General Cable

ELECTRONICS

CAROL BRAND

ELECTRONICS
WIRE & CABLE

ELECTRONIC WIRE AND CABLE FOR
SIGNAL TRANSMISSION AND SOUND/SECURITY

APRIL 2010

Electronics

This catalog contains in-depth information on the most comprehensive line of copper Electronics products available today for data transmission, sound, security/fire alarm, professional audio and video broadcast.

In a rapidly changing industry with ever-growing demands, General Cable continues to stay ahead of the curve with engineered products that guarantee future performance. Choose from the best cable in its class—Carol® Brand.

Our products are readily available for immediate shipment through our network of authorized stocking distributors and distribution centers.

General Cable

Demand Better... Expect More™

FROM CAROL® BRAND

QUALITY

General Cable is committed to meeting customer requirements through continuous quality improvements. As a significant part of our commitment to quality, General Cable's manufacturing facilities are certified to the ISO 9001:2000 quality standard. We strive to provide value optimization through innovation and quality solutions.

- Our in-house testing capabilities are extensive, with strict adherence to our product specifications as well as industry standards.
- Cables are safety listed and verified.
- Third-party testing labs like UL and ETL are utilized to quantify and confirm our quality and provide final qualification data that sets the foundation for our extended product warranty.
- General Cable products have stood the test of time with proven reliability and performance.

INTERNATIONAL
ISO 9001:2000
CERTIFICATION

CUSTOMER SERVICE

General Cable is dedicated to customer service and satisfaction. Call our team of professionally trained sales associates at

888-295-5896

with any questions to meet your application needs.

GENERALCABLE.COM

What's New?

EXPANDED COMPETITIVE OFFERINGS

Cross-Reference & Online Spec Sheets

We have expanded our Carol® Brand Electronics offering and now have more competitive crosses than anyone. Many of these cables are in stock and ready for immediate shipment from one of our stocking distributors. For questions on any of the Carol Electronics cables, detailed spec sheets are now available online at www.generalcable.com/Products/Electronics/Product Specification Sheets.

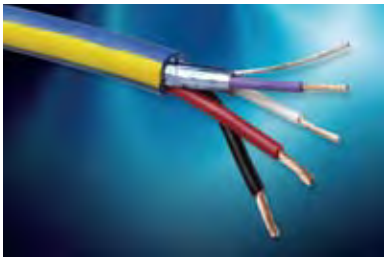
LOOKING FOR PLENUM CABLES?

The Carol® Electronics Catalog has been revamped, with Plenum Cables now being featured in the Communications & Control Multi-Conductor and Multi-Paired sections. If you're still not sure what you're looking for, please contact our Customer Service associates at 866.295.5896 today!

ALARM & SECURITY SOLUTIONS

General Cable has increased the information in its Alarm & Security Solutions Guide, with the addition of Sheer Wire™ Cables for Lighting Control & Touch Panel Systems, Bundled Composite Access Control Cables, Command® Series Home Entertainment Cables and our line of Carol® Brand Helix/Hi-Temp® Data Communications Cables. To view the updated guide, see pages 114-116 in the catalog.

SHEER WIRE™ PRODUCTS



Carol® Brand has added the Sheer Wire™ line of cable for Lighting Control & Touch Panel Systems to its already expansive electronics offering. For more information, see page A2 or call 866-295-5896 today for your FREE Sheer Wire catalog.

ARMORED ELECTRONICS PRODUCTS

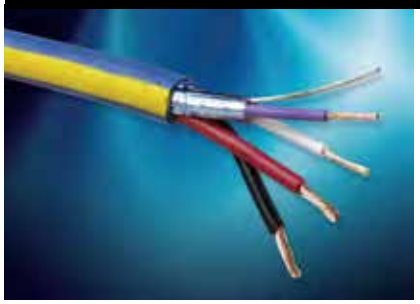
Carol® Brand Electronics products are now offered with an interlock armored option, which provides outstanding mechanical protection and is flexible for easy installation, potentially saving time and money. For complete product information, go to pages 179-180.

CAROL® BRAND

General Cable

SHEER WIRE™

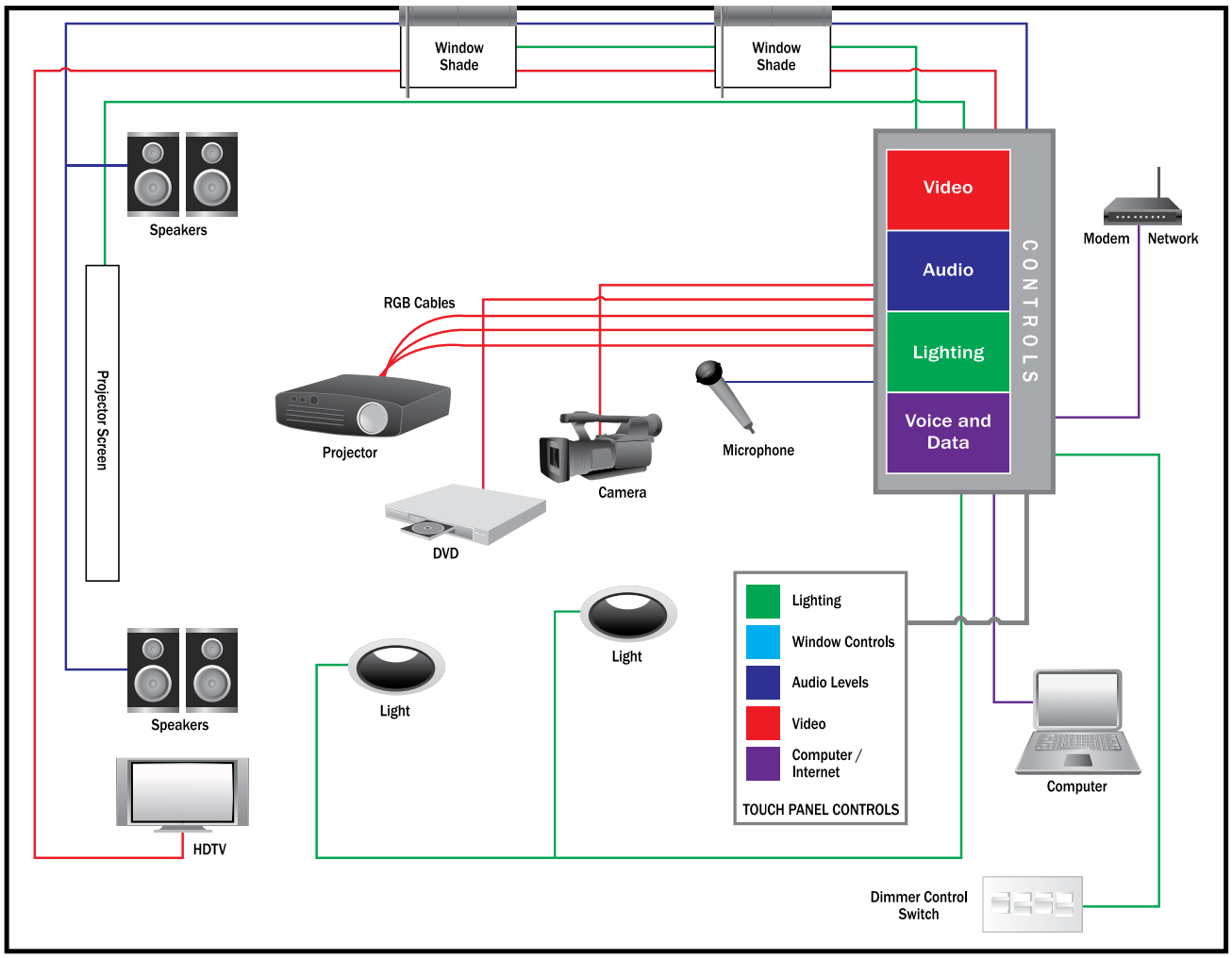
Sheer Wire™ Lighting Control and Touch Panel Systems



Cable Solution	Description
1618SVA1	18/4 16/30 BC 20 AWG 10/30 + 16/1 PR 26/30 BC (UL) CL3R
1822AXL0	22/1PR 7/30 + 18/2 7/26 (UL) CL3R FT-4
1822CCD8	Touch Panel Composite: 1 Control Element + 2 5e Elements
1822CCT8	Touch Panel Composite: 1 Control Element + 2 5e Elements + 2 RG 6
1822CDC8	22C 5E: (1)I18/22CRT-89/04, (1)I181VQ6-09, I181VQ6-00, (2) Cat 5e
1822CRT8	Comp 4C 2E: 22/1PR 7/30 BC 24 AWG 7/32 TC Drain + 1/2C 7/26 BC (UL) CL3R
1822KYP1	Comp 4C 2E: 18/2C 16/30 BC + 22/1PR 7/30 BC Shielded
182LUTDS	18/2 7/26 BC PVC NYLON (UL) TC for Lutron Dimmer & Switch
184LUTDS	18/4 7/26 BC PVC Nylon O/A AM SHLD 20 AWG 7/36 TC Drain PVC
222LUTDS	22/2 7/30 BC PVC O/A AM SHLD 24 AWG 7/32 TC Drain PVC
164LTCH0	16/4 65/34 BC .012" PVC Lite Touch
224SLTCH	22/4 7/30 BC .015 PVC, O/A AM SHLD, 24 7/32 TC Drain/A 0.35 PVC Lite Touch
EF24C0021000	24/2 Conductor Shielded Low Cap Type CMP

Applications:

Lighting Controls
Window Controls
Audio Level Controls
Video Controls
Computer/Internet Controls



General Cable

CAROL BRAND

PRODUCT SECTION LOCATOR

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Alben Roland –Wire Wizard.SM When it comes to solving your problems, he makes magic happen.

Alben's highest and most challenging form of wire wizardry is new product development, followed closely by solving tough, often one-of-a-kind technical problems. His powers are also evident in quality control and in laboratory testing. We call on Alben to perform his wizardry all the time. And so do our customers. Alben, Manager, Product Engineering, Carol® Brand Electronic Products, and the entire team of General Cable Wire Wizards are ready to perform magic. "Whether it's providing a prototype, solving an applications problem, or answering a technical question, we try to make magic happen," explains Alben. Magic or not, our Wizards always seem to find the answer and serve the customer. And there's no smoke or mirrors about that.

CAROL® BRAND

If you'd like to put the powers of Alben and General Cable Carol Brand products to work for you, talk to a General Cable rep today. To connect, just call 1.888.295.5896 or e-mail us at info@generalcable.com.

REEL People ... Adding REAL Value

General Cable
www.generalcable.com

General Cable | One Company Connecting the World

General Cable is a leader in the development, design, manufacture, marketing and distribution of copper, aluminum and fiber optic wire and cable for the energy, industrial, specialty and communications markets.

Our products inspire progress worldwide … customers use our value-added products to create global infrastructure that improves the standard of living for people everywhere.

Each day we're building business momentum — developing ideas into innovative solutions and industry-leading products, expanding geographic access and furthering our investment in highly capable associates, Lean Manufacturing, material science and technology resources.

General Cable is influencing the world … with more than two-thirds of our sales generated outside North America and more than 11,000 associates in 45 manufacturing facilities throughout 22 countries. As one of the largest wire and cable manufacturers, we are the *One Company Connecting the World.*

Energy Cables

Our cables carry energy across the world — through the air, underground and under the sea. Increasing demand for energy is accelerating investment in exploration, extraction, power generation, transmission and distribution — whether based on coal, natural gas, oil, nuclear, wind, solar or water.

Industrial & Specialty Cables

Our cables channel the power and signals that make equipment hum and engines run. From oil rigs and broadcast studios to cars and trains, and in commercial buildings, public venues, factory floors and special applications such as military, nuclear, marine and mining — we serve an extensive range of markets.

Communications Cables

Our cables keep information flowing — facilitating a non-stop stream of words and images around the world. We meet the high-speed bandwidth needs of global communications networks, from fiber optic submarine communications cables, copper and fiber aerial and underground cables, to copper and fiber optic enterprise cables and system solutions.

World Headquarters - General Cable

4 Tesseneer Drive • Highland Heights, KY • 41076-9753 U.S.A.

GREEN INITIATIVE

Our Green Initiative symbol recognizes our role and responsibility in promoting sustainability. The symbol also reflects our commitment to achieving industry-leading standards and responding proactively to environmental global issues.

Look for our products with the RoHS symbol for your green building initiatives.

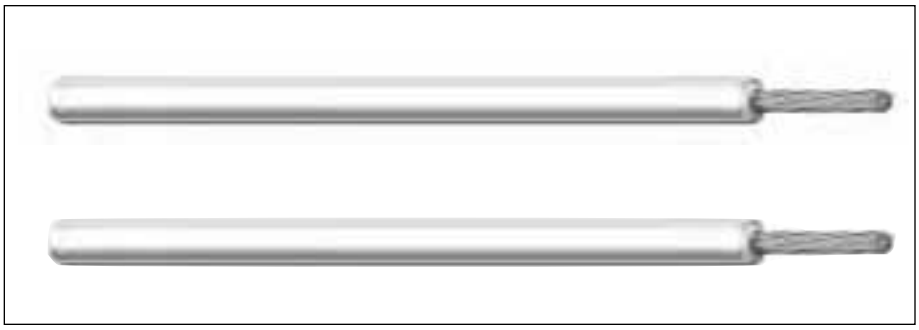
RoHS Compliant
Directive 2002/95/EC

Visit www.generalcable.com
Select "company", then select "environmental"

General Cable

Hook-Up Wire

1



Most applications of hook-up and lead wire for board-to-board or point-to-point wiring rely on PVC-insulated designs.

General Cable's Carol® Brand products offer both electrical and electronic designers a vast array of quality PVC hook-up wire to meet the specific technical demands of today, with "off-the-shelf" distributor inventoried products.

Hook-up wire is also available in special colors and/or stripe combinations with a minimum of lead time. In addition, General Cable offers a variety of put-ups to meet individual customer requirements.

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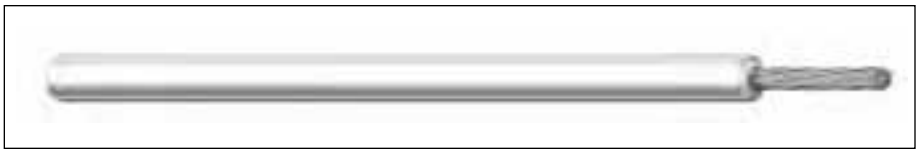
UL 1007, UL 1569, CSA TR-64



CATALOG NUMBER	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
			INCHES	mm	INCHES	mm
SOLID CONDUCTORS						
C2003A	24	Solid	0.016	0.41	0.052	1.32
C2004A	22	Solid	0.016	0.41	0.057	1.45
C2028A	20	Solid	0.016	0.41	0.064	1.63
C2052A	18	Solid	0.016	0.41	0.072	1.83
C2053A	16	Solid	0.016	0.41	0.083	2.11
STRANDED CONDUCTORS						
C2015A	24	7/32	0.016	0.41	0.056	1.42
C2016A	22	7/30	0.016	0.41	0.062	1.57
C2040A	20	10/30	0.016	0.41	0.070	1.78
C2064A	18	16/30	0.016	0.41	0.080	2.03
C2065A	16	26/30	0.016	0.41	0.092	2.34

Color Code Chart

ORDERING SUFFIX	COLORS	ORDERING SUFFIX	COLORS
01	Black	**06**	Green
02	White	**07**	Blue
03	Red	**08**	Brown
04	Orange	**10**	Gray
05	Yellow	**19**	Violet

Striped combinations available upon request; consult Customer Service.

Product Construction:

Conductor:

- 24 thru 16 AWG
- Fully annealed tinned copper per ASTM B-33
- Solid or stranded

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -20˚C to +105˚C
- Color code: See chart below

Applications:

- Internal wiring of electrical and electronic equipment
- Internal wiring of panels and meters
- Point-to-point wiring
- Suggested voltage rating: 300 volts

Compliances:

- UL Style 1007 – 80˚C, 300V
- UL Style 1569 – 105˚C, 300V
- CSA TR-64 – 90°C, 300V
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL VW-1 Vertical Wire Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

Certified Canadian Standard Association

Designed to Meet UL VW-1 Vertical Wire Flame Test

Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

UL 1015, CSA TEW

Product Construction:

Conductor:

- 24 thru 10 AWG
- Fully annealed tinned copper per ASTM B-33
- Solid or stranded

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -20˚C to +105˚C
- Color code: See chart below

Applications:

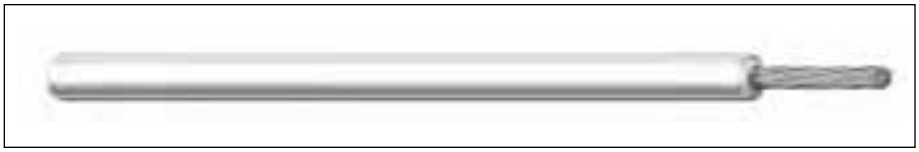
- Internal wiring of electrical and electronic equipment
- Internal wiring of panels and meters
- Point-to-point wiring
- Suggested voltage rating: 600 volts

Compliances:

- UL Style 1015 – 105°C, 600V
- CSA Type TEW
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL VW-1 Vertical Wire Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
			INCHES	mm	INCHES	mm
SOLID CONDUCTORS						
C2117A	22	Solid	0.032	0.81	0.089	2.26
C2118A	20	Solid	0.032	0.81	0.096	2.44
C2119A	18	Solid	0.032	0.81	0.104	2.64
STRANDED CONDUCTORS						
C2100A	24	7/32	0.032	0.81	0.088	2.24
C2101A	22	7/30	0.032	0.81	0.094	2.39
C2102A	20	10/30	0.032	0.81	0.102	2.59
C2103A	18	16/30	0.032	0.81	0.112	2.84
C2104A	16	26/30	0.032	0.81	0.124	3.15
C2105A	14	41/30	0.032	0.81	0.141	3.58
C2106A	12	65/30	0.032	0.81	0.160	4.06
C2107A	10	105/30	0.033	0.84	0.184	4.67

Color Code Chart

ORDERING SUFFIX	COLORS	ORDERING SUFFIX	COLORS
01	Black	**06**	Green
02	White	**07**	Blue
03	Red	**08**	Brown
04	Orange	**10**	Gray
05	Yellow	**19**	Violet

Striped combinations available upon request; consult Customer Service.

General Cable

RoHS Compliant Directive 2002/95/EC

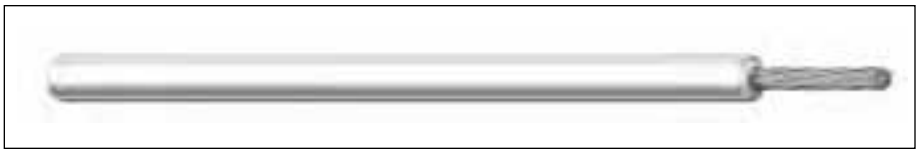
Designed to Meet UL VW-1 Vertical Wire Flame Test

Underwriters Laboratories Inc.

Certified Canadian Standard Association

CAROL BRAND

MIL-W-76B
Type MW



CATALOG NUMBER	TYPE DESIGNATION	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm
MIL-W-76B TYPE MW (MEDIUM WALL)							
C7600A	MW-C24(7)U	24	7/32	0.016	0.41	0.056	1.42
C7602A	MW-C22(7)U	22	7/30	0.016	0.41	0.062	1.57
C7604A	MW-C20(10)U	20	10/30	0.016	0.41	0.070	1.78
C7606A	MW-C18(16)U	18	16/30	0.016	0.41	0.080	2.03
C7608A*	MW-C16(26)U	16	26/30	0.016	0.41	0.092	2.34
C7610A*	MW-C14(41)U	14	41/30	0.016	0.41	0.109	2.77
C7611A*	MW-C12(65)U	12	65/30	0.016	0.41	0.128	3.25

*-25°C to +105°C

Color Code Chart

ORDERING SUFFIX	COLORS	ORDERING SUFFIX	COLORS
01	Black	**06**	Green
02	White	**07**	Blue
03	Red	**08**	Brown
04	Orange	**10**	Gray
05	Yellow	**19**	Violet

Striped combinations available upon request; consult Customer Service.

Product Construction:

Conductor:
- 24 thru 12 AWG
- Fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded PVC
- Type MW: Medium wall
- Temperature range: -12°C to +90°C
- Color code: See chart below

Applications:
- Internal wiring of electrical and electronic equipment
- Internal wiring of panels and meters
- Point-to-point wiring
- Suggested voltage rating: 1000 volts (MIL-W-76B)
- Non QPL

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options

UL Types MTW, TFF, AWM & CSA TEW

90ºC 600 Volt MTW, TFF 105ºC 600 Volt AWM/TEW

Product Construction:

Conductor:

- 18 through 8 AWG fully annealed stranded bare copper per ASTM B-8

Insulation:

- Premium-grade, color-coded PVC
- Temperature range:
  MTW: -40ºC to +90ºC
  TEW/AWM: -20ºC to +105ºC
- Color code: See chart below

Jacket Marking:

- 18 and 16 AWG:
  CAROL (SIZE) 600V E# MTW (UL) OR TFF OR AWM VW-1 --- CSA TEW 105ºC FT-1
- 14 through 8 AWG:
  CAROL (SIZE) 600V E# MTW (UL) OR AWM VW-1 --- CSA TEW 105ºC FT-1

Applications:

- Motor and transformer lead
- External wiring of machinery
- Internal wiring of electrical and electronic equipment
- Internal wiring of panels and meters
- Point-to-point wiring

Features:

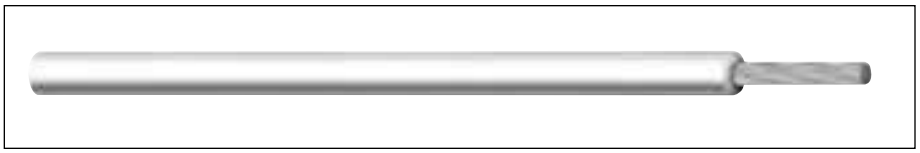
- Outstanding oil, flame and moisture resistance
- Extra flexible

Compliances:

- UL and NMTBA Type MTW/AWM
- CSA TEW
- RoHS Compliant Directive 2002/95/EC
- Passes VW-1 Vertical Flame Test
- AWM Style 1015 – 18-8 AWG
- AWM Style 1335 – 18-10 AWG
- AWM Style 1336 – 8 AWG

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		STOCK COLORS	APPROX. NET WEIGHT LBS/M[S]
			INCHES	mm	INCHES	mm		
UL TYPE MTW, AWM, TFF, CSA TYPE TEW–600 VOLT								
76502	18	16/30	0.032	0.81	0.110	2.79	1-12	10
76512	16	26/30	0.032	0.81	0.123	3.12	1-12	14
76812	14	19/.0159	0.032	0.81	0.136	3.40	1-12	20
76822	12	19/.0185	0.032	0.81	0.155	3.91	1-7	28
76832	10	19/.0234	0.032	0.81	0.179	4.55	1-5	42
76843	8	19/.0295	0.047	1.19	0.242	6.15	1-5	72

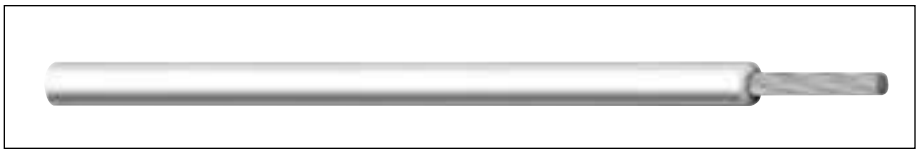
[S] Actual shipping weight may vary.

Color Code Chart

ORDERING SUFFIX	COLORS	ORDERING SUFFIX	COLORS
01	Black	**04**	Orange
02	White	**08**	Brown
03	Red	**19**	Purple
07	Blue	**10**	Gray
06	Green	**13**	Pink

Heavy Wall UL Types MTW, AWM & NEC Type THW

90°C 600 Volts



CATALOG NUMBER	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m[S]
			INCHES	mm	INCHES	mm	
AWM, MTW, THW – 600 VOLT – UL							
76954	6	19/.0372	0.064	1.63	0.315	8.00	110
76994	4	19/.0469	0.065	1.65	0.365	9.27	150

[S]Actual shipping weight may vary.

Product Construction:

Conductor:

- 6 and 4 AWG fully annealed stranded bare copper per ASTM B-8

Insulation:

- Premium-grade, color-coded PVC, black
- Temperature range: -40°C to +90°C

Jacket Marking:

- CAROL 6 AWG 600V E# MTW OR THW (UL) OR AWM

Applications:

- Motor and transformer lead
- External wiring of machinery

Features:

- Outstanding oil, flame and moisture resistance
- Extra flexible

Compliances:

- UL Type AWM
- UL and NMTBA Type MTW
- NEC Type THW
- RoHS Compliant Directive 2002/95/EC
- Passes UL VW-1 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

UL LISTED

Designed to Meet UL VW-1 Vertical Wire Flame Test

Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Rubber/PVC/Polyethylene

Product Construction:

Conductor:

- 20, 18 and 14 AWG
- Fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded rubber, PVC or polyethylene
- Temperature range:
  -20˚C to +60˚C rubber
  -25˚C to +60˚C PVC
  -20˚C to +80˚C polyethylene
- Color code: See chart below

Applications:

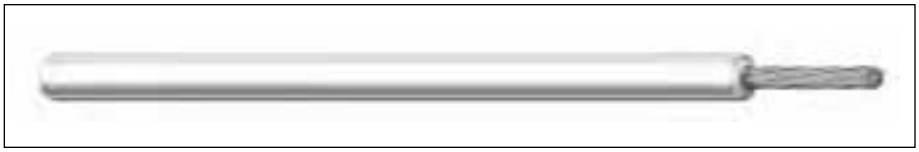
- Test equipment
- Oscillators

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



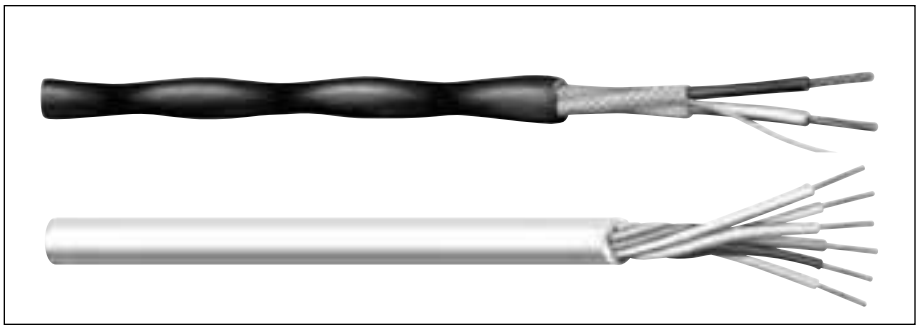
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		BREAKDOWN VOLTAGE (AC, rms)	WORKING VOLTAGE*	NOMINAL O.D.	
				INCHES	mm			INCHES	mm
RUBBER TEST LEAD									
C1326	1	20	41/36	0.040	1.02	6,000V	1,500V	0.125	3.18
C1319	1	20	41/36	0.047	1.19	12,000V	3,000V	0.140	3.56
C1321	1	18	65/36	0.045	1.14	20,000V	5,000V	0.145	3.68
C1318	1	18	65/36	0.088	2.24	29,000V	10,000V	0.230	5.84
PVC TEST LEAD									
C1320A	1	18	65/36	0.047	1.19	20,000V	5,000V	0.140	3.56
POLYETHYLENE TEST LEAD									
C7108A	1	14	105/34	0.032	0.81	4,000V	600V	0.140	3.56

*For intermittent duty only.

Color Code Chart

ORDERING SUFFIX	COLORS
01	Black
03	Red
06	Green

Communication & Control Cable, Multi-Conductor 2



The multi-conductor array of communication and control cable facilitates cable pull-ins and single-site installations.

This cable is typically used for industrial equipment control, electric valve actuation and remote signaling, as well as communications and broadcast applications. These designs are available in a wide variety of insulation and jacketing materials, as well as shield designs to alleviate unwanted circuit noise.

General Cable's Carol® Brand products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.

A Design To Meet Every Application

PVC/PVC designs employ polyvinyl chloride insulations and jackets capable of meeting everyday, general purpose applications.

PE or PP/PVC designs employ high quality polyethylene or polypropylene insulations to assure faithful reproduction of transmitted signals across interconnection circuits.

Foamed PP/PVC designs use high speed, foamed polypropylene insulations for long-distance critical circuits, which would not perform if higher loss insulations were employed.

FEP/FEP designs employ fluoropolymer 200°C-rated materials. They are recommended for use in applications where high temperature, plenum rating, electrical and mechanical safety and chemical resistance are essential.

Rubber/Rubber is typically employed in installations characterized as severely hostile environments, where these designs provide unsurpassed service life.

Rubber/Carolprene® offers the ultimate performance for applications that demand the greatest protection from the environment, including physical abuse. The specially formulated Carolprene® jacket has been proven time and again to withstand all types of abuse, both mechanical and chemical.

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CAROL BRAND

General Cable

Multi-Conductor, Unshielded

UL 2464, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- Fully annealed tinned copper per ASTM B-33 (C4008A, C4311A)
- Fully annealed solid bare copper per ASTM B-3 (C2754A)

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

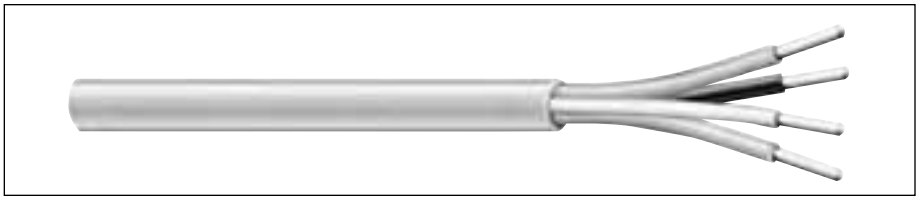
- Public address systems
- Intercoms
- Remote control circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



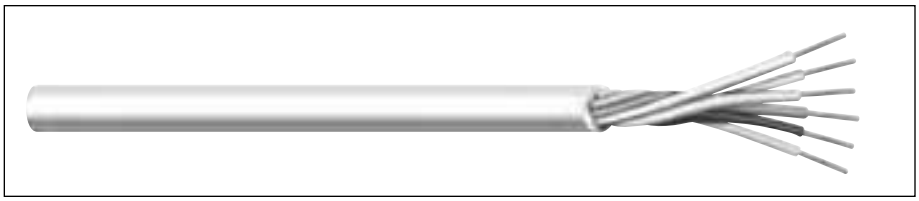
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C4008A	2	22	Solid	0.010	0.25	0.032	0.81	0.156	3.94	Black/ Red	24.5
C4311A	2	20	Solid	0.010	0.25	0.032	0.81	0.166	4.22	Black/ Red	28.0
C2754A	2	19	Solid	0.010	0.25	0.032	0.81	0.176	4.47	Brown/ Tan	29.5

*Capacitance between conductors

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Unshielded

UL 2464, NEC Type CM (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C4081A	6	4-22 2-18	7/30 16/30	0.010 0.016	0.25 0.41	0.032	0.81	0.244	6.20	24.5 31.0
C4082A	7	5-22 2-18	7/30 16/30	0.010 0.016	0.25 0.41	0.032	0.81	0.253	6.43	24.5 31.0
C4083A	8	6-22 2-18	7/30 16/30	0.010 0.016	0.25 0.41	0.032	0.81	0.263	6.69	24.5 31.0
C4084A	9	7-22 2-18	7/30 16/30	0.010 0.016	0.25 0.41	0.032	0.81	0.273	6.94	24.5 31.0

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1 18 ga.	Black
2	White
1 22 ga.	Red
2	Green
3	Brown
4	Blue
5	Orange
6	Yellow
7	Violet

Product Construction:

Conductor:

- 22 thru 18 fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC (18 AWG), S-R PVC (22 AWG)
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- TV antenna rotor control
- Satellite actuator control
- Public address systems
- Suggested voltage rating: 300 volts

Features:

- Tinned copper conductors provide excellent corrosion resistance
- Assists with soldering applications

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Multi-Conductor, Unshielded

UL 2464, UL 2576, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See charts below

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

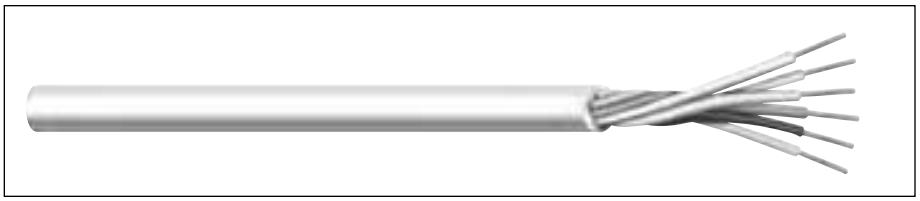
- Easy to terminate
- Excellent electrical properties
- Tinned conductors provide excellent corrosion resistance
- Assists soldering applications

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- UL Style 2576 (UL: 80°C, 150V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C2461A	2	24	7/32	0.010	0.25	0.032	0.81	0.152	3.86	Black/ Red	23.0
C2462A	3	24	7/32	0.010	0.25	0.032	0.81	0.163	4.14	Black/ Red/ Green	23.0
C2463A	4	24	7/32	0.010	0.25	0.032	0.81	0.174	4.42	1	23.0
C2464A	5	24	7/32	0.010	0.25	0.032	0.81	0.183	4.75	1	23.0
C2466A	6	24	7/32	0.010	0.25	0.032	0.81	0.200	5.08	1	23.0
C2488A	7	24	7/32	0.010	0.25	0.032	0.81	0.200	5.08	1	23.0
C2465A	8	24	7/32	0.010	0.25	0.032	0.81	0.214	5.44	1	23.0
C2470A	9	24	7/32	0.010	0.25	0.032	0.81	0.227	5.77	1	23.0
C2471A	10	24	7/32	0.010	0.25	0.032	0.81	0.244	6.20	1	23.0
C2467A	12	24	7/32	0.010	0.25	0.032	0.81	0.251	6.38	1	23.0
C2473A	15	24	7/32	0.010	0.25	0.032	0.81	0.275	6.99	2	23.0

*Capacitance between conductors

Color Code Chart 1 - For cables up to and including 12 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	White	8	Yellow
3	Red	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

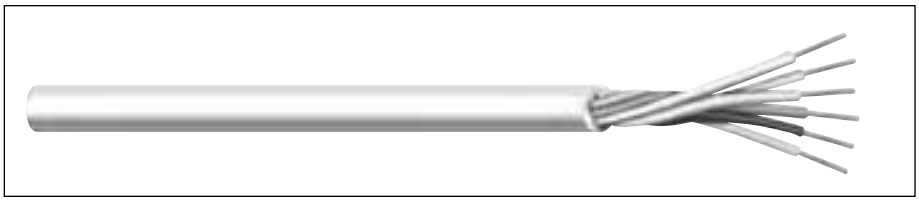
Color Code Chart 2 Per ICEA - For cables with 15 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	6	Blue	11	Blue/Black
2	White	7	White/Black	12	Black/White
3	Red	8	Red/Black	13	Red/White
4	Green	9	Green/Black	14	Green/White
5	Orange	10	Orange/Black	15	Blue/White

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Unshielded

UL 2464, UL 2576, NEC Type CM (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C6348A†	2	22	7/30	0.010	0.25	0.015	0.38	0.130	3.30	Black/ Red	24.5
C4062A	3	22	7/30	0.010	0.25	0.032	0.81	0.176	4.47	Black/ Red/ Green	24.5
C4063A	4	22	7/30	0.010	0.25	0.032	0.81	0.189	4.80	1	24.5
C4064A	5	22	7/30	0.010	0.25	0.032	0.81	0.203	5.16	1	24.5
C4066A	6	22	7/30	0.010	0.25	0.032	0.81	0.218	5.54	1	24.5
C4088A	7	22	7/30	0.010	0.25	0.032	0.81	0.205	5.54	1	24.5
C4065A	8	22	7/30	0.010	0.25	0.032	0.81	0.230	5.94	1	24.5
C4070A	9	22	7/30	0.010	0.25	0.032	0.81	0.249	6.32	1	24.5
C4071A	10	22	7/30	0.010	0.25	0.032	0.81	0.268	6.81	1	24.5
C4067A	12	22	7/30	0.010	0.25	0.032	0.81	0.276	7.01	1	24.5
C4073A	15	22	7/30	0.010	0.25	0.032	0.81	0.303	7.70	2	24.5
C4075A	20	22	7/30	0.010	0.25	0.032	0.81	0.334	8.48	2	24.5
C4076A	25	22	7/30	0.010	0.25	0.032	0.81	0.368	9.35	2	24.5
C4077A	30	22	7/30	0.010	0.25	0.032	0.81	0.389	9.88	2	24.5
C4078A	40	22	7/30	0.010	0.25	0.032	0.81	0.434	11.02	2	24.5
C4079A	50	22	7/30	0.010	0.25	0.032	0.81	0.489	12.42	2	24.5

*Capacitance between conductors
†CM-CSA CMG Only

Color Code Chart 1 - For cables up to and including 12 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	White	8	Yellow
3	Red	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

Color Code Chart 2 Per ICEA - For cables of 15 thru 50 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	14	Green/White	27	Blue/Black/White	39	White/Black/Green
2	White	15	Blue/White	28	Black/Red/Green	40	Red/White/Green
3	Red	16	Black/Red	29	White/Red/Green	41	Green/White/Blue
4	Green	17	White/Red	30	Red/Black/Green	42	Orange/Red/Green
5	Orange	18	Orange/Red	31	Green/Black/Orange	43	Blue/Red/Green
6	Blue	19	Blue/Red	32	Orange/Black/Green	44	Black/White/Blue
7	White/Black	20	Red/Green	33	Blue/White/Orange	45	White/Black/Blue
8	Red/Black	21	Orange/Green	34	Black/White/Orange	46	Red/White/Blue
9	Green/Black	22	Black/White/Red	35	White/Red/Orange	47	Green/Orange/Red
10	Orange/Black	23	White/Black/Red	36	Orange/White/Blue	48	Orange/Red/Blue
11	Blue/Black	24	Red/Black/White	37	White/Red/Blue	49	Blue/Red/Orange
12	Black/White	25	Green/Black/White	38	Black/White/Green	50	Black/Orange/Red
13	Red/White	26	Orange/Black/White				

Product Construction:

Conductor:

- 22 AWG fully annealed, stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See charts below

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

- Easy to terminate
- Excellent electrical properties
- Tinned conductors provide excellent corrosion resistance
- Assists soldering applications

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- UL Style 2576 (UL: 80°C, 150V)
- CSA CMG (CSA 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

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Multi-Conductor, Unshielded

UL 2464, UL 2576, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 20 or 18 AWG fully annealed stranded, tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC per UL 1007
- Color code: See charts below

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80°C

Applications:

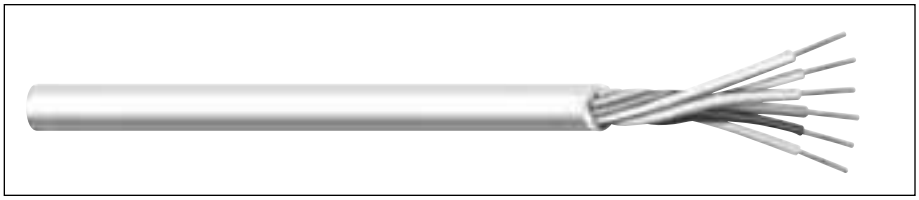
- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- UL Style 2576 (UL: 80˚C, 150V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C6351A†	2	20	7/28	0.016	0.41	0.025	0.64	0.192	4.88	Black/ Red	28.0
C6352A	3	20	7/28	0.016	0.41	0.032	0.81	0.216	5.50	1	28.0
C6353A	4	20	7/28	0.016	0.41	0.032	0.81	0.235	5.97	1	28.0
C6355A	5	20	7/28	0.016	0.41	0.032	0.81	0.254	6.46	1	28.0
C6356A	7	20	7/28	0.016	0.41	0.032	0.81	0.275	6.99	1	28.0
C6357A	9	20	7/28	0.016	0.41	0.032	0.81	0.317	8.05	1	28.0
C6360A	12	20	7/28	0.016	0.41	0.032	0.81	0.354	9.00	2	28.0
C6358A	15	20	7/28	0.016	0.41	0.032	0.81	0.392	9.96	2	28.0
C2830A†	2	18	16/30	0.016	0.41	0.015	0.64	0.190	5.33	Black/ Red	30.5
C2831A	3	18	16/30	0.016	0.41	0.032	0.81	0.236	5.99	1	30.5
C2404A	4	18	16/30	0.016	0.41	0.032	0.81	0.258	6.55	1	30.5
C2420A	5	18	16/30	0.016	0.41	0.032	0.81	0.280	7.11	1	30.5
C2421A	7	18	16/30	0.016	0.41	0.032	0.81	0.309	7.85	1	30.5
C2422A	9	18	16/30	0.016	0.41	0.032	0.81	0.358	9.09	1	30.5
C2412A	12	18	16/30	0.016	0.41	0.032	0.81	0.401	10.19	2	30.5
C2423A	15	18	16/30	0.016	0.41	0.032	0.81	0.445	11.30	2	30.5
C2424A	19	18	16/30	0.016	0.41	0.032	0.81	0.469	11.91	2	30.5
C2433A	25	18	16/30	0.016	0.41	0.032	0.81	0.550	13.94	2	30.5

*Capacitance between conductors
†CM (UL) c(UL), CSA CMG Only

Color Code Chart 1 - For cables up to and including 9 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	6	Blue
2	White	7	Orange
3	Red	8	Yellow
4	Green	9	Violet
5	Brown		

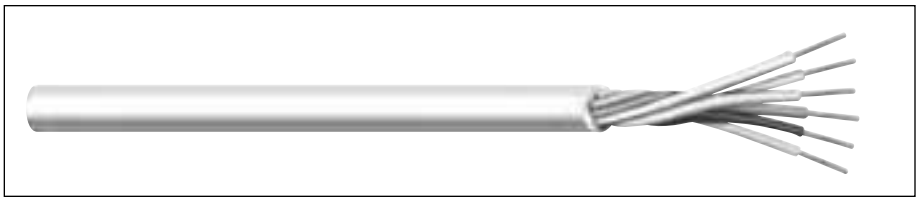
Color Code Chart 2 Per ICEA - For cables of 12 thru 25 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	10	Orange/Black	19	Blue/Red
2	White	11	Blue/Black	20	Red/Green
3	Red	12	Black/White	21	Orange/Green
4	Green	13	Red/White	22	Black/White/Red
5	Orange	14	Green/White	23	White/Black/Red
6	Blue	15	Blue/White	24	Red/Black/White
7	White/Black	16	Black/Red	25	Green/Black/White
8	Red/Black	17	White/Red		
9	Green/Black	18	Orange/Red		

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Unshielded

UL 2464, UL 2587, NEC Type CL3 and CM (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
NEC TYPE CM, UL STYLE 2464 (80°C, 300 VOLTS)										
C2405A	2	16	19/.0117	0.021	0.53	0.032	0.81	0.260	6.81	30.5
C2406A	3	16	19/.0117	0.021	0.53	0.032	0.81	0.283	7.19	30.5
C2425A	4	16	19/.0117	0.021	0.53	0.032	0.81	0.306	7.77	30.5
C2434A	5	16	19/.0117	0.021	0.53	0.032	0.81	0.334	8.48	30.5
C2426A	7	16	19/.0117	0.021	0.53	0.032	0.81	0.363	9.25	30.5
C2443A	8	16	19/.0117	0.021	0.53	0.032	0.81	0.393	10.03	30.5
C2435A	9	16	19/.0117	0.021	0.53	0.032	0.81	0.423	10.80	30.5
C2427A	12	16	19/.0117	0.021	0.53	0.032	0.81	0.476	12.17	30.5
C2428A	15	16	19/.0117	0.021	0.53	0.032	0.81	0.530	13.46	30.5
C2429A	19	16	19/.0117	0.021	0.53	0.032	0.81	0.559	14.33	30.5
C2436A	25	16	19/.0117	0.021	0.53	0.032	0.81	0.657	16.69	30.5
NEC TYPE CL3, UL STYLE 2587 (90°C, 600 VOLTS)										
C2409A†	2	14	19/.0147	0.030	0.81	0.032	0.81	0.326	8.51	29.0
C2430A	4	14	19/.0147	0.032	0.81	0.032	0.81	0.391	9.93	28.2
C2437A	5	14	19/.0147	0.032	0.81	0.032	0.81	0.428	10.87	28.2
C2431A	7	14	19/.0147	0.032	0.81	0.032	0.81	0.469	11.91	28.2
C2410A	2	12	19/0.0185	0.032	0.81	0.032	0.81	0.366	9.40	31.0
C2440A	4	12	19/0.0185	0.032	0.81	0.032	0.81	0.437	11.02	31.0

*Capacitance between conductors
†CL3, UL2587, CSA CMH Only

Product Construction:

Conductor:

- 16 thru 12 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20°C to +90°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3 (UL: 75°C)
- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- UL Style 2587 (UL: 90°C, 600V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart Per ICEA

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**10**	Orange/Black	**19**	Blue/Red
2	White	**11**	Blue/Black	**20**	Red/Green
3	Red	**12**	Black/White	**21**	Orange/Green
4	Green	**13**	Red/White	**22**	Black/White/Red
5	Orange	**14**	Green/White	**23**	White/Black/Red
6	Blue	**15**	Blue/White	**24**	Red/Black/White
7	White/Black	**16**	Black/Red	**25**	Green/Black/White
8	Red/Black	**17**	White/Red		
9	Green/Black	**18**	Orange/Red		

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c UL us LISTED
CMG Certified Canadian Standard Association
Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.
RoHS Compliant Directive 2002/95/EC
General Cable

Multi-Conductor, Unshielded

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Jacket:

- Flexguard® PVC, natural or as requested
- Temperature range: -20°C to +75°C

Applications:

- Audio systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

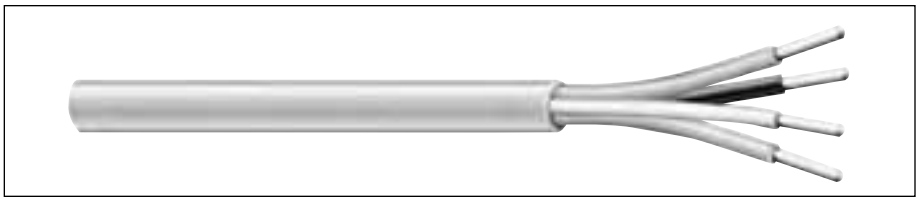
- NEC Article 800 (UL: 75°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C8102	4	18	19/30 TC	0.007	0.18	0.014	0.36	0.178	4.52	21.5

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

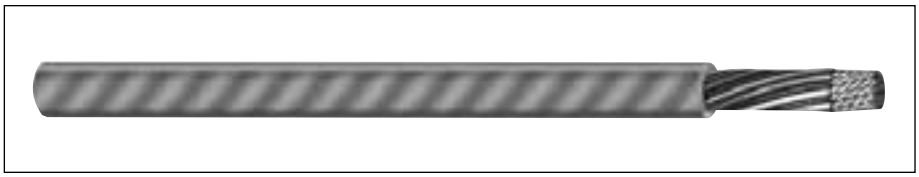
Underwriters Laboratories Inc.

c UL us LISTED

CAROL BRAND

Multi-Conductor, Unshielded

NEC Type CMP (UL) c(UL) and/or CL2P



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
22 AWG CONDUCTORS										
C3105†	2	22	7/30 TC	0.006	0.15	0.010	0.25	0.089	2.26	29.0
C3106†	4	22	7/30 TC	0.006	0.15	0.010	0.25	0.121	3.07	29.0
18 AWG CONDUCTORS										
C3102	2	18	7/26 BC	0.008	0.20	0.010	0.25	0.123	3.12	31.0
C3190	3	18	7/26 BC	0.008	0.20	0.010	0.25	0.143	3.63	31.0
C3103	4	18	7/26 BC	0.008	0.20	0.010	0.25	0.163	4.14	31.0
C3134	5	18	7/26 BC	0.008	0.20	0.010	0.25	0.187	4.75	30.8
C3192	6	18	7/26 BC	0.008	0.20	0.010	0.25	0.198	5.03	31.0
C3191	8	18	7/26 BC	0.008	0.20	0.010	0.25	0.223	5.66	31.0
C3178	10	18	7/26 BC	0.008	0.20	0.010	0.25	0.244	6.19	31.0
C3179	12	18	7/26 BC	0.008	0.20	0.010	0.25	0.263	6.68	31.0
16 AWG CONDUCTORS										
C3193	2	16	19/.0117 BC	0.008	0.20	0.010	0.25	0.141	3.58	33.0
C3194	3	16	7/.0192 BC	0.008	0.20	0.010	0.25	0.164	4.17	33.0
C3195	4	16	7/.0192 BC	0.008	0.20	0.010	0.25	0.187	4.75	33.0
14 AWG CONDUCTORS										
C3126†	2	14	19/.0147 BC	0.010	0.25	0.010	0.25	0.168	4.27	35.0
12 AWG CONDUCTORS										
C3135†	2	12	19/.0185 BC	0.010	0.25	0.010	0.25	0.238	6.05	37.0

*Capacitance between conductors

†CL2P only

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow
9	Violet
10	Gray
11	Pink
12	Tan

Product Construction:

Conductor:

- 22 thru 14 AWG fully annealed stranded tinned or bare copper per ASTM B-3, B-8 or B-33

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Fluoropolymer, natural
- Temperature range: -20°C to +75°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- Intercom systems
- Background music
- Audio systems
- Power-limited control circuits
- Suggested voltage rating: 150 volts

Compliances:

- NEC Article 725 (UL: 75°C, 150V)
- NEC Article 800 (UL: 75°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Abrasion-, chemical- and water-resistant jacket

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Conductor, Unshielded

NEC Type CMP (UL) c(UL) and/or CL3P

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid, stranded tinned or bare copper per ASTM B-3, B-8 or B-33

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Flexguard® PVC, natural
- Temperature range: 0°C to +75°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- Intercom systems
- Background music
- Audio systems
- Power-limited control circuits
- Suggested voltage rating: 150 volts

Compliances:

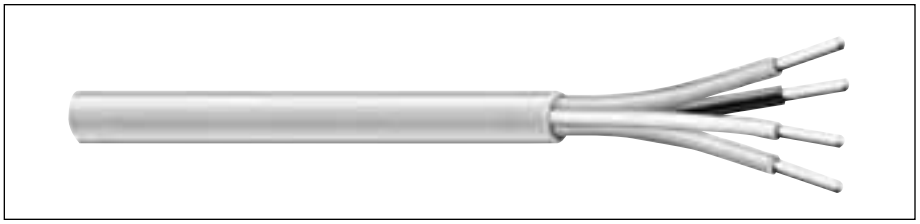
- NEC Article 725 (UL: 75°C, 150V)
- NEC Article 800 (UL: 75°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Flexible
- Easy to terminate

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM.* C-C CAP. pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
22 AWG CONDUCTORS										
C3115	2	22	7/32 TC	0.008	0.20	0.015	0.38	0.122	3.10	30.0
C3116	4	22	7/32 TC	0.008	0.20	0.015	0.38	0.141	3.58	30.0
18 AWG CONDUCTORS										
C3110	2	18	Solid BC	0.008	0.20	0.015	0.38	0.142	3.61	37.0
C3114	3	18	Solid BC	0.008	0.20	0.015	0.38	0.151	3.84	37.0
C3111	4	18	Solid BC	0.008	0.20	0.015	0.38	0.166	4.22	37.0
C3117	5	18	Solid BC	0.008	0.20	0.015	0.38	0.182	4.62	37.0
C3118	6	18	Solid BC	0.008	0.20	0.015	0.38	0.199	5.05	37.0
C3119	8	18	Solid BC	0.008	0.20	0.015	0.38	0.216	5.49	37.0
C3112	2	18	7/26 BC	0.008	0.20	0.015	0.38	0.156	3.96	35.0
C3120	3	18	7/26 BC	0.008	0.20	0.015	0.38	0.166	4.22	35.0
C3113	4	18	7/26 BC	0.008	0.20	0.015	0.38	0.182	4.62	35.0
C3125	5	18	7/26 BC	0.008	0.20	0.015	0.38	0.200	5.08	54.6
C3121	6	18	7/26 BC	0.008	0.20	0.015	0.38	0.216	5.49	35.0
C3122	8	18	7/26 BC	0.008	0.20	0.015	0.38	0.239	6.07	35.0
C3123	10	18	7/26 BC	0.008	0.20	0.015	0.38	0.278	7.06	35.0
C3124	12	18	7/26 BC	0.008	0.20	0.015	0.38	0.287	7.29	35.0
16 AWG CONDUCTORS										
C3127	2	16	19/.0117 BC	.009	.227	0.015	0.38	0.178	4.52	40.0
14 AWG CONDUCTORS										
C3128†	2	14	19/.0147 BC	0.010	0.20	0.015	0.38	0.212	5.38	40.0
12 AWG CONDUCTORS										
C3129†	2	12	19/.0185 BC	0.010	0.20	0.015	0.38	0.254	6.45	43.0

*Capacitance between conductors

†CL3P only

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

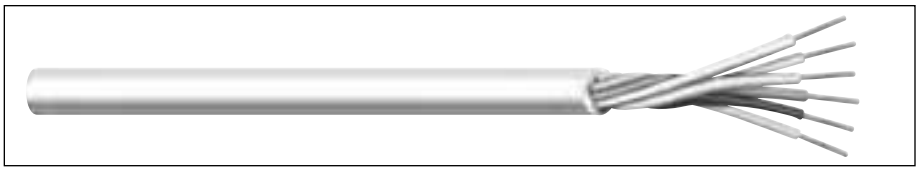
c UL us LISTED

CAROL BRAND

General Cable

Multi-Conductor, Unshielded

AWM Style 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C4100A	2	22	7/30	0.010	0.25	0.032	0.81	0.165	4.19	Black/ Red	27.5
C4101A	3	22	7/30	0.010	0.25	0.032	0.81	0.176	4.47	Black/ Red/ Green	27.5
C4102A	4	22	7/30	0.010	0.25	0.032	0.81	0.189	4.80	1	27.5
C4103A	5	22	7/30	0.010	0.25	0.032	0.81	0.203	5.16	1	27.5
C4104A	6	22	7/30	0.010	0.25	0.032	0.81	0.208	5.28	1	27.5
C4105A	7	22	7/30	0.010	0.25	0.032	0.81	0.218	5.54	1	27.5
C4106A	8	22	7/30	0.010	0.25	0.032	0.81	0.234	5.94	1	27.5
C4107A	9	22	7/30	0.010	0.25	0.032	0.81	0.249	6.32	1	27.5
C4108A	10	22	7/30	0.010	0.25	0.032	0.81	0.268	6.81	1	27.5
C4109A	12	22	7/30	0.010	0.25	0.032	0.81	0.276	7.01	1	27.5
C4110A	15	22	7/30	0.010	0.25	0.032	0.81	0.303	7.70	2	27.5
C4111A	18	22	7/30	0.010	0.25	0.032	0.81	0.318	8.08	2	27.5
C4112A	20	22	7/30	0.010	0.25	0.032	0.81	0.334	8.48	2	27.5
C4113A	25	22	7/30	0.010	0.25	0.032	0.81	0.368	9.35	2	27.5
C4114A	30	22	7/30	0.010	0.25	0.032	0.81	0.389	9.88	2	27.5
C4115A	40	22	7/30	0.010	0.25	0.032	0.81	0.434	11.02	2	27.5
C4116A	50	22	7/30	0.010	0.25	0.032	0.81	0.489	12.42	2	27.5

*Capacitance between conductors

Color Code Chart 1– For cables up to and including 12 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	White	8	Yellow
3	Red	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

Color Code Chart 2 Per ICEA – For cables of 15 thru 50 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	18	Orange/Red	35	White/Red/Orange
2	White	19	Blue/Red	36	Orange/White/Blue
3	Red	20	Red/Green	37	White/Red/Blue
4	Green	21	Orange/Green	38	Black/White/Green
5	Orange	22	BlackWhite/Red	39	White/Black/Green
6	Blue	23	White/Black/Red	40	Red/White/Green
7	White/Black	24	Red/Black/White	41	Green/White/Blue
8	Red/Black	25	Green/Black/White	42	Orange/Red/Green
9	Green/Black	26	Orange/Black/White	43	Blue/Red/Green
10	Orange/Black	27	Blue/Black/White	44	Black/White/Blue
11	Blue/Black	28	Black/Red/Green	45	White/Black/Blue
12	Black/White	29	White/Red/Green	46	Red/White/Blue
13	Red/White	30	Red/Black/Green	47	Green/Orange/Red
14	Green/White	31	Green/Black/Orange	48	Orange/Red/Blue
15	Blue/White	32	Orange/Black/Green	49	Blue/Red/Orange
16	Black/Red	33	Blue/White/Orange	50	Black/Orange/Red
17	White/Red	34	Black/White/Orange		

Product Construction:

Conductor:

- 22 AWG fully annealed, stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

- Easy to terminate
- Excellent electrical properties
- Tinned conductors provide excellent corrosion resistance
- Assists soldering applications

Compliances:

- AWM Style 2464 (CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 vertical flame test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Conductor, Unshielded

AWM Style 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)

Product Construction:

Conductor:

- 20 or 18 AWG fully annealed, stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Jacket:

- PVC, gray
- Temperature range: -20˚C to +105°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

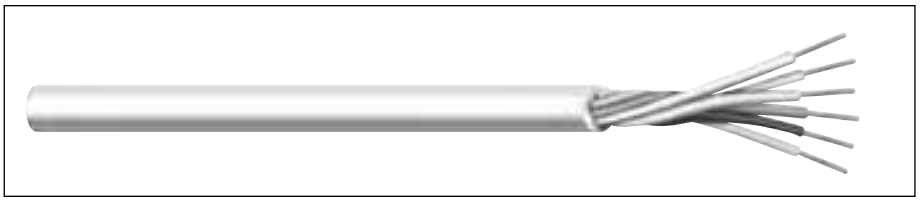
- Easy to terminate
- Excellent electrical properties
- Tinned conductors provide excellent corrosion resistance
- Assists soldering applications

Compliances:

- AWM Style 2464 (CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 vertical flame test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm		
C4117A	2	20	7/28	0.016	0.41	0.032	0.81	0.206	5.23	Black/ Red	25.0
C4118A	3	20	7/28	0.016	0.41	0.032	0.81	0.216	5.49	1	25.0
C4119A	4	20	7/28	0.016	0.41	0.032	0.81	0.235	5.97	1	25.0
C4120A	5	20	7/28	0.016	0.41	0.032	0.81	0.254	6.45	1	25.0
C4121A	7	20	7/28	0.016	0.41	0.032	0.81	0.275	6.99	1	25.0
C4122A	9	20	7/28	0.016	0.41	0.032	0.81	0.317	8.05	1	25.0
C4123A	12	20	7/28	0.016	0.41	0.032	0.81	0.354	8.99	2	25.0
C4124A	15	20	7/28	0.016	0.41	0.032	0.81	0.392	9.96	2	25.0
C4125A	2	18	16/30	0.016	0.41	0.032	0.81	0.224	5.69	Black/ Red	27.5
C4214A	2	18	16/30	0.016	0.41	0.032	0.81	0.224	5.69	1	27.5
C4126A	3	18	16/30	0.016	0.41	0.032	0.81	0.236	5.99	1	27.5
C4127A	4	18	16/30	0.016	0.41	0.032	0.81	0.258	6.55	1	27.5
C4128A	5	18	16/30	0.016	0.41	0.032	0.81	0.280	7.11	1	27.5
C4206A	6	18	16/30	0.016	0.41	0.032	0.81	0.304	7.72	1	27.5
C4129A	7	18	16/30	0.016	0.41	0.032	0.81	0.309	7.85	1	27.5
C4130A	9	18	16/30	0.016	0.41	0.032	0.81	0.358	9.09	1	27.5
C4131A	12	18	16/30	0.016	0.41	0.032	0.81	0.401	10.19	2	27.5
C4132A	15	18	16/30	0.016	0.41	0.032	0.81	0.445	11.30	2	27.5
C4133A	19	18	16/30	0.016	0.41	0.032	0.81	0.469	11.91	2	27.5
C4134A	25	18	16/30	0.016	0.41	0.032	0.81	0.549	13.94	2	27.5

*Capacitance between conductors

Color Code Chart 1 - For cables up to and including 9 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**6**	Blue
2	White	**7**	Orange
3	Red	**8**	Yellow
4	Green	**9**	Violet
5	Brown		

Color Code Chart 2 Per ICEA - For cables of 12 thru 25 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**10**	Orange/Black	**19**	Blue/Red
2	White	**11**	Blue/Black	**20**	Red/Green
3	Red	**12**	Black/White	**21**	Orange/Green
4	Green	**13**	Red/White	**22**	Black/White/Red
5	Orange	**14**	Green/White	**23**	White/Black/Red
6	Blue	**15**	Blue/White	**24**	Red/Black/White
7	White/Black	**16**	Black/Red	**25**	Green/Black/White
8	Red/Black	**17**	White/Red		
9	Green/Black	**18**	Orange/Red		

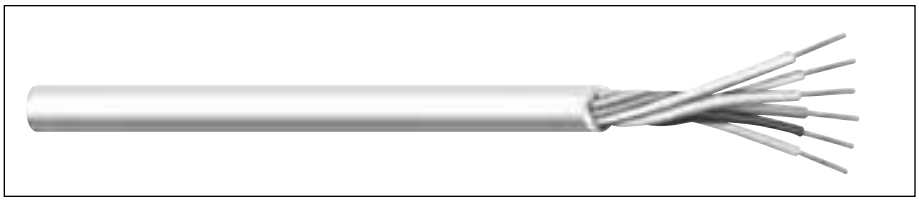
General Cable

RoHS Compliant Directive 2002/95/EC

CAROL BRAND

Multi-Conductor, Unshielded

AWM Styles 2464, 2587, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US), or NEC Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
AWM STYLE 2464, CSA TYPE AWM, CSA C/US TYPE CMG										
C4135A	2	16	19/.0117	0.021	0.53	0.032	0.81	0.268	6.81	27.0
C4136A	3	16	19/.0117	0.021	0.53	0.032	0.81	0.283	7.19	27.0
C4137A	4	16	19/.0117	0.021	0.53	0.032	0.81	0.306	7.77	27.0
C4138A	5	16	19/.0117	0.021	0.53	0.032	0.81	0.334	8.48	27.0
C4139A	7	16	19/.0117	0.021	0.53	0.032	0.81	0.364	9.25	27.0
C4140A	8	16	19/.0117	0.021	0.53	0.032	0.81	0.395	10.03	27.0
C4141A	9	16	19/.0117	0.021	0.53	0.032	0.81	0.425	10.80	27.0
C4142A	12	16	19/.0117	0.021	0.53	0.032	0.81	0.479	12.17	27.0
C4143A	15	16	19/.0117	0.021	0.53	0.032	0.81	0.530	13.46	27.0
C4144A	19	16	19/.0117	0.021	0.53	0.032	0.81	0.564	14.33	27.0
C4145A	25	16	19/.0117	0.021	0.53	0.032	0.81	0.657	16.69	27.0
AWM STYLE 2587, CSA TYPE AWM (FT4), NEC TYPE CL2**										
C4146A	2	14	19/.0147	0.032	0.81	0.032	0.81	0.334	8.48	25.0
C4147A	4	14	19/.0147	0.032	0.81	0.032	0.81	0.391	9.93	25.0
C4148A	5	14	19/.0147	0.032	0.81	0.032	0.81	0.428	10.87	25.0
C4149A	7	14	19/.0147	0.032	0.81	0.032	0.81	0.469	11.91	25.0
C4150A	2	12	19/.0185	0.032	0.81	0.032	0.81	0.370	9.40	29.4
C4151A	4	12	19/.0185	0.032	0.81	0.032	0.81	0.434	11.02	29.4

* Capacitance between conductors

Color Code Chart Per ICEA

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**10**	Orange/Black	**19**	Blue/Red
2	White	**11**	Blue/Black	**20**	Red/Green
3	Red	**12**	Black/White	**21**	Orange/Green
4	Green	**13**	Red/White	**22**	Black/White/Red
5	Orange	**14**	Green/White	**23**	White/Black/Red
6	Blue	**15**	Blue/White	**24**	Red/Black/White
7	White/Black	**16**	Black/Red	**25**	Green/Black/White
8	Red/Black	**17**	White/Red		
9	Green/Black	**18**	Orange/Red		

Product Construction:

Conductor:

- 16 thru 12 AWG fully annealed, stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Public address systems
- Intercoms
- Internal telephones
- Remote control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

- Easy to terminate
- Excellent electrical properties
- Tinned conductors provide excellent corrosion resistance
- Assists soldering applications

Compliances:

- AWM Style 2464 (CSA or UL: 80˚C, 300V)
- AWM Style 2587 (CSA: 90˚C, 600V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test
- UL Certified CL2 to Standard UL13**
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED C SP US RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Rubber, Unshielded

Product Construction:

Conductor:

- 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded rubber
- Color code: See chart below

Jacket:

- Rubber, black
- Temperature range: -20˚C to +60˚C

Applications:

- Energy management systems
- Control circuits
- Fire alarm control
- Broadcast and studio requirements
- Suggested voltage rating: 350 volts

Features:

- Excellent impact resistance
- High level of abrasion resistance
- High flexibility
- Excellent mechanical strength
- Excellent moisture resistance

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

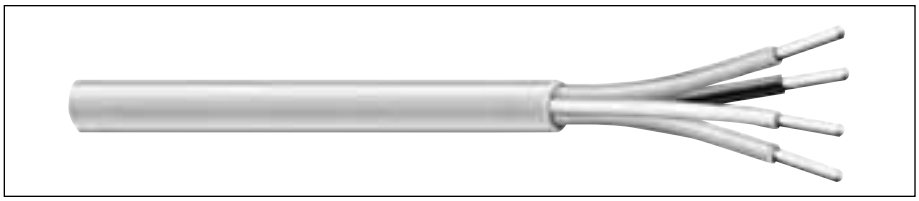
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C3602	2	20	26/34	0.020	0.51	0.035	0.89	0.230	5.84
C3603	3	20	26/34	0.020	0.51	0.035	0.89	0.255	6.48
C3604	4	20	26/34	0.020	0.51	0.035	0.89	0.260	6.60
C3605	5	20	26/34	0.020	0.51	0.035	0.89	0.300	7.62
C3606	6	20	26/34	0.020	0.51	0.035	0.89	0.315	8.00
C3607	7	20	26/34	0.020	0.51	0.035	0.89	0.347	8.81
C3608	8	20	26/34	0.020	0.51	0.035	0.89	0.260	9.14
C3610	10	20	26/34	0.020	0.51	0.035	0.89	0.410	10.41

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Blue
6	Brown
7	Yellow
8	Orange
9	Gray
10	Violet

Power-Limited Tray Cable, Unshielded

NEC Type PLTC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C0431A	2	22	7/30	0.013	0.33	0.037	0.94	0.190	4.83	27.5
C0432A	3	22	7/30	0.013	0.33	0.037	0.94	0.198	5.03	27.5
C0433A	2	20	7/28	0.013	0.33	0.037	0.94	0.206	5.23	30.5
C0434A	3	20	7/28	0.013	0.33	0.037	0.94	0.216	5.49	30.5
C0435A	2	18	16/30	0.015	0.38	0.037	0.94	0.226	5.74	31.5
C0436A	3	18	16/30	0.015	0.38	0.037	0.94	0.237	6.02	31.5
C0444A	4	18	16/30	0.015	0.38	0.037	0.94	0.257	6.53	31.5
C0437A	2	16	19/.0117	0.013	0.33	0.037	0.94	0.243	6.17	37.0
C0438A	3	16	19/.0117	0.013	0.33	0.037	0.94	0.250	6.35	37.0
C0439A	2	14	19/.0147	0.013	0.33	0.042	1.07	0.288	7.32	40.5
C0440A	3	14	19/.0147	0.013	0.33	0.042	1.07	0.290	7.37	40.5
C0441A	2	12	19/.0185	0.013	0.33	0.042	1.07	0.315	8.00	44.0

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20˚C to +105°C

Applications:

- Cable tray installations
- Power limited circuits
- Intercom systems
- Business machines
- Cash registers
- Automatic valve control systems
- Irrigation systems
- Suggested voltage rating: 300 volts
- Burglar alarms

Features:

- Sunlight-resistant PVC jacket
- UL rated for cable tray use

Compliances:

- NEC Article 725 Power-Limited Tray Cable (UL: 105°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Meets UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

UL LISTED

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Conductor, Foil Shield

NEC Type CL2 and CM (UL) c(UL) CMH

Product Construction:

Conductor:

- 24 thru 12 AWG fully annealed solid or stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene
- Premium-grade, color-coded polypropylene
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +75°C

Applications:

- Recording studios and sound stages
- Broadcast and sound systems
- Computers
- Industrial equipment control
- Suggested voltage rating: 300 or 600 volts

Features:

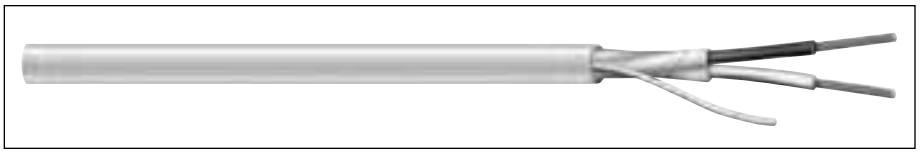
- Excellent electrical properties
- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Good flexibility

Compliances:

- UL Style 2092 (UL: 60°C, 300V)
- UL Style 2093 (UL: 60°C, 300V)
- UL Style 2094 (UL: 60°C, 300V)
- UL Style 2106 (UL: 60°C, 600V)
- UL Style 2107 (UL: 60°C, 600V)
- UL Style 2464 (UL: 80°C, 300V)
- NEC Article 725 Type CL2 (UL: 75°C)
- NEC Article 800 Type CM (UL: 75°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- CSA CMH (CSA: 60°C)
- Passes CSA CMH Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.*** pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL STYLE 2092, CM (UL) C(UL) CMH, 300V											
C2513A	2	24	7/32	0.016	0.41	0.026	0.66	0.167	4.24	18.0	33.0
C2514A	2	22	7/30	0.016	0.41	0.020	0.51	0.167	4.24	20.0	36.0
C2524A	2	20	7/28	0.016	0.41	0.020	0.51	0.183	4.65	22.5	40.5
C2534A	2	18	16/30	0.016	0.41	0.020	0.51	0.201	5.21	25.5	45.5
Polyethylene Insulation, Color Code Chart #1											
UL STYLE 2093, CM (UL) c(UL) CMH, 300V											
C2526A	3	22	7/30	0.016	0.41	0.030	0.76	0.196	4.98	18.5	33.5
C2528A	3	20	7/28	0.016	0.41	0.030	0.76	0.210	5.34	21.0	37.5
C2525A	3	20	7/28	0.016	0.41	0.030	0.76	0.213	5.41	21.0	37.0
C2535A	3	18	16/30	0.016	0.41	0.020	0.51	0.213	5.56	23.0	41.0
Polyethylene Insulation, Color Code Chart #1											
UL STYLE 2094, CM (UL) c(UL) CMH, 300V											
C2523A	4	22	7/30	0.016	0.41	0.030	0.76	0.213	5.41	18.5	33.5
C2555A	4	20	7/28	0.016	0.41	0.030	0.76	0.234	5.94	20.5	36.5
Polyethylene Insulation, Color Code Chart #1											
UL STYLE 2106, CSA, 600V											
C2536A*	2	16	19/.0117	0.031	0.79	0.032	0.81	0.307	7.80	20.0	36.0
C2538A**	2	14	19/.0147	0.031	0.79	0.032	0.81	0.335	8.51	23.0	42.0
C2539A**	2	12	19/.0185	0.032	0.81	0.032	0.81	0.376	9.55	26.0	46.0
* CM (UL) c(UL) CMH ** CL2 Polyethylene Insulation, Color Code Chart #1											
UL STYLE 2107, CM (UL) c(UL) CMH, 600V											
C2537A	3	16	19/.0117	0.031	0.79	0.032	0.81	0.325	8.26	19.0	34.0
Polyethylene Insulation, Color Code Chart #1											
UL STYLE 2464, CL2/CM (UL) c(UL) CMH, 300V											
C2540A	2	20	7/28	0.013	0.33	0.032	0.81	0.194	4.9	49.7	89.5
PVC Insulation, Color Code Chart #2											
CM (UL) c(UL) CMH, 300V											
C2515A	2	22	Solid	0.007	0.18	0.020	0.51	0.124	3.15	30.0	55.0
C2516A	2	22	7/30	0.008	0.20	0.020	0.51	0.137	3.48	28.0	51.0
C2517A	3	22	7/30	0.008	0.20	0.020	0.51	0.144	3.36	25.0	45.0
Polypropylene Insulation, Color Code Chart #2 ***A – Capacitance between conductors ***B – Capacitance between one conductor and other conductors connected to shield											

Color Code Chart 1

NO. OF COND.	COLOR
1	Black
2	Natural
3	Red
4	Green

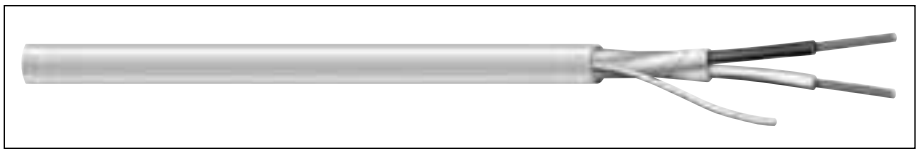
Color Code Chart 2

NO. OF COND.	COLOR
1	Black
2	Red
3	Clear

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Foil Shield

UL 2092, NEC Type CM (UL) c(UL) CMH



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL STYLE 2092, CM (UL) C(UL) CMH, 300V											
C2518A	2	22	7/30	0.016	0.41	0.026	0.66	0.181	4.60	20.0	36.0
C2519A	2	20	7/28	0.016	0.41	0.028	0.71	0.201	5.11	21.5	38.5
C2521A	2	18	16/30	0.018	0.46	0.028	0.71	0.229	5.82	23.5	43.0
Polyethylene Insulation, Color Code Chart #1											
CM (UL) c(UL) CMH, 300V											
C2520A	2	22	7/30	0.008	0.20	0.020	0.51	0.137	3.48	28.0	50.0

Polypropylene Insulation, Color Code Chart #2
*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF COND.	COLOR
1	Black
2	Natural

Color Code Chart 2

NO. OF COND.	COLOR
1	Black
2	Red

Product Construction:

Conductor:
- 22 thru 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded polyethylene or polypropylene
- Color code: See charts below

Shield:
- 100% aluminum/polyester foil “bonded” to jacket, foil facing in
- Stranded tinned copper drain wire

Jacket:
- PVC, gray
- Temperature range: -20°C to +75°C

Applications:
- 100% shielded cable where RF shielding is required
- Control circuits
- Data and signal transmission
- Computer interconnections
- Suggested voltage rating: 300 volts

Features:
- The jacket and shield are “bonded” for ease of removal on automatic stripping equipment

Compliances:
- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2092 (UL: 60°C, 300V)
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- CSA CMH (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Passes CSA CMH Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED CMG Certified Canadian Standard Association Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Foil Shield

UL 2464, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

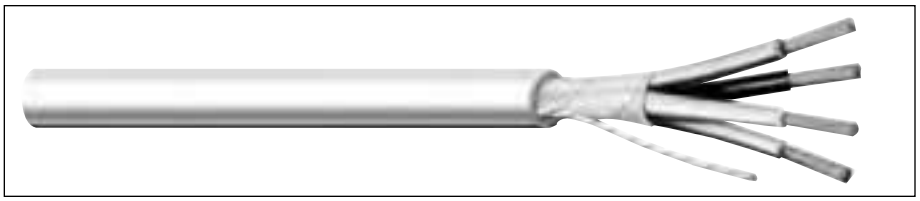
- Audio, broadcast, instrumentation and sound systems
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C2543A	4	18	19/30	0.010	0.25	0.032	0.81	0.238	6.05	47	84.5

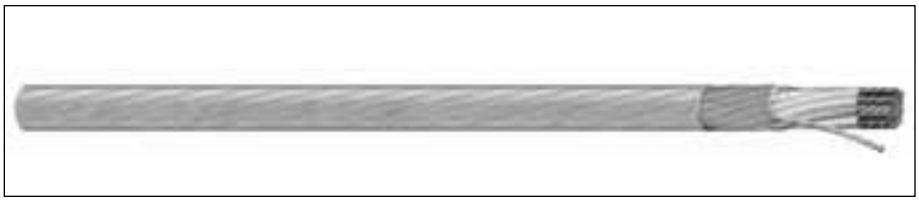
*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green

Multi-Conductor, Foil Shield

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8106	3	18	19/30 TC	0.007	0.18	0.014	0.36	0.178	4.27	54.0	95.0
C8114	4	18	19/30 TC	0.007	0.18	0.014	0.36	0.185	4.70	30.0	55.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green

Product Construction:

Conductor:
- 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded FEP
- Color code: See chart below

Separator:
- Polyester tape with 25% overlap

Shield:
- 100% Flexfoil® aluminum/polyester foil with 25% overlap
- Stranded tinned copper drain wire

Jacket:
- FEP, red or as requested
- Temperature range: -40°C to +200°C

Applications:
- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:
- Fire-retardant, low-smoke jacket
- Suitable for outdoor and direct burial
- Chemical-resistant

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Conductor, Foil Shield

NEC Type CMP (UL) c(UL) and/or CL2P

Product Construction:

Conductor:

- 22 thru 16 AWG fully annealed stranded tinned or bare copper per ASTM B-3, B-8 or B-33
- Class B stranding per ASTM B-8

Insulation:

- Premium-grade, color-coded Flexguard®
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil, with 25% overlap
- Stranded tinned copper drain wire

Jacket:

- Fluoropolymer, natural
- Temperature range: -20°C to +75°C
- Sequential footage marked to facilitate installations
- Stranded tinned copper drain wire
- Includes ripcord

Applications:

- Intercom systems
- Background music
- Audio systems
- Power-limited control circuits
- Suggested voltage rating: 150 volts

Compliances:

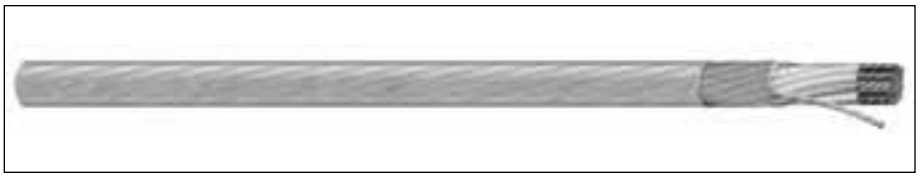
- NEC Article 725 (UL: 75°C, 150V)
- NEC Article 800 (UL: 75°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Abrasion-, chemical- and water-resistant jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.** pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG CONDUCTORS											
C3154*	2	22	7/30 TC	0.006	0.15	0.010	0.25	0.103	2.62	51.0	92.0
C3310*	3	22	7/30 TC	0.006	0.15	0.010	0.25	0.116	2.95	45.0	81.0
C3155*	4	22	7/30 TC	0.006	0.15	0.010	0.25	0.130	3.30	45.0	81.0
C3311*	6	22	7/30 TC	0.006	0.15	0.010	0.25	0.152	3.86	40.0	73.0
20 AWG CONDUCTORS											
C3320*	2	20	7/28 TC	0.007	0.18	0.010	0.25	0.120	3.05	53.0	96.0
C3321*	3	20	7/28 TC	0.007	0.18	0.010	0.25	0.136	3.45	46.0	84.0
C3322*	4	20	7/28 TC	0.007	018	0.010	0.25	0.153	3.89	46.0	84.0
18 AWG CONDUCTORS											
C3162	2	18	7/26 BC	0.008	0.20	0.010	0.25	0.152	3.86	54.0	98.0
C3164	3	18	7/26 BC	0.008	0.20	0.010	0.25	0.158	4.01	47.0	85.0
C3163	4	18	7/26 BC	0.008	0.20	0.010	0.25	0.178	4.52	47.0	85.0
C3166	6	18	7/26 BC	0.008	0.20	0.010	0.25	0.212	5.38	43.0	76.0
C3180	8	18	7/26 BC	0.008	0.20	0.010	0.25	0.229	5.82	43.0	76.0
C3181	10	18	7/26 BC	0.008	0.20	0.010	0.25	0.273	6.93	43.0	76.0
C3182	12	18	7/26 BC	0.008	0.20	0.012	0.30	0.285	7.24	43.0	76.0
16 AWG CONDUCTORS											
C3169	2	16	19/.0117 BC	0.008	0.20	0.010	0.25	0.181	4.60	62.0	112.0
C3340	3	16	7/.0192 BC	0.008	0.20	0.010	0.25	0.185	4.70	52.0	93.0
C3341	4	16	7/.0192 BC	0.008	0.20	0.010	0.25	0.210	5.16	52.0	93.0

*CL2P only
**A – Capacitance between conductors
**B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow
9	Violet
10	Gray
11	Pink
12	Tan

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

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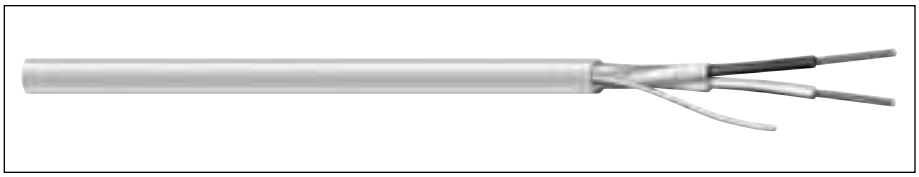
CAROL BRAND

General Cable

Multi-Conductor, Foil Shield

NEC Type CMP (UL) c(UL) and CL3P



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG CONDUCTORS											
C3158	2	22	7/30 TC	0.008	0.20	0.015	0.38	0.127	3.23	51.0	91.0
C3159	4	22	7/30 TC	0.008	0.20	0.015	0.38	0.146	3.71	45.0	81.0
18 AWG CONDUCTORS											
C3060	2	18	Solid BC	0.008	0.20	0.015	0.38	0.148	3.76	67.0	120.0
C3061	4	18	Solid BC	0.008	0.20	0.015	0.38	0.171	4.34	58.0	104.0
C3062	2	18	7/26 BC	0.008	0.20	0.015	0.38	0.164	4.17	61.0	110.0
C3064	3	18	7/26 BC	0.008	0.20	0.015	0.38	0.169	4.29	53.0	96.0
C3063	4	18	7/26 BC	0.008	0.20	0.015	0.38	0.185	4.70	53.0	96.0
C3065	6	18	7/26 BC	0.010	0.25	0.015	0.38	0.230	5.84	48.0	86.0
C3183	10	18	7/26 BC	0.012	0.20	0.015	0.38	0.310	7.87	47.0	84.0
C3184	12	18	7/26 BC	0.010	0.25	0.015	0.38	0.308	7.82	52.5	94.6
16 AWG CONDUCTORS											
C3068	2	16	19/.0117 BC	0.009	0.23	0.015	0.38	0.187	4.75	75.0	134.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow
9	Violet
10	Gray
11	Pink
12	Tan

Product Construction:

Conductor:

- 22 thru 16 AWG fully annealed stranded tinned or bare copper per ASTM B-3, B-8 or B-33

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Flexguard® PVC, natural
- Temperature range: 0°C to +75°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- Intercom systems
- Background music
- Audio systems
- Power-limited control circuits
- Suggested voltage rating: 150 volts

Compliances:

- NEC Article 725 (UL: 75°C, 150V)
- NEC Article 800 (UL: 75°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Flexible
- Easy to terminate

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Conductor, Foil Shield

Various AWM Styles, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US), NEC Type CL2

Product Construction:

Conductor:
- 24 thru 12 AWG fully annealed solid or stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded polypropylene
- Color code: See charts below

Shield:
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

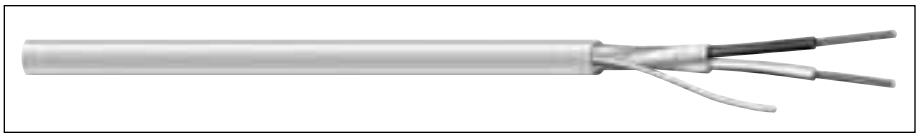
Jacket:
- PVC, gray
- Temperature range: -20°C to +80°C

Applications:
- Recording studios and sound stages
- Broadcast and sound systems
- Computers
- Industrial equipment control
- Suggested voltage rating: 300 or 600 volts

Features:
- Excellent electrical properties
- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Good flexibility

Compliances:
- AWM Style 20251 (CSA: 60˚C, 150V, 300V peak)
- CSA Type AWM (80˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC Type CL2/CEC Type CMG (CSA: 80˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
AWM STYLE 20251, CSA TYPE AWM, CSA C/US TYPE CMG											
C4152A	2	24	7/32	0.016	0.41	0.026	0.66	0.167	4.24	23.0	42.0
C4153A	2	22	7/30	0.016	0.41	0.026	0.66	0.179	4.55	21.0	38.0
C4154A	2	20	7/28	0.016	0.41	0.030	0.76	0.203	5.16	22.0	40.0
C4155A	2	18	16/30	0.018	0.46	0.030	0.76	0.233	5.92	24.0	43.0
C4156A	3	22	7/30	0.016	0.41	0.030	0.76	0.196	4.98	25.0	45.0
C4157A	3	20	7/28	0.016	0.41	0.030	0.76	0.210	5.33	27.0	51.0
C4158A	3	20	7/28	0.016	0.41	0.030	0.76	0.213	5.41	29.0	52.0
C4159A	3	18	16/30	0.018	0.46	0.030	0.76	0.247	6.27	22.0	40.0
C4160A	4	22	7/30	0.016	0.41	0.030	0.76	0.213	5.41	23.0	42.0
C4161A	4	20	7/28	0.016	0.41	0.030	0.76	0.234	5.94	26.0	74.0
Color Code Chart #1											
AWM STYLE 2106, CSA TYPE AWM, CSA C/US TYPE CMG											
C4162A	2	16	19/.0117	0.032	0.81	0.032	0.81	0.307	7.80	27.0	49.0
C4165A	3	16	19/.0117	0.032	0.81	0.032	0.81	0.326	8.28	26.0	46.0
Color Code Chart #1											
NEC TYPE CL2, AWM STYLE 2464, CSA TYPE AWM											
C4163A	2	14	41/30	0.020	0.51	0.032	0.81	0.298	7.57	31.0	56.0
Color Code Chart #3											
NEC TYPE CL2, AWM STYLE 2106, CSA TYPE AWM											
C4164A	2	12	19/.0185	0.032	0.81	0.040	1.02	0.390	9.90	35.0	63.0
Color Code Chart #1											
AWM STYLE 20251, CSA TYPE AWM, CSA C/US TYPE CMG											
C4167A	2	22	Solid	0.007	0.18	0.020	0.51	0.124	3.15	40.0	76.0
C4168A	2	22	7/30	0.008	0.20	0.020	0.51	0.137	3.48	34.0	67.0
C4169A	3	22	7/30	0.008	0.20	0.020	0.51	0.144	3.66	32.0	60.0

Polyethylene Insulation, Color Code Chart #2
*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF COND.	COLOR
1	Black
2	Natural
3	Red
4	Green

Color Code Chart 2

NO. OF COND.	COLOR
1	Black
2	Red
3	Clear

Color Code Chart 3

NO. OF COND.	COLOR
1	Black
2	White

General Cable

RoHS Compliant Directive 2002/95/EC

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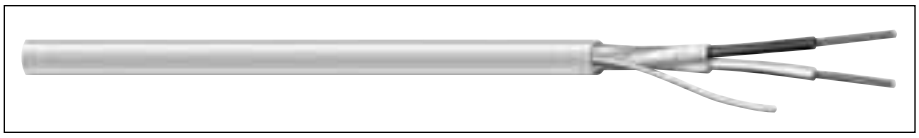
CAROL BRAND

Multi-Conductor, Foil Shield

AWM Styles 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US), or NEC Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		COLOR CODE	NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm		A	B
AWM STYLE 2464, CSA TYPE AWM, CSA C/US TYPE CMG												
C4192A	2	22	7/30	0.009	0.23	0.030	0.76	0.165	4.19	1	47.0	85.0
C4210A	2	22	7/30	0.009	0.23	0.032	0.81	0.165	4.19	2	47.0	85.0
C4193A	3	22	7/30	0.009	0.23	0.030	0.76	0.169	4.29	2	43.0	76.0
C4194A	4	22	7/30	0.009	0.23	0.030	0.76	0.181	4.60	2	43.0	76.0
C4207A	6	22	7/30	0.009	0.23	0.032	0.81	0.204	5.18	2	43.0	76.0
C4208A	8	22	7/30	0.009	0.23	0.032	0.81	0.223	5.66	2	43.0	76.0
C4166A	2	20	7/28	0.012	0.30	0.030	0.76	0.187	4.75	1	46.0	83.0
C4211A	2	20	7/28	0.012	0.30	0.032	0.81	0.191	4.85	2	46.0	83.0
C4195A	3	20	7/28	0.012	0.30	0.030	0.76	0.200	5.08	2	42.0	75.0
C4196A	4	20	7/28	0.012	0.30	0.030	0.76	0.216	5.49	2	42.0	75.0
C4197A	2	18	16/30	0.012	0.30	0.030	0.76	0.203	5.16	1	51.0	92.0
C4212A	2	18	16/30	0.012	0.30	0.032	0.81	0.205	5.20	2	51.0	92.0
C4198A	3	18	16/30	0.012	0.30	0.030	0.76	0.214	5.44	2	46.0	83.0
C4204A	4	18	16/30	0.012	0.30	0.032	0.81	0.236	5.99	2	46.0	83.0
C4205A	6	18	16/30	0.012	0.30	0.032	0.81	0.271	6.88	2	46.0	83.0
C4199A	2	16	19/.0117	0.010	0.25	0.030	0.76	0.218	5.54	1	62.0	112.0
C4213A	2	16	19/.0117	0.010	0.25	0.032	0.81	0.219	5.56	2	62.0	112.0
C4200A	3	16	19/.0117	0.010	0.25	0.030	0.76	0.230	5.84	2	58.0	104.0
AWM STYLE 2464, CSA TYPE AWM (FT4), NEC TYPE CL2*												
C4201A	2	14	19/.0147	0.014	0.36	0.030	0.76	0.268	6.81	1	60.0	107.0
C4215A	2	14	19/.0147	0.014	0.36	0.030	0.76	0.268	6.81	2	60.0	107.0
C4202A	2	12	19/.0185	0.014	0.36	0.030	0.76	0.302	7.67	1	64.0	116.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF COND.	COLOR
1	Black
2	Red

Color Code Chart 2

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Recording studios and sound stages
- Broadcast and sound systems
- Industrial equipment control
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Good flexibility

Compliances:

- AWM Style 2464 (UL or CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test
- UL Certified CL2 to Standard UL 13*

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED C SP US RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Foil Shield

AWM Style 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +105˚C

Applications:

- Computer interconnections
- Data transmission
- Control circuits
- Industrial equipment control
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

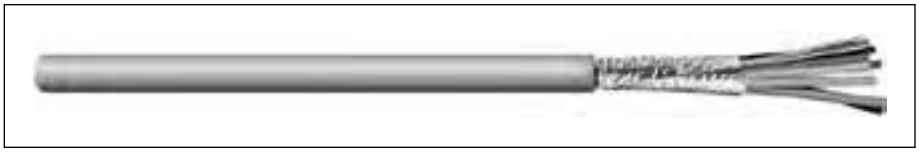
- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Good flexibility

Compliances:

- AWM Style 2464 (UL or CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20˚C		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
AWM STYLE 2464, CSA TYPE AWM, CSA C/US TYPE CMG													
C4216A	2	24	7/32	0.010	0.25	0.032	0.81	0.157	3.99	26.0	18.0	40.0	72.0
C4217A	3	24	7/32	0.010	0.25	0.032	0.81	0.164	4.17	26.0	18.0	36.0	66.0
C4218A	4	24	7/32	0.010	0.25	0.032	0.81	0.175	4.45	26.0	18.0	36.0	66.0
C4219A	5	24	7/32	0.010	0.25	0.032	0.81	0.188	4.78	26.0	16.0	36.0	66.0
C4220A	6	24	7/32	0.010	0.25	0.032	0.81	0.201	5.11	26.0	16.0	34.0	61.0
C4221A	7	24	7/32	0.010	0.25	0.032	0.81	0.201	5.11	26.0	16.0	34.0	61.0
C4222A	8	24	7/32	0.010	0.25	0.032	0.81	0.215	5.46	26.0	16.0	34.0	61.0
C4223A	9	24	7/32	0.010	0.25	0.032	0.81	0.228	5.79	26.0	16.0	34.0	61.0
C4224A	10	24	7/32	0.010	0.25	0.032	0.81	0.245	6.22	26.0	14.0	34.0	61.0

Color Code Chart #1

C4225A	15	24	7/32	0.010	0.25	0.032	0.81	0.276	7.01	26.0	14.0	34.0	61.0
C4226A	20	24	7/32	0.010	0.25	0.032	0.81	0.303	7.70	26.0	14.0	34.0	61.0
C4227A	25	24	7/32	0.010	0.25	0.032	0.81	0.333	8.46	26.0	12.0	34.0	61.0
C4228A	30	24	7/32	0.010	0.25	0.032	0.81	0.351	8.92	26.0	12.0	34.0	61.0
C4229A	40	24	7/32	0.010	0.25	0.032	0.81	0.391	9.93	26.0	12.0	34.0	61.0
C4230A	50	24	7/32	0.010	0.25	0.032	0.81	0.439	11.15	26.0	10.0	34.0	61.0

Color Code Chart #2

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1 – For cables up to and including 10 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**6**	Blue
2	White	**7**	Orange
3	Red	**8**	Yellow
4	Green	**9**	Violet
5	Brown	**10**	Gray

Color Code Chart 2 Per ICEA – For cables of 15 to 50 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**18**	Orange/Red	**35**	White/Red/Orange
2	White	**19**	Blue/Red	**36**	Orange/White/Blue
3	Red	**20**	Red/Green	**37**	White/Red/Blue
4	Green	**21**	Orange/Green	**38**	Black/White/Green
5	Orange	**22**	Black/White/Red	**39**	White/Black/Green
6	Blue	**23**	White/Black/Red	**40**	Red/White/Green
7	White/Black	**24**	Red/Black/White	**41**	Green/White/Blue
8	Red/Black	**25**	Green/Black/White	**42**	Orange/Red/Green
9	Green/Black	**26**	Orange/Black/White	**43**	Blue/Red/Green
10	Orange/Black	**27**	Blue/Black/White	**44**	Black/White/Blue
11	Blue/Black	**28**	Black/Red/Green	**45**	White/Black/Blue
12	Black/White	**29**	White/Red/Green	**46**	Red/White/Blue
13	Red/White	**30**	Red/Black/Green	**47**	Green/Orange/Red
14	Green/White	**31**	Green/Black/Orange	**48**	Orange/Red/Blue
15	Blue/White	**32**	Orange/Black/Green	**49**	Blue/Red/Orange
16	Black/Red	**33**	Blue/White/Orange	**50**	Black/Orange/Red
17	White/Red	**34**	Black/White/Orange		

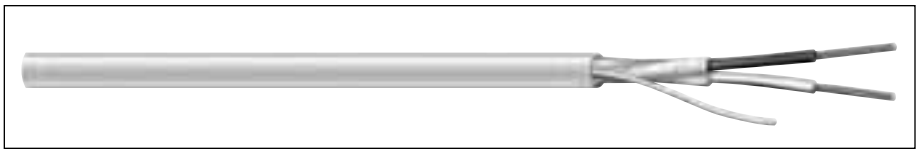
General Cable

RoHS Compliant Directive 2002/95/EC

CAROL BRAND

Power-Limited Tray Cable, Foil Shield

NEC Type PLTC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C0450A	2	22	7/30	0.013	0.33	0.037	0.94	0.191	4.85	43.0	77.5
C0451A	3	22	7/30	0.013	0.33	0.037	0.94	0.199	5.05	39.5	71.0
C0452A	2	20	7/28	0.013	0.33	0.037	0.94	0.207	5.26	50.0	89.5
C0453A	3	20	7/28	0.013	0.33	0.037	0.94	0.217	5.51	45.0	81.0
C0454A	2	18	16/30	0.015	0.38	0.037	0.94	0.227	5.77	51.5	92.5
C0455A	3	18	16/30	0.015	0.38	0.037	0.94	0.238	6.04	46.5	83.5
C0456A	2	16	19/.0117	0.013	0.33	0.037	0.94	0.243	6.17	64.0	115.5
C0457A	3	16	19/.0117	0.013	0.33	0.037	0.94	0.255	6.48	56.5	102.0
C0458A	2	14	19/.0147	0.013	0.33	0.042	1.07	0.288	7.32	72.5	131.0
C0459A	3	14	19/.0147	0.015	0.33	0.042	1.07	0.298	7.57	60.0	108.0
C0460A	2	12	19/.0185	0.013	0.33	0.042	1.07	0.315	8.00	80.5	145.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Cable tray installations
- Power limited circuits
- Intercom systems
- Business machines
- Cash registers
- Industrial control systems
- Petrochemical refineries
- Suggested voltage rating: 300 volts
- Burglar alarms

Features:

- Sunlight-resistant PVC jacket
- Good weather resistance
- UL tray cable rated

Compliances:

- NEC Article 725 Power-Limited Tray Cable (UL: 105°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED Underwriters Laboratories Inc. Designed to Meet UL Vertical Tray Flame Test RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Spiral Shield

UL 2095, NEC Type CL2 and CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 thru 16 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See charts below

Shield:

- 85% spiral tinned copper

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Electronic circuits where RF shielding is required
- Radio transmitters
- Sound systems
- Recording studios
- Suggested voltage rating: 300 volts

Features:

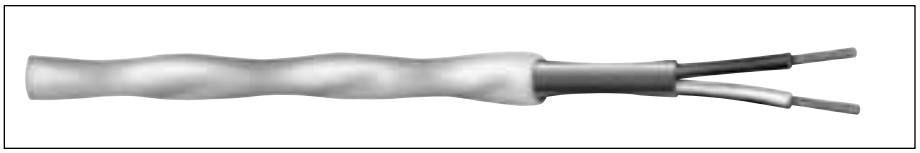
- Spiral shield allows ease of "pigtail soldering"
- Maximum flexibility

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2095 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test
- NEC Article 725 Type CL2 (UL: 75°C)

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL STYLE 2095, CM (UL) c(UL), CSA CMG, 300V											
C2882A	2	22	7/30	0.015	0.38	0.032	0.81	0.197	5.00	40.0	72.0
C2888A	2	20	7/28	0.016	0.41	0.032	0.81	0.215	5.46	44.0	80.2
Color Code Chart #1											
CL2/CM (UL) c(UL), CSA CMG, 300V											
C1335A	3	22	7/30	0.015	0.38	0.032	0.81	0.206	5.23	37.0	67.0
C1337A	4	22	7/30	0.015	0.38	0.032	0.81	0.222	5.64	37.0	67.0
C1341A	6	22	7/30	0.015	0.38	0.032	0.81	0.257	6.53	34.5	62.0
C2768A	3	18	7/26	0.020	0.51	0.032	0.81	0.266	6.76	41.0	74.0
Color Code Chart #1											
CM (UL) c(UL), CSA CMG, 300V											
C2892A	2	18	16/30	0.016	0.41	0.032	0.81	0.252	6.40	49.5	89.0
C2895A	2	16	19/.0117	0.016	0.41	0.032	0.81	0.265	6.73	58.0	104.0
Color Code Chart #2											

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green
5	Yellow
6	Blue

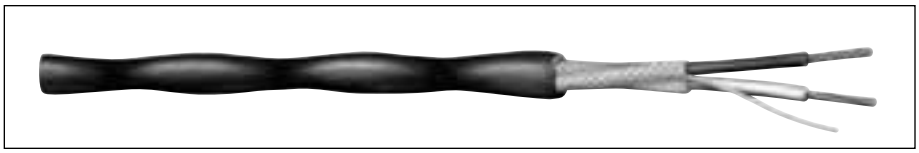
Color Code Chart 2

CATALOG NUMBER	CONDUCTOR	COLOR
C2892A	1 2	White Red
C2895A	1 2	White Black

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Braid Shield

NEC Type CL2 and CM(UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C2676A	2	22	Solid	0.015	0.38	0.032	0.81	0.209	5.31	38.6	69.4
C2677A	2	22	7/30	0.015	0.38	0.032	0.81	0.211	5.36	39.3	70.7

A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red

Product Construction:

Conductor:

- 22 AWG fully annealed solid or stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:

- 88% tinned copper braid
- Stranded or solid tinned copper drain wire

Jacket:

- PVC, black
- Temperature range: -20°C to +75°C

Applications:

- Electronic circuits where RF shielding is required
- Radio transmitters
- Sound systems
- Recording studios
- Good flexibility
- Excellent shielding for noise reduction
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- NEC Article 725 Type CL2 (UL: 75°C)

Packaging:

- Please contact Customer Service for packaging and color options

Multi-Conductor, Braid Shield

UL 2092, 2093, 2094, NEC Type CM (UL) c(UL) CMH

Product Construction:

Conductor:

- 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 80% tinned copper braid
- Mylar wrap under braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +75°C

Applications:

- Electronic circuits where RF shielding is required
- Video interconnect
- Broadcast and studio
- Sound systems
- Suggested voltage rating: 300 volts

Features:

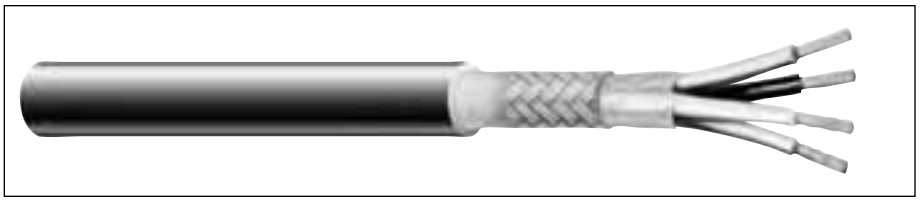
- Low capacitance
- Lightweight
- Excellent shielding for noise reduction

Compliances:

- NEC Article 800 Type CM/CMH (UL: 75°C)
- AWM style 2092 (UL: 60°C, 300V)
- AWM style 2093 (UL: 60°C, 300V)
- AWM style 2094 (UL: 60°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL VW-1 Vertical Wire Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
AWM STYLE 2092, CM (UL) c(UL) CMH, 300V											
C1642A	2	20	26/34	0.016	0.38	0.029	0.74	0.226	5.74	24.0	43.0
AWM STYLE 2093, CM (UL) c(UL) CMH, 300V											
C1643A	3	20	26/34	0.016	0.38	0.029	0.74	0.236	5.99	22.0	40.0
AWM STYLE 2094, CM (UL) c(UL) CMH 300V											
C1644A	4	20	26/34	0.016	0.38	0.029	0.74	0.255	6.48	22.0	39.0
C1645A	5	20	26/34	0.016	0.38	0.029	0.74	0.274	6.96	22.0	39.0
C1646A	6	20	26/34	0.016	0.38	0.029	0.74	0.290	7.37	20.0	36.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Blue

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL VW-1 Vertical Wire Flame Test
Underwriters Laboratories Inc.

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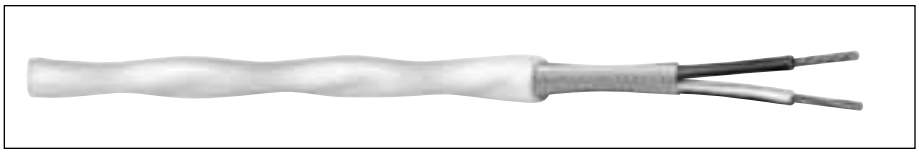
CAROL BRAND

Multi-Conductor, Braid Shield

UL 2095, NEC Type CM (UL) c(UL)



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C2679A	2	22	7/30	0.015	0.38	0.032	0.81	0.212	5.38	40.0	72.0
C2678A	3	22	7/30	0.015	0.38	0.032	0.81	0.221	5.61	37.0	67.0
C2680A	4	22	7/30	0.015	0.38	0.032	0.81	0.237	6.02	37.0	67.0
C2681A	2	20	7/28	0.016	0.41	0.032	0.81	0.230	5.84	44.0	80.0
C1332A	3	20	7/28	0.016	0.41	0.032	0.81	0.240	6.10	40.0	72.0
C2683A	4	20	7/28	0.016	0.41	0.032	0.81	0.259	6.58	40.0	73.0
C2686A	2	18	16/30	0.016	0.41	0.032	0.81	0.252	6.40	49.0	89.0
C2687A	3	18	16/30	0.016	0.41	0.032	0.81	0.264	6.71	45.0	80.5
C2688A	4	18	16/30	0.016	0.41	0.032	0.81	0.286	7.26	45.0	80.5
C2689A	2	16	19/29	0.020	0.51	0.030	0.76	0.280	7.11	51.0	91.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green

Product Construction:

Conductor:
- 22 thru 16 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:
- 75% tinned copper braid

Jacket:
- PVC, gray
- Temperature range: -20°C to +80°C

Applications:
- Electronic circuits where RF shielding is required
- Radio transmitters
- Sound systems
- Recording studios
- Provides good flexibility
- Excellent shielding for noise reduction
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2095 (UL: 80°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- CSA CMG (CSA: 60°C)
- Passes CSA CMG Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED
Certified Canadian Standard Association
Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.
RoHS Compliant Directive 2002/95/EC
General Cable

Multi-Conductor, Braid Shield

MIL-W-16878 Type B

Product Construction:

Conductor:

- 28 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC per MIL-W-16878 Type B
- Color code: See chart below

Shield:

- 90% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +90°C

Applications:

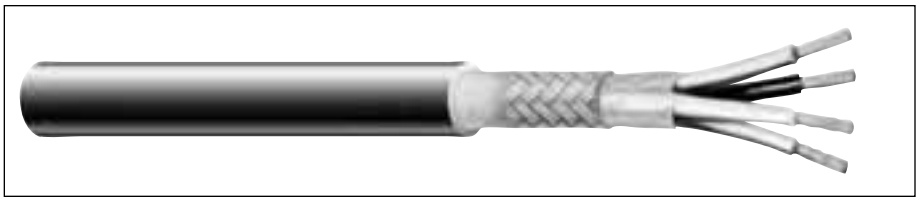
- Electronic circuits where RF shielding is required
- Remote control for studio equipment
- Sound systems
- Provides good flexibility
- Excellent shielding for noise reduction
- Suggested voltage rating: 600 volts
- Non QPL

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C6500A	2	28	7/36	0.010	0.28	0.016	0.41	0.130	3.30	34.0	61.0
C6501A	3	28	7/36	0.010	0.28	0.016	0.41	0.135	3.30	32.5	58.5
C6502A	4	28	7/36	0.010	0.28	0.016	0.41	0.145	3.68	32.5	58.5
C6503A	6	28	7/36	0.010	0.28	0.019	0.48	0.172	4.37	30.5	55.0
C6504A	8	28	7/36	0.010	0.28	0.021	0.53	0.187	4.75	30.5	55.0
C6505A	10	28	7/36	0.010	0.28	0.021	0.53	0.212	5.38	30.5	55.0
C6506A	12	28	7/36	0.010	0.28	0.021	0.53	0.217	5.51	30.5	55.0
C6507A	15	28	7/36	0.010	0.28	0.021	0.53	0.237	6.01	30.5	55.0
C6508A	20	28	7/36	0.010	0.28	0.021	0.53	0.259	6.58	30.5	55.0

*A – Capacitance between conductors

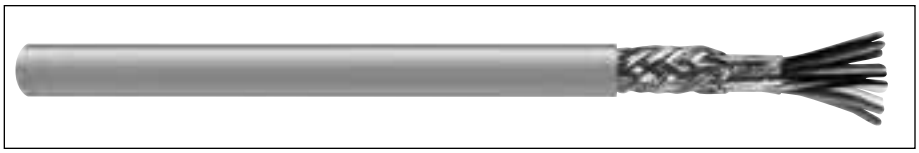
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**8**	Red/Black	**15**	Blue/White
2	White	**9**	Green/Black	**16**	Black/Red
3	Red	**10**	Orange/Black	**17**	White/Red
4	Green	**11**	Blue/Black	**18**	Orange/Red
5	Orange	**12**	Black/White	**19**	Blue/Red
6	Blue	**13**	Red/White	**20**	Red/Green
7	White/Black	**14**	Green/White		

Multi-Conductor, Foil/Braid Shield

UL 2094, NEC Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1648A	8	20	26/34	0.016	0.38	0.029	0.74	0.316	8.03	20.0	36.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	5	Yellow
2	White	6	Blue
3	Red	7	Brown
4	Green	8	Orange

Product Construction:

Conductor:

- 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- 80% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +75°C

Applications:

- Electronic circuits where RF shielding is required
- Video interconnect
- Broadcast and studio
- Sound systems
- Suggested voltage rating: 300 volts

Features:

- Low capacitance
- Lightweight
- Excellent shielding for noise reduction

Compliances:

- NEC Article 725 Type CL2 (UL: 75°C)
- UL Style 2094 (UL: 60°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Foil & TC Braid Shield

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- Fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Separator:

- Polyester tape with 25% overlap

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap
- Tinned copper braid, 90% coverage

Jacket:

- FEP, red or as requested
- Temperature range: -40°C to +200°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Audio controls
- Suggested voltage rating: 300 volts

Compliances:

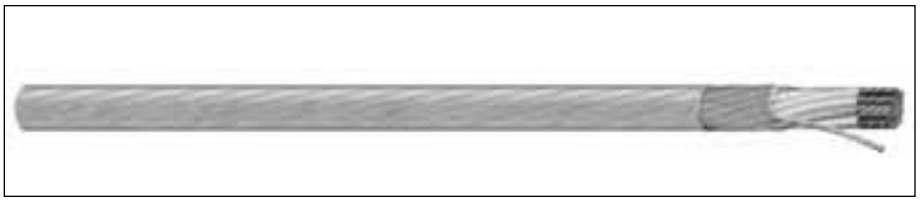
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
16 AWG CONDUCTORS											
C8108	6	16	19/29	0.007	0.18	0.014	0.36	0.270	6.86	33.0	61.0
C8119	3	16	19/29	0.007	0.18	0.014	0.36	0.209	5.31	35.0	63.0
C8111	2	16	19/29	0.007	0.18	0.014	0.36	0.198	5.03	35.0	63.0
18 AWG CONDUCTORS											
C8120	6	18	19/30	0.007	0.18	0.014	0.36	0.242	6.15	33.0	61.0
C8110	4	18	19/30	0.007	0.18	0.014	0.36	0.206	5.23	35.0	63.0
C8107	3	18	19/30	0.007	0.18	0.014	0.36	0.190	4.83	35.0	63.0
24 AWG CONDUCTORS											
C8115	3	24	7/32	0.006	0.15	0.014	0.36	0.133	3.38	25.0	45.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

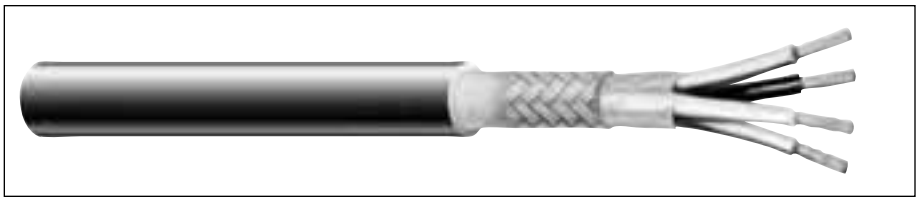
NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Orange
6	Blue

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

c UL us LISTED

Multi-Conductor, Rubber, Braid Shield



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C1302	2	20	26/34	0.020	0.51	0.035	0.89	0.270	6.86
C1304	3	20	26/34	0.020	0.51	0.035	0.89	0.285	7.24
C1305	4	20	26/34	0.020	0.51	0.035	0.89	0.300	7.62
C1308	5	20	26/34	0.020	0.51	0.035	0.89	0.330	8.38
C1310	6	20	26/34	0.020	0.51	0.035	0.89	0.340	8.64
C1312	7	20	26/34	0.020	0.51	0.035	0.89	0.355	9.02
C1313	8	20	26/34	0.020	0.51	0.035	0.89	0.385	9.78

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	5	Blue
2	White	6	Brown
3	Red	7	Yellow
4	Green	8	Orange

Product Construction:

Conductor:
- 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded rubber
- Color code: See chart below

Shield:
- 80% tinned copper braid

Jacket:
- Rubber, black
- Temperature range: -20°C to +60°C

Applications:
- Control circuits
- Broadcast and studio applications
- Audio interconnects
- Suggested voltage rating: 300 volts

Features:
- Impact- and abrasion-resistant
- Stranded conductors for superior flexibility

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND RoHS Compliant Directive 2002/95/EC General Cable

Multi-Conductor, Carolprene®, Braid Shield

Product Construction:

Conductor:
- 18 thru 14 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded rubber
- Color code: See chart below

Shield:
- 80% tinned copper braid

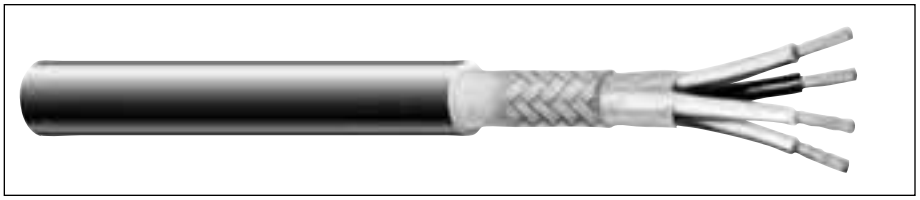
Jacket:
- Carolprene®, black
- Temperature range: -20°C to +60°C

Applications:
- Control circuits
- Broadcast and studio applications
- Audio interconnects
- Suggested voltage rating: 300 volts

Features:
- Impact- and abrasion-resistant
- Stranded conductors for superior flexibility
- Designed to meet UL VW-1 Vertical Wire Flame Test

Compliance:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C1202	2	18	41/34	0.020	0.51	0.035	0.89	0.295	7.49
C1203	3	18	41/34	0.020	0.51	0.035	0.89	0.305	7.75
C1204	4	18	41/34	0.020	0.51	0.035	0.89	0.330	8.38
C1206	6	18	41/34	0.020	0.51	0.035	0.89	0.370	9.39
C1208	8	18	41/34	0.020	0.51	0.035	0.89	0.420	10.67
C1210	10	18	41/34	0.020	0.51	0.035	0.89	0.425	10.80
C1212	12	18	41/34	0.020	0.51	0.065	1.65	0.555	14.10
C1602	2	16	65/34	0.025	0.64	0.035	0.89	0.335	8.51
C1603	3	16	65/34	0.025	0.64	0.035	0.89	0.355	9.02
C1604	4	16	65/34	0.025	0.64	0.035	0.89	0.385	9.78
C1606	6	16	65/34	0.025	0.64	0.040	1.02	0.445	11.30
C1608	8	16	65/34	0.025	0.64	0.040	1.02	0.510	12.95
C1612	2	14	41/30	0.030	0.76	0.040	1.02	0.395	10.03
C1614	4	14	41/30	0.030	0.76	0.040	1.02	0.455	11.56

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Yellow
2	White	8	Orange
3	Red	9	Gray
4	Green	10	Violet
5	Blue	11	White/Black
6	Brown	12	White/Red

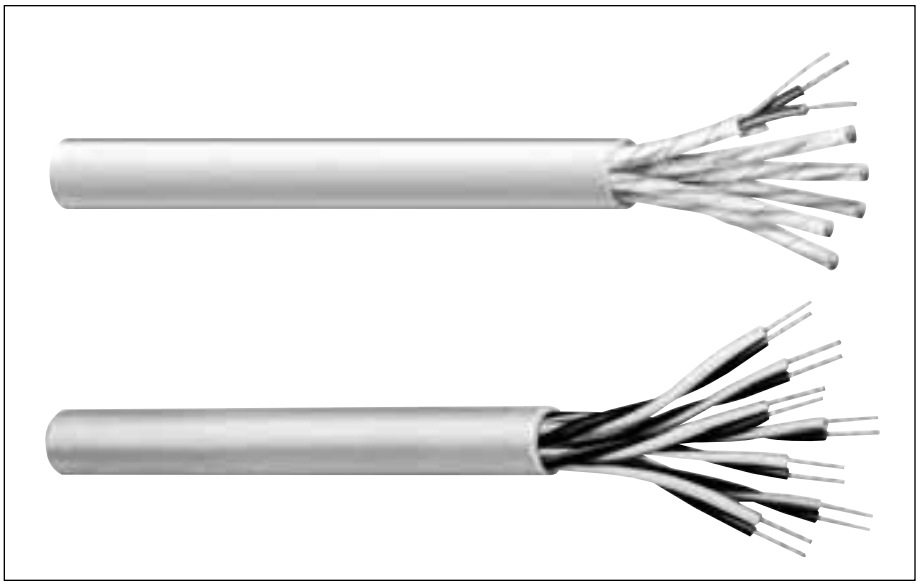
General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL VW-1 Vertical Wire Flame Test
Underwriters Laboratories Inc.

CAROL BRAND

Communication & Control Cable, Multi-Paired 3



In many electronic applications, two wires are required to complete circuits; these are often referred to as “balanced arrays” or “twisted pair” constructions.

Paired cable designs find frequent application in circuits requiring circuit-to-circuit isolation from noise, minimization of capacitance imbalances and a reduction of EMI interference currents.

Circuit separation is further enhanced in those designs employing individual circuit shields in concert with an overall shield. These shielding systems are available from General Cable in myriad combinations to suit the unique needs of the circuit designer.

As with the multi-conductor designs, a wide array of insulating and jacketing materials are available to meet specific electronic applications.

General Cable’s Carol® Brand communication cable products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.

Multi-Paired, Unshielded

UL 2464, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 AWG fully annealed solid or stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C4008A	1	22	Solid	0.010	0.25	0.032	0.81	0.156	3.94	24.5
C4010A	2	22	Solid	0.010	0.25	0.032	0.81	0.218	5.54	24.5
C4014A	3	22	Solid	0.010	0.25	0.032	0.81	0.229	5.82	24.5
C4015A	4	22	Solid	0.010	0.25	0.032	0.81	0.249	6.32	24.5
C4017A	6	22	Solid	0.012	0.30	0.032	0.81	0.293	7.44	24.5
C6010A	2	22	7/30	0.010	0.25	0.032	0.81	0.228	5.79	24.5
C6014A	3	22	7/30	0.010	0.25	0.032	0.81	0.240	6.10	24.5
C6015A	4	22	7/30	0.010	0.25	0.032	0.81	0.262	6.65	24.5
C6017A	6	22	7/30	0.010	0.25	0.032	0.81	0.300	7.62	24.5
C6019A	9	22	7/30	0.010	0.25	0.032	0.81	0.366	9.30	24.5
C6023A	12	22	7/30	0.010	0.25	0.032	0.81	0.410	10.40	24.5
C6026A	15	22	7/30	0.010	0.25	0.032	0.81	0.456	11.58	24.5

* Capacitance between conductors

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	9	Red paired with Green
2	Black paired with White	10	Red paired with Blue
3	Black paired with Green	11	Red paired with Yellow
4	Black paired with Blue	12	Red paired with Brown
5	Black paired with Yellow	13	Red paired with Orange
6	Black paired with Brown	14	Green paired with White
7	Black paired with Orange	15	Green paired with Blue
8	Red paired with White		

General Cable RoHS Compliant Directive 2002/95/EC

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

CMG Certified
Canadian Standard Association

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CAROL BRAND

Multi-Paired, Unshielded

UL 2464, NEC Type CM (UL) c(UL), CSA CMG

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C6101A	1	18	16/30	0.013	0.33	0.032	0.81	0.206	5.23	26.3
C6118A	2	18	16/30	0.013	0.33	0.032	0.81	0.320	8.13	26.3
C6103A	3	18	16/30	0.013	0.33	0.032	0.81	0.338	8.59	26.3
C6119A	4	18	16/30	0.013	0.33	0.032	0.81	0.372	9.45	26.3
C6120A	5	18	16/30	0.013	0.33	0.032	0.81	0.408	10.36	26.3
C6106A	6	18	16/30	0.013	0.33	0.032	0.81	0.445	11.30	26.3
C6121A	8	18	16/30	0.013	0.33	0.032	0.81	0.484	12.29	26.3
C6109A	9	18	16/30	0.013	0.33	0.032	0.81	0.522	13.26	26.3
C6111A	15	18	16/30	0.013	0.33	0.032	0.81	0.659	16.74	26.3

* Capacitance between conductors

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	9	Red paired with Green
2	Black paired with White	10	Red paired with Blue
3	Black paired with Green	11	Red paired with Yellow
4	Black paired with Blue	12	Red paired with Brown
5	Black paired with Yellow	13	Red paired with Orange
6	Black paired with Brown	14	Green paired with White
7	Black paired with Orange	15	Green paired with Blue
8	Red paired with White		

Product Construction:

Conductor:

- 18 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED CSA CMG Certified Canadian Standard Association Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Unshielded

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Jacket:

C8116

- FEP, red or as requested
- Temperature range: -40°C to +200°C

C8122

- Flexguard® PVC, natural
- Temperature range: -20°C to +75°C

Applications:

- Audio systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

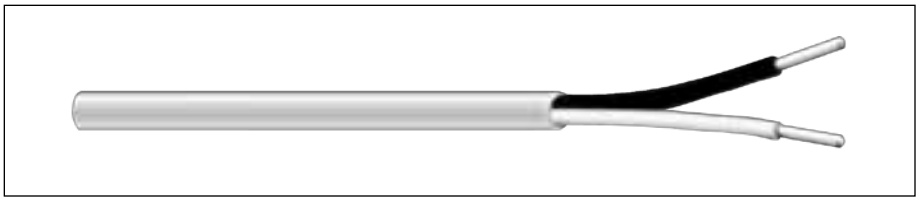
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C8116	1	18	19/30	0.007	0.18	0.009	0.23	0.142	3.61	20.0
C8122	1	18	19/30	0.007	0.18	0.015	0.38	0.154	3.91	20.0

*Capacitance between conductors

Color Code Chart

NO. OF PAIRS	COLOR
1	Black and Red

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

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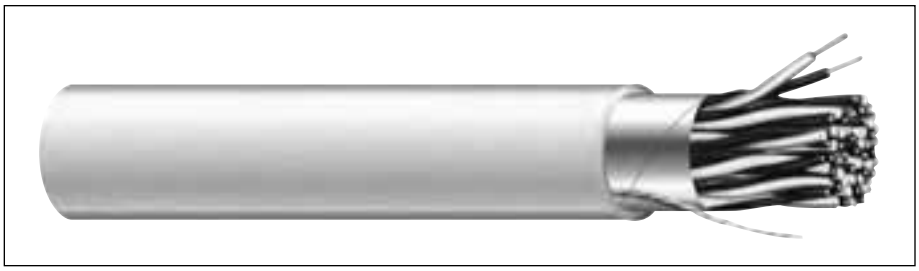
Multi-Paired, Foil Shield

NEC Type CM (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C7104A†	1	22	7/.0096	0.013	0.33	0.035	0.89	0.185	4.70	35.0	62.0
C1670A	2	22	Solid	0.010	0.25	0.032	0.81	0.218	5.54	32.0	57.0
C1676A	4	22	Solid	0.010	0.25	0.032	0.81	0.249	6.32	28.0	50.0
C1671A	6	22	Solid	0.010	0.25	0.032	0.81	0.292	7.42	25.0	45.0
C1672A	9	22	Solid	0.010	0.25	0.032	0.81	0.338	8.59	25.0	45.0
C1673A	15	22	Solid	0.010	0.25	0.032	0.81	0.419	10.64	25.0	45.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
† Also UL Style 2464 (UL: 80°C, 300V)

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	**9**	Red paired with Green
2	Black paired with White	**10**	Red paired with Blue
3	Black paired with Green	**11**	Red paired with Yellow
4	Black paired with Blue	**12**	Red paired with Brown
5	Black paired with Yellow	**13**	Red paired with Orange
6	Black paired with Brown	**14**	Green paired with White
7	Black paired with Orange	**15**	Green paired with Blue
8	Red paired with White		

Product Construction:

Conductor:
- 22 AWG fully annealed solid or stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:
- PVC, gray
- Temperature range: -20°C to +75°C

Applications:
- Audio systems
- Communication circuits
- Instrumentation and control use
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800 Type CM (UL: 75°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND® c UL us LISTED
CSA CMG Certified Canadian Standard Association
Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.
RoHS Compliant Directive 2002/95/EC
General Cable

Multi-Paired, Foil Shield

UL 2095, NEC Type CM (UL) c(UL)

Product Construction:

Conductor:

- 22 AWG fully annealed solid tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

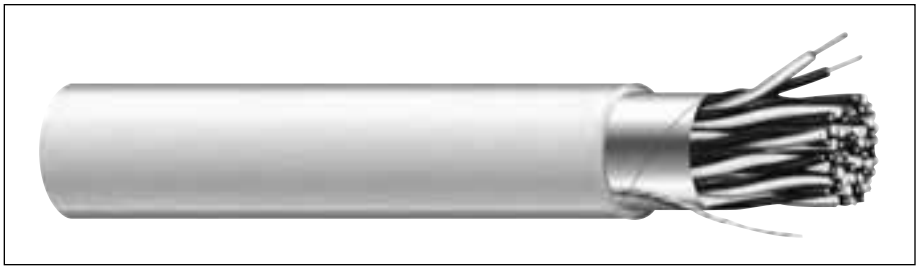
- Intercom systems
- Sound systems
- Electronic instrumentation control systems
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM (UL: 75°C, 300V)
- UL Style 2095 (UL: 80˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C6451A	51	22	Solid	0.010	0.25	0.050	1.27	0.715	18.16	25.0	45.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Blue paired with White	18	Brown/White striped paired with White	35	Green/White striped paired with Red
2	Orange paired with White				
3	Green paired with White	19	Brown/Gray striped paired with White	36	Green/Brown striped paired with Red
4	Brown paired with White				
5	Gray paired with White	20	Gray/White striped paired with White	37	Green/Gray striped paired with Red
6	Blue/White striped paired with White	21	Blue paired with Red	38	Brown/White striped paired with Red
		22	Orange paired with Red		
7	Blue/Orange striped paired with White	23	Green paired with Red	39	Brown/Gray striped paired with Red
		24	Brown paired with Red		
8	Blue/Green striped paired with White	25	Gray paired with Red	40	Gray/White striped paired with Red
9	Blue/Brown striped paired with White	26	Blue/White striped paired with Red	41	Blue paired with Black
10	Blue/Gray striped paired with White	27	Blue/Orange striped paired with Red	42	Orange paired with Black
				43	Green paired with Black
11	Orange/White striped paired with White	28	Blue/Green striped paired with Red	44	Brown paired with Black
				45	Gray paired with Black
12	Orange/Green striped paired with White	29	Blue/Brown striped paired with Red	46	Blue/White striped paired with Black
13	Orange/Brown striped paired with White	30	Blue/Gray striped paired with Red	47	Blue/Orange striped paired with Black
14	Orange/Gray striped paired with White	31	Orange/White striped paired with Red	48	Blue/Green striped paired with Black
15	Green/White striped paired with White	32	Orange/Green striped paired with Red	49	Blue/Brown striped paired with Black
16	Green/Brown striped paired with White	33	Orange/Brown striped paired with Red	50	Blue/Gray striped paired with Black
17	Green/Gray striped paired with White	34	Orange/Gray striped paired with Red	51	Orange/White striped paired with Black

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

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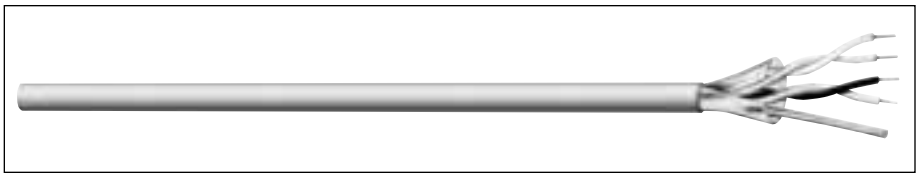
CAROL BRAND

Multi-Paired, Foil Shield

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG CONDUCTORS											
C3204	1	22	7/30	0.006	0.15	0.010	0.25	0.117	2.97	31.0	55.8
C3205	2	22	7/30	0.006	0.15	0.010	0.25	0.151	3.84	25.0	45.0
C3206	3	22	7/30	0.006	0.15	0.010	0.25	0.177	4.50	25.0	36.0
C3207	4	22	7/30	0.006	0.15	0.010	0.25	0.200	5.08	20.0	45.0
C3208	6	22	7/30	0.006	0.15	0.010	0.25	0.237	6.02	18.0	32.4
24 AWG CONDUCTORS											
C3150	2	24	7/32	0.006	0.15	0.010	0.25	0.130	3.30	22.0	39.6
C3153	3	24	7/32	0.006	0.15	0.010	0.25	0.152	3.86	18.0	32.4
C3151	4	24	7/32	0.006	0.15	0.010	0.25	0.170	4.32	17.0	30.6
C3165	6	24	7/32	0.006	0.15	0.010	0.25	0.200	5.08	17.0	30.6
C3152	12.5	24	7/32	0.006	0.15	0.012	0.30	0.290	7.04	17.0	30.6

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black & Yellow
2	Red & Violet
3	Dark Blue & Brown
4	Orange & Dark Green
5	Pink & Gray
6	Tan & White
7	Light Blue & Light Green
8	Red/White & White/Red
9	Orange/White & White/Orange
10	Yellow/White & White/Yellow
11	Gray/White & White/Gray
12	Blue/White & White/Blue
1C	Dark Green/Yellow

Product Construction:

Conductor:
- 22 and 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:
- Fluoropolymer, natural
- Temperature range: -40°C to +150°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:
- EIA RS-232 circuits
- Remote control circuits
- Process control and instrumentation
- Power-limited control circuits
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800 (UL: 150°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:
- Water-resistant jacket

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND® c UL us LISTED

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Paired, Foil Shield

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 22 and 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Separator:

- Polyester tape with 25% overlap

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- FEP, red or as requested
- PVDF, red or as requested

C8101, C8109

- Temperature range: -40°C to +200°C

C8104, C8103

- Temperature range: -40°C to +150°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

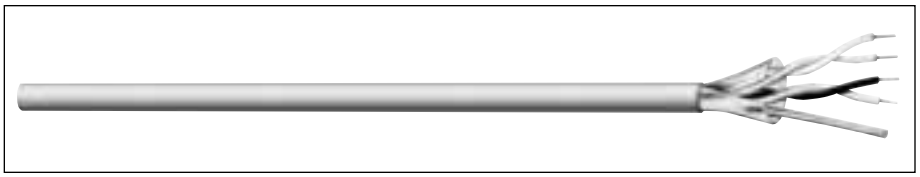
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options
- 1000' (305m) reels



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8101**	1	18	19/30	0.007	0.18	0.016	0.41	0.165	4.19	51.0	95.0
C8104	1	18	19/30	0.007	0.18	0.016	0.41	0.165	4.19	51.0	95.0
C8103	1	22	7/30	0.006	0.15	0.014	0.36	0.120	3.05	35.0	65.0
C8109**	1	22	7/30	0.006	0.15	0.016	0.41	0.122	3.10	35.0	65.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
** FEP jacket

Color Code Chart

NO. OF PAIRS	COLOR
1	Black and Red

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

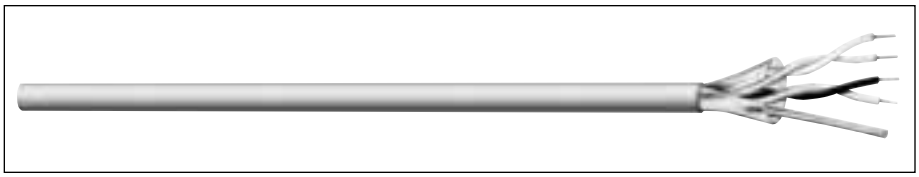
Underwriters Laboratories Inc.

c UL us LISTED

CAROL BRAND

Multi-Paired, Foil Shield

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8118	2	24	7/32	0.014	0.15	0.015	0.38	0.203	5.16	12.0	22.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	White/Blue paired with Blue/White
2	White/Orange paired with Orange/White

Product Construction:

Conductor:
- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded foam FEP
- Color code: See chart below

Separator:
- Polyester tape with 25% overlap

Shield:
- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:
- PVDF, gray or as requested
- Temperature range: -40°C to +150°C

Applications:
- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suitable for RS232, RS422, RS485
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:
- Fire-retardant, low-smoke jacket

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

c UL us LISTED

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Paired, Foil Shield

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 24, 22 and 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Separator:

- Polyester tape with 25% overlap

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Flexguard® PVC, natural or as requested
- Temperature range: -20°C to +75°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

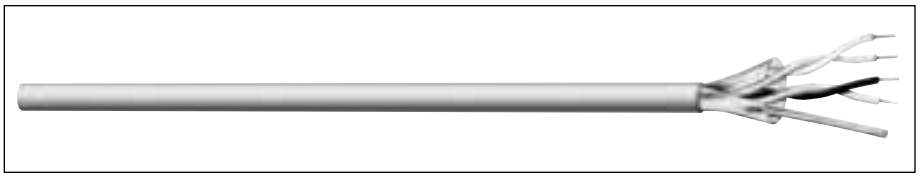
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8127	1	24	7/32	0.006	0.15	0.014	0.36	0.108	2.69	30.0	60.0
C8113	3	24	7/32	0.006	0.15	0.014	0.36	0.161	4.09	25.0	45.0
C8126	1	22	7/30	0.006	0.15	0.014	0.36	0.120	3.05	35.0	65.0
C8123	1	18	19/30	0.007	0.18	0.014	0.36	0.160	4.06	51.0	90.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

C8124**	1	22	7/30	0.007	0.18	0.017	0.43	0.128	3.25	32.0	62.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
**This item does not have a separator and has a shield fusible to the jacket to facilitate removal along with the jacket while stripping.

Color Code Chart

NO. OF PAIRS	COLOR
1	Black and Red

C8113 NO. OF PAIRS	COLOR
1	Black paired with White
2	Black paired with Red
3	Black paired with Green

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

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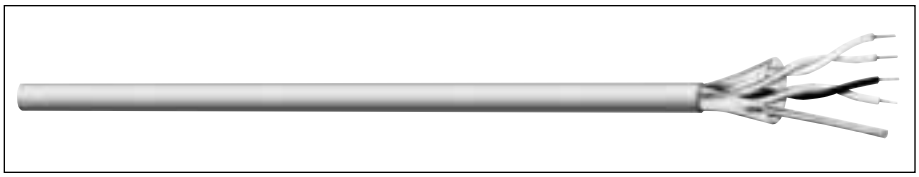
CAROL BRAND

Multi-Paired, Foil Shield

NEC Type CMP (UL) c(UL) and/or CL2P



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG, CL2P, c(UL) 150 VOLTS											
C3352	2	22	7/30 TC	0.007	0.180	0.010	0.25	0.157	3.99	37.0	66.0
C3353	3	22	7/30 TC	0.007	0.180	0.010	0.25	0.194	4.42	30.0	53.0
C3354	4	22	7/30 TC	0.007	0.180	0.010	0.25	0.207	4.75	30.0	53.0
C3356	6	22	7/30 TC	0.007	0.180	0.010	0.25	0.246	5.74	27.0	48.0
18 AWG, CL2P/CMP, c(UL) 150 VOLTS											
C3362	2	18	7/26 BC	0.008	0.020	0.010	0.25	0.205	5.21	44.0	79.0
C3364	4	18	7/26 BC	0.008	0.020	0.010	0.25	0.277	7.04	33.0	59.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black & Yellow
2	Red & Violet
3	Dark Blue & Brown
4	Orange & Dark Green
5	Pink & Gray
6	Tan & White

Product Construction:

Conductor:

- 22 and 18 AWG fully annealed stranded tinned copper per ASTM B-33 or stranded bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Fluoropolymer, natural
- Temperature range: -20°C to +75°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- EIA RS-232 circuits
- Remote control circuits
- Process control and instrumentation
- Power-limited control circuits
- Suggested voltage rating: 150 volts

Compliances:

- NEC Article 800 (UL: 75°C, 300V)
- NEC Article 725 (UL: 75°C, 150V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Abrasion-, chemical- and water-resistant jacket

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Paired, Foil Shield

AWM Style 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 or 600 volts

Features:

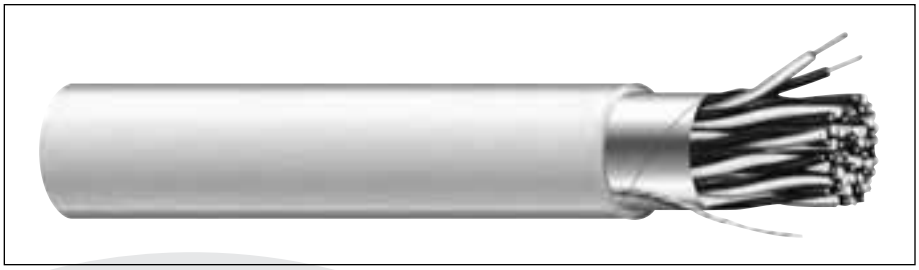
- Excellent electrical properties
- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Assists system designers in meeting FCC Docket 20780 demands
- Good flexibility

Compliances:

- AWM Style 2464 (CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/KFT		COLOR CODE	NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.		A	B
C4170A	1	24	7/32	0.010	0.25	0.032	0.81	0.157	3.99	26.0	18.0	1	36.4	65.5
C4209A	1	24	7/32	0.010	0.25	0.032	0.81	0.157	3.99	26.0	18.0	Wht/Blk	36.4	65.5
C4191A	1	24	7/32	0.009	0.23	0.030	0.76	0.148	3.78	26.0	16.5	Blk/Red	43.0	78.0
C4171A	2	24	7/32	0.010	0.25	0.032	0.81	0.214	5.44	26.0	18.0	1	31.9	57.3
C4172A	3	24	7/32	0.010	0.25	0.032	0.81	0.225	5.72	26.0	16.5	1	28.6	51.4
C4173A	4	24	7/32	0.010	0.25	0.032	0.81	0.245	6.22	26.0	16.5	1	28.6	51.4
C4174A	5	24	7/32	0.010	0.25	0.032	0.81	0.265	6.73	26.0	16.5	1	28.6	51.4
C4175A	6	24	7/32	0.010	0.25	0.032	0.81	0.287	7.29	26.0	15.2	1	26.3	47.5
C4176A	7	24	7/32	0.010	0.25	0.032	0.81	0.287	7.29	26.0	15.2	1	26.3	47.5
C4177A	8	24	7/32	0.010	0.25	0.032	0.81	0.309	7.85	26.0	15.0	1	26.3	47.5
C4178A	9	24	7/32	0.010	0.25	0.032	0.81	0.331	8.41	26.0	15.0	1	26.3	47.5
C4179A	10	24	7/32	0.010	0.25	0.032	0.81	0.359	9.12	26.0	14.0	1	26.3	47.5
C4180A	15	24	7/32	0.010	0.25	0.032	0.81	0.410	10.41	26.0	13.8	1	26.3	47.5
C4181A	19	24	7/32	0.010	0.25	0.032	0.81	0.432	10.97	26.0	13.5	1	26.3	47.5
C4182A	25	24	7/32	0.010	0.25	0.032	0.81	0.505	12.83	26.0	12.7	1	26.3	47.5

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black with Red	14	Green with White
2	Black with White	15	Green with Blue
3	Black with Green	16	Green with Yellow
4	Black with Blue	17	Green with Brown
5	Black with Yellow	18	Green with Orange
6	Black with Brown	19	White with Blue
7	Black with Orange	20	White with Yellow
8	Red with White	21	White with Brown
9	Red with Green	22	White with Orange
10	Red with Blue	23	Blue with Yellow
11	Red with Yellow	24	Blue with Brown
12	Red with Brown	25	Blue with Orange
13	Red with Orange		

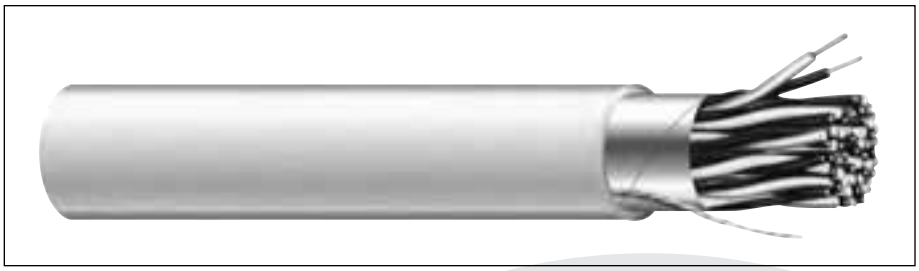
General Cable

RoHS Compliant Directive 2002/95/EC

CAROL BRAND

Multi-Paired, Foil Shield

AWM Style 2464, CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C4183A	1	22	7/30	0.010	0.25	0.032	0.81	0.169	4.29	15.0	18.0	44.8	80.7
C4184A	2	22	7/30	0.010	0.25	0.032	0.81	0.234	5.94	15.0	16.5	35.9	64.6
C4185A	3	22	7/30	0.010	0.25	0.032	0.81	0.246	6.25	15.0	16.5	30.9	55.7
C4186A	4	24	7/30	0.010	0.25	0.032	0.81	0.269	6.83	15.0	16.5	30.9	55.7
C4187A	5	22	7/30	0.010	0.25	0.032	0.81	0.294	7.47	15.0	16.5	30.9	55.7
C4188A	6	22	7/30	0.010	0.25	0.032	0.81	0.320	8.13	15.0	16.5	28.4	51.0
C4189A	9	22	7/30	0.010	0.25	0.032	0.81	0.367	9.32	15.0	16.5	28.4	51.0
C4190A	15	22	7/30	0.010	0.25	0.032	0.81	0.457	11.61	15.0	16.5	28.4	51.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black with Red	**9**	Red with Green
2	Black with White	**10**	Red with Blue
3	Black with Green	**11**	Red with Yellow
4	Black with Blue	**12**	Red with Brown
5	Black with Yellow	**13**	Red with Orange
6	Black with Brown	**14**	Green with White
7	Black with Orange	**15**	Green with Blue
8	Red with White		

Product Construction:

Conductor:
- 22 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:
- PVC, gray
- Temperature range: -20°C to +105°C

Applications:
- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage ratings: 300 or 600 volts

Features:
- Excellent electrical properties
- Superior shielding effectiveness
- 25% shield overlap provides excellent shielding efficiency
- Assists system designers in meeting FCC Docket 20780 demands
- Good flexibility

Compliances:
- AWM Style 2464 (CSA: 80˚C, 300V)
- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA 22.2 No. 214
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND C SP US RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Foil Shield, Mid-Cap

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Fluoropolymer, natural
- Temperature range: -40°C to +150°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- EIA RS-232 and RS-422 circuits
- Remote control circuits
- Process control and instrumentation
- Power-limited control circuits
- Suggested voltage rating: 300 volts

Compliances:

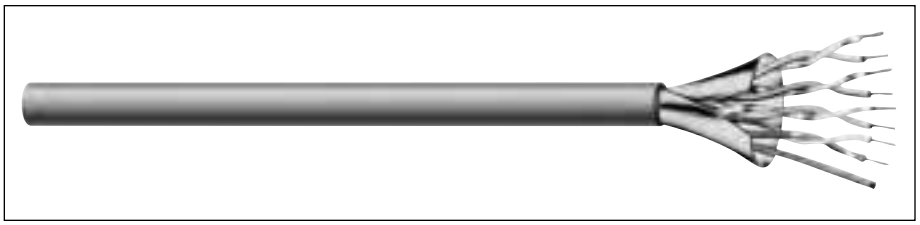
- NEC Article 800 (UL: 150°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Abrasion-, chemical- and water-resistant jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C3214	2	24	7/32	0.010	0.25	0.010	0.25	0.150	3.81	17.0	30.0
C3215	3	24	7/32	0.010	0.25	0.010	0.25	0.177	4.50	15.0	27.0
C3216	4	24	7/32	0.010	0.25	0.010	0.25	0.201	5.11	15.0	27.0
C3217	4.5	24	7/32	0.010	0.25	0.010	0.25	0.214	5.18	15.0	27.0
C3218	6	24	7/32	0.010	0.25	0.010	0.25	0.239	6.07	14.0	25.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black paired with Yellow
2	Red paired with Violet
3	Dark Blue paired with Brown
4	Orange paired with Dark Green
5	Pink paired with Gray
6	Tan paired with White
1C	Green with Yellow Stripe

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications
Underwriters Laboratories Inc.

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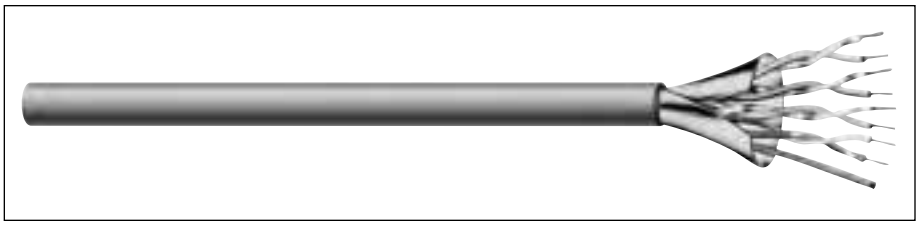
CAROL BRAND

Multi-Paired, Foil Shield, Lo-Cap®

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft		IMPED. Ω NOM
				INCHES	mm	INCHES	mm	A	B	
C3028	2	24	7/32	0.010	0.25	0.159	4.04	15.0	27.00	94.0
C3029	3	24	7/32	0.010	0.25	0.183	4.65	14.0	25.00	107.0
C3030	4	24	7/32	0.010	0.25	0.246	6.25	14.0	25.00	107.0
C3031	6	24	7/32	0.012	0.30	0.285	7.24	13.0	23.00	115.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black paired with Yellow
2	Red paired with Violet
3	Dark Blue paired with Brown
4	Orange paired with Dark Green
5	Pink paired with Gray
6	Tan paired with White

Product Construction:

Conductor:
- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:
- Fluoropolymer, natural
- Temperature range: -40°C to +150°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:
- EIA RS-232 and RS-422 circuits
- Remote control circuits
- Process control and instrumentation
- Low capacitance requirements
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800 (UL: 150°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:
- Abrasion-, chemical- and water-resistant jacket

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Paired, Overall Foil & TC Braid Shield, Lo-Cap®

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded foam FEP
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Tinned copper braid, 90% coverage

Jacket:

C8117

- FEP, red or as requested
- Temperature range: -40°C to +200°C

C8129

- Flexguard® PVC, natural
- Temperature range: -20°C to +75°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

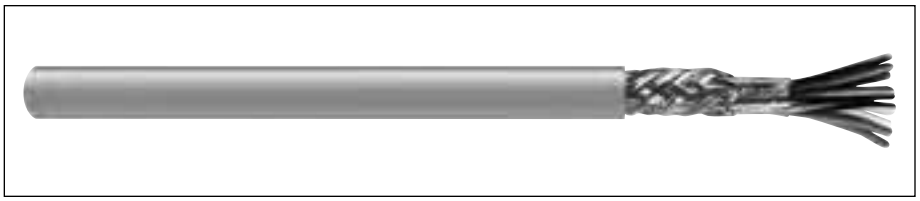
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8117	1	24	7/32	0.026	0.66	0.014	0.36	0.208	5.28	12.0	22.0
C8129	2	24	7/32	0.019	0.48	0.017	0.43	0.280	6.93	12.0	22.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

C8117 NO. OF PAIRS	COLOR
1	White/Blue paired with Blue/White

C8129 NO. OF PAIRS	COLOR
1	White/Blue paired with Blue/White
2	White/Orange paired with Orange/White

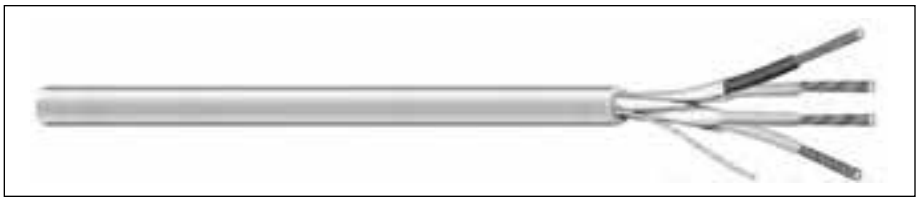
Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

c UL us LISTED

Multi-Paired, Individually Shielded

UL 2717, UL 2835, NEC Type CM (UL) c(UL) CMH or CMG



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
POLYPROPYLENE INSULATION — NEC TYPE CM(UL) c(UL) CMH											
C1352A	2	22	7/30	0.007	0.18	0.020	0.51	0.160	4.06	30.0	45.0
POLYPROPYLENE INSULATION — UL STYLE 2717, UL STYLE 2835, CM(UL) c(UL) CMH											
C1353A**	2	22	7/30	0.010	0.25	0.028	0.71	0.208	5.028	25.0	53.5
SR-PVC INSULATION — UL STYLE 2464, CM(UL) c(UL) CMG											
C7106A	2	20	7/28	0.010	0.25	0.041	1.04	0.305	7.75	46.0	82.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
**Individually shielded with overall shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black/Red
2	Green/White

Product Construction:

Conductor:
- 22 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:
- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:
- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:
- Where total isolation of signal is required
- Computers
- Control circuits
- Industrial equipment
- Suggested voltage rating: 300 volts

Features:
- Excellent high frequency properties
- Mechanical durability

Compliances:
- NEC Article 800 Type CM (UL: 75˚C, 300V)
- UL Style 2717 (UL: 80˚C)
- UL Style 2835 (UL: 60˚C, 30V)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMH (CSA: 60˚C)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH or CMG Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Individually Shielded

CSA Type AWM I/II A/B, NEC/CEC Type CMG (CSA C/US)

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:

- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +105˚C

Applications:

- Where total isolation of signal is required
- Computers
- Control circuits
- Industrial equipment
- Suggested voltage rating: 300 or 600 volts

Features:

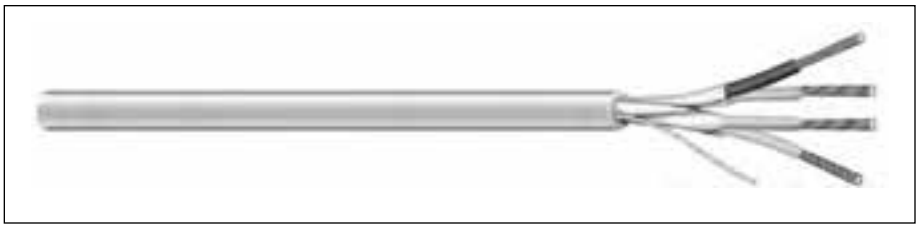
- Excellent high-frequency properties
- Mechanical durability

Compliances:

- CSA Type AWM (105˚C, 600V)
- CSA Certified CMG to harmonized standard UL444 and CSA (22.2 No. 2)
- NEC/CEC Type CMG (CSA: 105˚C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet CSA 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C4203A	2	22	7/30	0.007	0.18	0.020	0.51	0.160	4.06	16.6	7.2	67.0	121.0

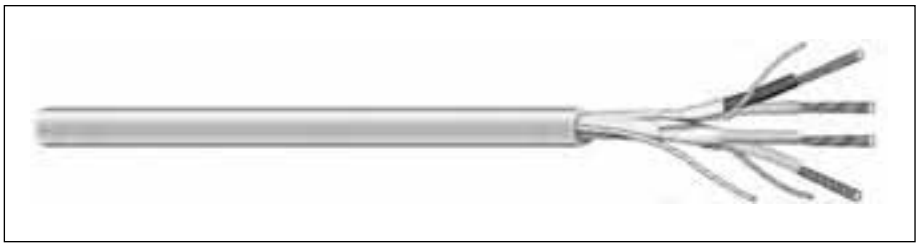
*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black with Red
2	Green with White

Multi-Paired, Individually Shielded, Overall Shield

UL 2464, UL 2576, NEC Type CMR (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1350A	2	22	7/30	0.010	0.25	0.035	0.889	0.175 x 0.280	4.45 x 7.11	40	71.5

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black/White
2	Black/Yellow

Product Construction:

Conductor:
- 22 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See chart below

Shield:
- Individually shielded pairs plus an overall foil shield and drain wire
- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing in
- Stranded tinned copper drain wire

Jacket:
- PVC, beige
- Temperature range: -20˚C to +80˚C

Applications:
- Computer interconnections
- Data transmission
- Control circuits
- Industrial equipment control
- Suggested voltage rating: 300 volts

Features:
- Excellent high frequency properties
- Mechanical durability

Compliances:
- NEC Article 800 Type CMR (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- UL Style 2576
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED CSA CMG Certified Canadian Standard Association Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Individually Foil Shielded

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil, each with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Fluoropolymer, red
- Temperature range: -20°C to +150°C
- Sequential footage marked to facilitate installation
- Includes ripcord

Applications:

- Point of sale systems
- Remote control circuits
- Process control and instrumentation
- Power-limited control circuits
- Suggested voltage rating: 300 volts

Compliances:

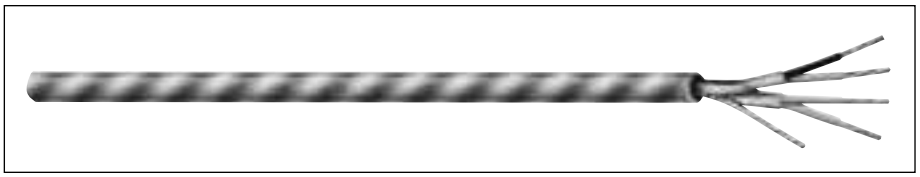
- NEC Article 800 (UL: 150°C, 300V)
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Individually shielded pairs for excellent signal isolation
- Abrasion-, chemical- and water-resistant jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.** pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C3156*	2	22	7/30	0.006	0.15	0.010	0.25	0.147	3.73	35.0	63.0
C3157†	3	22	7/30	0.006	0.15	0.010	0.25	0.184	4.67	35.0	63.0

*Cabled on common axis to reduce diameter, foil out, common drain wire
**A – Capacitance between conductors
**B – Capacitance between one conductor and other conductors connected to shield
†3 individually shielded pairs with separate drain wires

Color Code Chart

C3156 NO. OF PAIRS	COLOR
1	Black paired with Red
2	White paired with Green

C3157 NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications
Underwriters Laboratories Inc.

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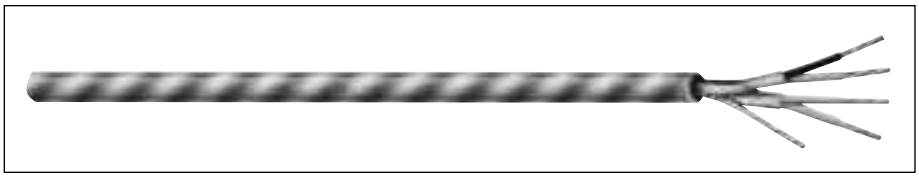
CAROL BRAND

Multi-Paired, Individually Foil Shielded

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8134	2	24	7/32	0.019	0.48	0.015	0.38	0.255	7.48	35.0	76.0
C8105	2	22	7/30	0.006	0.15	0.014	0.36	0.186	4.72	43.0	75.0
C8131	3	22	7/30	0.010	0.25	0.018	0.46	0.237	6.02	35.0	76.0
C8133	6	22	7/30	0.010	0.25	0.018	0.45	0.314	7.98	35.0	76.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

C8105 NO. OF PAIRS	COLOR
1	Black paired with Red
2	White paired with Green

C8131 NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green

C8133 NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue
5	Black paired with Yellow
6	Black paired with Brown

C8134 NO. OF PAIRS	COLOR
1	White/Blue paired with Blue/White
2	White/Orange paired with Orange/White

Product Construction:

Conductor:
- 24 thru 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded FEP or foamed FEP
- Color code: See chart below

Pair Shield:
- 100% Flexfoil® aluminum/polyester foil, with 25% overlap, minimum
- Individually shielded pairs with stranded tinned copper drain wire

Jacket:
- Flexguard® PVC, natural
- Temperature range: -20°C to +75°C

Applications:
- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:
- Individually shielded pairs for excellent signal isolation
- Fire-retardant, low-smoke jacket

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Paired, Individually Foil Shielded

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded FEP
- Color code: See chart below

Pair Shield:

- 100% Flexfoil® aluminum/polyester foil, with 25% overlap, minimum
- Individually shielded pairs with stranded tinned copper drain wire

Jacket:

- FEP, red or as requested
- Temperature range: -40°C to +200°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

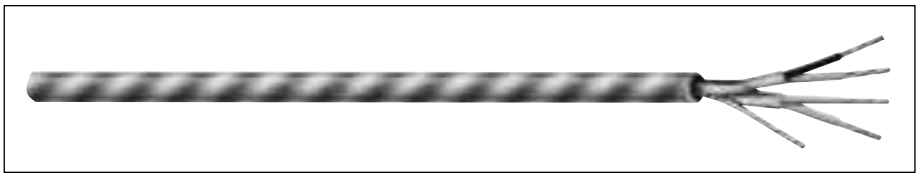
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Individually shielded pairs for excellent signal isolation
- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8112	2	22	7/30	0.006	0.15	0.014	0.36	0.186	4.72	35.0	65.0
C8132	6	22	7/30	0.010	0.25	0.015	0.38	0.309	7.85	30.0	65.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

C8112 NO. OF PAIRS	COLOR
1	Black paired with Red
2	White paired with Green

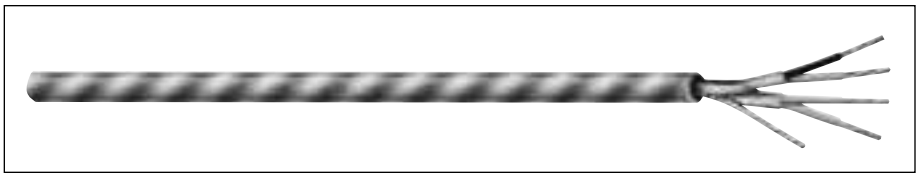
C8132 NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue
5	Black paired with Yellow
6	Black paired with Brown

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications
Underwriters Laboratories Inc.

c UL us LISTED

Multi-Paired, Individually Foil Shielded

NEC Type CMP (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C8128	2	24	7/32	0.019	0.48	0.018	0.46	0.261	6.63	12.5	22.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	White/Blue paired with Blue/White
2	White/Orange paired with Orange/White

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded foam FEP
- Color code: See chart below

Pair Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Individually shielded pairs with stranded tinned copper drain wire

Jacket:

- PVDF, gray or as requested
- Temperature range: -40°C to +150°C

Applications:

- Computer systems
- Remote control circuits
- Process control and instrumentation
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Individually shielded pairs for excellent signal isolation
- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options

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Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Power-Limited Tray Cable, Individually Shielded

UL 2464, NEC Type PLTC AND CSA CMG

Product Construction:

Conductor:

- 22 or 18 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded PVC
- Color code: Each pair black and red, numbered at one-inch intervals

Shield:

- Pairs are 100% individually shielded with Flexfoil® aluminum/polyester, foil facing in
- Stranded tinned copper drain wire each pair

Jacket:

- PVC, gray
- Temperature range: -20°C to +105°C

Applications:

- Power-limited circuits
- Intercom systems
- Business machines
- Cash registers
- Computer interconnects
- Suitably marked for appropriate tray cable installations
- Burglar alarms
- Suggested voltage rating: 300 volts

Features:

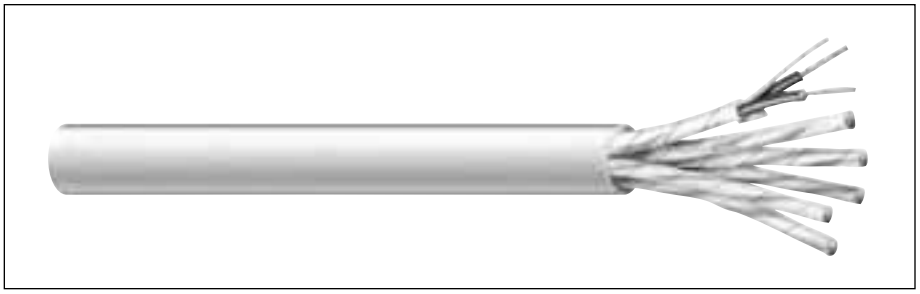
- Superior temperature characteristics
- Robust, highly durable
- Sunlight-resistant jacket

Compliances:

- NEC Article 725 Power-Limited Tray Cable (UL: 105°C, 300V)
- UL Style 2464 (UL: 80°C)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C0570A	2	22	7/30	0.016	0.41	0.042	1.07	0.327	8.31	38.5	69.5
C0571A	3	22	7/30	0.015	0.41	0.042	1.07	0.345	8.76	38.5	69.5
C0572A	4	22	7/30	0.015	0.41	0.042	1.07	0.378	9.60	38.5	69.5
C0573A	6	22	7/30	0.015	0.41	0.053	1.35	0.469	11.91	38.5	69.5
C0574A	9	22	7/30	0.015	0.41	0.053	1.35	0.542	13.77	38.5	69.5
C0575A	11	22	7/30	0.015	0.41	0.053	1.35	0.589	14.96	38.5	69.5
C0584A	2	18	16/30	0.016	0.41	0.042	1.07	0.380	9.65	50.5	91.0
C0585A	3	18	16/30	0.016	0.41	0.053	1.35	0.437	11.10	50.5	91.0
C0586A	4	18	16/30	0.016	0.41	0.053	1.35	0.478	12.14	50.5	91.0
C0587A	6	18	16/30	0.016	0.41	0.053	1.35	0.566	14.38	50.5	91.0
C0588A	9	18	16/30	0.016	0.41	0.063	1.60	0.679	17.25	50.5	91.0
C0589A	11	18	16/30	0.016	0.41	0.063	1.60	0.738	18.75	50.5	91.0
C0590A	15	18	16/30	0.015	0.38	0.063	1.60	0.845	21.46	50.5	91.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

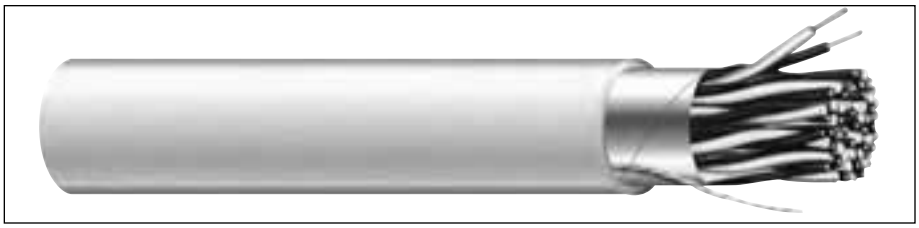
NO. OF PAIRS	COLOR
1 thru 15	Black Red

Each pair marked and numbered

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Power-Limited Tray Cable, Foil Shield or Foil/Braid Shield

UL 2464, NEC Type PLTC/CM, CSA CMG



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
PVC INSULATION — UL STYLE 2464, NEC TYPE PLTC/CM, CSA CMG, 105°C											
C0550A	2	22	7/.0096	0.015	0.38	0.042	1.07	0.294	7.47	32.0	57.0
C0551A	3	22	7/.0096	0.015	0.38	0.042	1.07	0.309	7.85	29.0	52.2
C0552A	4	22	7/.0096	0.015	0.38	0.042	1.07	0.337	8.56	29.0	52.2
C0553A	6	22	7/.0096	0.015	0.38	0.042	1.35	0.418	10.62	26.5	47.7
C0554A	9	22	7/.0096	0.015	0.38	0.042	1.35	0.480	12.19	26.5	47.7
C0555A	11	22	7/30	0.015	0.38	0.053	1.35	0.520	13.21	27.0	48.5
C0556A	15	22	7/30	0.015	0.38	0.053	1.35	0.592	15.04	27.0	48.5
C0560A	2	18	16/30	0.016	0.41	0.042	1.07	0.314	7.98	40.0	72.0
C0561A	3	18	16/30	0.016	0.41	0.042	1.35	0.403	10.24	33.5	60.3
C0562A	4	18	16/30	0.016	0.41	0.042	1.35	0.440	11.18	33.5	60.3
C0563A	6	18	16/30	0.016	0.41	0.042	1.35	0.519	13.18	30.5	54.9
C0564A	9	18	16/30	0.016	0.41	0.042	1.60	0.622	15.80	30.5	54.9
C0566A	15	18	16/30	0.016	0.41	0.042	1.60	0.622	15.80	30.5	54.9

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1 thru 9	Black/Red

Each pair marked and numbered

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
LO-CAP® DATACOM COLOR CODE WITH 65% TINNED COPPER BRAID											
FOAMED POLYETHYLENE INSULATION — NEC TYPE PLTC/CM, CEC CM c(UL), 60°C											
C7112A	1	22	7/.0096	0.024	0.61	0.037	0.94	0.261	6.63	11.5	20.5
C7114A	2	22	7/.0096	0.017	0.43	0.042	1.07	0.343	8.71	11.0	19.6
C7116A	3	22	7/.0096	0.015	0.38	0.042	1.07	0.344	8.74	11.0	19.6

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	White/Blue Stripe and Blue/White Stripe
2	White/Orange Stripe and Orange/White Stripe
3	White/Green Stripe and Green/White Stripe

Product Construction:

Conductor:

- 22 or 18 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded PVC or FMPE
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, foil facing out
- Stranded tinned copper drain wire
- 65% tinned copper braid (C7101A, C7103A and C7107A only)

Jacket:

- PVC, gray or black
- Temperature range: -20°C to +60°C or +105°C

Applications:

- Power-limited circuits
- Intercom systems
- Business machines
- Computer interconnects
- Suitably marked for appropriate tray cable installations
- Petrochemical control systems
- Burglar alarms
- Suggested voltage rating: 300 volts

Features:

- Superior temperature characteristics
- Robust, highly durable
- Sunlight-resistant jacket

Compliances:

- NEC Article 725 Power-Limited Tray Cable (UL: 105°C or 60°C, 300V)
- NEC Article 800 Communications Cable (UL: 105°C or 60°C, 300V)
- †UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C) or CM c(UL)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

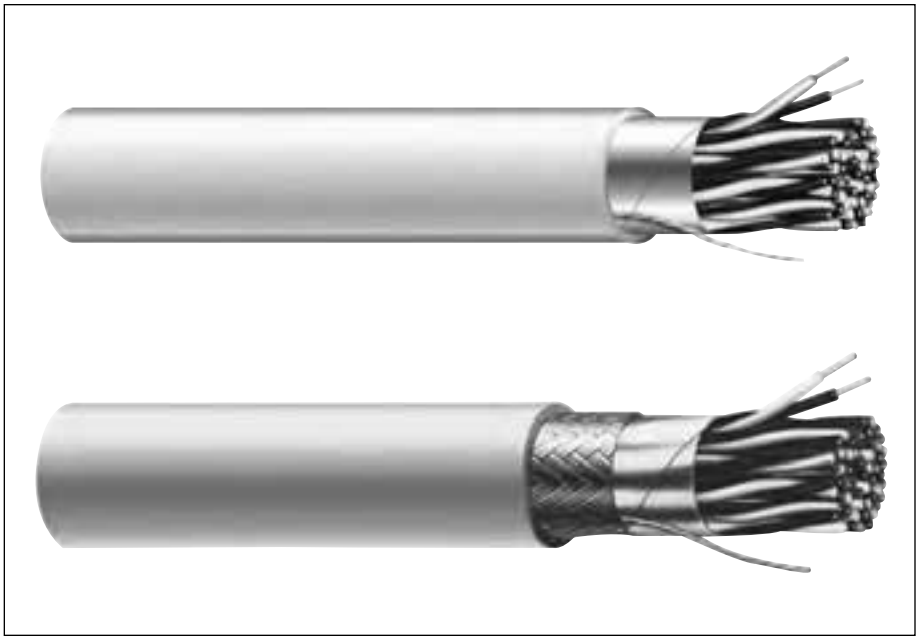
Packaging:

- Please contact Customer Service for packaging and color options

† UL Style 2464 only available on PVC insulation constructions

CAROL BRAND c UL us LISTED CMG Certified Canadian Standard Association Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Computer Cable



General Cable manufactures a comprehensive line of computer cables.

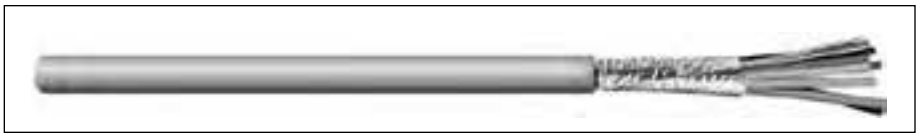
This complete line of paired and unpaired, shielded computer cables—which are UL and CSA listed—are used primarily for the internal or external interconnection of electronic equipment and computers. Applications include data transmission, CAD/CAM, telemetering, data displays, computer print-out, credit verification systems and similar applications.

General Cable also offers a variety of put-ups for computer cables to meet your individual requirements.

Our products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.

Multi-Conductor, Foil Shield

UL 2464, NEC Type CMR (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20°C		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C0740A	2	24	7/32	0.010	0.25	0.032	0.81	0.157	3.99	26.0	7.2	36.0	64.0
C0741A	3	24	7/32	0.010	0.25	0.032	0.81	0.164	4.17	26.0	7.2	33.0	59.0
C0742A	4	24	7/32	0.010	0.25	0.032	0.81	0.175	4.45	26.0	7.2	33.0	59.0
C0753A	5	24	7/32	0.010	0.25	0.032	0.81	0.188	4.78	26.0	7.2	33.0	59.0
C0743A	6	24	7/32	0.010	0.25	0.032	0.81	0.201	5.11	26.0	7.2	30.0	55.0
C0754A	7	24	7/32	0.010	0.25	0.032	0.81	0.201	5.11	26.0	7.2	30.0	55.0
C0744A	8	24	7/32	0.010	0.25	0.032	0.81	0.215	5.46	26.0	7.2	30.0	55.0
C0755A	9	24	7/32	0.010	0.25	0.032	0.81	0.228	5.79	26.0	7.2	30.0	55.0
C0745A	10	24	7/32	0.010	0.25	0.032	0.81	0.245	6.22	26.0	7.2	30.0	55.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1 - For cables up to and including 10 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	6	Light Blue
2	White	7	Orange
3	Red	8	Yellow
4	Light Green	9	Violet
5	Light Brown	10	Gray

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20°C		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C0746A	15	24	7/32	0.010	0.25	0.032	0.81	0.276	7.01	26.0	7.2	30.0	55.0
C0747A	20	24	7/32	0.010	0.25	0.032	0.81	0.303	7.70	26.0	7.2	30.0	55.0
C0748A	25	24	7/32	0.010	0.25	0.032	0.81	0.333	8.46	26.0	7.2	30.0	55.0
C0749A	30	24	7/32	0.010	0.25	0.032	0.81	0.351	8.92	26.0	7.2	30.0	55.0
C0750A	40	24	7/32	0.010	0.25	0.032	0.81	0.391	9.93	26.0	7.2	30.0	55.0
C0751A	50	24	7/32	0.010	0.25	0.032	0.81	0.439	11.15	26.0	7.2	30.0	55.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 2 Per ICEA - For cables of 15 thru 50 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	14	Light Green/White	27	Light Blue/Black/White	39	White/Black/Green
2	White	15	Light Blue/White	28	Black/Red/Green	40	Red/White/Green
3	Red	16	Black/Red	29	White/Red/Green	41	Light Green/White/Blue
4	Light Green	17	White/Red	30	Red/Black/Green	42	Orange/Red/Green
5	Orange	18	Orange/Red	31	Light Green/Black/Orange	43	Light Blue/Red/Green
6	Light Blue	19	Light Blue/Red	32	Orange/Black/Green	44	Black/White/Blue
7	White/Black	20	Red/Green	33	Light Blue/White/Orange	45	White/Black/Blue
8	Red/Black	21	Orange/Green	34	Black/White/Orange	46	Red/White/Blue
9	Light Green/Black	22	Black/White/Red	35	White/Red/Orange	47	Light Green/Orange/Red
10	Orange/Black	23	White/Black/Red	36	Orange/White/Blue	48	Orange/Red/Blue
11	Light Blue/Black	24	Red/Black/White	37	White/Red/Blue	49	Light Blue/Red/Orange
12	Black/White	25	Light Green/Black/White	38	Black/White/Green	50	Black/Orange/Red
13	Red/White	26	Orange/Black/White				

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Computer interconnections
- Data transmission
- Control circuits
- Industrial equipment control
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CMR (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

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CSA CMG Certified Canadian Standard Association

Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Conductor, Foil Shield

UL 2464, NEC Type CM (UL) c(UL) or CMR (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 or 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC or PVC
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

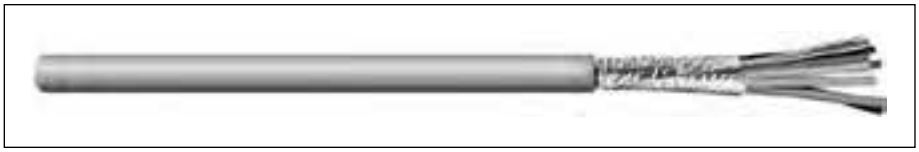
- Computer interconnections
- Data transmission
- Control circuits
- Industrial equipment control
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 800 Type CM - 20 or 22 AWG (UL: 75˚C)
- NEC Article 800 Type CMR - 20 or 22 AWG (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20˚C		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
S-R PVC – CMR (UL) c(UL)													
C0760A	2	22	7/30	0.010	0.25	0.032	0.81	0.169	4.29	16.5	6.3	36.0	65.0
C0761A	3	22	7/30	0.010	0.25	0.032	0.81	0.177	4.50	16.5	6.3	36.0	65.0
C0762A	4	22	7/30	0.010	0.25	0.032	0.81	0.190	4.83	16.5	6.3	36.0	65.0
C0763A	6	22	7/30	0.010	0.25	0.032	0.81	0.219	5.56	16.5	6.3	34.0	61.0
C0764A	8	22	7/30	0.010	0.25	0.032	0.81	0.235	5.97	16.5	6.3	34.0	61.0
C0765A	10	22	7/30	0.010	0.25	0.032	0.81	0.269	6.83	16.5	6.3	34.0	61.0
C0766A	15	22	7/30	0.010	0.25	0.032	0.81	0.304	7.72	16.5	6.3	34.0	61.0
C0767A	20	22	7/30	0.010	0.25	0.032	0.81	0.335	8.51	16.5	6.3	34.0	61.0
C0768A	25	22	7/30	0.010	0.25	0.032	0.81	0.369	9.37	16.5	6.3	34.0	61.0
PVC – CM (UL) c(UL)													
C0780A	2	20	7/28	0.016	0.41	0.032	0.81	0.207	5.26	11.0	6.3	39.0	70.0
C0781A	3	20	7/28	0.016	0.41	0.032	0.81	0.217	5.51	11.0	6.3	39.0	70.0
C0782A	4	20	7/28	0.016	0.41	0.032	0.81	0.236	5.99	11.0	6.3	39.0	70.0
C0783A	6	20	7/28	0.016	0.41	0.032	0.81	0.276	7.01	11.0	6.3	37.0	66.0
C0784A	8	20	7/28	0.016	0.41	0.032	0.81	0.297	7.54	11.0	6.3	37.0	66.0
C0785A	10	20	7/28	0.016	0.41	0.032	0.81	0.345	8.76	11.0	6.3	37.0	66.0
C0786A	15	20	7/28	0.016	0.41	0.032	0.81	0.393	9.98	11.0	6.3	37.0	66.0
C0787A	20	20	7/28	0.016	0.41	0.032	0.81	0.435	11.05	11.0	6.3	37.0	66.0
C0788A	25	20	7/28	0.016	0.41	0.032	0.81	0.483	12.27	11.0	6.3	40.0	72.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

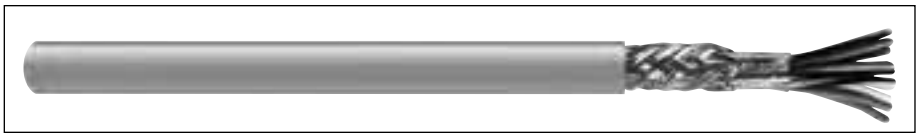
Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**10**	Orange/Black	**19**	Blue/Red
2	White	**11**	Blue/Black	**20**	Red/Green
3	Red	**12**	Black/White	**21**	Orange/Green
4	Green	**13**	Red/White	**22**	Black/White/Red
5	Orange	**14**	Green/White	**23**	White/Black/Red
6	Blue	**15**	Blue/White	**24**	Red/Black/White
7	White/Black	**16**	Black/Red	**25**	Green/Black/White
8	Red/Black	**17**	White/Red		
9	Green/Black	**18**	Orange/Red		

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Foil/Braid Shield

UL 2464, NEC Type CL2 (UL) or CM (UL) c(UL), CSA CMG



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20°C		NOMINAL CAP.** pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
CL2, CMG, UL 2464													
C0939A*	3	28	7/36	0.010	0.25	0.032	0.81	0.166	4.22	67.5	5.0	26.0	47.0
C0940A*	4	28	7/36	0.010	0.25	0.032	0.81	0.176	4.47	67.5	5.0	26.0	47.0
C0941A*	5	28	7/36	0.010	0.25	0.032	0.81	0.186	4.72	67.5	5.0	26.0	47.0
C0942A*	6	28	7/36	0.010	0.25	0.032	0.81	0.196	4.98	67.5	5.0	25.0	44.0
C0943A*	7	28	7/36	0.010	0.25	0.032	0.81	0.196	4.98	67.5	5.0	25.0	44.0
C0944A*	8	28	7/36	0.010	0.25	0.032	0.81	0.207	5.26	67.5	5.0	25.0	44.0
C0945A*	9	28	7/36	0.010	0.25	0.032	0.81	0.217	5.51	67.5	5.0	20.0	36.0
C0946A*	10	28	7/36	0.010	0.25	0.032	0.81	0.231	5.87	67.5	5.0	20.0	36.0
C0947A	15	28	7/36	0.010	0.25	0.032	0.81	0.256	6.50	67.5	5.0	20.0	36.0
C0948A	25	28	7/36	0.010	0.25	0.032	0.81	0.301	7.65	67.5	5.0	20.0	36.0
CM, CMG, UL 2464													
C0951A	3	24	7/32	0.010	0.25	0.032	0.81	0.186	4.72	25.7	5.3	33.0	59.0
C0952A	4	24	7/32	0.010	0.25	0.032	0.81	0.197	5.00	25.7	5.5	33.0	59.0
C0953A	5	24	7/32	0.010	0.25	0.032	0.81	0.210	5.33	25.7	4.4	33.0	59.0
C0954A	6	24	7/32	0.010	0.25	0.032	0.81	0.223	5.66	25.7	4.6	30.0	55.0
C0955A	7	24	7/32	0.010	0.25	0.032	0.81	0.223	5.66	25.7	4.6	30.0	55.0
C0956A	8	24	7/32	0.010	0.25	0.032	0.81	0.237	6.02	25.7	3.8	30.0	55.0
C0957A	9	24	7/32	0.010	0.25	0.032	0.81	0.250	6.35	25.7	3.9	30.0	55.0
C0958A	10	24	7/32	0.010	0.25	0.032	0.81	0.267	6.78	25.7	4.2	30.0	55.0
C0959A	15	24	7/32	0.010	0.25	0.032	0.81	0.298	7.57	25.7	3.6	30.0	55.0
C0960A	20	24	7/32	0.010	0.25	0.032	0.81	0.325	8.26	25.7	4.5	30.0	55.0
C0961A	25	24	7/32	0.010	0.25	0.032	0.81	0.355	9.02	25.7	3.5	30.0	55.0

*Color Code Chart 1. Remaining items Color Code Chart 2
**A – Capacitance between conductors
**B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	6	Light Blue
2	White	7	Orange
3	Red	8	Yellow
4	Light Green	9	Violet
5	Light Brown	10	Gray

Color Code Chart 2 Per ICEA

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	10	Orange/Black	19	Light Blue/Red
2	White	11	Light Blue/Black	20	Red/Green
3	Red	12	Black/White	21	Orange/Green
4	Light Green	13	Red/White	22	Black/White/Red
5	Orange	14	Light Green/White	23	White/Black/Red
6	Light Blue	15	Light Blue/White	24	Red/Black/White
7	White/Black	16	Black/Red	25	Light Green/Black/White
8	Red/Black	17	White/Red		
9	Light Green/Black	18	Orange/Red		

Product Construction:

Conductor:

- 28 and 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire (28 AWG only)
- 65% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20780 demands

Compliances:

- NEC Article 725 Type CL2 - 28 AWG (UL: 75°C)
- NEC Article 800 Type CM - 24 AWG (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

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CSA CMG Certified Canadian Standard Association

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Conductor, Foil/Braid Shield

UL 2464, NEC Type CMR (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- 65% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

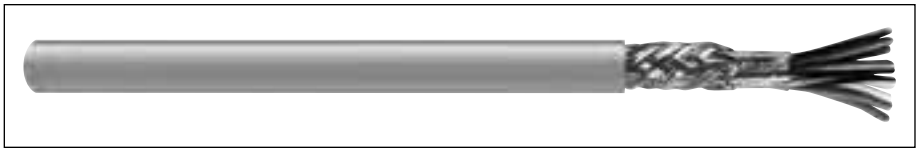
- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20780 demands

Compliances:

- NEC Article 800 Type CMR (UL: 75°C)
- UL Style 2464 (UL: 80°C, 300V)
- CSA CMG (CSA: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft @20°C		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C0971A	3	22	7/30	0.010	0.25	0.032	0.81	0.199	5.05	16.6	5.6	36.0	66.0
C0972A	4	22	7/30	0.010	0.25	0.032	0.81	0.212	5.38	16.6	4.4	36.0	66.0
C0973A	5	22	7/30	0.010	0.25	0.032	0.81	0.226	5.74	16.6	4.7	36.0	66.0
C0974A	6	22	7/30	0.010	0.25	0.032	0.81	0.241	6.12	16.6	3.8	34.0	60.0
C0975A	7	22	7/30	0.010	0.25	0.032	0.81	0.241	6.12	16.6	6.2	34.0	60.0
C0976A	8	22	7/30	0.010	0.25	0.032	0.81	0.257	6.53	16.6	4.0	34.0	60.0
C0977A	9	22	7/30	0.010	0.25	0.032	0.81	0.272	6.91	16.6	3.4	34.0	60.0
C0978A	10	22	7/30	0.010	0.25	0.032	0.81	0.291	7.39	16.6	3.6	34.0	60.0
C0979A	15	22	7/30	0.010	0.25	0.032	0.81	0.326	8.28	16.6	3.6	34.0	60.0
C0980A	20	22	7/30	0.010	0.25	0.032	0.81	0.357	9.07	16.6	3.9	34.0	60.0
C0981A	25	22	7/30	0.010	0.25	0.032	0.81	0.391	9.93	16.6	2.7	34.0	60.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

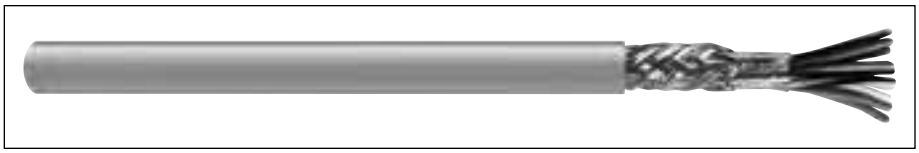
Color Code Chart Per ICEA

NO. OF COND.	COLOR	NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**10**	Orange/Black	**19**	Light Blue/Red
2	White	**11**	Light Blue/Black	**20**	Red/Green
3	Red	**12**	Black/White	**21**	Orange/Green
4	Light Green	**13**	Red/White	**22**	Black/White/Red
5	Orange	**14**	Light Green/White	**23**	White/Black/Red
6	Light Blue	**15**	Light Blue/White	**24**	Red/Black/White
7	White/Black	**16**	Black/Red	**25**	Light Green/Black/White
8	Red/Black	**17**	White/Red		
9	Light Green/Black	**18**	Orange/Red		

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Conductor, Foil/Braid Shield, Lo-Cap®

UL 2919, NEC Type CL2 or CM (UL) c(UL) CMH, CSA CMH



CATALOG NUMBER	NO. OF COND.	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL CAP.* pF/ft	
		INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
28 AWG (7/36): CL2, CSA CMH											
C0530A	3	0.016	0.41	0.032	0.81	0.192	4.88	64.9	7.8	9.5	17.0
C0531A	4	0.016	0.41	0.032	0.81	0.205	5.21	64.9	5.9	9.5	17.0
C0532A	5	0.016	0.41	0.032	0.81	0.218	5.54	64.9	5.9	9.5	17.0
C0533A	6	0.016	0.41	0.032	0.81	0.232	5.89	64.9	6.2	9.0	16.0
C0534A	7	0.016	0.41	0.032	0.81	0.232	5.89	64.9	6.2	9.0	16.0
C0535A	8	0.016	0.41	0.032	0.81	0.247	6.27	64.9	4.8	9.0	16.0
C0536A	9	0.016	0.41	0.032	0.81	0.261	6.63	64.9	4.9	9.0	16.0
C0537A	10	0.016	0.41	0.032	0.81	0.279	7.09	64.9	5.2	9.0	16.0
C0538A	15	0.016	0.41	0.032	0.81	0.312	7.92	64.9	4.2	9.0	16.0
24 AWG (7/32): CM (UL) c(UL) CMH, AWM Style 2919											
C0680A	3	0.016	0.41	0.032	0.81	0.211	5.36	25.7	3.8	11.9	21.5
C0681A	4	0.016	0.41	0.032	0.81	0.227	5.77	25.7	3.8	11.9	21.5
C0682A	5	0.016	0.41	0.032	0.81	0.242	6.15	25.7	3.8	11.9	21.5
C0683A	6	0.016	0.41	0.032	0.81	0.259	6.58	25.7	3.2	11.2	20.2
C0684A	7	0.016	0.41	0.032	0.81	0.259	6.58	25.7	3.2	11.2	20.2
C0685A	8	0.016	0.41	0.032	0.81	0.276	7.01	25.7	3.2	11.2	20.2
C0686A	9	0.016	0.41	0.032	0.81	0.293	7.44	25.7	3.6	11.2	20.2
C0687A	10	0.016	0.41	0.032	0.81	0.315	8.00	25.7	3.6	11.2	20.2
C0688A	15	0.016	0.41	0.032	0.81	0.354	8.99	25.7	3.6	11.2	20.2

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
Vp = 78%
Impedance: ≈100 Ω

Color Code Chart 1 - For cables up to and including 10 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	6	Light Blue
2	White	7	Orange
3	Red	8	Yellow
4	Light Green	9	Violet
5	Brown	10	Gray

Color Code Chart 2 Per ICEA - For cables up to 15 conductors

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	10	Orange/Black
2	White	11	Light Blue/Black
3	Red	12	Black/White
4	Light Green	13	Red/White
5	Orange	14	Light Green/White
6	Light Blue	15	Light Blue/White
7	White/Black		
8	Red/Black		
9	Light Green/Black		

Product Construction:

Conductor:

- 28 and 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium grade foamed Lo-Cap® color coded polypropylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire
- 70% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- High speed computers
- Industrial equipment
- Control circuits
- Designed for low capacitance applications
- Suitable for EIA RS-232 and RS-423 CAD/CAM applications
- Suggested voltage rating: 30 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20780 demands

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2919 (UL: 80˚C, 30V)
- CSA CMH (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH Flame Test

Packaging:

- 1000' (305 m) spools or reels
- 500' (152 m) spools or reels
- Other put-ups available—consult Customer Service

CAROL BRAND® c UL us LISTED
CMH Certified Canadian Standard Association
Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.
RoHS Compliant Directive 2002/95/EC
General Cable

Multi-Paired, Foil Shield

UL 2464, NEC Type CMR (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

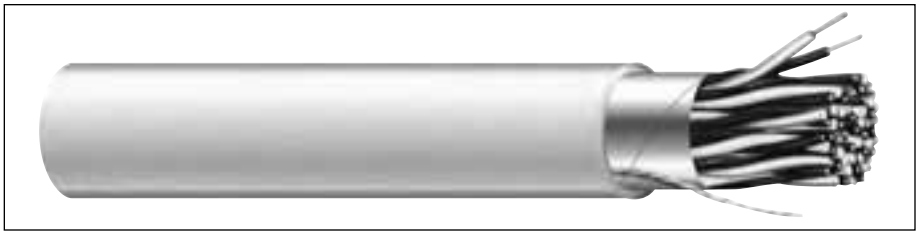
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20780 demands

Compliances:

- NEC Article 800 Type CMR (UL: 75°C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA, 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C0600A	1	24	7/32	0.010	0.25	0.032	0.81	0.157	3.99	25.7	7.2	19.7	21.5
C0601A	2	24	7/32	0.010	0.25	0.032	0.81	0.214	5.44	25.7	7.2	28.7	21.5
C0602A	3	24	7/32	0.010	0.25	0.032	0.81	0.225	5.72	25.7	7.2	25.7	21.5
C0603A	4	24	7/32	0.010	0.25	0.032	0.81	0.245	6.23	25.7	7.2	25.7	20.2
C0604A	5	24	7/32	0.010	0.25	0.032	0.81	0.265	6.73	25.7	7.2	25.7	20.2
C0605A	6	24	7/32	0.010	0.25	0.032	0.81	0.287	7.29	25.7	7.2	23.7	42.7
C0606A	7	24	7/32	0.010	0.25	0.032	0.81	0.287	7.29	25.7	7.2	23.7	42.7
C0607A	8	24	7/32	0.010	0.25	0.032	0.81	0.309	7.85	25.7	7.2	23.7	42.7
C0608A	9	24	7/32	0.010	0.25	0.032	0.81	0.331	8.41	25.7	7.2	23.7	42.7
C0609A	10	24	7/32	0.010	0.25	0.032	0.81	0.359	9.12	25.7	7.2	23.7	42.7
C0610A	15	24	7/32	0.010	0.25	0.032	0.81	0.410	10.41	25.7	7.2	23.7	42.7
C0611A	19	24	7/32	0.010	0.25	0.032	0.81	0.432	10.97	25.7	7.2	23.7	42.7
C0612A	25	24	7/32	0.010	0.25	0.032	0.81	0.505	12.84	25.7	7.2	23.7	42.7
C0720A	1	22	7/30	0.010	0.25	0.032	0.81	0.169	4.29	16.6	6.2	40.4	72.6
C0721A	2	22	7/30	0.010	0.25	0.032	0.81	0.234	5.94	16.6	6.2	32.3	58.1
C0722A	3	22	7/30	0.010	0.25	0.032	0.81	0.246	6.25	16.6	6.2	27.8	50.1
C0723A	4	22	7/30	0.010	0.25	0.032	0.81	0.269	6.83	16.6	6.2	27.8	50.1
C0724A	5	22	7/30	0.010	0.25	0.032	0.81	0.292	7.42	16.6	6.2	27.8	50.1
C0725A	6	22	7/30	0.010	0.25	0.032	0.81	0.317	8.05	16.6	6.2	25.5	45.9
C0726A	9	22	7/30	0.010	0.25	0.032	0.81	0.367	9.32	16.6	6.2	25.5	45.9
C0728A	15	22	7/30	0.010	0.25	0.032	0.81	0.457	11.62	16.6	6.2	25.5	45.9
C0729A	19	22	7/30	0.010	0.25	0.032	0.81	0.482	12.24	16.6	6.2	25.5	45.9
C0730A	27	22	7/30	0.010	0.25	0.032	0.81	0.576	14.36	16.6	6.2	26.0	46.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

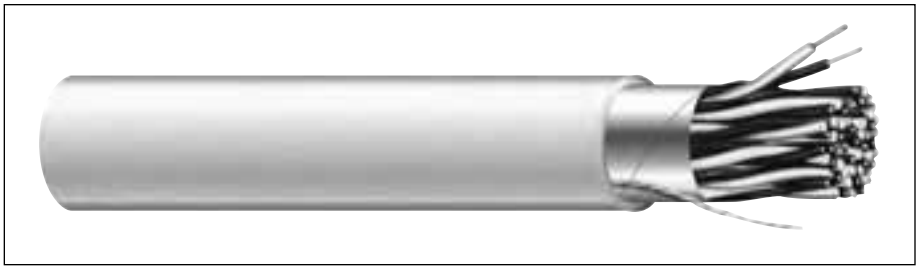
Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black with Red	14	Green with White
2	Black with White	15	Green with Blue
3	Black with Green	16	Green with Yellow
4	Black with Blue	17	Green with Brown
5	Black with Yellow	18	Green with Orange
6	Black with Brown	19	White with Blue
7	Black with Orange	20	White with Yellow
8	Red with White	21	White with Brown
9	Red with Green	22	White with Orange
10	Red with Blue	23	Blue with Yellow
11	Red with Yellow	24	Blue with Brown
12	Red with Brown	25	Blue with Orange
13	Red with Orange	26	Brown with Yellow
		27	Brown with Orange

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Paired, Foil Shield, Lo-Cap®

UL 2448, NEC Type CM (UL) c(UL), CMH



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0890A	2	24	7/32	0.015	0.38	0.032	0.81	0.247	6.27	25.7	7.20	66	100	14.4	26.0
C0901A	3	24	7/32	0.015	0.38	0.032	0.81	0.261	6.63	25.7	7.20	66	100	13.9	25.1
C0893A	4	24	7/32	0.015	0.38	0.032	0.81	0.277	7.04	25.7	7.20	66	100	13.9	25.1
C0894A	5	24	7/32	0.015	0.38	0.032	0.81	0.310	7.87	25.7	7.20	66	100	13.9	25.1
C0899A	6	24	7/32	0.015	0.38	0.032	0.81	0.336	8.53	25.7	7.20	66	100	13.0	23.4
C0896A	9	24	7/32	0.015	0.38	0.032	0.81	0.391	9.93	25.7	7.20	66	100	13.0	23.4
C0897A	12.5	24	7/32	0.015	0.38	0.032	0.97	0.459	11.66	25.7	7.20	66	100	13.0	23.4

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with White	7	White/Blue paired with Blue/White
2	Red paired with Green	8	White/Brown paired with Brown/White
3	Brown paired with Blue	9	White/Orange paired with Orange/White
4	Orange paired with Yellow	10	White/Green paired with Green/White
5	Violet paired with Gray	11	White/Red paired with Red/White
6	Tan paired with Pink	12	White/Black paired with Black/White
Single Conductor: Green With Yellow Stripe			

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20˚C to +75°C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for low capacitance applications
- Suggested voltage rating: 30 volts

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2448 (UL: 60˚C, 30V)
- CSA CMH (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Foil/Braid Shield

UL 2464, NEC Type CMR (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 and 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded S-R PVC per UL 1061
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- 65% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Suitable for EIA RS-232 applications
- Suggested voltage rating: 300 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20789 demands

Compliances:

- NEC Article 800 Type CMR (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOMINAL INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	A	B
C0620A	2	24	7/32	0.010	0.25	0.032	0.81	0.235	5.97	25.7	5.4	29.5	53.0
C0621A	3	24	7/32	0.010	0.25	0.032	0.81	0.231	5.87	25.7	5.0	26.4	47.6
C0622A	4	24	7/32	0.010	0.25	0.032	0.81	0.253	6.43	25.7	4.5	26.4	47.6
C0623A	5	24	7/32	0.010	0.25	0.032	0.81	0.278	7.06	25.7	4.6	26.4	47.6
C0624A	6	24	7/32	0.010	0.25	0.032	0.81	0.296	7.52	25.7	2.9	24.4	43.9
C0625A	7	24	7/32	0.010	0.25	0.032	0.81	0.313	7.95	25.7	3.1	24.4	43.9
C0626A	8	24	7/32	0.010	0.25	0.032	0.81	0.336	8.53	25.7	4.1	24.4	43.9
C0628A	10	24	7/32	0.010	0.25	0.032	0.81	0.357	9.07	25.7	2.6	24.4	43.9
C0630A	12.5	24	7/32	0.010	0.25	0.032	0.81	0.386	9.80	25.7	3.6	24.4	43.9
C0650A	2	22	7/30	0.010	0.25	0.032	0.81	0.229	5.82	16.6	3.8	33.2	59.7
C0651A	3	22	7/30	0.010	0.25	0.032	0.81	0.296	7.52	16.6	4.1	28.6	51.5
C0652A	4	22	7/30	0.010	0.25	0.032	0.81	0.320	8.13	16.6	3.5	28.6	51.5
C0653A	5	22	7/30	0.010	0.25	0.032	0.81	0.331	8.41	16.6	3.9	28.6	51.5
C0654A	6	22	7/30	0.010	0.25	0.032	0.81	0.348	8.84	16.6	4.4	26.2	47.2
C0655A	7	22	7/30	0.010	0.25	0.032	0.81	0.348	8.84	16.6	5.0	26.2	47.2
C0656A	8	22	7/30	0.010	0.25	0.032	0.81	0.368	9.35	16.6	3.8	26.2	47.2
C0658A	10	22	7/30	0.010	0.25	0.032	0.81	0.388	9.86	16.6	4.1	26.2	47.2
C0660A	12.5	22	7/30	0.010	0.25	0.032	0.81	0.429	10.90	16.6	4.7	26.2	47.2
C0663A	25	22	7/30	0.010	0.25	0.058	0.81	0.620	15.75	16.6	2.1	26.2	46.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	13	Red paired with Orange
2	Black paired with White	14	White paired with Green
3	Black paired with Green	15	Blue paired with Green
4	Black paired with Blue	16	Yellow paired with Green
5	Black paired with Yellow	17	Brown paired with Green
6	Black paired with Brown	18	Orange paired with Green
7	Black paired with Orange	19	White paired with Blue
8	Red paired with White	20	White paired with Yellow
9	Red paired with Green	21	White paired with Brown
10	Red paired with Blue	22	White paired with Orange
11	Red paired with Yellow	23	Yellow paired with Blue
12	Red paired with Brown	24	Blue paired with Brown
		25	Orange paired with Blue
Single Conductor: Green with Yellow Stripe			

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Paired, Foil/Braid Shield, Lo-Cap®

UL 2919, NEC Type CM (UL) c(UL) CMH

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0841A	1	24	7/32	0.024	0.61	0.032	0.81	0.235	5.97	25.7	2.9	66	120	14.6	26.2
C0842A	2	24	7/32	0.024	0.61	0.032	0.81	0.304	7.72	25.7	2.3	66	120	11.7	21.0
C0843A	3	24	7/32	0.024	0.61	0.032	0.81	0.360	9.14	25.7	2.3	66	120	11.9	21.4
C0844A	4	24	7/32	0.024	0.61	0.032	0.81	0.390	9.91	25.7	2.1	66	120	11.9	21.4

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 1

NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C4841A	1	24	7/32	0.024	0.61	0.032	0.81	0.235	5.97	25.7	2.9	66	120	14.6	26.2
C4842A	2	24	7/32	0.024	0.61	0.032	0.81	0.304	7.72	25.7	2.3	66	120	11.7	21.0
C4843A	3	24	7/32	0.024	0.61	0.032	0.81	0.360	9.14	25.7	2.3	66	120	11.9	21.4
C4844A	4	24	7/32	0.024	0.61	0.032	0.81	0.390	9.91	25.7	2.1	66	120	11.9	21.4

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart 2

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	White–Blue Stripe Blue–White Stripe	3	White–Green Stripe Green–White Stripe
2	White–Orange Stripe Orange–White Stripe	4	White–Brown Stripe Brown–White Stripe

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See charts below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire
- 90% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Low capacitance requirements
- Suitable for EIA RS-485 applications
- Suggested voltage rating: 30 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20789 demands

Compliances:

- NEC Article 800 Type CM/CMH (UL: 75°C)
- UL Style 2919 (UL: 80˚C, 30V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Paired, Foil/Braid Shield, Lo-Cap®

UL 2919, NEC Type CM (UL) c(UL) CMH

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire
- 90% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Low capacitance requirements
- Suitable for EIA RS-232 applications
- Suitable for EIA RS-422 applications
- Suggested voltage rating: 30 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20789 demands

Compliances:

- NEC Article 800 Type CM/CMH (UL: 75˚C)
- UL Style 2919 (UL: 80˚C, 30V)
- CSA CMH (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0829A	2	24	7/32	0.015	0.38	0.032	0.81	0.257	6.53	25.7	2.7	66	100	14.8	26.7
C0830A	3	24	7/32	0.015	0.38	0.032	0.81	0.289	7.34	25.7	2.6	66	100	14.2	25.5
C0831A	4	24	7/32	0.015	0.38	0.032	0.81	0.313	7.95	25.7	3.2	66	100	14.2	25.5
C0832A	5	24	7/32	0.015	0.38	0.032	0.81	0.338	8.59	25.7	1.9	66	100	14.2	25.5
C0839A	6	24	7/32	0.015	0.38	0.032	0.81	0.364	9.24	25.7	2.4	66	100	13.2	23.8
C0833A	7	24	7/32	0.015	0.38	0.032	0.81	0.364	9.24	25.7	2.0	66	100	13.2	23.8
C0835A	10	24	7/32	0.015	0.38	0.038	0.97	0.462	11.73	25.7	1.7	66	100	13.2	23.8
C0836A	12	24	7/32	0.015	0.38	0.038	0.97	0.479	12.17	25.7	1.8	66	100	13.2	23.8

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black paired with Red	7	Black paired with Orange
2	Black paired with White	8	Red paired with White
3	Black paired with Green	9	Red paired with Green
4	Black paired with Blue	10	Red paired with Blue
5	Black paired with Yellow	11	Red paired with Yellow
6	Black paired with Brown	12	Red paired with Brown

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

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CAROL BRAND

Multi-Paired, Foil/Braid Shield, Lo-Cap®

UL 2919, NEC Type CM (UL) c(UL) CMH

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0515A	2	24	7/32	0.016	0.41	0.032	0.81	0.276	7.01	25.7	3.0	78	132	10.2	18.4
C0516A	3	24	7/32	0.016	0.41	0.032	0.81	0.290	7.37	25.7	3.2	78	132	9.9	17.8
C0517A	4	24	7/32	0.016	0.41	0.032	0.81	0.315	8.00	25.7	3.3	78	132	9.9	17.8
C0518A	5	24	7/32	0.016	0.41	0.032	0.81	0.340	8.64	25.7	4.2	78	132	9.9	17.8
C0519A	6	24	7/32	0.016	0.41	0.032	0.81	0.368	9.35	25.7	3.6	78	141	9.2	16.6
C0520A	7	24	7/32	0.016	0.41	0.032	0.81	0.370	9.40	25.7	3.5	78	141	9.2	16.6
C0521A	8	24	7/32	0.016	0.41	0.032	0.81	0.397	10.08	25.7	2.7	78	141	9.2	16.6
C0522A	10	24	7/32	0.016	0.41	0.038	0.97	0.473	12.01	25.7	2.4	78	141	9.2	16.6
C0523A	12.5	24	7/32	0.016	0.41	0.038	0.97	0.486	12.34	25.7	2.4	78	141	9.2	16.6
C0524A	15	24	7/32	0.016	0.41	0.048	1.22	0.555	14.10	25.7	2.6	78	141	9.2	16.6
C0525A	18	24	7/32	0.016	0.41	0.048	1.22	0.585	14.86	25.7	2.1	78	141	9.2	16.6
C0526A	25	24	7/32	0.016	0.41	0.048	1.22	0.677	17.20	25.7	2.0	78	141	9.2	16.6

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	White–Blue Stripe Blue–White Stripe	10	Red–Gray Stripe Gray–Red Stripe	18	Yellow–Green Stripe Green–Yellow Stripe
2	White–Orange Stripe Orange–White Stripe	11	Black–Blue Stripe Blue–Black Stripe	19	Yellow–Brown Stripe Brown–Yellow Stripe
3	White–Green Stripe Green–White Stripe	12	Black–Orange Stripe Orange–Black Stripe	20	Yellow–Gray Stripe Gray–Yellow Stripe
4	White–Brown Stripe Brown–White Stripe	13	Black–Green Stripe Green–Black Stripe	21	Violet–Blue Stripe Blue–Violet Stripe
5	White–Gray Stripe Gray–White Stripe	14	Black–Brown Stripe Brown–Black Stripe	22	Violet–Orange Stripe Orange–Violet Stripe
6	Red–Blue Stripe Blue–Red Stripe	15	Black–Gray Stripe Gray–Black Stripe	23	Violet–Green Stripe Green–Violet Stripe
7	Red–Orange Stripe Orange–Red Stripe	16	Yellow–Blue Stripe Blue–Yellow Stripe	24	Violet–Brown Stripe Brown–Violet Stripe
8	Red–Green Stripe Green–Red Stripe	17	Yellow–Orange Stripe Orange–Yellow Stripe	25	Violet–Gray Stripe Gray–Violet Stripe
9	Red–Brown Stripe Brown–Red Stripe				

Single Conductor: Green with Yellow Stripe

Product Construction:

Conductor:
- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded Lo-Cap® foamed polypropylene
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire
- 65% tinned copper braid

Jacket:
- PVC, gray
- Temperature range: -20°C to +80°C

Applications:
- High-speed computer interconnects
- CAD/CAM systems
- EIA RS-232 and RS-423 systems
- Control circuits
- Industrial equipment
- Low signal distortion data requirements
- Suggested voltage rating: 30 volts

Features:
- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20789 demands

Compliances:
- NEC Article 800 Type CM/CMH (UL: 75°C)
- UL Style 2919 (UL: 80°C, 30V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND® c UL us LISTED

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Paired, Foil/Braid Shield, Lo-Cap®

UL 2960, NEC Type CL2

Product Construction:

Conductor:

- 28 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire
- 90% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +75°C

Applications:

- Computers
- Industrial equipment
- Data transmission
- Control circuits
- Low capacitance requirements
- Suitable for EIA RS-232 applications
- Suitable for EIA RS-422 applications
- Suggested voltage rating: 30 volts

Features:

- Braid shield provides good flexibility
- Superior shielding where noise rejection is critical
- Assists system designers in meeting FCC Docket 20789 demands

Compliances:

- NEC Article 725 Type CL2 (UL: 75°C)
- UL Style 2960 (UL: 60°C, 30V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0804A	2	28	7/36	0.009	0.23	0.032	0.81	0.194	4.93	67.5	4.0	66	100	14.8	26.6
C0805A	3	28	7/36	0.009	0.23	0.032	0.81	0.194	4.93	67.5	4.2	66	100	14.0	25.3
C0806A	4	28	7/36	0.009	0.23	0.032	0.81	0.211	5.36	67.5	3.3	66	100	14.0	25.3
C0807A	5	28	7/36	0.009	0.23	0.032	0.81	0.226	5.74	67.5	3.5	66	100	14.0	25.3
C0808A	7	28	7/36	0.009	0.23	0.032	0.81	0.253	6.43	67.5	2.9	66	100	13.1	23.5
C0809A	9	28	7/36	0.009	0.23	0.032	0.81	0.286	7.26	67.5	2.9	66	100	13.1	23.5
C0810A	10	28	7/36	0.009	0.23	0.032	0.81	0.285	7.24	67.5	2.9	66	100	13.1	23.5
C0812A	12	28	7/36	0.009	0.23	0.032	0.81	0.294	7.47	67.5	3.3	66	100	13.1	23.5

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black paired with Red	7	Black paired with Orange
2	Black paired with White	8	Red paired with White
3	Black paired with Gren	9	Red paired with Green
4	Black paired with Blue	10	Red paired with Blue
5	Black paired with Yellow	11	Red paired with Yellow
6	Black paired with Brown	12	Red paired with Brown

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

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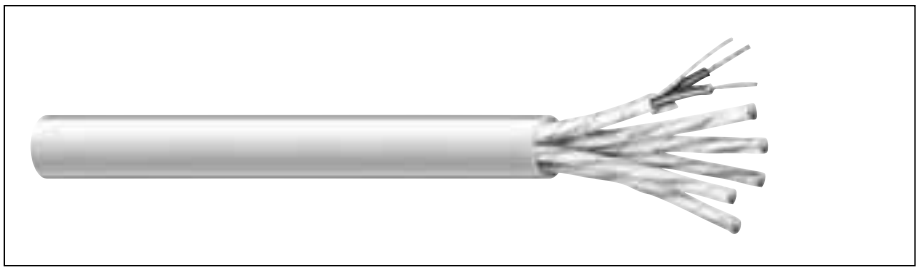
CAROL BRAND

Multi-Paired, Individually Foil Shielded

NEC Type CL2 and CM (UL) c(UL)



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1368A	4	20	7/28	0.015	0.38	0.032	0.81	0.364	9.25	23.0	41.5

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Red paired with White/Red
2	Black paired with White/Black
3	Green paired with White/Green
4	White paired with White/Yellow

Product Construction:

Conductor:

- 20 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:

- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire each pair

Jacket:

- PVC, gray
- Temperature range: -20˚C to +75°C

Applications:

- Applications for total isolation of signal
- Computers
- Control circuits
- Industrial equipment
- Suggested voltage rating: 300 volts

Features:

- Individually shielded pairs for excellent signal isolation
- Excellent high frequency properties
- Mechanical durability

Compliances:

- NEC Article 725 Type CL2 (UL: 75°C, 150V)
- NEC Article 800 Type CM (UL: 75°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND® c UL us LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Multi-Paired, Individually Foil Shielded

UL 2464, NEC Type CM (UL) c(UL), CSA CMG

Product Construction:

Conductor:

- 22 AWG fully annealed solid tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:

- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Solid tinned copper drain wire each pair

Jacket:

- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:

- Applications for total isolation of signal
- Computers
- Control circuits
- Industrial equipment
- Suggested voltage rating: 300 volts

Features:

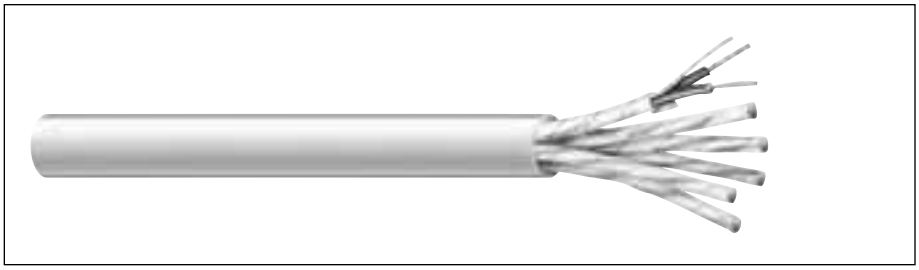
- Individually shielded pairs for excellent signal isolation
- Excellent high-frequency properties
- Mechanical durability

Compliances:

- NEC Article 800 Type CM (UL: 75˚C)
- UL Style 2464 (UL: 80˚C, 300V)
- CSA CMG (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMG Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		NOMINAL IMPEDANCE	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.	Ω	A	B
C6035A	3	22	Solid	0.015	0.38	0.032	0.81	0.304	7.72	16.5	11.3	50	38.6	69.4
C6036A	6	22	Solid	0.015	0.38	0.032	0.81	0.397	10.08	16.5	11.3	50	38.6	69.4

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

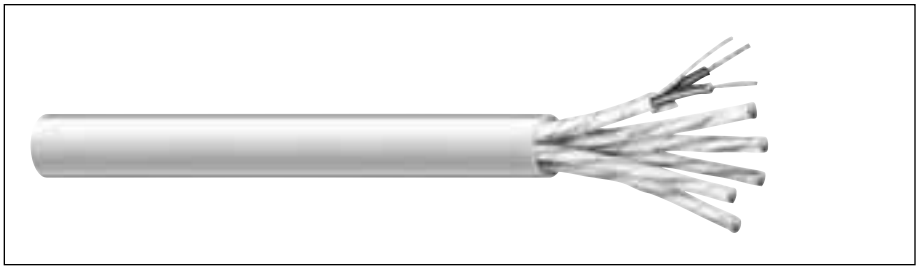
Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	**4**	Black paired with Blue
2	Black paired with White	**5**	Black paired with Yellow
3	Black paired with Green	**6**	Black paired with Brown

General Cable RoHS Compliant Directive 2002/95/EC Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. CMG Certified Canadian Standard Association c UL us LISTED CAROL BRAND

Multi-Paired, Individually Foil Shielded

UL 2919, NEC Type CM, CSA CMH



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.** pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C6065A	3	24	7/32	0.011	0.28	0.032	0.81	0.269	6.83	26.0	18.0	66	71	21.7	39.0
C6066A	6	24	7/32	0.011	0.28	0.032	0.81	0.349	8.86	26.0	18.0	66	71	21.7	39.0
C6067A	9	24	7/32	0.011	0.28	0.032	0.81	0.406	10.31	26.0	18.0	66	71	21.7	39.0
C6040A	3	22	7/30	0.011	0.28	0.032	0.81	0.292	7.42	16.5	11.3	66	63	24.4	43.9
C6041A	6	22	7/30	0.011	0.28	0.032	0.81	0.381	9.68	16.5	11.3	66	63	24.4	43.9
C6042A	9	22	7/30	0.011	0.28	0.032	0.81	0.445	11.30	16.5	11.3	66	63	24.4	43.9
C6043A	11	22	7/30	0.011	0.28	0.032	0.81	0.486	12.34	16.5	11.3	66	63	24.4	43.9
C6059A	12	22	7/30	0.011	0.28	0.048	1.22	0.533	13.54	16.5	11.3	66	63	24.4	43.9
C6044A	15	22	7/30	0.011	0.28	0.048	1.22	0.591	15.01	16.5	11.3	66	63	24.4	43.9
C6060A	17	22	7/30	0.011	0.28	0.048	1.22	0.622	15.80	16.5	11.3	66	63	24.4	43.9
C6045A	19	22	7/30	0.011	0.28	0.048	1.22	0.622	15.80	16.5	11.3	66	63	24.4	43.9
C6046A*	27	22	7/30	0.011	0.28	0.048	1.22	0.696	17.68	16.5	11.3	66	63	24.4	43.9
C6052A	3	20	7/28	0.013	0.33	0.032	0.81	0.339	8.61	10.5	10.2	66	61	25.3	45.6
C6053A	6	20	7/28	0.013	0.33	0.032	0.81	0.446	11.33	10.5	10.2	66	61	25.3	45.6
C6054A	9	20	7/28	0.013	0.33	0.048	1.22	0.555	14.10	10.5	10.2	66	61	25.3	45.6
C6056A	12	20	7/28	0.013	0.33	0.048	1.22	0.623	15.82	10.5	10.2	66	61	25.3	45.6
C6058A	15	20	7/28	0.013	0.33	0.048	1.22	0.692	17.58	10.5	10.2	66	61	25.3	45.6
C6047A	3	18	16/30	0.016	0.41	0.032	0.81	0.395	10.03	7.2	8.3	66	60	25.7	46.2
C6048A	6	18	16/30	0.016	0.41	0.048	1.22	0.556	14.12	7.2	8.3	66	60	25.7	46.2
C6049A	9	18	16/30	0.016	0.41	0.048	1.22	0.649	16.48	7.2	8.3	66	60	25.7	46.2
C6050A	12	18	16/30	0.016	0.41	0.048	1.22	0.731	18.57	7.2	8.3	66	60	25.7	46.2
C6051A	15	18	16/30	0.016	0.41	0.048	1.22	0.776	19.71	7.2	8.3	66	60	25.7	46.2

*UL 2919, CSA CMH Only
**A – Capacitance between conductors
**B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	10	Red paired with Blue	19	White paired with Blue
2	Black paired with White	11	Red paired with Yellow	20	White paired with Yellow
3	Black paired with Green	12	Red paired with Brown	21	White paired with Brown
4	Black paired with Blue	13	Red paired with Orange	22	White paired with Orange
5	Black paired with Yellow	14	Green paired with White	23	Blue paired with Yellow
6	Black paired with Brown	15	Green paired with Blue	24	Blue paired with Brown
7	Black paired with Orange	16	Green paired with Yellow	25	Blue paired with Orange
8	Red paired with White	17	Green paired with Brown	26	Brown paired with Yellow
9	Red paired with Green	18	Green paired with Orange	27	Brown paired with Orange

Product Construction:

Conductor:
- 24 thru 18 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:
- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire each pair

Jacket:
- PVC, gray
- Temperature range: -20˚C to +80˚C

Applications:
- Applications for total isolation of signal
- Computers
- Control circuits
- Industrial equipment
- Suggested voltage rating: 30 volts

Features:
- Individually shielded pairs for excellent signal isolation
- Excellent high frequency properties
- Mechanical durability

Compliances:
- NEC Article 800 Type CM (UL: 75°C)
- UL Style 2919 (UL: 80˚C, 30V)
- CSA CMH (CSA: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA CMH Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

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CMH Certified Canadian Standard Association

Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Paired, Individually Foil Shielded, Lo-Cap®

UL 2493, NEC Type CM (UL) c(UL) CMH

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded foamed Lo-Cap® polypropylene
- Color code: See chart below

Shield:

- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire each pair

Jacket:

- PVC, gray
- Temperature range: -20˚C to +75˚C

Applications:

- High-speed computers
- Industrial equipment
- Control circuits
- Suitable for low capacitance applications
- Suitable for EIA RS-422 CAD/CAM applications
- Suggested voltage rating: 300 volts

Features:

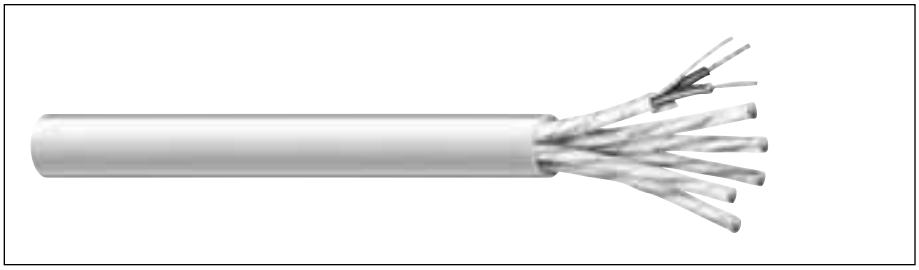
- Individually shielded pairs for excellent signal isolation
- Excellent high-frequency properties
- Mechanical durability

Compliances:

- NEC Article 800 Type CM/CMH (UL: 75˚C, 300V)
- UL Style 2493 (UL: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR Ω/kft		VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	COND.	SHLD.			A	B
C0910A	2	24	7/32	0.022	0.56	0.047	1.19	0.283	7.19	26.0	18.0	78	100	14.8	26.7
C0911A	3	24	7/32	0.022	0.56	0.048	1.22	0.381	9.68	26.0	18.0	78	100	14.8	26.7
C0912A	4	24	7/32	0.022	0.56	0.048	1.22	0.416	10.57	26.0	18.0	78	100	14.8	26.7
C0913A	6	24	7/32	0.022	0.56	0.048	1.22	0.492	12.50	26.0	18.0	78	100	14.8	26.7
C0914A	9	24	7/32	0.022	0.56	0.063	1.60	0.601	15.27	26.0	18.0	78	100	14.8	26.7
C0915A	11	24	7/32	0.022	0.56	0.063	1.60	0.652	16.56	26.0	18.0	78	100	14.8	26.7
C0916A	12	24	7/32	0.022	0.56	0.063	1.60	0.672	17.08	26.0	18.0	78	100	14.8	26.7
C0917A	15	24	7/32	0.022	0.56	0.063	1.60	0.743	18.87	26.0	18.0	78	100	14.8	26.7

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Black paired with Red	9	Red paired with Green
2	Black paired with White	10	Red paired with Blue
3	Black paired with Green	11	Red paired with Yellow
4	Black paired with Blue	12	Red paired with Brown
5	Black paired with Yellow	13	Red paired with Orange
6	Black paired with Brown	14	Green paired with White
7	Black paired with Orange	15	Green paired with Blue
8	Red paired with White		

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

c UL us LISTED

CAROL BRAND

Multi-Paired, Individually Foil/Braid Shielded, Lo-Cap®

UL 2493, NEC Type CM (UL) c(UL) CMH

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL DCR** Ω/kft			VEL. OF PROP., %	NOM. IMP., Ω	NOMINAL CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	C	D	E			A	B
C0924A	2	24	7/32	0.022	0.56	0.048	1.22	0.392	9.96	26.0	18.0	4.3	78	100	14.8	26.7
C0925A	3	24	7/32	0.022	0.56	0.048	1.22	0.410	10.41	26.0	18.0	4.4	78	100	14.8	26.7
C0926A	4	24	7/32	0.022	0.56	0.048	1.22	0.445	11.30	26.0	18.0	3.2	78	100	14.8	26.7

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield
**C – Conductor resistance
**D – Individual shield resistance
**E – Overall shield resistance

Color Code Chart

NO. OF PAIRS	COLOR
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:

- Premium-grade, color-coded foamed Lo-Cap® polypropylene
- Color code: See chart below

Shield:

- Individually shielded pairs
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire, each pair
- 70% tinned copper braid, each pair

Jacket:

- PVC, gray
- Temperature range: -20˚C to +75˚C

Applications:

- High-speed computers
- Industrial equipment
- Control circuits
- Designed for low capacitance applications
- Suitable for RS-422 CAD/CAM applications
- Suggested voltage rating: 300 volts

Features:

- Individually shielded pairs for excellent signal isolation
- Excellent high-frequency properties
- Mechanical durability

Compliances:

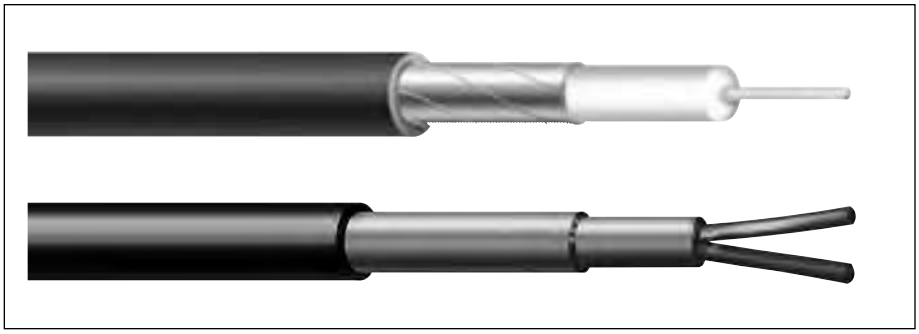
- NEC Article 800 Type CM/CMH (UL: 75˚C, 300V)
- UL Style 2493 (UL: 60˚C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND c UL us LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Coaxial Cable 5



To meet the needs of today's sophisticated, high-speed, wide bandwidth electronics over long distances, with minimum signal loss or degradation, General Cable Carol® Brand offers a wide range of coaxial and twinaxial designs in both unbalanced arrays and precision-balanced pairs. This offers the system designer a wide choice of cost-effective products that reflect the most recent changes in the standards set by UL, CSA and/or the FCC.

Included in this section are recommended Carol® Brand coaxial products for the CATV market. However, these constructions may differ in certain parts of the country.

Unlike other products in the electronic market, coaxial cable does not have one accepted standard construction.

General Cable recommends, in order to avoid installing an unacceptable coaxial cable for the CATV application in your area, the local CATV company should be consulted.

General Cable's Carol® Brand product mix encompasses standard RG/U-type coaxial constructions in the more popular 50, 75 and 93 ohm designs and miniature coaxial products for smaller high-speed applications.

The twinaxial products meet or exceed the stringent demands of today's precision- balanced pair systems. The minimization of capacitance unbalance is a necessary requirement for long distance data transmission.

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Coaxial Cable Solutions Guide

CAROL® BRAND

ELECTRONICS WIRE & CABLE

General Cable offers a complete line of Carol® Brand Coaxial Cables for today's sophisticated high-speed, wide-bandwidth electronics products that run over long distances with minimal signal loss or degradation.

General Cable has the right coaxial cable to serve every application, including:

- CATV/MATV/DBS
- HDTV/SDI
- CCTV

The General Cable Coaxial Cable Solutions Guide is a quick-reference tool to make it easier to specify and sell the right cable for the required application–residential, commercial, entertainment and security. Whatever the application calls for, we have a coaxial cable that delivers the performance your customers need.

CATV/MATV/DBS

Broadband signal, 5MHz–3GHz, VHF/UHF, is traditionally transmitted as an analog signal received directly off air (MATV) or delivered as a community access television (CATV) service and uses a 75 Ohm system.

Recommended Coaxial Cable Construction: Copper clad steel (CCS) conductor with a foam polyethylene or Teflon* core, an aluminum/Mylar* foil, a minimum of 60% braid, which is typically aluminum (AL) for this application, and a PVC jacket.

For home use, a CM rated coax should be used. A commercial application may require a National Electrical Code (NEC 800 or 725) Riser (CMR) or Plenum (CMP) rated cable. Economical cable solutions use low smoke PVC (75˚C) jackets. Teflon* (FEP) and other fluoropolymer materials (150˚C) may be used to provide a more durable and higher-temperature cable alternative.

It is a common misconception that RG 6 coax is "better" than RG 59. While RG 6 has become the industry standard and is an excellent value, it is a larger cable than RG 59. RG 6 allows the same signal level to be delivered a greater distance. This is expressed as a decibel value at particular frequencies. For example, at 100 MHz, General Cable's Carol® Brand part number C5775 RG 6 coax cable has an attenuation value of 2.05 db/100'. A similar construction Carol® Brand part number C5782 RG 59 coax cable exhibits an attenuation value (loss) at 100 MHz frequency of 2.70db/100'. This may or may not be significant, depending on the input signal level and distance of the cable run.

For a longer cable run, or if the coax cable is planned for use as the backbone in a system, Carol® Brand part number C5039 RG 11 coax cable should be used, because its attenuation at 100 MHz frequency is 1.30 db/100'.

CATV/MATV/DBS *RG 59, RG 6 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 6 CCS/Foil/60% AL Braid CATV/CM	C5775	9116/1829A	5303	841	5726
RG 6 CCS/Foil/60% AL Braid CATVR/CMR	C5886	9116R	—	—	—
RG 6 CCS/Quad/Foil/60%/40% AL Braid CATV/CM	C5785	1189A	5307	Q841	5740
RG 6 CCS/Quad/Foil/60%/40% AL Braid CATVR/CMR	C5889	1884A	—	—	—
RG 6 CCS/Foil/60% AL Braid CMP - Plenum	C3524	9116P	—	25841	2275K
RG 6 CCS/Quad/Foil/60%/40% AL Braid CMP - Plenum	C3525	1189AP	—	25Q841	—
RG 11 CCS/Foil/60% AL Braid CATV/CM	C5039	1525A	—	—	5913
RG 11 CCS/Foil/60% AL Braid CL2P/CMP - Plenum	C3528	1523AP	—	—	2285K

*Note: DuPont™ trademark

HDTV/SDI

A DTV signal is a television signal provided in a digital form. Data bits, like in a computer, provide a dramatically better picture and better sound quality called High Definition TV (HDTV). HDTV is the highest quality of DTV and is only one of the available formats. In addition to enhanced picture quality, the DTV signal allows several program streams (multicasting) on one channel, providing more program potential, as well as interactive services.

Serial Digital Interface (SDI) is the standard for digital video transmission over coaxial cable. The SMPTE 295M standard provides maximum distances (300 meters; 140 meters for High Definition), typically at 270 Mbps with 540 Mbps possible over a coaxial cable.

Recommended Coax Cable Construction: Cable providing signal to and within the home/building will continue to be CCS construction (C5775, C5785). Cables with SBC conductors (395011, 495025) are recommended for the interconnect between the decoder box and other electronic devices (TV, DVD, DVR, CD, Bluray).

HDTV/SDI—Interconnect Cables *RG 59, RG 6 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 59 SBC/Foil/95% TC Braid CMR	395025	1505A	5361	819	5553
RG 59 SBC/Foil/95% TC Braid CMP - Plenum	495023	1506A	—	—	—
RG 6 SBC/Foil/95% TC Braid CMR	395011	1694A	—	—	5765
RG 6 SBC/Foil/95% TC Braid CMP - Plenum	495025	1695A	—	—	—
RG 11 SBC/Foil/95% TC Braid CMR	395029	7731A	—	—	—
RG 11 SBC/Foil/95% TC Braid CMP - Plenum	495027	7732A	—	—	2286K

CCTV

Closed Circuit TV (CCTV) signals are typically lower-frequency analog signals. Attenuation increases as frequency increases, therefore lower baseband signals are able to travel longer distances on an RG 59 type coaxial cable than a higher-frequency television signal. This is why RG 59 is the most common coax for CCTV. It is becoming more common for Unshielded Twisted Pair (UTP) products, like Category 5e and 6 cables, to be used for Closed Circuit over Twisted Pair (CCTP) or Web-enabled cameras implemented over a Power over Ethernet network architecture; however, these solutions require the use of specialized equipment.

Recommended Coax Cable Construction: Solid bare copper (SBC) conductor and a bare copper (BC) braid shield with coverage of 90-95% to minimize signal loss of both the horizontal and vertical sync signals. Stranded conductors are recommended for pan, zoom, tilt (PZT) cameras.

CCTV *RG 59 and RG 11 Ratings*

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
RG 59 SBC/95% BC Braid CM	C1142	543945	5001	—	—
RG 59 Stranded (7/30) BC/95% BC Braid CM	C1103	9259	—	—	—
RG 59 Stranded (7/30) BC/95% BC Braid + 22 AWG (7/30) Shielded Pair CM	C8025	9265	—	—	—
RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CM	C8028	549945	—	—	—
RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CMP - Plenum	C8030	649948	—	—	—
RG 59 SBC/95% BC Braid CMP - Plenum	495028	643948	5351	25815	2037V
RG 11 SBC/95% BC Braid CM	395058	513945	—	811	5905
RG 11 SBC/95% BC Braid CMP - Plenum	495015	613948	—	—	2286K
RG 6 BC/95% BC Braid CMP - Plenum	495035	—	—	—	2277V

***Abbreviation Key** AL - aluminum | SBC - solid bare copper | CCS- copper clad steel | BC - bare copper | TC - tinned copper

RG 6/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- MATV
- CATV
- CCTV†
- HDTV
- Digital video
- Drop cable
- FM broadcast
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5760 **RG 6/U Type**	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE 0.180	 4.57	100% Flexfoil® 30 Ga. CCS Spiral Served Shield 30.0 Ω/Mft.	Black PVC 0.240	 6.10	16.20	53.15	82	75	1 10 50 100 200 500 1000	0.26 0.81 1.46 2.05 2.83 4.53 6.59
C5761† **RG 6/U Type** **UL CL2, CATV, CM** **c(UL) CM**	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Foam PE 0.180	 4.57	100% Flexfoil® +95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.275	 6.98	16.20	53.15	83	75	1 10 50 100 200 500 1000	0.26 0.81 1.46 2.05 2.83 4.53 6.59
C5775 **RG 6/U Type** **UL CL2, CATV, CM** **c(UL) CM**	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE 0.180	 4.57	100% Flexfoil® Bonded +60% Aluminum Braid 9.0 Ω/Mft.	Black PVC 0.275	 6.98	16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
C5886 **RG 6/U Type** **Riser** **UL CL2R, CATVR, CMR** **c(UL) CMR**	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE 0.180	 4.57	100% Flexfoil® Bonded +60% Aluminum Braid 9.0 Ω/Mft.	Black PVC 0.275	 6.98	16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
C5776 **RG 6/U Type** **UL CL2, CATV, CM** **c(UL) CM**	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE 0.180	 4.57	100% Flexfoil® Bonded +95% Aluminum Braid 10.5 Ω/Mft.	Black PVC 0.275	 6.98	16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79

RG 6/U Type

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Solid and foam polyethylene (PE) designs

Shield:
- Tinned, bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound or PE compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- CATV
- MATV
- HDTV
- Digital video
- Direct burial
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5785 RG 6/U Type Quad-Shield UL CL2, CATV, CM c(UL) CM 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		(2) 100% Flexfoil® 1st Bonded (1) 60% (2) 40% Aluminum Braids 3.7 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
		0.180	4.57		0.292	7.42						
C5889 RG 6/U Type Riser Quad-Shield UL CL2R, CATVR, CMR c(UL) CM 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		(2) 100% Flexfoil® 1st Bonded (1) 60% (2) 40% Aluminum Braids 3.7 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
		0.180	4.57		0.292	7.42						
C5777 RG 6/U Type UL CL2, CATV, CM c(UL) CM 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +61% Tinned Copper Braid 6.5 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
		0.180	4.57		0.275	6.98						
C5802 RG 6/U Type Messengered, Self-Supporting 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +60% Aluminum Braid 9.0 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000	0.26 0.81 1.46 2.05 2.83 4.53 6.59
		0.180	4.57		0.270 x 0.428	6.86 x 10.87						
C5804 RG 6/U Type MoistureGuard™ Direct Burial, Flooded 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +60% Aluminum Braid w/water block 9.0 Ω/Mft.	Black PE		16.20	53.15	83	75	1 10 50 100 200 500 1000	0.26 0.81 1.46 2.05 2.83 4.53 6.59
		0.180	4.57		0.275	6.98						

RG 6/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Tinned copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- LAN cable
- HDTV
- CCTV†
- Digital video
- Direct broadcast satellite
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5814† RG 6/U Type Digital Video/HDTV UL CL2, CATV, CM c(UL) CM 	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Foam PE		100% Flexfoil® +95% Tinned Copper Braid 2.7 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.20 0.72 1.48 2.01 2.79 4.46 6.53 7.86 8.76 9.69 11.31
		0.180	4.57		0.275	6.98						
C5822 RG 6/U Dual-Type DBS UL CL2, CATV, CM c(UL) CM 	18 Ga. Solid Copper-Clad Steel 28.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +60% Aluminum Braid 9.0 Ω/Mft.	Black PVC		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
		0.180	4.57		0.267 x 0.595	6.86 x 15.11						

RG 6/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3 or copper-clad steel per ASTM B-869
- Twisted pair color code: black and red

Insulation/Core:
- Foam polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Tinned copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium-grade PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- CATV
- CCTV†
- DBS
- Drop cable
- FM broadcast
- HDTV
- Digital video
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5778 **RG 6/U Type** **UL CL2, CATV, CM** **c(UL) CM** 	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Foam PE 0.180	4.57	100% Flexfoil® Bonded +61% Tinned Copper Braid 6.5 Ω/Mft.	Black PVC 0.275	6.98	16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.81 1.46 2.05 2.83 4.53 6.59 8.10 8.80 10.10 11.79
C3523 **RG 6/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP** 	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Fluoropolymer 0.170	4.32	100% Flexfoil® +80% Tinned Copper Braid 2.3 Ω/Mft.	Flexguard® PVC Natural 0.232	5.89	16.40	52.50	83	75	1 10 50 100 200 500 1000	0.30 0.66 1.50 2.10 3.10 5.00 7.30
C3521 **RG 6/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP** 	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Fluoropolymer 0.170	4.32	Flexfoil® Bonded +95% Tinned Copper Braid 2.3 Ω/Mft.	Flexguard® PVC Natural 0.232	5.89	16.00	52.50	83	75	1 10 50 100 200 500 1000	0.30 0.66 1.50 2.10 3.10 5.00 7.30
C3524 **RG 6/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP** 	18 Ga. Solid Copper-Clad Steel 28.6 Ω/Mft.	Fluoropolymer 0.170	4.32	Flexfoil® Bonded +80% Aluminum Braid 9.0 Ω/Mft.	Flexguard® PVC Natural 0.232	5.89	16.00	52.50	83	75	1 10 50 100 200 500 1000 2300 3000	0.30 0.66 1.50 2.10 3.10 5.00 7.30 12.20 14.28
C3525 **RG 6/U Type** **Quad Shield** **Plenum** **UL CL2P, CMP** **c(UL) CMP** 	18 Ga. Solid Copper-Clad Steel 28.6 Ω/Mft.	Fluoropolymer 0.170	4.32	(2) 100% Flexfoil® (1) 60% (2) 40% Aluminum Braids 5.3 Ω/Mft.	Flexguard® PVC Natural 0.306	7.77	16.00	52.50	83	75	1 10 50 100 200 500 1000 2300 3000	0.30 0.66 1.50 2.10 3.10 5.00 7.30 12.20 14.28
C8029† **RG 6/U Type** **+18 AWG** **Unshielded Pair** **UL CL2, CATV, CM** **c(UL) CM** 	18 Ga. Solid Bare Copper Coax 18 AWG (7/26) Unshielded Pair	Foam PE 0.180 Premium PVC 0.010	4.57 0.25	100% Flexfoil® 95% Bare Copper Braid 1.9 Ω/Mft. Unshielded Pair	Black PVC 0.270 x 0.493	6.86 x 12.52	16.20	53.15	83	75	1 10 50 100 200 500 1000	0.20 0.72 1.48 2.01 2.70 4.46 6.53
C8031† **RG 6/U Type** **+18 AWG** **Unshielded Pair** **UL CMP** **c(UL) CMP** 	18 AWG Solid Bare Copper Coax 18 AWG (7/26) Unshielded Pair	Fluoropolymer 0.170 Halar 0.006	0.432 0.15	95% Bare Copper Braid 3.5 Ω/Mft. Unshielded Pair	Natural PVC 0.232 x 0.416	5.89 x 10.57	16.30	53.48	83	75	1 10 50 100 200 500 1000	0.30 0.66 1.50 2.10 3.10 5.00 7.30

General Cable

CAROL BRAND

RG 6/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Tinned copper braid
- Flexfoil® shield

Jacket:
- Premium-grade PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Broadlast grade headend
- Serial Digital Interface (SDI)
- CATV
- DBS
- Drop cable
- HDTV
- CCTV†
- Digital video
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
395011 **UL CMR** **c(UL) CMG**	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Foam PE		Dual Foil + 95% Tinned Copper Braid Shield 2.8 Ω/Mft.	Flame-Retardant PVC		16.20	53.10	83	75	1 3.6 135 270 540 1500 2250 3000	0.24 0.45 2.10 2.97 4.25 7.33 9.14 10.67
		0.180	4.57		0.275	6.91						
495035† **UL CMP** **c(UL) CMP** **75°C**	18 Ga. Solid Bare Copper 6.7 Ω/Mft.	Fluoropolymer		95% Bare Copper Braid 2.0 Ω/Mft.	Plenum PVC		16.20	52.50	83	75	1 10 50 100 200 540 1000 1500 2250 3000	0.21 0.65 1.46 2.04 2.98 5.18 7.05 8.64 10.58 12.21
		0.170	4.32		0.232	5.89						
495036† **UL CMP** **c(UL) CMP** **105°C**	18 Ga. Solid Bare Copper 6.7 Ω/Mft.	Fluoropolymer		95% Bare Copper Braid 2.0 Ω/Mft.	PVDF		16.10	53.00	83	75	1 10 50 100 200 540 1000 1500 2250 3000	0.21 0.65 1.46 2.04 2.98 5.18 7.05 8.64 10.58 12.21
		0.170	4.32		0.232	5.89						
495025 **UL CMP** **c(UL) CMP**	18 Ga. Solid Bare Copper 6.5 Ω/Mft.	Fluoropolymer		Dual Foil + 95% Tinned Copper Braid Shield 2.8 Ω/Mft.	Plenum PVC		16.10	53.00	83	75	1 3.6 135 270 540 1500 2250 3000	0.24 0.45 2.40 2.75 4.00 6.36 11.60 13.70
		0.170	4.32		0.232	5.89						

RG 6/U Multi-Channel Digital/Precision, Riser Rated

75 Ohm High-End Coaxial Cables for Exacting Video, Analog, Digital & Monitor Applications

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Dual Flexfoil® shield
- Tinned copper braid

Jacket:
- Outer jacket: black matte finish thermoplastic elastomer (TPE)
- Inner jacket: flame-retardant PVC; see color codes below

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Analog/Digital Video Broadcast-Grade Monitor
- HDTV
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
395011-3 UL CMR c(UL) CMG 	18 Ga. 3/Cond. Solid Bare Copper 6.5 Ω/Mft.	Foam PE		Bi-Metal Foil + 95% Tinned Copper Braid Shield (2.8 Ohm)	Inner: Flame-Retardant PVC Outer: TPE matte		16.20	53.20	83	75	1 3.6 71.5 270 540 1500	0.24 0.45 1.60 2.97 4.25 7.33
		0.180	4.57		0.685	17.40						
395011-4 UL CMR c(UL) CMG 	18 Ga. 4/Cond. Solid Bare Copper 6.5 Ω/Mft.	Foam PE		Bi-Metal Foil + 95% Tinned Copper Braid Shield (2.8 Ohm)	Inner: Flame-Retardant PVC Outer: TPE matte		16.20	53.20	83	75	1 3.6 71.5 270 540 1500	0.24 0.45 1.60 2.97 4.25 7.33
		0.180	4.57		0.755	19.18						
395011-5 UL CMR c(UL) CMG 	18 Ga. 5/Cond. Solid Bare Copper 6.5 Ω/Mft.	Foam PE		Bi-Metal Foil + 95% Tinned Copper Braid Shield (2.8 Ohm)	Inner: Flame-Retardant PVC Outer: TPE matte		16.20	53.20	83	75	1 3.6 71.5 270 540 1500	0.24 0.45 1.60 2.97 4.25 7.33
		0.180	4.57		0.860	21.85						

Inner Jacket Color Code Chart

Ordering Suffix	COLOR
1	Red
2	Green
3	Blue
4	White
5	Yellow

Note: 395011-3 will have the first three colors, 395011-4 will have the first four colors and 395011-5 will have all five colors.

RG 8/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Solid and cellular polyethylene designs

Shield:
- Tinned or bare copper braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1108A **RG 8/U Mini Type** **UL CL2, CM** **CSA CMG** **VW-1 1354** 	16 Ga. (19/28) Bare Copper 4.2 Ω/Mft.	Foam PE		95% Bare Copper Braid 3.3 Ω/Mft.	Black PVC		25.30	83.01	80	50	1 10 50 100 200 500 1000	0.26 0.98 2.30 3.30 4.90 8.50 14.30
		0.155	3.94		0.242	6.15						
C1154 **RG 8/U Type** **JAN-C-17A TYPE** **VW-1 1354** 	13 Ga. (7/21) Bare Copper 1.9 Ω/Mft.	Solid PE		95% Bare Copper Braid 1.2 Ω/Mft.	Black PVC		29.50	96.79	66	52	1 10 50 100 200 500 1000	0.16 0.56 1.30 1.90 2.80 4.70 7.40
		0.285	7.24		0.405	10.29						
C1198 **RG 8/U Type** **VW-1 1354** 	11 Ga. (19/24) Bare Copper 1.9 Ω/Mft.	Foam PE		95% Bare Copper Braid 1.1 Ω/Mft.	Black PVC		26.00	85.31	78	50	1 10 50 100 200 500 1000	0.17 0.57 1.20 1.80 2.70 4.70 7.10
		0.285	7.24		0.405	10.29						
C1180 **RG 8/U Type** 	9½ Ga. Solid Bare Copper 0.90 Ω/Mft.	Semi-Solid PE		100% Flexfoil® Bonded +88% Tinned Copper Braid 1.8 Ω/Mft.	Black PVC		24.60	80.71	84	50	1 10 50 100 200 500 1000	0.13 0.40 0.90 1.30 1.80 3.00 4.50
		0.285	7.24		0.405	10.29						

RG 8/U Type Thicknet/Trunk Cable

50 Ohm IEEE 802.3 and ISO/IEC 8802.3 10 Base 5 LAN and Computer Cables

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Tinned copper braid
- Flexfoil® shield

Jacket:
- Premium PVC compound
- Premium fluoropolymer compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- LAN & data transmission computer cables
- Thicknet/trunk cable – IEEE 802.3 and ISO/IEC 8802.3 10 base 5 LAN computer cables
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
397001 RG 8/U Type THICKNET DEC 17-000451-00 UL CM c(UL) 	12 Ga. Solid Bare Copper 1.42 Ω/Mft.	Foam PE		Quad Shield Dual Flexfoil® 94% Tinned Copper Braid + Dual Flexfoil® 94% Tinned Copper Braid 1.52 Ω/Mft.	Yellow Flame-Retardant PVC		26.00	85.30	78	50	1 5 10 50 100 200 400 700 900 1000	0.17 0.37 0.53 1.20 1.73 2.50 3.64 4.97 5.74 6.10
		0.245	6.22		0.405	10.29						
497001 RG 8/U Type THICKNET DEC 17-000324-00 UL CMP c(UL) 	12 Ga. Solid Bare Copper 1.42 Ω/Mft.	Fluoropolymer		Quad Shield Dual Flexfoil® 94% Tinned Copper Braid + Dual Flexfoil® 94% Tinned Copper Braid 1.52 Ω/Mft.	Orange PVDF		25.00	82.00	84	50	1 5 10 50 100 200 400 700 900 1000	0.16 0.35 0.51 1.19 1.75 2.61 3.97 5.65 6.67 7.14
		0.245	6.22		0.375	9.53						

RG 11/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Solid and foam polyethylene (PE) designs

Shield:
- Tinned, bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound or PE compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast digital video
- MATV
- CATV†
- Drop cable
- HDTV
- CCTV
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1160 **RG 11/U Type** **JAN-C-17A Type**	18 Ga. (7/26) Tinned Copper 6.1 Ω/Mft.	Solid PE		95% Bare Copper Braid 1.2 Ω/Mft.	Black PVC		20.50	67.26	66	75	1 10 50 100 200 500 1000	0.20 0.70 1.30 2.00 2.90 4.70 7.10
		0.285	6.55		0.400	10.16						
C5011† **RG 11/U Type** **UL CL2, CATV, CM** **c(UL) CM**	14 Ga. Solid Bare Copper 2.5 Ω/Mft.	Foam PE		100% Flexfoil® +95% Bare Copper Braid 1.2 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.13 0.40 0.90 1.30 1.90 3.00 4.40 5.30 5.90 6.53 7.62
		0.280	7.11		0.395	10.03						
C5025 **RG 11/U Type**	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE		97% Bare Copper Braid 1.2 Ω/Mft.	Black PE		16.20	53.15	83	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.30 0.70 1.00 1.50 2.20 3.70 5.30 6.38 7.11 7.86 9.18
		0.285	7.24		0.405	10.29						
C5029 **RG 11/U Type** **UL CL2, CM** **c(UL) CM**	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +61% Tinned Copper Braid 3.0 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.30 0.70 0.90 1.30 1.90 3.00 4.40 5.30 5.90 6.53 7.62
		0.280	7.11		0.395	10.03						
C5034 **RG 11/U Type** **1354**	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE		100% Flexfoil® Bonded +40% Aluminum Braid 5.3 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000	0.30 0.70 0.90 1.30 1.90 3.00 4.40
		0.280	7.11		0.395	10.03						

CAROL BRAND

General Cable

RG 11/U Type

Product Construction:

Conductor:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Tinned, bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound, Flexguard® or PE compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast digital video
- MATV
- CATV
- Drop cable
- HDTV
- Direct burial
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5039 **RG 11/U Type** **UL CL2, CATV, CM** **CSA CMG** **1354** 	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE 0.280	 7.11	100% Flexfoil® Bonded +60% Aluminum Braid 4.6 Ω/Mft.	Black PVC 0.395	 10.03	16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.30 0.70 0.90 1.30 1.90 3.00 4.40 5.30 5.90 6.53 7.62
C5044 **RG 11/U Type** **Quad-Shield** **UL CL2, CATV, CM** **CSA CMG** **1354** 	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE 0.280	 7.11	(2) 100% Flexfoil® 1st Bonded (1) 61% (2) 40% Aluminum Braids 3.4 Ω/Mft.	Black PVC 0.405	 10.29	16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.30 0.70 0.90 1.30 1.90 3.00 4.40 5.30 5.90 6.53 7.62
C3528 **RG 11/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP** **CATVP** 	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Fluoropolymer 0.280	 7.11	100% Flexfoil® +60% Aluminum Braids 4.6 Ω/Mft.	PVDF Jacket 0.351	 8.92	16.00	52.50	82	75	1 10 50 100 200 500 1000 1450 1800 2200	0.15 0.47 1.09 1.49 2.35 3.94 6.19 7.45 8.30 9.18

RG 11/U Type

Product Construction:

Conductor:
- Stranded or solid copper per ASTM B-3
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Foam polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium fluoropolymer compound or premium polythylene (PE) compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast/digital video
- MATV
- CATV
- Drop cable
- HDTV
- Direct burial
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL INCHES	INSULATION MATERIAL mm	SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D. INCHES	NOMINAL O.D. mm	NOMINAL CAPACITANCE pF/ft	NOMINAL CAPACITANCE pF/m	VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION MHz	NOMINAL ATTENUATION dB/100'
C3529 **RG 11/U Type** **Quad-Shield** **Plenum** **UL CL2P, CMP** **c(UL) CMP** **CATVP** 	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Fluoropolymer 0.280	7.11	(2) 100% Flexfoil® (1) 60% (2) 40% Aluminum Braids 3.4 Ω/Mft.	PVDF Jacket 0.372	9.45	16.00	52.50	82	75	1 10 50 100 200 500 1000 1450 1800 2200	0.15 0.47 1.09 1.49 2.35 3.94 6.19 7.45 8.30 9.18
C5043 **RG 11/U Type** **MoistureGuard™** **Direct Burial, Flooded**  	14 Ga. Solid Copper-Clad Steel 11.4 Ω/Mft.	Foam PE 0.280	7.11	100% Flexfoil® Bonded +60% Aluminum Braid w/water block 5.3 Ω/Mft.	Black PE 0.395	10.03	16.20	53.15	85	75	1 10 50 100 200 500 1000	0.30 0.70 0.90 1.30 1.90 3.00 4.40

RG 11/U Type Serial Digital Interface (SDI) Precision Cable

Extended-Distance, 75 Ohm High-End Coaxial Cables for Exacting Video, Analog & Digital Applications

Product Construction:

Conductor:
- Copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Bare copper or tinned copper
- Flexfoil® shield

Jacket:
- Premium PVC compound or fluoropolymer

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast-grade Serial Digital Interface (SDI)
- Analog/digital video
- MATV
- CATV
- CCTV†
- Drop cable
- HDTV
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
395058† RG 11/U Type UL CM c(UL) CMG 	14 Ga. Solid Bare Copper 2.6 Ω/Mft.	Foam PE		95% Bare Copper Braid 1.2 Ω/Mft.	Flame-Retardant PVC		16.20	52.50	84	75	1 10 50 100 200 400 540 1000 2250 3000	0.17 0.35 0.90 1.30 1.90 2.90 3.37 4.59 6.88 7.94
		0.285	7.24		0.405	10.29						
395029 RG 11/U Type UL CMR c(UL) CMG 	14 Ga. Solid Bare Copper 2.6 Ω/Mft.	Foam PE		Dual Flexfoil® + 95% Tinned Copper Braid 1.5 Ω/Mft.	Flame-Retardant PVC		16.20	53.10	83	75	1 3.6 135 270 540 1500 2250 3000	0.15 0.28 1.62 2.31 3.29 5.60 6.94 8.10
		0.280	7.11		0.405	10.29						
495015† RG 11/U Type UL CMP c(UL) CMP 	14 Ga. Solid Bare Copper 2.6 Ω/Mft.	Fluoropolymer		95% Bare Copper Braid 1.2 Ω/Mft.	PVDF		16.20	52.50	84	75	1 10 50 100 200 400 540 1000 2250 3000	0.17 0.35 0.90 1.30 1.90 2.90 3.37 4.59 6.88 7.94
		0.280	7.11		0.351	8.92						
495016† RG 11/U Type UL CMP c(UL) CMP 	14 Ga. Solid Bare Copper 2.6 Ω/Mft.	Fluoropolymer		Dual Flexfoil® + 60% AL Braid 3.0 Ω/Mft.	PVDF		16.20	53.10	84	75	1 10 50 100 200 400 540 1000 2250 3000	0.15 0.40 1.00 1.50 2.20 3.30 3.83 5.22 7.83 9.04
		0.280	7.11		0.351	8.92						
495027 RG 11/U Type UL CMP c(UL) CMP 	14 Ga. Solid Bare Copper 2.6 Ω/Mft.	Fluoropolymer		Dual Flexfoil® + 95% Tinned Copper Braid Shield 1.5 Ω/Mft.	PVDF		16.20	53.10	84	75	1 3.6 135 270 540 1500 2250 3000	0.12 0.24 1.63 2.49 3.89 7.88 10.61 12.35
		0.280	7.11		0.348	8.84						

RG 58/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Tinned copper per ASTM B-33

Insulation/Core:
- Solid and foam polyethylene (PE) designs
- Solid and foam fluoropolymer (FEP) design

Shield:
- Tinned copper braid

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast
- LAN & data transmission
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1117 **RG 58/U Type**	20 Ga. Solid Bare Copper 10.1 Ω/Mft.	Solid PE 0.116	2.95	70% Tinned Copper Braid 6.0 Ω/Mft.	Black PVC 0.195	4.95	28.50	93.51	66	53	1 10 50 100 200 500 1000	0.40 1.20 2.90 4.20 6.00 10.17 16.50
C1155 **RG 58 C/U Type** **MIL-C-17G Type**	20 Ga. (19/.0071) Tinned Copper 10.8 Ω/Mft.	Solid PE 0.116	2.95	95% Tinned Copper Braid 4.3 Ω/Mft.	Non-Contaminating Black PVC 0.195	4.95	30.80	101.05	66	50	1 10 50 100 200 500 1000	0.42 1.50 3.70 5.40 8.10 13.86 22.80
C1166 **RG 58/U Type** **JAN-C-17A Type** **1354**	20 Ga. Solid Bare Copper 10.1 Ω/Mft.	Solid PE 0.116	2.95	95% Tinned Copper Braid 4.3 Ω/Mft.	Black PVC 0.195	4.95	30.00	98.43	66	50	1 10 50 100 200 500 1000	0.40 1.20 2.90 4.20 6.00 10.17 16.50
C1178 **RG 58A/U Type** **JAN-C-17A Type** **1354**	20 Ga. (19/.0071) Tinned Copper 10.8 Ω/Mft.	Solid PE 0.116	2.95	95% Tinned Copper Braid 4.3 Ω/Mft.	Black PVC 0.195	4.95	31.80	104.34	66	50	1 10 50 100 200 500 1000	0.42 1.50 3.70 5.40 8.10 13.96 22.80
C1188 **RG 58 A/U Type** **UL CL2, CM** **CSA CMG** **1354**	20 Ga. (19/32) Tinned Copper 9.5 Ω/Mft.	Foam PE 0.114	2.90	95% Tinned Copper Braid 4.3 Ω/Mft.	Black PVC 0.195	4.95	26.00	85.31	78	50	1 10 50 100 200 500 1000	0.45 1.42 3.20 4.50 6.40 10.06 14.50
C3519 **RG 58/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP**	19 Ga. Solid Bare Copper 8.1 Ω/Mft.	Fluoropolymer 0.102	2.59	95% Tinned Copper Braid 2.9 Ω/Mft.	Flexguard® PVC Natural 0.161	4.09	25.00	82.00	82	50	1 10 50 100 200 500 1000	0.40 1.30 2.80 3.90 6.00 9.50 13.50

RG 59/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-869
- Twisted pair color code: black and red

Insulation/Core:
- Solid and cellular polyethylene (PE) designs or foam fluoropolymer (FEP) design

Shield:
- Bare copper braid

Jacket:
- Premium PVC compound or PE compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- CATV
- MATV
- CCTV†
- Local Area Network
- Digital video
- Monitor/VDT display
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION,	NOMINAL IMPEDANCE,	NOMINAL ATTENUATION	
		INCHES	mm	NOM SHLD DCR	INCHES	mm	pF/ft	pF/m	%	Ω	MHz	dB/100'
C1102 **RG 59/U Type**	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE 0.146	3.71	95% Bare Copper Braid 3.5 Ω/Mft.	Black PE 0.242	6.15	17.30	56.76	82	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.82 1.80 2.60 3.70 6.00 8.80 10.60 11.81 13.05 15.24
C1104 **RG 59/U Type** **1354**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Solid PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.242	6.15	20.50	67.26	66	73	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.41 0.99 2.38 3.49 5.09 8.43 13.03 15.69 17.48 19.33 22.57
C1135 **RG 59/U Type** **UL CL2, CATV, CM** **CSA CMG** **1354**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Foam PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.242	6.15	16.30	53.48	78	80	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.42 0.92 2.10 2.90 4.10 6.60 9.30 11.20 12.48 13.79 16.11
C1103† **RG 59/U Type** **UL CL2, CATV, CM** **CSA CMG** **1354**	22 Ga. (7/30) Bare Copper 14.8 Ω/Mft.	Foam PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.242	6.15	17.00	55.78	78	76	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.26 0.91 2.09 3.00 4.33 7.03 10.64 12.81 14.28 15.78 18.43
C1142† **RG 59/U Type** **UL CL2, CATV, CM CSA** **CMG** **1354**	20 Ga. Solid Bare Copper 10.1 Ω/Mft.	Foam PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.234	5.94	16.20	53.15	78	71	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.25 0.78 1.97 2.79 3.97 6.35 9.15 11.02 12.28 13.57 15.85
C1106 **RG 59B/U Type** **MIL-C-17D Type** **1354**	23 Ga. Solid Copper-Clad Steel 68.5 Ω/Mft.	Solid PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Non-Contaminating Black PVC 0.242	6.15	21.00	68.90	66	73	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.44 1.02 2.44 3.55 5.18 8.59 13.56 16.33 18.19 20.11 23.49
C8030† **RG 59/U Type** **+18 AWG Unshielded Pair** **UL CMP c(UL) CMP**	20 AWG Solid BC Coax 18 AWG (7/26) Unshielded Pair	Fluoropolymer 0.135 PVC 0.006	3.43 0.15	95% Bare Copper Braid Unshielded Pair	Natural PVC 0.200 X 0.383	5.08 X 9.73	16.30	53.48	83	75	1 10 50 100 200 500 1000	0.78 1.90 1.98 2.80 4.10 6.82 9.64

General Cable

CAROL BRAND

RG 59/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3
- Copper-clad steel per ASTM B-869
- Twisted pair color code: black and red

Insulation/Core:
- Solid and foam polyethylene (PE) designs

Shield:
- Tinned, bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- MATV
- CATV
- CCTV†
- Local Area Network
- Monitor/VDT display
- Analog video
- Digital video
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1110 **RG 59/U Type** **1354**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Solid PE 0.146	3.71	70% Bare Copper Braid 4.5 Ω/Mft.	Black PVC 0.242	6.15	22.00	72.18	66	73	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.41 0.99 2.38 3.49 5.09 8.43 13.03 15.69 17.48 19.33 22.57
C1112 **RG 59/U Type**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Foam PE 0.146	3.71	70% Bare Copper Braid 4.5 Ω/Mft.	Black PVC 0.242	6.15	16.30	53.48	78	80	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.42 0.92 2.10 2.90 4.10 6.60 9.30 11.20 12.48 13.79 16.11
C8025† **RG 59/U Type** **+22 AWG Shielded Pair** **UL CL2, CATV, CM** **c(UL) CM**	22 AWG (7/30) Bare Copper Coax 22 AWG (7/30) Shielded Pair	Foam PE 0.144 Premium PVC 0.013	3.66 0.33	95% Bare Copper Braid 100% Flexfoil® Al/PP Shielded	Black PVC 0.242 X 0.445	6.147 X 11.30	17.00	57.78	78	76	1 10 50 100 200 500 1000	0.26 0.91 2.90 3.00 4.33 7.03 10.64

RG 59/U Type

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- CATV
- MATV
- Drop cable
- Local Area Network
- Monitor/VDT display
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5770 **RG 59/U Type** **UL CL2, CATV, CM** **CSA CMG** **1354** 	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Foam PE		100% Flexfoil® Bonded + 40% Aluminum Braid 11.0 Ω/Mft.	Black PVC		16.00	52.50	78	80	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.50 1.00 2.30 3.30 4.10 6.50 9.40 11.32 12.61 13.94 16.28
		0.144	3.66		0.231	5.87						
C5780 **RG 59/U Type** **MATV** **UL CL2, CATV, CM** **CSA CMG** **1354** 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded + 40% Aluminum Braid 11.0 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.60 1.20 1.95 2.70 3.70 5.70 8.12 9.78 10.89 12.04 14.06
		0.144	3.66		0.234	5.94						
C5830 **RG 59/U Type** **Tri-Shield** **UL CL2, CATV, CM** **c(UL) CM** 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded + 95% Aluminum Braid + 100% Flexfoil® 3.0 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.60 1.20 1.95 2.70 3.70 5.70 8.12 9.78 10.89 12.04 14.06
		0.144	3.66		0.242	6.15						
C5784 **RG 59/U Type** **Quad-Shield** **UL CL2, CATV, CM** **CSA CMG** **1354** 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE		100% Flexfoil® 1st Bonded (1) 67% (2) 46% Aluminum Braids 4.1 Ω/Mft.	Black PVC		16.20	53.15	85	75	1 10 50 100 200 500 1000 1450 1800 2200 3000	0.60 1.20 1.95 2.70 3.70 5.70 8.12 9.78 10.89 12.04 14.06
		0.144	3.66		0.270	6.86						

RG 59/U Type

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869
- Copper per ASTM B-3
- Twisted pair color code: black and red

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Bare copper or aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- MATV
- CATV
- CCTV†
- Local Area Network
- Monitor/VDT display
- Direct burial
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL INCHES	INSULATION MATERIAL mm	SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D. INCHES	NOMINAL O.D. mm	NOMINAL CAPACITANCE pF/ft	NOMINAL CAPACITANCE pF/m	VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION MHz	NOMINAL ATTENUATION dB/100'
C3526 **RG 59/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP**	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer 0.135	3.429	100% Flexfoil® +65% Aluminum Braid 10.7 Ω/Mft.	Flexguard® Natural 0.202	5.13	16.00	52.50	84	75	1 10 50 100 200 500 1000 2300	0.34 1.07 1.77 2.50 3.53 5.98 8.45 14.10
C3527 **RG 59/U Type** **Quad-Shield Plenum** **UL CL2P, CMP** **c(UL) CMP**	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer 0.135	3.429	(2) 100% Flexfoil® (1) 60% (2) 40% Aluminum Braid 6.3 Ω/Mft.	Flexguard® Natural 0.235	5.97	16.00	52.50	84	75	1 10 50 100 200 500 1000 2300	0.34 1.07 1.77 2.50 3.53 5.98 8.45 14.10
C3500 **RG 59/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP**	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer 0.145	3.68	95% Bare Copper Braid 1.9 Ω/Mft.	Flexguard® PVC Natural 0.201	5.11	16.50	54.14	83	75	1 10 50 100 200 500 1000	0.78 1.90 1.98 2.80 4.10 6.82 9.64
C8027† **RG 59/U Type** **+18 AWG** **Shielded Pair** **UL CL2, CATV, CM** **c(UL) CM**	22 AWG (7/30) Bare Copper Coax 18 AWG (16/30) Shielded Pair	Foam PE 0.144 Premium PVC 0.016	3.66 0.41	95% Bare Copper Braid 125% Flexfoil® Al/PP Shielded	Black PVC 0.242 X 0.480	6.15 X 12.19	17.00	55.78	78	76	1 10 50 100 200 500 1000	0.26 0.91 2.09 3.00 4.33 7.03 10.64
C8028† **RG 59/U Type** **+18 AWG** **Unshielded Pair** **UL CL2, CATV, CM** **c(UL) CM**	20 AWG Solid Bare Copper Coax 18 AWG (7/26) Unshielded Pair	Foam PE 0.144 Premium PVC 0.010	3.66 0.25	95% Bare Copper Braid Unshielded Pair	Black PVC 0.238 X 0.440	6.05 X 11.18	16.20	53.15	78	71	1 10 50 100 200 500 1000	0.25 0.78 1.97 2.70 3.97 6.35 9.15

RG 59/U Precision & Miniature Cable

75 Ohm High-End Coaxial Cables for Video, Analog and Digital Applications

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869
- Copper per ASTM B-3

Insulation/Core:
- Solid polyethylene (PE) designs
- Foam fluoropolymer (FEP) design

Shield:
- Bare or tinned copper, aluminum braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast-grade
- MATV
- CATV
- CCTV†
- Precision video–analog/digital
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1158 **RG 59/U Type** **Miniature Type** **UL 1354**	27 Ga. (7/35) Stranded Copper-Clad Steel 120.0 Ω/Mft.	Solid PE		93% Tinned Copper Braid 6.5 Ω/Mft.	Black PVC		20.50	67.26	66	75	1 10 50 100 200 500 1000	1.20 2.40 4.20 5.70 8.30 13.53 20.00
		0.100	2.54		0.150	3.81						
495028† **RG 59/U Type** **UL CMP** **c(UL) CMP**	20 Ga. Solid Bare Copper 10.5 Ω/Mft.	Fluoropolymer		95% Bare Copper Braid Shield 2.7 Ω/Mft.	Plenum PVC		16.00	52.50	84	75	1 10 50 100 200 400	0.24 1.41 1.83 2.64 3.84 5.64
		0.139	3.43		0.197	5.00						

RG 59 Serial Digital Interface Cable

75 Ohm High-End Coaxial Cables for Video, Analog & Digital Applications

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) designs
- Foam fluoropolymer (FEP) design

Shield:
- Tinned copper braid
- Flexfoil® shield

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast-grade
- MATV
- CATV
- Precision video–analog/digital
- Serial digital interface cable (SDI)
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
395025 **RG 59/U Type** **UL CMR** **c(UL) CMG** 	20 Ga. Solid Bare Copper 10.5 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.5 Ω/Mft.	Flame-Retardant PVC		16.30	53.40	83	75	1 135 270 540 1500 2250 3000	0.29 2.70 3.80 5.47 9.30 11.51 13.31
		0.146	3.71		0.242	6.15						
495023 **RG 59/U Type** **UL CMP** **c(UL) CMP** 	20 Ga. Solid Bare Copper 10.5 Ω/Mft.	Fluoropolymer		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.2 Ω/Mft.	Plenum PVC		16.10	53.00	84	75	1 10 50 100 200 400 540 1000 2250 3000	0.29 1.03 1.88 2.50 3.85 5.53 6.40 8.56 17.50 21.90
		0.135	3.43		0.199	5.05						

RG 59/U (RGB) Multi-Channel Digital/Precision Cable

75 Ohm High-End Coaxial Cables for Video, Analog & Monitor Applications

Product Construction:

Conductors:
- Solid bare copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Tinned copper braid
- Flexfoil® shield

Jacket:
- Outer jacket: matte finish thermoplastic elastomer (TPE)
- Inner jacket: flame-retardant PVC

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast
- HDTV
- Video–analog/digital
- Monitor applications
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
RG 59/U SERIAL DIGITAL INTERFACE (SDI), PRECISION COAX, RISER RATED												
395025-3 RG 59/U Type UL CMR c(UL) CMG 	20 Ga. 3/Cond. Solid Bare Copper 10.5 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.5 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.30	52.40	83	75	1 71.5 135 270 540 1500 2250 3000	0.29 2.10 2.70 3.80 5.47 9.30 11.51 13.31
		0.146	3.71		0.610	15.49						
395025-4 RG 59/U Type UL CMR c(UL) CMG 	20 Ga. 4/Cond. Solid Bare Copper 10.5 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.5 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.30	52.40	83	75	1 71.5 135 270 540 1500 2250 3000	0.29 2.10 2.70 3.80 5.47 9.30 11.51 13.31
		0.146	3.71		0.670	17.04						
395025-5 RG 59/U Type UL CMR c(UL) CMG 	20 Ga. 5/Cond. Solid Bare Copper 10.5 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.5 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.30	52.40	83	75	1 71.5 135 270 540 1500 2250 3000	0.29 2.10 2.70 3.80 5.47 9.30 11.51 13.31
		0.146	3.71		0.745	18.87						
395025-10 RG 59/U Type UL CMR c(UL) CMG 	20 Ga. 10/Cond. Solid Bare Copper 10.5 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 3.5 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.30	52.40	83	75	1 71.5 135 270 540 1500 2250 3000	0.29 2.10 2.70 3.80 5.47 9.30 11.51 13.31
		0.146	3.71		1.110	28.19						
RG 59/U MINI SERIAL DIGITAL INTERFACE (SDI), PRECISION COAX, RISER RATED												
395031-3 RG 59/U Type UL CMR c(UL) CMG 	23 Ga. 3/Cond. Solid Bare Copper 20.1 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 7.6 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.50	54.10	83	75	1 71.5 135 270 540 1500 2250 3000	0.39 3.06 3.81 5.40 7.70 13.00 16.00 18.50
		0.102	2.59		0.415	10.58						
395031-5 RG 59/U Type UL CMR c(UL) CMG 	23 Ga. 5/Cond. Solid Bare Copper 20.1 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 7.6 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		16.50	54.10	83	75	1 71.5 135 270 540 1500 2250 3000	0.39 3.06 3.81 5.40 7.70 13.00 16.00 18.50
		0.102	2.59		0.510	12.95						

RG 59/U (RGB) Miniature Multi-Channel Precision Cable

75 Ohm High-End Coaxial Cables for Video, Analog & Monitor Applications

Product Construction:

Conductors:
- Solid bare copper per ASTM B-3

Insulation/Core:
- Foam polyethylene (PE) design

Shield:
- Tinned copper braid
- Flexfoil® shield

Jacket:
- Outer jacket: matte finish thermoplastic elastomer (TPE)
- Inner jacket: flame-retardant PVC

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Broadcast
- HDTV
- Video–analog/digital
- Monitor applications
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
RG 59/U (RGB) RISER RATED												
395035-3 RG 59/U Type UL CMR c(UL) CMG 	26 Ga. 3/Cond. Stranded (7/34) Bare Copper 39.7 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 8.6 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		17.30	56.74	78	75	1 10 50 100 200 400 540 1000 2250 3000	0.56 1.48 3.20 5.18 6.95 9.36 10.88 15.79 23.69 27.35
		0.089	2.26		0.435	11.05						
395035-4 RG 59/U Type UL CMR c(UL) CMG 	26 Ga. 4/Cond. Stranded (7/34) Bare Copper 39.7 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 8.6 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		17.30	56.74	78	75	1 10 50 100 200 400 540 1000 2250 3000	0.56 1.48 3.20 5.18 6.95 9.36 10.88 15.79 23.69 27.35
		0.089	2.26		0.460	11.70						
395035-5 RG 59/U Type UL CMR c(UL) CMG 	26 Ga. 5/Cond. Stranded (7/34) Bare Copper 39.7 Ω/Mft.	Foam PE		Bi-Metal Foil +95% Tinned Copper Braid Shield 8.6 Ω/Mft.	Inner: Flame-Retardant PVC Outer: TPE Matte		17.30	56.74	78	75	1 10 50 100 200 400 540 1000 2250 3000	0.56 1.48 3.20 5.18 6.95 9.36 10.88 15.79 23.69 27.35
		0.089	2.26		0.480	12.19						

RG 62/U Type

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Semi-solid polyethylene (PE) design
- Foam fluoropolymer (FEP) design

Shield:
- Bare copper braid

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- Computer/networks
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1162 **RG 62A/U Type** **MIL-C-17G Type** **UL 1354**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Semi-Solid PE 0.146	3.71	95% Bare Copper Braid 2.6 Ω/Mft.	Non-Contaminating Black PVC 0.242	6.15	13.60	44.62	84	93	1 10 50 100 200 500 1000	0.38 0.85 1.90 2.70 3.80 5.90 8.70
C1164 **RG 62/U Type** **Computer Cable** **JAN-C-17A Type** **UL CL2, CM** **CSA CMG** **UL 1354**	22 Ga. Solid Copper-Clad Steel 73.4 Ω/Mft.	Semi-Solid PE 0.146	3.66	95% Bare Copper Braid 2.6 Ω/Mft.	Black PVC 0.242	6.15	13.60	44.62	84	93	1 10 50 100 200 500 1000	0.38 0.85 1.90 2.70 3.80 5.90 8.70
C3520 **RG 62/U Type** **Plenum** **UL CL2P, CMP** **c(UL) CMP**	22 Ga. Solid Copper-Clad Steel 54.7 Ω/Mft.	Fluoropolymer 0.145	3.56	95% Bare Copper Braid 1.9 Ω/Mft.	Flexguard® PVC Natural 0.201	5.11	13.00	42.65	84	93	1 10 50 100 200 500 1000	0.30 0.90 1.90 2.70 3.80 5.90 8.34

RG 174/U Type

Product Construction:

Conductors:
- Copper-clad steel per ASTM B-869

Insulation/Core:
- Solid polyethylene (PE) design

Shield:
- Tinned or bare copper braid

Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1156 **RG 174/U Type** **1354** 	26 Ga. (7/34) Copper-Clad Steel 97.0 Ω/Mft.	Solid PE		88% Tinned Copper Braid 10.3 Ω/Mft.	Black PVC		30.80	101.05	66	50	1 10 50 100 200 500 1000	1.90 3.30 5.80 8.40 12.50 21.21 34.00
		0.060	1.52		0.103	2.62						
395027 **RG 174/U** **1354** 	26 Ga. (7/34) Copper-Clad Steel 93.0 Ω/Mft.	Solid PE		88% Tinned Copper Braid Shield 10.7 Ω/Mft.	Black PVC		30.80	101.05	66	50	1 10 50 100 200 500 1000	1.90 3.30 5.80 8.40 12.50 21.21 34.00
		0.059	0.139		0.110	2.82						

RG 213/U Type

Product Construction:

Conductors:
- Copper per ASTM B-3

Insulation/Core:
- Solid polyethylene (PE) design

Shield:
- Bare copper braid

Jacket:
- Premium non-contaminating black PVC

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Suitable for RF signal transmission
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C1176A **RG 213/U Type** **MIL-C-17G Type** **1354**	13 Ga. (7/21) Bare Copper 1.7 Ω/Mft.	Solid PE		95% Bare Copper Braid 1.2 Ω/Mft.	Black PVC		30.80	101.05	66	50	1 10 50 100 200 500 1000	0.18 0.62 1.50 2.10 3.00 5.03 8.20
		0.285	7.24		0.405	10.29						

Twinaxial Cables

Product Construction:

Conductors:
- Copper per ASTM B-3
- Tinned copper per ASTM B-33

Insulation/Core:
- Solid and foam polyethylene (PE) designs
- Lo-Cap® polypropylene (PPE) design

Shield:
- Tinned copper braid
- Flexfoil® shield

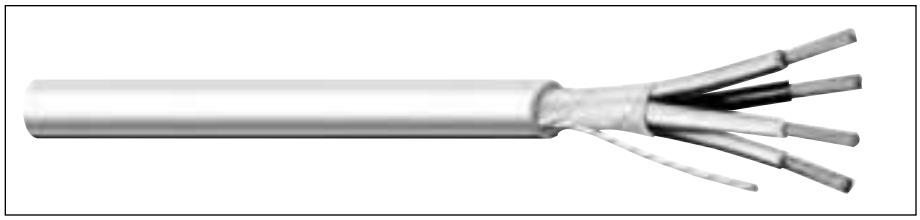
Jacket:
- Premium PVC compound

Packaging:
- Please contact Customer Service for packaging and color options

Applications:
- Programmable Logic Controllers (PLC)
- Data transmission
- Broadcast
- Computer
- See Coax Connector Cross Reference, pages 192-199

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C8000 **UL CL2** **2498** **80°C, 300V** 	20 Ga. (7/28) (1) Tinned Copper, (1) Bare Copper 9.5 Ω/Mft.	Solid PE Coded: Natural, Natural		100% Flexfoil® +90% Tinned Copper Braid 2.5 Ω/Mft.	Black PVC		15.50	50.86	66	100	1 10 50 100 200 400	0.40 1.10 2.50 4.10 6.40 10.20
		0.022	0.56		0.330	8.38						
C8001 **UL CL2, CM** **C(UL) CM** **2464** **2582** **60°C, 300V** 	20 Ga. (7/28) Tinned Copper 9.5 Ω/Mft.	Solid PE Coded: Natural, Blue		100% Flexfoil® +57% Tinned Copper Braid 4.1 Ω/Mft.	Blue PVC		19.17	62.90	66	78	1 10 50 100 200 400	0.60 2.10 5.00 7.50 11.00 16.00
		0.020	0.51		0.242	6.15						
C8014 **2668** **60°C, 30V** 	22 Ga. (19/34) Tinned Copper 15.0 Ω/Mft.	Lo-Cap® PPE Coded: Black, Yellow		100% Flexfoil® +22 AWG Tinned Copper Drain Wire 6.3 Ω/Mft.	Black PVC		8.80	28.87	78	150	1 10 50 100 200 400	0.40 1.20 2.65 4.30 6.20 8.80
		0.051	1.30		0.360	9.14						

Fire Alarm/Life Safety Cable 6



Fire alarm systems have expanded from a rather simple and unsophisticated business configured upon large, electro-mechanical devices to one relying upon the most modern technologies of microprocessor and chip technology.

More and more end users—industrial, commercial as well as consumer—are relying upon these emerging systems to protect both property and life. These systems are only as good as their weakest component, whether that component be a processor or interconnecting wire and cable.

It is General Cable's charter that all products supplied for use in these and any other systems shall be constructed of only the finest available materials, and provide the service and assurance that the end user not only needs, but requires.

Aside from the quality materials used in these designs, specifiers and end users of Carol® Brand wire and cable products have come to expect that these cables are registered and certified with the leading regulatory agencies such as Underwriters Laboratories … and we haven't let you down!

These designs have proven themselves in the area of fire system security over time; all are fabricated with solid, bare copper conductors and insulations and jackets of premium-grade PVC. Offered both with and without shields, the former to protect these critical circuits from noise, these cables will provide the latest in available technology for the system installer and contractor.

General Cable Carol® Brand products are conveniently packaged in 1000' or 500' lengths to assist the installer.

Index **Page**

Carol® Brand Alarm & Security Solutions

General Cable's Carol® Brand is the right solution for alarm and security wire and cable. Carol offers as broad an offering as anyone in the industry. Our Alarm and Security Solutions Guide makes it easier to specify and sell the right cables for every application in this ever-growing market.

There are five basic areas where alarm and security cables are used. General Cable has the right product to serve every application, including:

- Access Control
- Video Surveillance/CCTV
- Fire Alarm and Life Safety
- Home Theater and Burglar Alarms
- Data Communications

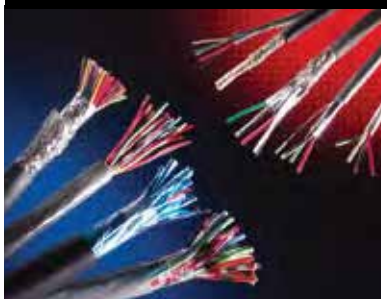
Our alarm and security cables offer solutions in all these major security applications markets, including:

- Commercial Buildings
- Residential Housing
- Business and Office Campus Environments
- Public Stadiums and Arenas
- Airport, Train, Bus and Other Transportation Hubs
- Schools, Colleges and Universities

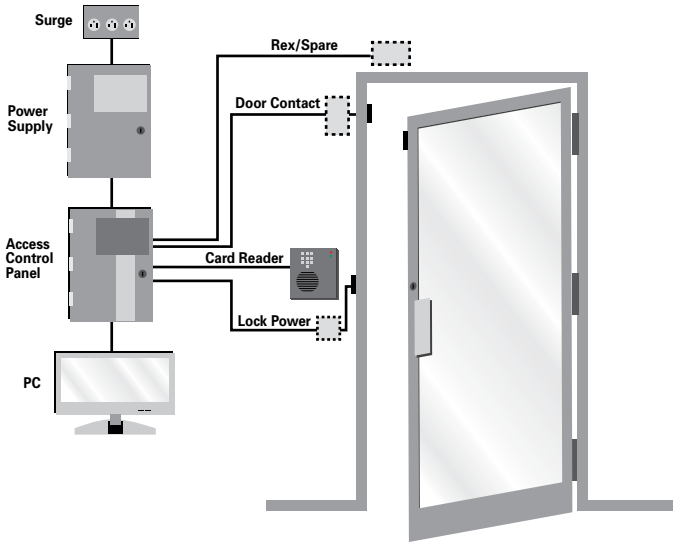
Many cables also available in ARMORED CONSTRUCTIONS for easy plenum installations

The General Cable Alarm and Security Solutions Guide provides a quick and easy reference tool to identify every Carol® Brand cable for the appropriate alarm and security application. Whatever the security application need calls for, we have a cable that delivers the performance you need.

Access Control



Applications:
Door Controllers
Prox Sensors
Key Pads
Card Readers
Gate Access



Cable Solution	Description
4EPL4S*	4 Shielded Elements Overall Jacket Access Control Plenum
4EPL1S*	4 Elements 1 Shielded Overall Jacket Access Control Plenum
4ERS4S**	4 Shielded Elements Overall Jacket Access Control Riser
4ERS1S**	4 Elements 1 Shielded Overall Jacket Access Control Riser
E2002S	22/2 Conductor Shielded Riser
E2004S	22/4 Conductor Shielded Riser
E2006S	22/6 Conductor Shielded Riser
E2008S	22/8 Conductor Shielded Riser
E2010S	22/10 Conductor Shielded Riser
E2012S	22/12 Conductor Shielded Riser
E2102S	22/2 Conductor Shielded Plenum
E2104S	22/4 Conductor Shielded Plenum
E2106S	22/6 Conductor Shielded Plenum
E2108S	22/8 Conductor Shielded Plenum
E2032S	18/2 Conductor Shielded Riser
E2034S	18/4 Conductor Shielded Riser
E2036S	18/6 Conductor Shielded Riser
E2038S	18/8 Conductor Shielded Riser

Cable Solution	Description
E2202S	18/2 Conductor Shielded Plenum
E2204S	18/4 Conductor Shielded Plenum
E2206S	18/6 Conductor Shielded Plenum
E2208S	18/8 Conductor Shielded Plenum

Carol® Brand Composite Access Control Cable – Plenum*
(3) Multi-Conductors • (1) Multi-Pair • Overall Jacket
60°C 300 Volt (UL) & C(UL) Type CMP

Catalog Number	Overall Nominal OD Inch (mm)	Component No.	Component Descriptions	Conductors Color Code	Component Nominal OD Inch (mm)	Insulation Thickness Inch (mm)
4EPL4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4EPL1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

Carol® Brand Composite Access Control Cable – Riser**
(3) Multi-Conductors • (1) Multi-Pair • Overall Jacket
60°C 300 Volt (UL) & C(UL) Type CMR

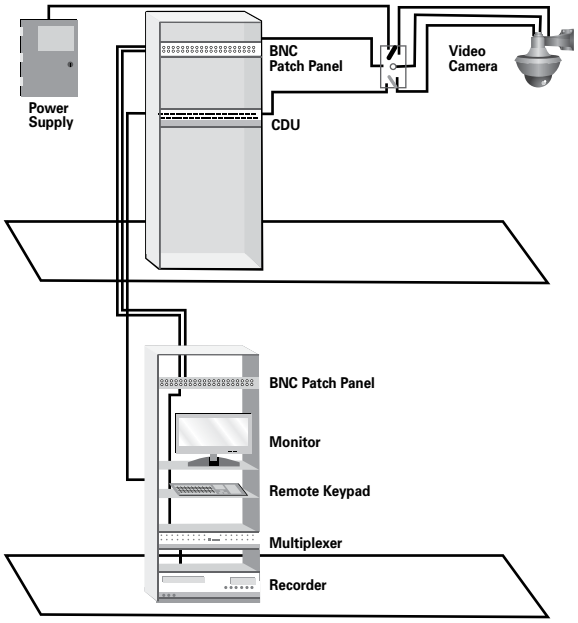
Catalog Number	Overall Nominal OD Inch (mm)	Component No.	Component Descriptions	Conductors Color Code	Component Nominal OD Inch (mm)	Insulation Thickness Inch (mm)
4ERS4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4ERS1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

CAROL BRAND

General Cable

Video Surveillance/CCTV

Applications:
CCTV
Satellites
Digital Video
Analog Video
Switchers/Multiplexers
Digital Recorders



CATV/MATV/DBS *RG 59, RG 6 and RG 11 Ratings*

Cable Solution	Description
C3521	RG 6/U 18/1 FL + 95% TC CL2P
C3523	RG 6 SBC/Foil/61% TC Braid Plenum
C3524	RG 6 CCS/Foil/60% AL Braid Plenum
C3525	RG 6 CCS/Quad 60/40% AL Braid Plenum
C5761	RG 6 SBC Foil/95% BC Braid CATV/CM
C5775	RG 6 CCS/Foil/60% AL Braid CATV/CM
C5785	RG 6 CCS/Quad 60/40% AL Braid CATV/CM
C5886	RG 6 CCS/Foil/60% AL Braid CATVR/CMR
C5889	RG 6 CCS/Quad 60/40% AL Braid CATVR/CMR
C3528	RG 11 CCS/Foil/60%/AL Braid CATV/CMP Plenum
C5039	RG 11 CCS/Foil/60%/AL Braid CATV/CM
C5043	RG 11/U CCS Burial FL 60% AL
C5044	RG 11/U CCS Quad Shield CL2/CM
C1135	RG 59/U CCS 95% BC Braid CM
C3500	RG 59 CCS/95% BC Braid Plenum
C3526	RG 59/U CCS AMA/80% AL Braid CLP2/CMP

HDTV/SDI—Interconnect Cables *RG 59, RG 6 and RG 11 Ratings*

Cable Solution	Description
395011	RG 6 SBC/Foil/95% TC Braid CMR
395014	RG 6/U 18/1 SBC Quad Shield 60%/40% CMR
495025	RG 6/U 18 AWG SBC 95% Dual Foil TC Braid CMP Plenum
395025	RG 59 SBC/Foil/95% TC Braid CMR
395031	RG 59 Single/Miniature/Foil/95% TC Braid CMR
495023	RG 59/U SBC/Foil/95% TC Braid CMP Plenum

Low Skew - 4 Pair UTP Cables for RGB Video

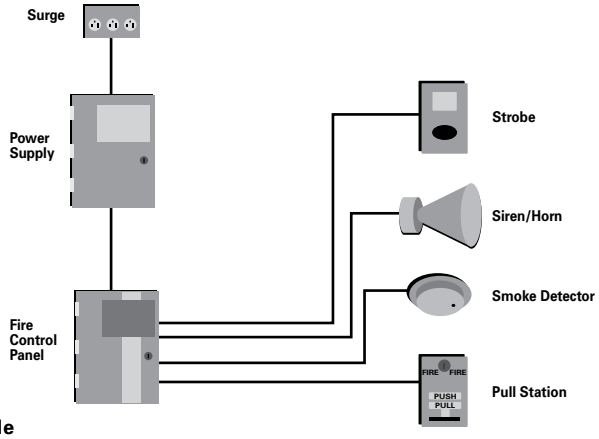
Cable Solution	Description
E3842S	Low Skew 24/4 UTP CMP for RGB Video
E1842S	Low Skew 24/4 UTP CMR for RGB Video
E3843S	Low Skew 23/4 UTP CMP for RGB Video
E1843S	Low Skew 23/4 UTP CMR for RGB Video

CCTV *RG 59 and RG 11 Ratings*

Cable Solution	Description
C8029	RG 6 + 18/2 Unshielded CATV/CM
C8031	RG 6/U SBC/95% + 18/2 Unshielded Pair CMP Plenum
495035	RG 6/U 18 AWG SBC 95% BC CMP Plenum
395058	RG 11 SBC/95% BC Braid CM
495015	RG 11 SBC/95% BC Braid CMP Plenum
C1103	RG 59 BC/95% BC Braid CATV/CM
C1142	RG 59 SBC/95% BC Braid CATV/CM
C8025	RG 59/U STR (7/30) BC/95% + 22/2 SH Pair CCTV/CM
C8027	RG 59 + 18/2 Shielded CATV/CM
C8028	RG 59 + 18/2 Unshielded CATV/CM
C8030	RG 59/U SBC/95% + 18/2 Unshielded Pair CCTV Plenum
495028	RG 59 SBC/95% BC Braid CMP Plenum

Fire Alarm and Life Safety

Applications:
Smoke Detectors
Strobes/Sirens
Pull Stations
Microprocessor/
Addressable
Controlled Systems



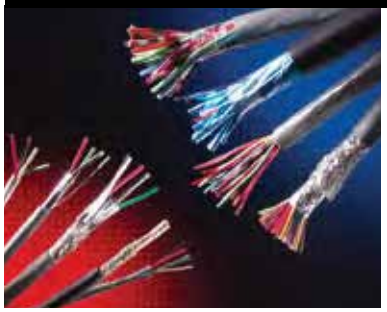
Cable Solution	Description
E1502S	18/2 Conductor Riser FPLR
E1504S	18/4 Conductor Riser FPLR
E1522S	14/2 Conductor Riser FPLR
E1524S	14/4 Conductor Riser FPLR
E2502S	18/2 Conductor Shielded Riser FPLR
E2504S	18/4 Conductor Shielded Riser FPLR
E2532S	14/2 Conductor Shielded Riser FPLR
E2534S	14/4 Conductor Shielded Riser FPLR
E3502S	18/2 Conductor Plenum FPLP
E3504S	18/4 Conductor Plenum FPLP
E3522S	14/2 Conductor Plenum FPLP
E3524S	14/4 Conductor Plenum FPLP

Cable Solution	Description
E3602S	18/2 Conductor Shielded Plenum FPLP
E3604S	18/4 Conductor Shielded Plenum FPLP
E3622S	14/2 Conductor Shielded Plenum FPLP
E3624S	14/4 Conductor Shielded Plenum FPLP

General Cable

CAROL BRAND

Home Theater and Burglar Alarms



Applications:

Intercoms
PA Systems
Sound Systems
Emergency Phones
Speakers
Burglar Alarms
Home Theater

Cable Solution	Description
E1002S	22/2 Conductor Riser
E1004S	22/4 Conductor Riser
C4408	22/2 Solid Conductor CMR/CMX
C4408ST	22/2 Stranded Conductor CMR/CMX
C4412	22/4 Solid Conductor Solid CMR/CMX
C4412ST	22/4 Stranded Conductor CMR/CMX
C4408.86.XX	22/2 Solid Conductor CM/CMX*
C4408ST.86.XX	22/2 Stranded Conductor CM/CMX*
C4412.86.XX	22/4 Solid Conductor CM/CMX*
C4412ST.86.XX	22/4 Stranded Conductor CM/CMX*
E1006S	22/6 Conductor Riser
E1008S	22/8 Conductor Riser
E1032S	18/2 Conductor Riser
E1034S	18/4 Conductor Riser
E1042S	16/2 Conductor Riser
E1044S	16/4 Conductor Riser
E1052S	14/2 Conductor Riser
E1054S	14/4 Conductor Riser
E1062S	12/2 Conductor Riser
E1064S	12/4 Conductor Riser

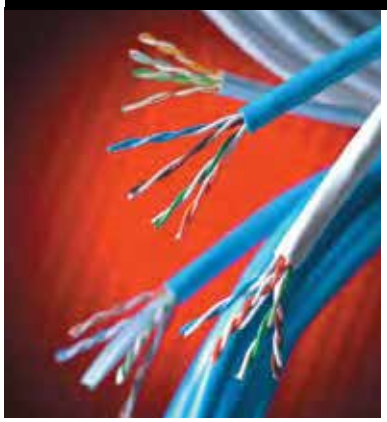
Burglar Alarm Cable in 500' Coil Packs*

*Available Colors for Burglar Alarm Coil Packs
XX= White Gray Green Beige Yellow Dark Blue

Cable Solution	Description
C1000	Command® Series Twisted Pair Speaker, 22/2, 7x30 Stranding, 500' Reels
C1001	Command Series Twisted Pair Speaker, 20/2, 7x28 Stranding, 500' Reels
C1002	Command Series Twisted Pair Speaker, 18/2, 7x26 Stranding, 500' Reels
C1003	Command Series Twisted Pair Speaker, 16/2, 19x29 Stranding, 500' Reels
C1004	Command Series Twisted Pair Speaker, 14/2, 42x30 Stranding, 500' Reels
C1005	Command Series Twisted Pair Speaker, 12/2, 65x30 Stranding, 500' Reels
C1362	22/2 Conductor Zip (not for inwall use)
C1357	18/2 Conductor Zip (not for inwall use)
C1458	16/2 Conductor Zip CL2
C1461	14/2 Conductor Zip CL2
C1463	12/2 Conductor Zip CL2
C1702	14/2 Command Series Home Grade Speaker
C1703	14/4 Command Series Home Grade Speaker
C1704	16/2 Command Series Home Grade Speaker
C1705	16/4 Command Series Home Grade Speaker
C1800	Command Series "High Def" Speaker Type NEC, 12/2, 105x32 Stranding, 500' Reels
C1801	Command Series "High Def" Speaker Type NEC, 12/4, 105x32 Stranding, 500' Reels
C1802	Command Series "High Def" Speaker Type NEC, 14/2, 105x34 Stranding, 500' Boxes
C1803	Command Series "High Def" Speaker Type NEC, 14/4, 105x34 Stranding, 500' Reels
C1804	Command Series "High Def" Speaker Type NEC, 16/2, 65x34 Stranding, 500' Boxes
C1805	Command Series "High Def" Speaker Type NEC, 16/4, 65x34 Stranding, 500' Boxes
395031X3	23/3 Command Series RGB Cables, Solid BC, Foam PE, Dual Foil + 95% TC Braid
395031X5	23/5 Command Series RGB Cables, Solid BC, Foam PE, Dual Foil + 95% TC Braid

Oxygen-Free + ETP High-Performance Home Theater Cables

Carol® Brand Helix/Hi-Temp® Data Communications



Applications:

Telephones
Cat 5e and 6 Connections
Networking
Workstations
Video Conferencing
Telco Closets
Home Automation
IP Cameras

Cat 5e Pull-Pac® II

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II CMR (Non-Plenum)	Pull-Pac® II CMP (Plenum)
Blue	CR5.30.07	CP5.30.07
White	CR5.30.02	CP5.30.02
Gray	CR5.30.10	CP5.30.10
Green	CR5.30.06	CP5.30.06
Yellow	CR5.30.05	CP5.30.05
Red	CR5.30.03	CP5.30.03

Cat 6 Pull-Pac® II

Standard packaging: 1000' Pull-Pac® II

Jacket Color	Pull-Pac® II CMR (Non-Plenum)	Pull-Pac® II CMP (Plenum)
Blue	CR6.30.07	CP6.30.07
White	CR6.30.02	CP6.30.02
Gray	CR6.30.10	CP6.30.10
Green	CR6.30.06	CP6.30.06
Yellow	CR6.30.05	CP6.30.05
Red	CR6.30.03	CP6.30.03

Cat 5e Spool-Pac®

Standard packaging: 1000' Spool-Pac®

Jacket Color	Spool-Pac® CMR (Non-Plenum)	Spool-Pac® CMP (Plenum)
Blue	CR5.A3.07	CP5.A3.07
White	CR5.A3.02	CP5.A3.02
Gray	CR5.A3.10	CP5.A3.10
Green	CR5.A3.06	CP5.A3.06
Yellow	CR5.A3.05	CP5.A3.05
Red	CR5.A3.03	CP5.A3.03

Cat 6 Spool-Pac®

Standard packaging: 1000' Spool-Pac®

Jacket Color	Spool-Pac® CMR (Non-Plenum)	Spool-Pac® CMP (Plenum)
Blue	CR6.A3.07	CP6.A3.07
White	CR6.A3.02	CP6.A3.02
Gray	CR6.A3.10	CP6.A3.10
Green	CR6.A3.06	CP6.A3.06
Yellow	CR6.A3.05	CP6.A3.05
Red	CR6.A3.03	CP6.A3.03

CAROL BRAND

General Cable

Multi-Conductor, Unshielded, Non-Plenum

NEC Type FPLR

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Jacket:

- Premium-grade, red PVC
- Suitable for use from -20°C to +75°C
- Round constructions have sequential footage markings to facilitate installation
- Includes ripcord on round constructions

Applications:

- Wiring of fire alarms
- Smoke detectors
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

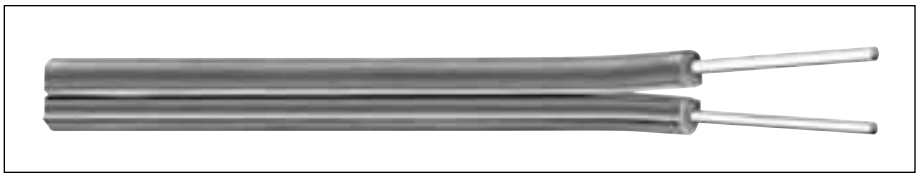
- NEC Article 760 Type FPLR (UL: 75°C, 300V)
- California State Fire Marshall Approved
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 1666 Flame Test

Packaging:

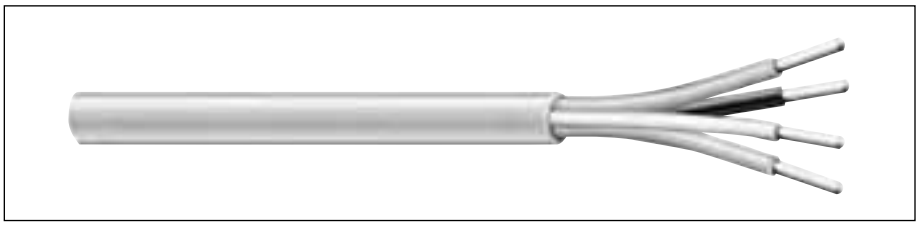
- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue
5	Orange
6	Yellow
7	Violet
8	Gray



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm
DUPLEX PARALLEL, RIBBED FOR POLARITY							
E2402S	2	18	Solid	0.032	0.81	0.105 x 0.210	2.67 x 5.33
E2404S	2	16	Solid	0.032	0.81	0.115 x 0.230	2.92 x 5.84
E2406S	2	14	Solid	0.032	0.81	0.126 x 0.260	3.20 x 6.60



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E1482S	2	22	Solid	0.010	0.25	0.015	0.38	0.121	3.07
E1484S	4	22	Solid	0.010	0.25	0.015	0.38	0.140	3.56
E1486S	6	22	Solid	0.010	0.25	0.015	0.38	0.168	4.27
18 AWG CONDUCTORS									
E1502S	2	18	Solid	0.010	0.25	0.015	0.38	0.150	3.81
E1503S	3	18	Solid	0.010	0.25	0.015	0.38	0.160	4.06
E1504S	4	18	Solid	0.010	0.25	0.015	0.38	0.175	4.45
E1505S	5	18	Solid	0.010	0.25	0.015	0.38	0.193	4.90
E1506S	6	18	Solid	0.010	0.25	0.015	0.38	0.210	5.33
E1508S	8	18	Solid	0.010	0.25	0.015	0.38	0.230	5.84
16 AWG CONDUCTORS									
E1512S	2	16	Solid	0.010	0.25	0.015	0.38	0.172	4.37
E1514S	4	16	Solid	0.010	0.25	0.015	0.38	0.202	5.13
14 AWG CONDUCTORS									
E1522S	2	14	Solid	0.013	0.33	0.015	0.38	0.210	5.33
E1524S	4	14	Solid	0.013	0.33	0.015	0.38	0.248	6.30
12 AWG CONDUCTORS									
E1532S	2	12	Solid	0.013	0.33	0.015	0.38	0.244	6.20
E1534S	4	12	Solid	0.013	0.33	0.015	0.38	0.288	7.32

General Cable

RoHS Compliant Directive 2002/95/EC

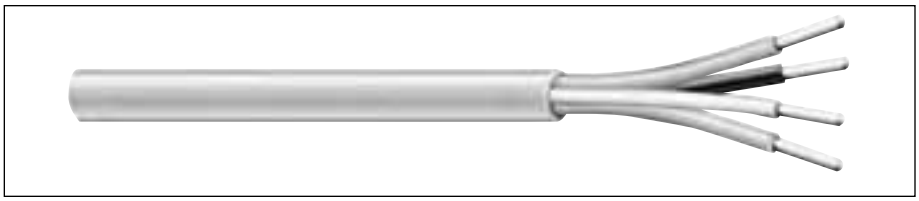
Designed to Meet UL 1666 Flame Test
Underwriters Laboratories Inc.

UL LISTED

CAROL BRAND

Multi-Conductor, Unshielded, Non-Plenum

CSA FAS 105, FPL (UL), NEC Type PLTC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C4300A	6	22	Solid	0.012	0.30	0.042	1.07	0.232	5.89
C4301A	15	22	Solid	0.012	0.30	0.042	1.07	0.316	8.03
C4302A	20	22	Solid	0.012	0.30	0.042	1.07	0.346	8.79
C4304A	2	18	Solid	0.015	0.38	0.042	1.07	0.225	5.71
C4305A	3	18	Solid	0.015	0.38	0.042	1.07	0.236	5.99
C4306A	4	18	Solid	0.015	0.38	0.042	1.07	0.255	6.47
C4307A	5	18	Solid	0.015	0.38	0.042	1.07	0.274	6.96
C4308A	6	18	Solid	0.015	0.38	0.042	1.07	0.296	7.52
C4309A	7	18	Solid	0.015	0.38	0.042	1.07	0.296	7.52
C4310A	8	18	Solid	0.015	0.38	0.042	1.07	0.317	8.05
C4312A	9	18	Solid	0.015	0.38	0.042	1.07	0.339	8.61
C4313A	10	18	Solid	0.015	0.38	0.042	1.07	0.366	9.30
C4314A	11	18	Solid	0.015	0.38	0.042	1.07	0.366	9.30
C4315A	15	18	Solid	0.015	0.38	0.053	1.35	0.437	11.10
C4316A	20	18	Solid	0.015	0.38	0.053	1.35	0.480	12.19
C4317A	21	18	Solid	0.015	0.38	0.053	1.35	0.480	12.19
C4318A	30	18	Solid	0.015	0.38	0.053	1.35	0.558	14.17
C4321A	2	16	Solid	0.015	0.38	0.042	1.07	0.246	6.25
C4322A	3	16	Solid	0.015	0.38	0.042	1.07	0.258	6.55
C4323A	4	16	Solid	0.015	0.38	0.042	1.07	0.280	7.11
C4349A	5	16	Solid	0.015	0.38	0.042	1.07	0.302	7.67
C4324A	2	14	Solid	0.015	0.38	0.042	1.07	0.272	6.91
C4325A	3	14	Solid	0.015	0.38	0.042	1.07	0.286	7.26
C4326A	4	14	Solid	0.015	0.38	0.042	1.07	0.311	7.90
C4327A	2	12	Solid	0.020	0.51	0.042	1.07	0.326	8.28

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade PVC
- Color code: See page 229 for the CSA Fire Alarm Color Code Chart

Jacket:

- Premium-grade, red PVC; brown as an option
- Temperature range: -20°C to +105°C
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

- Wiring of fire alarms
- Smoke alarms
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 PLTC (UL: 105°C, 300V)
- NEC Article 760 Type FPL (UL: 105°C, 300V)
- CSA FAS 105 (CSA: 105°C, 300V)
- C22.2 No. 208-03 (R2008)
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT-4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Multi-Conductor, Shielded, Non-Plenum

NEC Type FPLR

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, red PVC
- Temperature range: -20°C to +75°C
- Sequential footage markings to facilitate installation
- Includes ripcord

Applications:

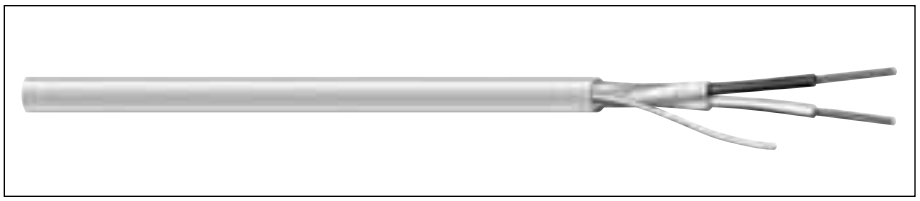
- Wiring of fire alarms
- Smoke alarms
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPLR (UL: 75°C, 300V)
- California State Fire Marshall Approved
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 1666 Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E2482S	2	22	Solid	0.010	0.25	0.015	0.38	0.126	3.20
E2484S	4	22	Solid	0.010	0.25	0.015	0.38	0.145	3.68
18 AWG CONDUCTORS									
E2502S	2	18	Solid	0.010	0.25	0.015	0.38	0.158	4.01
E2503S	3	18	Solid	0.010	0.25	0.015	0.38	0.165	4.19
E2504S	4	18	Solid	0.010	0.25	0.015	0.38	0.183	4.65
E2506S	6	18	Solid	0.010	0.25	0.015	0.38	0.216	5.49
E2508S	8	18	Solid	0.010	0.25	0.015	0.38	0.235	5.97
16 AWG CONDUCTORS									
E2522S	2	16	Solid	0.010	0.25	0.015	0.38	0.180	4.57
E2524S	4	16	Solid	0.010	0.25	0.015	0.38	0.210	5.33
14 AWG CONDUCTORS									
E2532S	2	14	Solid	0.013	0.33	0.015	0.38	0.218	5.54
E2534S	4	14	Solid	0.013	0.33	0.015	0.38	0.253	6.43
12 AWG CONDUCTORS									
E2542S	2	12	Solid	0.013	0.33	0.015	0.38	0.252	6.40
E2544S	4	12	Solid	0.013	0.33	0.015	0.38	0.293	7.44

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue
5	Orange
6	Yellow
7	Violet
8	Gray

General Cable

RoHS Compliant Directive 2002/95/EC

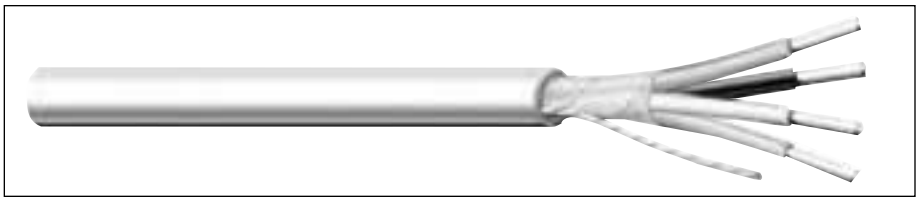
Designed to Meet UL 1666 Flame Test
Underwriters Laboratories Inc.

UL LISTED

CAROL BRAND

Multi-Conductor, Shielded, Non-Plenum

CSA FAS 105, FPL (UL), NEC Type PLTC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	DRAIN WIRE AWG	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
					INCHES	mm	INCHES	mm	INCHES	mm
C4334A	2	18	Solid	22	0.015	0.38	0.042	1.07	0.230	5.84
C4335A	3	18	Solid	22	0.015	0.38	0.042	1.07	0.241	6.12
C4336A	4	18	Solid	22	0.015	0.38	0.042	1.07	0.260	6.60
C4337A	5	18	Solid	22	0.015	0.38	0.042	1.07	0.279	7.09
C4338A	6	18	Solid	22	0.015	0.38	0.042	1.07	0.301	7.65
C4339A	7	18	Solid	22	0.015	0.38	0.042	1.07	0.301	7.65
C4340A	8	18	Solid	22	0.015	0.38	0.042	1.07	0.322	8.18
C4341A	9	18	Solid	22	0.015	0.38	0.042	1.07	0.344	8.74
C4342A	10	18	Solid	22	0.015	0.38	0.042	1.07	0.371	9.42
C4343A	30	18	Solid	22	0.015	0.38	0.053	1.35	0.563	14.30
C4344A	2	16	Solid	22	0.015	0.38	0.042	1.07	0.251	6.37
C4345A	3	16	Solid	22	0.015	0.38	0.042	1.07	0.263	6.68
C4346A	4	16	Solid	22	0.015	0.38	0.042	1.07	0.285	7.24
C4350A	5	16	Solid	22	0.015	0.38	0.042	1.07	0.307	7.80
C4347A	2	14	Solid	16	0.015	0.38	0.042	1.07	0.277	7.04
C4348A	2	12	Solid	16	0.020	0.51	0.042	1.07	0.331	8.41

Product Construction:

Conductor:

- 18-12 AWG fully annealed, solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See page 229 for the CSA Fire Alarm Color Code Chart

Shield:

- 100% Flexfoil® aluminum/polyester with 25% overlap, foil facing out
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, red PVC; brown as an option
- Temperature range: -20°C to +105°C
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

- Wiring of fire alarms
- Smoke alarms
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 PLTC (UL: 105°C, 300V)
- NEC Article 760 Type FPL (UL: 105°C, 300V)
- CSA FAS 105 (CSA: 105°C, 300V)
- C22.2 No. 208-03 (R2008)
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT-4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Multi-Conductor, Unshielded, Plenum

NEC Type FPLP

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Premium-grade, red Flexguard® PVC
- Temperature range: 0°C to +75°C
- Sequential footage markings to facilitate installation
- Includes ripcord

Applications:

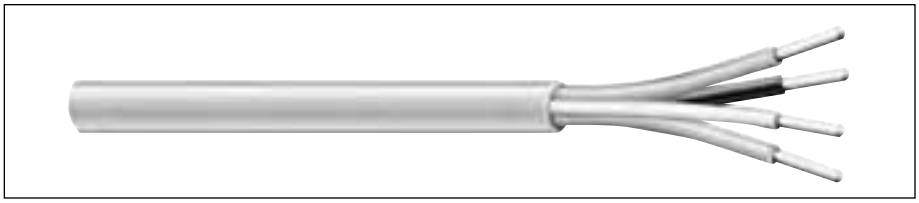
- Wiring of fire alarms
- Smoke detectors
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E3482S	2	22	Solid	0.010	0.25	0.015	0.38	0.121	3.07
E3484S	4	22	Solid	0.010	0.25	0.015	0.38	0.137	3.47
18 AWG CONDUCTORS									
E3502S	2	18	Solid	0.010	0.25	0.015	0.38	0.155	3.81
E3503S	3	18	Solid	0.010	0.25	0.015	0.38	0.160	4.06
E3504S	4	18	Solid	0.010	0.25	0.015	0.38	0.175	4.45
E3506S	6	18	Solid	0.010	0.25	0.015	0.38	0.211	5.36
16 AWG CONDUCTORS									
E3512S	2	16	Solid	0.010	0.25	0.015	0.38	0.172	4.37
E3514S	4	16	Solid	0.010	0.25	0.015	0.38	0.202	5.13
14 AWG CONDUCTORS									
E3522S	2	14	Solid	0.012	0.30	0.015	0.38	0.205	5.21
E3524S	4	14	Solid	0.012	0.30	0.015	0.38	0.243	6.17
12 AWG CONDUCTORS									
E3532S	2	12	Solid	0.012	0.30	0.015	0.38	0.244	6.20
E3534S	4	12	Solid	0.012	0.30	0.015	0.38	0.284	7.21

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue
5	Orange
6	Yellow

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

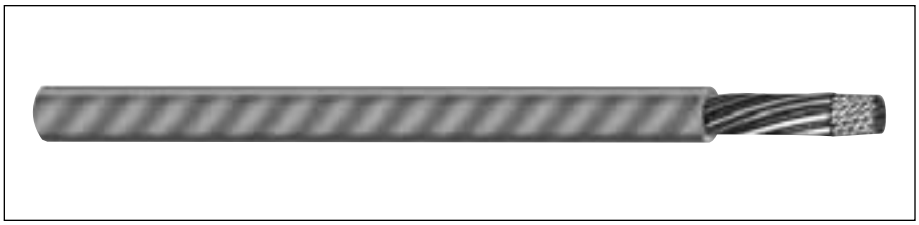
UL LISTED

CAROL BRAND

General Cable

Multi-Conductor, Unshielded, Plenum

NEC Type FPLP, PVDF Jacketed



CATALOG NUMBER	NO. OF COND	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM.* C-C CAP. pF/ft
				IN	mm	IN	mm	IN	mm	
C3200	2	18	Solid	0.010	0.23	0.010	0.25	0.140	3.56	29.0
C3201	4	18	Solid	0.010	0.23	0.010	0.25	0.156	3.96	29.0
C3210	2	16	Solid	0.010	0.23	0.010	0.25	0.133	3.38	31.0
C3211	4	16	Solid	0.010	0.23	0.010	0.25	0.186	4.72	31.0
C3220	2	14	Solid	0.013	0.31	0.010	0.25	0.170	4.32	31.0
C3223	4	14	Solid	0.013	0.31	0.010	0.25	0.224	5.69	31.0
C3224	2	12	Solid	0.013	0.31	0.010	0.25	0.194	4.93	35.0
C3225	4	12	Solid	0.013	0.31	0.010	0.25	0.261	6.63	35.0

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

Product Construction

Conductor:

- 18 thru 12 AWG fully annealed solid bare copper to ASTM B-3

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Fluoropolymer, red
- Temperature range: -10°C to +75°C
- Includes ripcord

Applications:

- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Abrasion-, chemical- and water-resistant jacket
- Sequentially footage marked

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND

UL LISTED

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

General Cable

Multi-Conductor, Shielded, Plenum

NEC Type FPLP

Product Construction:

Conductor:

- 22 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, red Flexguard® PVC
- Suitable for use from 0°C to +75°C
- Sequential footage markings to facilitate installation
- Includes ripcord

Applications:

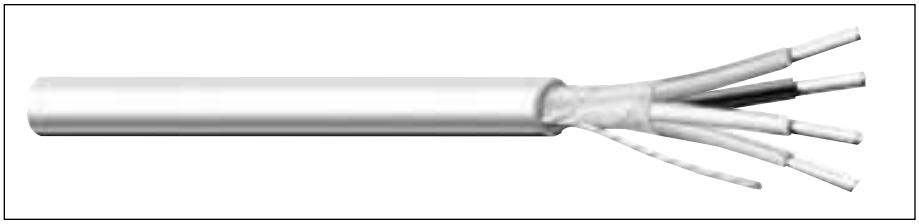
- Wiring of fire alarms
- Smoke detectors
- Voice communications
- Burglar alarms
- Fire protective circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E3542S	2	22	Solid	0.010	0.25	0.015	0.38	0.126	3.20
18 AWG CONDUCTORS									
E3602S	2	18	Solid	0.010	0.25	0.015	0.38	0.158	4.01
E3603S	3	18	Solid	0.010	0.25	0.015	0.38	0.165	4.19
E3604S	4	18	Solid	0.010	0.25	0.015	0.38	0.183	4.65
E3606S	6	18	Solid	0.010	0.25	0.015	0.38	0.216	5.49
16 AWG CONDUCTORS									
E3612S	2	16	Solid	0.010	0.25	0.015	0.38	0.180	4.57
E3614S	4	16	Solid	0.010	0.25	0.015	0.38	0.210	5.33
14 AWG CONDUCTORS									
E3622S	2	14	Solid	0.012	0.30	0.015	0.38	0.210	5.33
E3624S	4	14	Solid	0.012	0.30	0.015	0.38	0.248	6.30
12 AWG CONDUCTORS									
E3632S	2	12	Solid	0.012	0.30	0.015	0.38	0.252	6.40
E3634S	4	12	Solid	0.012	0.30	0.015	0.38	0.300	7.62

Color Code Chart

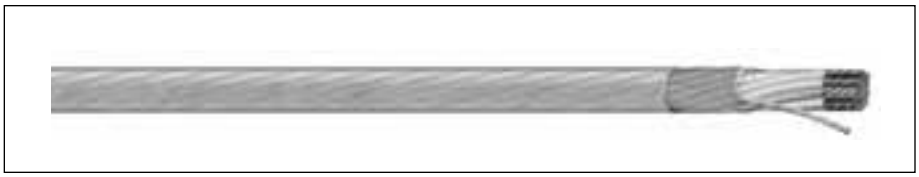
NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue
5	Orange
6	Yellow

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

Multi-Conductor, Shielded, Plenum

NEC Type FPLP, PVDF Jacketed



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP. * pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C3260	2	18	Solid	0.010	0.25	0.010	0.25	0.149	3.78	50.5	90.8
C3261	4	18	Solid	0.010	0.25	0.010	0.25	0.168	4.27	44.5	80.0
C3270	2	16	Solid	0.010	0.25	0.010	0.25	0.169	4.29	58.0	104.0
C3271	4	16	Solid	0.010	0.25	0.010	0.25	0.194	4.93	50.0	90.0
C3280	2	14	Solid	0.013	0.33	0.010	0.25	0.214	5.44	55.5	100.0
C3284	4	14	Solid	0.013	0.33	0.010	0.25	0.245	6.22	48.0	87.0
C3282	2	12	Solid	0.013	0.33	0.010	0.25	0.234	5.94	65.0	116.0
C3283	4	12	Solid	0.013	0.33	0.010	0.25	0.284	7.21	55.0	99.0

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

Product Construction

Conductor:
- 18 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:
- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester foil, 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:
- Fluoropolymer, red
- Temperature range: -10°C to +75°C
- Includes ripcord

Applications:
- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:
- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved

Features:
- Abrasion-, chemical-resistant jacket
- Sequentially footage marked

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED

General Cable

Mid-Capacitance, Unshielded, Non-Plenum

NEC Type FPL for Microprocessor-Controlled Systems

Product Construction:

Conductor:

- 18 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Jacket:

- PVC, red
- Temperature range: -20°C to +60°C

Applications:

- Addressable fire alarm systems
- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:

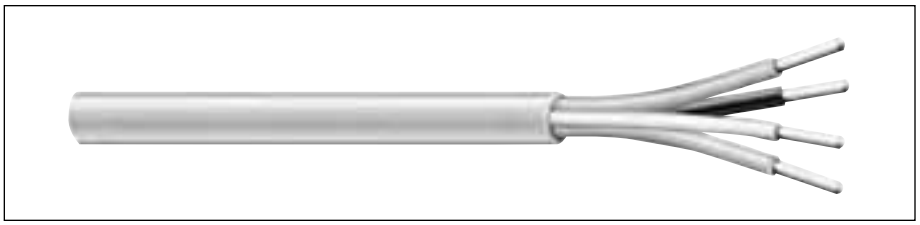
- NEC Article 760 Type FPL (UL: 60°C, 300V)
- California State Fire Marshall Approved
- RoHS Compliant Directive 2002/95/EC
- Passes UL 70,000 BTU Vertical Tray Flame Test

Features:

- Red PVC jacket for easy critical circuit identification

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM.* C-C CAP. pF/ft
				IN	mm	IN	mm	IN	mm	
C0471	2	18	Solid	0.014	0.36	0.020	0.51	0.177	4.50	16.5
C0485	4	18	Solid	0.014	0.36	0.020	0.51	0.205	5.21	16.5
C0473	2	16	Solid	0.016	0.41	0.020	0.51	0.206	5.23	17.5
C0486	4	16	Solid	0.016	0.41	0.020	0.51	0.240	6.10	17.5
C0491	2	14	Solid	0.018	0.46	0.020	0.51	0.240	6.10	18.0
C0492	2	12	Solid	0.020	0.51	0.020	0.51	0.282	7.16	19.0

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

General Cable

RoHS Compliant Directive 2002/95/EC

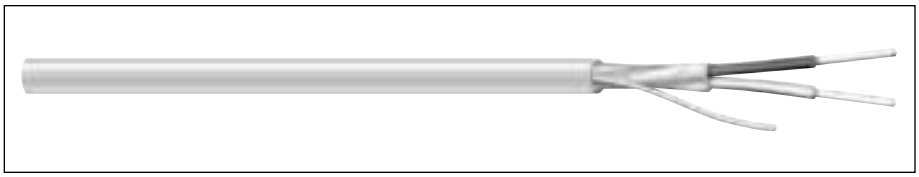
Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

UL LISTED

CAROL BRAND

Mid-Capacitance, Shielded, Non-Plenum

NEC Type FPL for Microprocessor-Controlled Systems



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP. * pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C0472	2	18	Solid	0.014	0.36	0.020	0.51	0.182	4.88	27.0	49.0
C0494	4	18	Solid	0.014	0.36	0.020	0.51	0.210	5.33	24.5	44.0
C0474	2	16	Solid	0.016	0.41	0.020	0.51	0.214	5.44	29.0	52.0
C0495	4	16	Solid	0.016	0.41	0.020	0.51	0.246	6.25	26.0	46.5
C0475	2	14	Solid	0.018	0.46	0.020	0.51	0.245	6.22	31.0	55.5
C0496	4	14	Solid	0.018	0.46	0.020	0.51	0.287	7.29	27.5	49.5
C0476	2	12	Solid	0.020	0.51	0.020	0.51	0.287	7.29	33.0	60.0
C0497	4	12	Solid	0.020	0.51	0.020	0.51	0.337	8.56	29.0	52.5

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

Product Construction:

Conductor:

- 18 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester, 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- PVC, red
- Temperature range: 0°C to +60°C

Applications:

- Addressable fire alarm systems
- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPL (UL: 60°C, 300V)
- California State Fire Marshall Approved
- RoHS Compliant Directive 2002/95/EC
- Passes UL 70,000 BTU Vertical Tray Flame Test

Features:

- Red PVC jacket for easy critical circuit identification

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Mid-Capacitance, Unshielded, Plenum

NEC Type FPLP for Microprocessor-Controlled Systems

Product Construction:

Conductor:

- 18 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Jacket:

- Premium-grade, red Flexguard® PVC
- Temperature range: 0°C to +75°C
- Includes ripcord

Applications:

- Addressable fire alarm systems
- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:

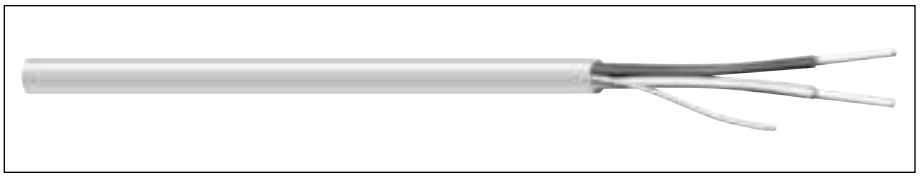
- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Red PVC jacket for easy critical circuit identification

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM.* C-C CAP.
				IN	mm	IN	mm	IN	mm	pF/ft
C3240	2	18	Solid	0.014	0.36	0.015	0.38	0.172	4.37	19.0
C3242	4	18	Solid	0.014	0.36	0.015	0.38	0.195	4.95	19.0
C3241	2	16	Solid	0.016	0.41	0.015	0.38	0.196	4.98	20.0
C3243	4	16	Solid	0.016	0.41	0.015	0.38	0.231	5.87	20.0
C3244	2	14	Solid	0.018	0.46	0.020	0.51	0.242	6.15	20.0
C3245	4	14	Solid	0.018	0.46	0.020	0.51	0.286	7.26	20.0
C3246	2	12	Solid	0.020	0.51	0.020	0.51	0.282	7.16	22.0
C3247	4	12	Solid	0.020	0.51	0.020	0.51	0.333	8.45	22.0

*Capacitance between conductors

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

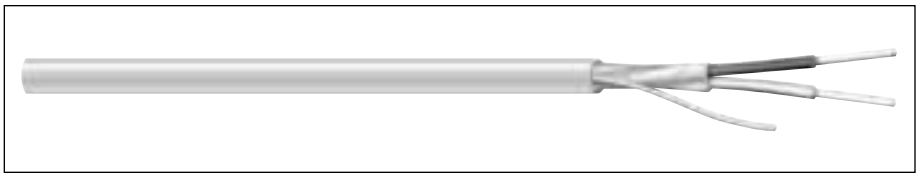
UL LISTED

CAROL BRAND

General Cable

Mid-Capacitance, Shielded, Plenum

NEC Type FPLP for Microprocessor-Controlled Systems



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP. * pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C3167	2	18	Solid	0.014	0.36	0.015	0.38	0.172	4.37	31.0	56.0
C3170	4	18	Solid	0.014	0.36	0.015	0.38	0.202	5.13	28.0	50.0
C3168	2	16	Solid	0.016	0.41	0.015	0.38	0.203	5.16	33.0	59.0
C3171	4	16	Solid	0.016	0.41	0.015	0.38	0.238	6.05	29.0	53.0
C3172	2	14	Solid	0.018	0.46	0.020	0.51	0.247	6.27	35.0	63.0
C3173	4	14	Solid	0.018	0.46	0.020	0.51	0.289	7.34	30.0	56.0
C3174	2	12	Solid	0.020	0.51	0.020	0.51	0.289	7.34	38.0	68.0
C3175	4	12	Solid	0.020	0.51	0.020	0.51	0.340	8.64	33.0	60.0

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	Brown
4	Blue

Product Construction

Conductor:

- 18 thru 12 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded fluoropolymer
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil, 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, red Flexguard® PVC
- Temperature range: 0°C to +75°C
- Includes ripcord

Applications:

- Addressable fire alarm systems
- Fire alarm systems
- Voice communications
- Smoke detectors
- Pull boxes
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 760 Type FPLP (UL: 75°C, 300V)
- California State Fire Marshall Approved
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Red PVC jacket for easy critical circuit identification

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications
Underwriters Laboratories Inc.

General Cable

Multi-Paired, Unshielded, Non-Plenum

CSA FAS 105, FPL (UL), NEC Type PLTC

Product Construction

Conductor:

- 22 and 18 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See page 229 for the CSA Fire Alarm Color Code Chart

Jacket:

- Premium-grade, red PVC; brown as an option
- Temperature range: -20°C to +105°C
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:

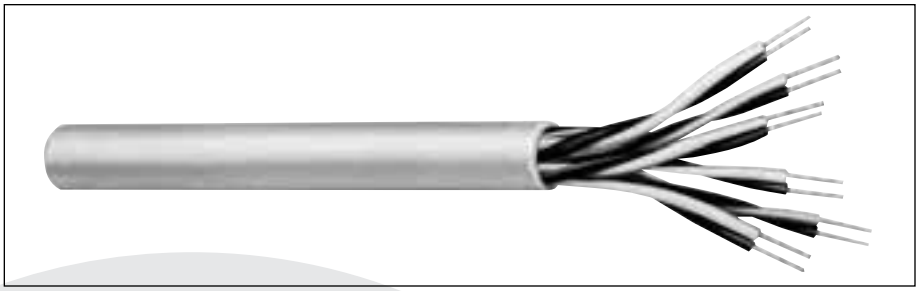
- Wiring of fire alarms
- Smoke alarms
- Voice communications
- Burglar alarms
- Fire protection circuits
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 PLTC (UL: 105˚C, 300V)
- NEC Article 760 Type FPL (UL: 105˚C, 300V)
- CSA FAS 105 (CSA: 105˚C, 300V)
- C22.2 No. 208-03 (R2008)
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT-4 Vertical Flame Test

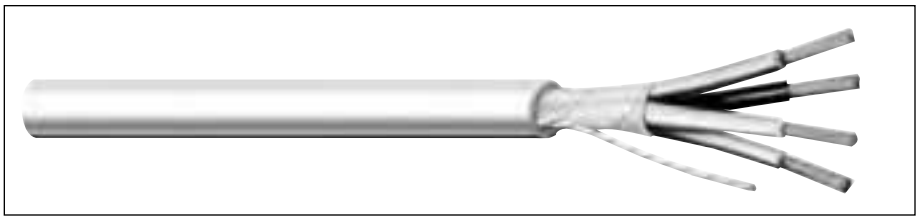
Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C4328A	3	22	Solid	0.012	0.30	0.042	1.07	0.279	7.09
C4329A	6	22	Solid	0.012	0.30	0.042	1.07	0.350	8.89
C4330A	12	22	Solid	0.012	0.30	0.053	1.35	0.474	12.04
C4331A	15	22	Solid	0.012	0.30	0.053	1.35	0.523	13.28
C4332A	27	22	Solid	0.012	0.30	0.063	1.60	0.672	17.07
C4333A	6	18	Solid	0.015	0.38	0.053	1.35	0.487	12.37

Sound, Alarm & Security Cable 7



The sound and security industry in the United States has grown from a simple and unsophisticated business, begun some 45 years ago, to one which has developed technology to the degree that specialized wires and cables are now much in demand.

No longer are the security and sound industries characterized by large electromechanical relays and large contactors; today these circuits incorporate the latest in microprocessors and solid state devices to not only improve functionality but also to guarantee performance.

As a major wire producer, our role is to ensure that the wires and cables that go into these systems are as reliable as the other components … the net result is a fully integrated system which will provide peace of mind to the system user.

Also in this section are General Cable's Carol® Brand wire and cable designs suitable for a variety of applications, both in industrial and commercial environments, including telephone systems, intercoms, burglar alarms, business machines and thermostats.

Aside from the quality materials used in these designs, specifiers and users of Carol® Brand wire and cable products have come to expect that these cables are registered and certified with the leading regulatory agencies such as Underwriters Laboratories … and we haven't let you down!

Carol® Brand designs have proven themselves in the area of sound and security over time; most are fabricated with solid or stranded, bare copper conductors with insulations and jackets of premium grades of PVC. We offer both parallel and cabled designs both with and without shields. Sequential footage markings on the jackets are offered on all products.

General Cable Carol® Brand products are conveniently packaged in 1000' or 500' lengths to assist the installer.

CAROL® BRAND ELECTRONICS WIRE & CABLE

Carol® Brand Composite Access Control Cable

General Cable's **Carol® Brand Composite Access Control Cable** is manufactured for use in Building Access & Control. The cable is designed to allow for a single cable run that incorporates the four components required for card readers, door contacts, locking power and retinal scanners in commercial buildings, distribution centers, manufacturing facilities and government buildings.

The cables are installer friendly, as they save time and money on installation. With multiple cables under one jacket, time is saved in preparation and setup, pulling and termination. The convenience of these cables at installation makes them a popular choice for multiple Access Control applications.

When your job requires Access Control cable, think of Carol® Brand cables first. Remember, you can always ***Demand Better...Expect More***™ with General Cable Carol® Brand Electronic Cables. We manufacture over 1,300 standard electronic cables that we can ship direct from stock, and we have the technical staff and design expertise to meet any custom cable requirement.

Special Application Cable
Hook-Up Wire
Plenum Cable
Coaxial Cable
Microphone Cable
Computer Cable
General Purpose Cable
Multi-Conductor Communication & Control Cable
Multi-Paired Communication & Control Cable
Fire Alarm Cable
Sound & Security Cable

For more information, contact your local General Cable representative.

General Cable

CAROL® BRAND

Composite Access Control Cable, Plenum

NEC Type CMP, UL, c(UL)

CATALOG NUMBER	OVERALL NOMINAL O.D. INCH (MM)	COMPONENT NO.	COMPONENT DESCRIPTIONS	CONDUCTORS COLOR CODE	COMPONENT NOMINAL O.D. INCH (MM)	INSULATION THICKNESS INCH (MM)
4EPL4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4EPL1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

Product Construction:

Conductor:

- Stranded bare copper

Jacket:

- Flexguard® PVC
- Temperature range: 0˚C to +60˚C
- Individual elements marked for application (see diagram below)
- Yellow overall jacket

Shields:

- Choice between all 4 elements shielded or just the 3-pair element shielded

Applications:

- Security systems
- Access control
- Card reader
- Door control
- REX
- Power-limited controls

Compliances:

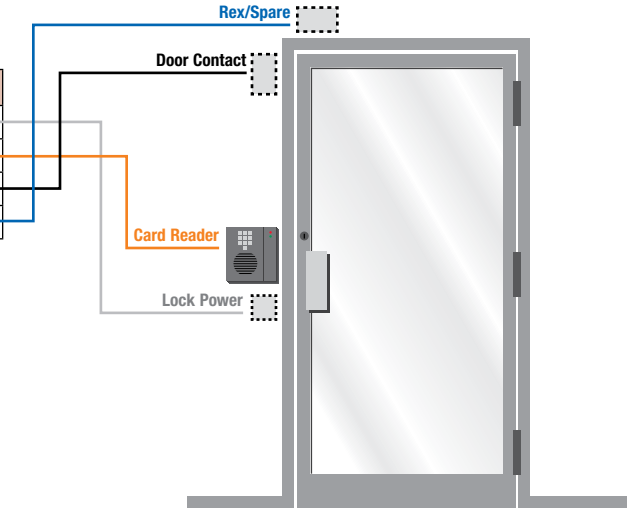
- NEC Article 800 Type CMP (UL), c(UL)
- RoHS Compliant Directive 2002/95/EC

Packaging:

- 500' and 1000' reels

Jacket Color Coding & Component Application

Jacket Color	Component	Cable Type	Application
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare



CAROL® BRAND c UL us LISTED RoHS Compliant Directive 2002/95/EC General Cable

Composite Access Control Cable, Riser

NEC Type CMR, UL, c(UL)

Product Construction:

Conductor:

- Stranded bare copper

Jacket:

- PVC
- Temperature range: -20˚C to +60˚C
- Individual elements marked for application (see diagram below)
- Blue overall jacket

Shields:

- Choice between all 4 elements shielded or just the 3-pair shielded

Applications:

- Security systems
- Access control
- Card reader
- Door control
- REX
- Power-limited controls

Compliances:

- NEC Article 800 Type CMR (UL), c(UL)
- RoHS Compliant Directive 2002/95/EC

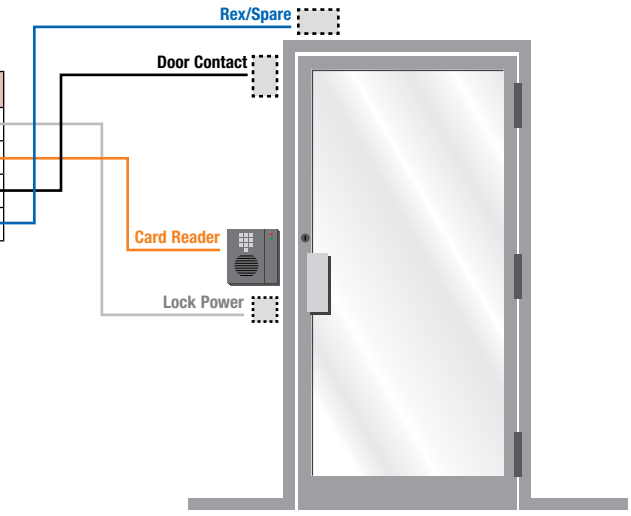
Packaging:

- 500' and 1000' reels

CATALOG NUMBER	OVERALL NOMINAL O.D. INCH (MM)	COMPONENT NO.	COMPONENT DESCRIPTIONS	CONDUCTORS COLOR CODE	COMPONENT NOMINAL O.D. INCH (MM)	INSULATION THICKNESS INCH (MM)
4ERS4S	0.430	1	4 Cond, 18 AWG, Shielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Shielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Shielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)
4ERS1S	0.420	1	4 Cond, 18 AWG, Unshielded	White, Black, Red, Green	0.180 (4.572)	0.008 (0.2032)
		2	3 Pair, 22 AWG, Shielded	White & Green, Orange & Brown, Red & Black	0.195 (4.593)	0.008 (0.2032)
		3	2 Cond, 22 AWG, Unshielded	Red, Black	0.125 (3.175)	0.008 (0.2032)
		4	4 Cond, 22 AWG, Unshielded	White, Black, Red, Green	0.145 (3.683)	0.008 (0.2032)

Jacket Color Coding & Component Application

Jacket Color	Component	Cable Type	Application
Gray	1	4 Conductor, 18 AWG	Lock Power
Orange	2	3 Pair, 22 AWG	Card Reader
White	3	2 Conductor, 22 AWG	Door Contact
Blue	4	4 Conductor, 22 AWG	Rex/Spare



General Cable

RoHS Compliant Directive 2002/95/EC

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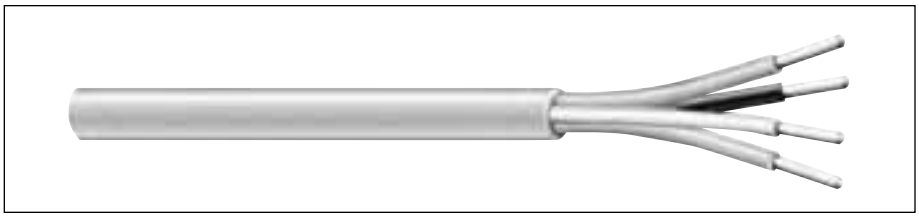
CAROL BRAND

Multi-Conductor, Unshielded, Riser

NEC Type CMR and/or CL3R



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E1000S	2	22	Solid	0.007	0.20	0.015	0.38	0.118	3.00
E1001S	4	22	Solid	0.007	0.20	0.015	0.38	0.126	3.20
E1002S	2	22	7/30	0.008	0.20	0.015	0.38	0.122	3.10
E1003S	3	22	7/30	0.008	0.20	0.015	0.38	0.141	3.58
E1004S	4	22	7/30	0.008	0.20	0.015	0.38	0.141	3.66
E1006S	6	22	7/30	0.008	0.20	0.015	0.38	0.164	4.17
E1008S	8	22	7/30	0.008	0.20	0.015	0.38	0.180	4.57
E1010S	10	22	7/30	0.008	0.20	0.015	0.38	0.212	5.38
E1012S	12	22	7/30	0.008	0.20	0.015	0.38	0.219	5.56
20 AWG CONDUCTORS									
E1022S	2	20	7/28	0.007	0.18	0.015	0.38	0.134	3.40
E1023S	3	20	7/28	0.008	0.20	0.015	0.38	0.134	3.40
E1024S	4	20	7/28	0.008	0.20	0.015	0.38	0.142	3.60
18 AWG CONDUCTORS									
E1030S	2	18	Solid	0.008	0.20	0.015	0.38	0.144	3.66
E1032S	2	18	7/26	0.009	0.23	0.015	0.38	0.156	3.96
E1033S	3	18	7/26	0.009	0.23	0.015	0.38	0.166	4.22
E1034S	4	18	7/26	0.009	0.23	0.015	0.38	0.187	4.75
E1036S	6	18	7/26	0.008	0.20	0.015	0.38	0.225	5.72
E1038S	8	18	7/26	0.008	0.20	0.015	0.38	0.245	6.22
E1040S	10	18	7/26	0.008	0.20	0.015	0.38	0.282	7.16
E1041S	12	18	7/26	0.009	0.23	0.015	0.38	0.291	7.39
16 AWG CONDUCTORS									
E1042S	2	16	19/.0117	0.009	0.25	0.015	0.38	0.178	4.52
E1043S	3	16	19/.0117	0.009	0.25	0.015	0.38	0.193	4.90
E1044S	4	16	19/.0117	0.009	0.25	0.015	0.38	0.210	5.33
14 AWG CONDUCTORS									
E1052S*	2	14	19/.0147	0.013	0.33	0.015	0.38	0.224	5.69
E1054S*	4	14	19/.0147	0.013	0.33	0.015	0.38	0.264	6.71
12 AWG CONDUCTORS									
E1062S*	2	12	19/.0185	0.013	0.33	0.015	0.38	0.260	6.60
E1064S*	4	12	19/.0185	0.013	0.33	0.015	0.38	0.312	7.92

* NEC CL3R only

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Jacket:

- Premium-grade, gray PVC
- Sequential footage markings to facilitate installation
- Temperature range: -20°C to +75°C
- Includes ripcord

Applications:

- Power-limited control circuits
- Wiring of the following systems:
  - Intercom
  - Security
  - Audio
  - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3R (UL: 75°C, 150V)
- NEC Article 800 Type CMR (UL: 75°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**7**	Orange
2	Red	**8**	Yellow
3	White	**9**	Violet
4	Green	**10**	Gray
5	Brown	**11**	Pink
6	Blue	**12**	Tan

CAROL BRAND

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RoHS Compliant Directive 2002/95/EC

General Cable

Multi-Conductor, Shielded, Riser

NEC Type CMR and/or CL3R

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded S-R PVC
- Color code: See chart below

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade, gray PVC
- Sequential footage markings to facilitate installation
- Temperature range: -20°C to +75°C
- Includes ripcord

Applications:

- Power-limited control circuits
- Wiring of the following systems:
  - Intercom
  - Security
  - Audio
  - Background music
- Suggested voltage rating: 300 volts

Compliances:

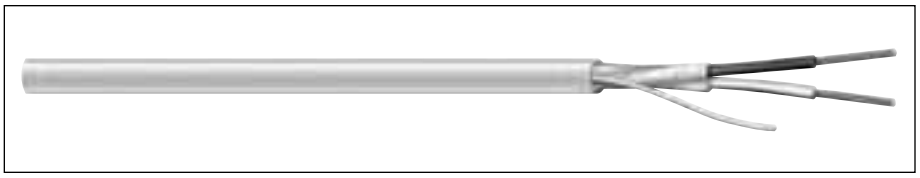
- NEC Article 725 Type CL3R (UL: 75°C,150V)
- NEC Article 800 Type CMR (UL: 75°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	Red	8	Yellow
3	White	9	Violet
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan

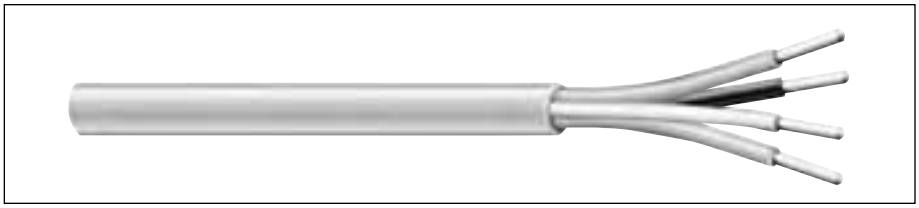


CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E2000S	2	22	Solid	0.008	0.20	0.015	0.38	0.117	2.97
E2002S	2	22	7/30	0.008	0.20	0.015	0.38	0.132	3.35
E2003S	3	22	7/30	0.008	0.20	0.015	0.38	0.135	3.43
E2004S	4	22	7/30	0.008	0.20	0.015	0.38	0.147	3.73
E2006S	6	22	7/30	0.008	0.20	0.015	0.38	0.173	4.39
E2008S	8	22	7/30	0.008	0.20	0.015	0.38	0.195	4.95
E2010S	10	22	7/30	0.008	0.20	0.015	0.38	0.218	5.54
E2012S	12	22	7/30	0.010	0.25	0.015	0.38	0.238	6.05
20 AWG CONDUCTORS									
E2022S	2	20	7/28	0.007	0.18	0.015	0.38	0.142	3.61
E2023S	3	20	7/28	0.008	0.20	0.015	0.38	0.151	3.84
E2024S	4	20	7/28	0.007	0.18	0.015	0.38	0.171	4.34
18 AWG CONDUCTORS									
E2030S	2	18	Solid	0.009	0.20	0.015	0.38	0.147	3.73
E2032S	2	18	7/26	0.009	0.23	0.015	0.38	0.164	4.17
E2033S	3	18	7/26	0.009	0.23	0.015	0.38	0.172	4.37
E2034S	4	18	7/26	0.009	0.23	0.015	0.38	0.187	4.75
E2036S	6	18	7/26	0.008	0.20	0.015	0.38	0.230	5.54
E2038S	8	18	7/26	0.008	0.20	0.015	0.38	0.250	6.35
E2040S	10	18	7/26	0.008	0.20	0.015	0.38	0.287	7.29
E2041S	12	18	7/26	0.008	0.20	0.015	0.38	0.296	7.52
16 AWG CONDUCTORS									
E2042S	2	16	19/.0117	0.009	0.23	0.015	0.38	0.189	4.80
E2043S	3	16	19/.0117	0.009	0.23	0.015	0.38	0.198	5.03
E2044S	4	16	19/.0117	0.009	0.23	0.015	0.38	0.219	5.56
14 AWG CONDUCTORS									
E2052S*	2	14	19/.0147	0.013	0.33	0.015	0.38	0.245	6.22
E2054S*	4	14	19/.0147	0.013	0.33	0.015	0.38	0.269	6.83
12 AWG CONDUCTORS									
E2062S*	2	12	19/.0185	0.013	0.33	0.015	0.38	0.281	7.14
E2064S*	4	12	19/.0185	0.013	0.33	0.015	0.38	0.312	7.92

* NEC CL3R only

Multi-Conductor, Unshielded, Plenum

NEC Type CMP and/or CL3P



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E3000S	2	22	Solid	0.007	0.18	0.015	0.38	0.108	2.74
E3001S	4	22	Solid	0.007	0.18	0.015	0.38	0.124	3.15
E3002S	2	22	7/30	0.008	0.20	0.015	0.38	0.120	3.05
E3003S	3	22	7/30	0.008	0.20	0.015	0.38	0.127	3.23
E3004S	4	22	7/30	0.008	0.20	0.015	0.38	0.139	3.53
E3006S	6	22	7/30	0.008	0.20	0.015	0.38	0.164	4.17
E3008S	8	22	7/30	0.008	0.20	0.015	0.38	0.178	4.52
E3010S	10	22	7/30	0.008	0.20	0.015	0.38	0.194	4.92
E3012S	12	22	7/30	0.008	0.20	0.015	0.38	0.211	5.36
20 AWG CONDUCTORS									
E3022S	2	20	7/28	0.009	0.23	0.015	0.38	0.138	3.51
E3023S	3	20	7/28	0.009	0.23	0.015	0.38	0.146	3.71
E3024S	4	20	7/28	0.009	0.23	0.015	0.38	0.161	4.09
18 AWG CONDUCTORS									
E3030S	2	18	Solid	0.008	0.20	0.015	0.38	0.142	3.61
E3032S	2	18	7/26	0.008	0.20	0.015	0.38	0.156	3.96
E3033S	3	18	7/26	0.008	0.20	0.015	0.38	0.166	4.22
E3034S	4	18	7/26	0.008	0.20	0.015	0.38	0.187	4.75
E3036S	6	18	7/26	0.008	0.20	0.015	0.38	0.216	5.49
E3038S	8	18	7/26	0.008	0.20	0.015	0.38	0.235	5.97
16 AWG CONDUCTORS									
E3042S	2	16	19/.0117	0.008	0.20	0.015	0.38	0.174	4.42
E3043S	3	16	19/.0117	0.008	0.20	0.015	0.38	0.185	4.70
E3044S	4	16	19/.0117	0.009	0.23	0.015	0.38	0.205	5.21
14 AWG CONDUCTORS									
E3052S*	2	14	19/.0147	0.011	0.28	0.015	0.38	0.216	5.49
E3054S*	4	14	19/.0147	0.011	0.28	0.015	0.38	0.255	6.48
12 AWG CONDUCTORS									
E3062S*	2	12	19/.0185	0.011	0.28	0.015	0.38	0.252	6.40
E3064S*	4	12	19/.0185	0.011	0.28	0.015	0.38	0.298	7.57

* NEC CL3P only

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

Jacket:

- Premium-grade natural Flexguard® PVC
- Sequential footage markings to facilitate installation
- Temperature range: 0°C to +75°C
- Ripcord available—consult Customer Service for details

Applications:

- Power-limited control circuits
- Wiring of the following systems:
  - Intercom
  - Security
  - Audio
  - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3P (UL: 75°C, 150V)
- NEC Article 800 Type CMP (UL: 75°C, 300V)
- Designed to meet NFPA 262 Flame Test
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	**7**	Orange
2	Red	**8**	Yellow
3	White	**9**	Violet
4	Green	**10**	Gray
5	Brown	**11**	Pink
6	Blue	**12**	Tan

CAROL BRAND c UL us LISTED

General Cable

Multi-Conductor, Shielded, Plenum

NEC Type CMP and/or CL3P

Product Construction:

Conductor:

- Stranded or solid bare copper per ASTM B-3, B-8 and B-286

Insulation:

- Premium-grade, color-coded Flexguard® PVC

Shield:

- Overall Flexfoil® polyester supported aluminum foil
- Stranded tinned copper drain wire

Jacket:

- Premium-grade natural Flexguard® PVC
- Sequential footage markings to facilitate installation
- Temperature range: 0°C to +75°C
- Ripcord available—consult Customer Service for details

Applications:

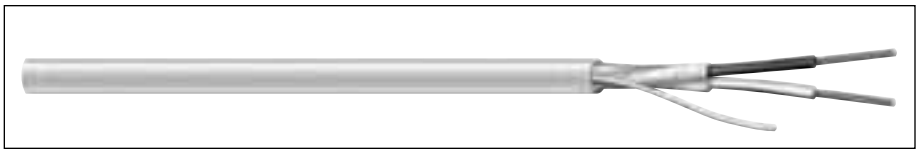
- Power-limited control circuits
- Wiring of the following systems:
  - Intercom
  - Security
  - Audio
  - Background music
- Suggested voltage rating: 300 volts

Compliances:

- NEC Article 725 Type CL3P (UL: 75°C, 150V)
- NEC Article 800 Type CMP (UL: 75°C, 300V)
- Designed to meet NFPA 262 Flame Test
- California State Fire Marshall Approved

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
22 AWG CONDUCTORS									
E2100S	2	22	Solid	0.007	0.18	0.015	0.38	0.116	2.95
E2102S	2	22	7/30	0.008	0.20	0.015	0.38	0.128	3.25
E2103S	3	22	7/30	0.008	0.20	0.015	0.38	0.131	3.33
E2104S	4	22	7/30	0.008	0.20	0.015	0.38	0.147	3.73
E2106S	6	22	7/30	0.008	0.20	0.015	0.38	0.176	4.47
E2108S	8	22	7/30	0.010	0.25	0.015	0.38	0.184	4.67
20 AWG CONDUCTORS									
E2122S	2	20	7/28	0.009	0.23	0.015	0.38	0.143	3.63
E2123S	3	20	7/28	0.009	0.23	0.015	0.38	0.151	3.84
E2124S	4	20	7/28	0.009	0.23	0.015	0.38	0.166	4.22
18 AWG CONDUCTORS									
E2200S	2	18	Solid	0.008	0.20	0.015	0.38	0.148	3.76
E2202S	2	18	7/26	0.008	0.20	0.015	0.38	0.164	4.17
E2203S	3	18	7/26	0.008	0.20	0.015	0.38	0.169	4.29
E2204S	4	18	7/26	0.008	0.20	0.015	0.38	0.185	4.70
E2206S	6	18	7/26	0.010	0.25	0.015	0.38	0.230	5.84
E2208S	8	18	7/26	0.010	0.25	0.015	0.38	0.252	6.40
16 AWG CONDUCTORS									
E2242S	2	16	19/.0117	0.008	0.20	0.015	0.38	0.179	4.55
E2243S	3	16	19/.0117	0.008	0.20	0.015	0.38	0.190	4.83
E2244S	4	16	19/.0117	0.008	0.20	0.015	0.38	0.209	5.31
14 AWG CONDUCTORS									
E2252S*	2	14	19/.0147	0.008	0.20	0.015	0.38	0.207	5.26
E2254S*	4	14	19/.0147	0.008	0.20	0.015	0.38	0.260	6.60
12 AWG CONDUCTORS									
E2262S*	2	12	19/.0185	0.008	0.20	0.015	0.38	0.244	6.20
E2264S*	4	12	19/.0185	0.008	0.20	0.015	0.38	0.288	7.32

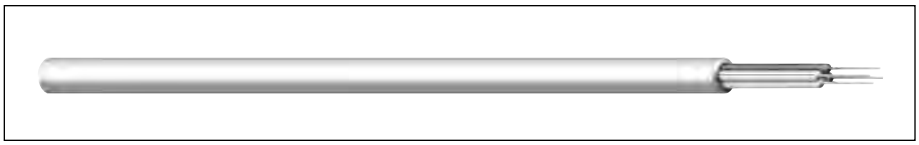
* NEC CL3P only

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green
5	Brown
6	Blue
7	Orange
8	Yellow

Telephone Station/Intercom & Speaker/ Burglar Alarm NEC Types CMR or CM/CL2 and CMX-Outdoor

Burglar Alarm Cable also available in 500' Coil Packs*



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
INTERCOM, SPEAKER AND BURGLAR ALARM									
C4408*	2	22	Solid	0.007	0.18	0.020	0.51	0.115	2.92
C4408ST*	2	22	7/.0096	0.007	0.18	0.020	0.51	0.125	3.18
C4410	3	22	Solid	0.007	0.18	0.016	0.41	0.118	3.00
C4412*	4	22	Solid	0.007	0.18	0.015	0.38	0.125	3.18
C4412ST*	4	22	7/.0096	0.007	0.18	0.015	0.38	0.135	3.43

Color Code Chart

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	Red	**3**	Yellow
2	Green	**4**	Black

TELEPHONE STATION CATEGORY 3

CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C4413	2	24	Solid	0.007	0.18	0.015	0.38	0.145 x 0.095	3.68 x 2.41

Note: Outdoor rating allows cable to be exposed for short distances from the network interface device on the outside of the house to the point where the cable enters the house. This type of cable is not to be buried or direct buried.

Color Code Chart (Bandmarked)

NO. OF PAIRS	COLOR	NO. OF PAIRS	COLOR
1	White-Blue Band Blue	**2**	White-Orange Band Orange

Product Construction:

Conductor:
- Solid or stranded bare copper per ASTM B-3

Insulation:
- Semi-rigid, flame-retardant PVC
- Color code: See chart below

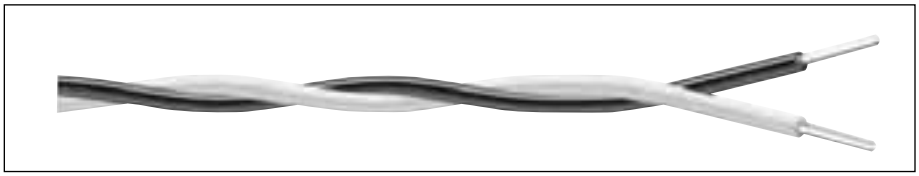
Core:
- Conductors in a quad configuration (C4412)

Jacket:
- Low-temperature, flame-retardant beige PVC (-20°C to +60°C)
- Sequential footage markings to facilitate installation
- Cables are suitable for installation with T-18 staples

Applications:
- Intercom systems and speaker extension service
- Suggested voltage rating: 300 volts
- **C4413 only:** Product is in conformance with TIA 568C, TIA 570B standards and the FCC Part 68 ruling which requires telephone system cables for voice and data services into homes to be at minimum category 3, 2 pr. 22 AWG solid.

Compliances:
- NEC Article 800 Type CMR/CMX-Indoor/ Outdoor; UL Listed (60°C, 300V)
- Coil Packs (500') – NEC Article 800 Type CM/CMX-Indoor/Outdoor; ETL Listed
- Coil Packs (500') – NEC Article 725 Type CL2; ETL Listed
- C4413 only, Category 3
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options



BURGLAR ALARM

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		NOM.* C-C CAP. pF/ft
				INCHES	mm	INCHES	mm	
C6310	2	22	7/30	0.024	0.61	0.156	3.96	20.0
C6311	2	20	7/28	0.024	0.61	0.172	4.37	22.5
C6312	2	18	7/0.015	0.024	0.61	0.192	4.88	24.5
C6313	3	18	7/0.015	0.024	0.61	0.202	5.13	28.5

*Capacitance between conductors

Color Code Chart

STOCK COLORS	ORDERING SUFFIX	STOCK COLORS	ORDERING SUFFIX
1. White-White	02	**3. Black-White**	96
2. Brown-Brown	08		

Product Construction:

Conductor:
- 22 thru 18 AWG one tinned/one bare fully annealed stranded copper
- Stranded bare copper per ASTM B-3 or stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded PVC
- Temperature range: -20°C to +60°C
- Color code: See chart below

Applications:
- Burglar alarms
- Intercom systems
- Remote control circuits
- Suggested voltage rating: 150 volts

Features:
- Polarity ridge for easy identification

Compliances:
- NEC Article 725 Type CL2 (UL: 60°C, 150V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND

UL LISTED Underwriters Laboratories Inc.

Designed to Meet UL Vertical Tray Flame Test

RoHS Compliant Directive 2002/95/EC

General Cable

Antenna Rotor

Product Construction:

Conductor:
- 22 thru 18 AWG fully annealed stranded bare copper per ASTM B-3

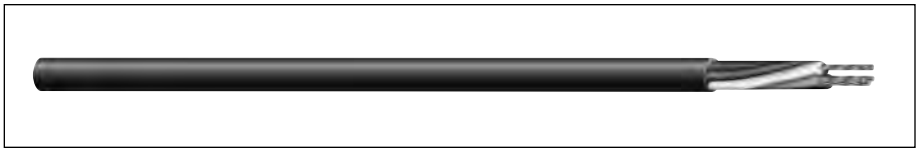
Insulation:
- Premium-grade, color-coded PVC
- Color code: See charts below

Jacket:
- Permaline® polyethylene, black
- Temperature range: -20°C to +60°C

Applications:
- Rotor antenna controls
- Outdoor installations
- Direct burial
- Suggested voltage rating: 200 volts

Features:
- Permaline® jackets resist deterioration
- Sunlight-resistant
- Moisture- and salt-resistant

Compliances:
- RoHS Compliant Directive 2002/95/EC



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C5076	4	22	7/30	0.010	0.25	0.022	0.56	0.165	4.19
C5086	5	22	7/30	0.010	0.25	0.022	0.56	0.175	4.45
C5096	8	22	7/30	0.010	0.25	0.020	0.51	0.205	5.21
C5078	4	20	10/30	0.009	0.23	0.023	0.58	0.180	4.57
C5460†	2	18	16/30	0.016	0.25	0.020	0.51	0.208	5.28
C5084	4	18	16/30	0.016	0.40	0.030	0.76	0.245	6.22

†Color Code Black/Red

Product Construction:

Conductor:
- 22 thru 16 AWG fully annealed stranded bare copper per ASTM B-3

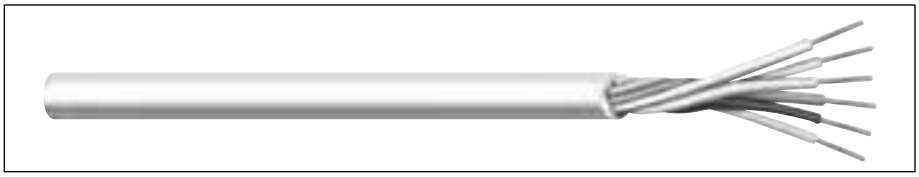
Insulation:
- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:
- PVC, chrome gray or black (C4080, C4090)
- Temperature range: -20°C to +80°C

Applications:
- Compatible with Alliance Ham/CB and TV rotors
- Suggested voltage rating: 200 volts

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C1118	4	22	7/30	0.010	0.25	0.020	0.51	0.161	4.09
C1124	5	22	7/30	0.010	0.25	0.020	0.51	0.175	4.45
C1130	8	22	7/30	0.010	0.25	0.020	0.51	0.205	5.21
C1119	4	20	10/30	0.010	0.25	0.020	0.51	0.180	4.57
C1126	5	20	10/30	0.010	0.25	0.020	0.51	0.197	5.00
C1123	4	18	16/30	0.016	0.40	0.030	0.76	0.255	6.48
COMBINATION ROTOR CABLE									
C4080	8	6-22 2-18	7/30 16/30	0.012 0.016	0.30 0.41	0.030	0.76	0.260	6.60
C4090	8	6-20 2-16	10/30 26/30	0.010 0.016	0.25 0.41	0.030	0.76	0.280	7.11

Antenna Rotor Cable Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Blue
7	Brown
8	Orange

Combination Rotor Cable Color Code Chart

NO. OF COND.	COLOR
16/18 ga.	
1	Black
2	Red
20/22 ga.	
1	White
2	Green
3	Yellow
4	Blue
5	Brown
6	Orange

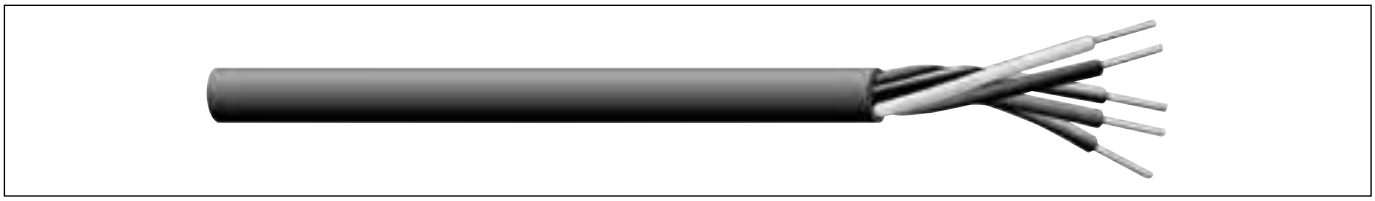
General Cable

RoHS Compliant Directive 2002/95/EC

CAROL BRAND

Low-Voltage Sprinkler Wire

60°C 30 Volts UL



CATALOG NUMBER	NO. OF COND.	AWG SIZE	LENGTH OF CORD (FEET)	PACKAGE TYPE	POWER RATING (1)			PKG PER CTN.	APPROX. WEIGHT PER CTN (LBS) (S)	CARTON DIMENSIONS (H x W x D)	UPC NUMBER
					VOLTS	AMPS	WATTS				
LOW VOLTAGE SPRINKLER WIRE - 30 VOLTS - UL											
23824-60-01	4	18	100	Cuff	30	15	450	6	22	8.5 x 12.25 x 14	079407238248
23804-18-01	4	18	500	Spool	30	15	450	1	18	10.625 x 10.625 x 6.313	079407908047
23815-60-01	5	18	50	Cuff	30	15	450	6	13	8.5 x 12.25 x 14	079407238156
23825-60-01	5	18	100	Cuff	30	15	450	6	27	9.5 x 14 x 17	079407238255
23805-18-01	5	18	500	Spool	30	15	450	1	22	10.625 x 10.625 x 6.313	079407908054
23817-60-01	7	18	50	Cuff	30	15	450	6	18	8.5 x 12.25 x 14	079407238170
23827-60-01	7	18	100	Cuff	30	15	450	6	36	9.5 x 14 x 17	079407238279
23807-18-01	7	18	500	Spool	30	15	450	1	31	10.625 x 10.625 x 6.313	079407908078
23810-18-01	10	18	500	Reel	30	15	450	1	44	—	079407908108

(1) Amps and watts are offered ONLY as a guide to the end user.
(s) Actual shipping weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLOR
1	Black
2	White
3	Red
4	Green
5	Orange
6	Yellow
7	Blue
8	Brown
9	Gray
10	Purple

Product Construction:

Conductor:

- 18 AWG fully annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Premium-grade PE jacket, black
- Nylon rip cord to facilitate jacket removal
- Temperature range: -20°C to +60°C
- Color code: See chart at right

Jacket Marking:

- CAROL (SIZE) 30V SPRINKLER SYSTEMS WIRE - DIRECT BURIAL E54567 (UL)

Applications:

- Low-voltage golf course satellite sprinkler control
- Residential sprinkler solenoid control

Compliances:

- UL Listed under a UL Miscellaneous Wire file
- UL Listed for outdoors applications
- UL Listed for direct burial applications

Packaging:

- See tabular data above
- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED

General Cable

Thermostat Wire

60ºC 30 Volt CSA Type LVT

Product Construction:

Conductors:

- 8 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- Polyvinylchloride (PVC), brown
- Temperature range: -20ºC to +60ºC

Jacket Marking:

- CAROL (SIZE) CSA LL# TYPE LVT FT-4

Applications:

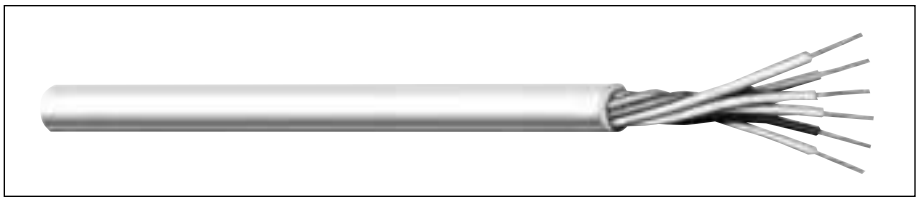
- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Compliances:

- CSA Type LVT
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



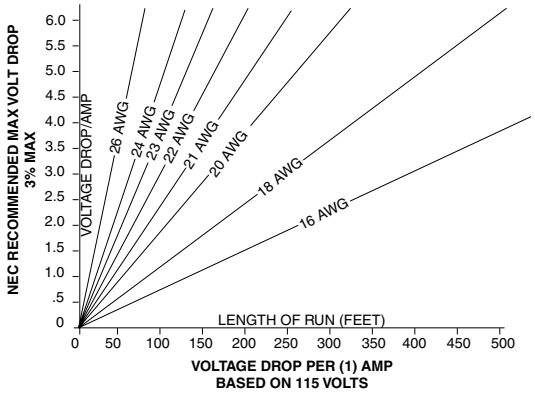
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m (S)	STD. CTN.
				INCHES	mm	INCHES	mm		
18 AWG THERMOSTAT WIRE – 30 VOLT – CSA TYPE LVT									
05092	2	18	Solid	0.017	0.43	0.210	5.33	25	2000'
05093*	3	18	Solid	0.017	0.43	0.222	5.64	33	500'
05094	4	18	Solid	0.017	0.43	0.242	6.15	41	1000'
05095	5	18	Solid	0.017	0.43	0.262	6.65	50	1000'
05096*	6	18	Solid	0.017	0.43	0.280	7.11	60	1000'
05097*	7	18	Solid	0.017	0.43	0.285	7.24	65	1000'
05098*	8	18	Solid	0.017	0.43	0.304	7.75	74	1000'
05099*	9	18	Solid	0.017	0.43	0.328	8.33	83	1000'
05091*	10	18	Solid	0.017	0.43	0.360	9.14	92	250'

*Non-stock item; minimum quantity purchase required.
(S) Actual shippng weight may vary.

Color Code Chart

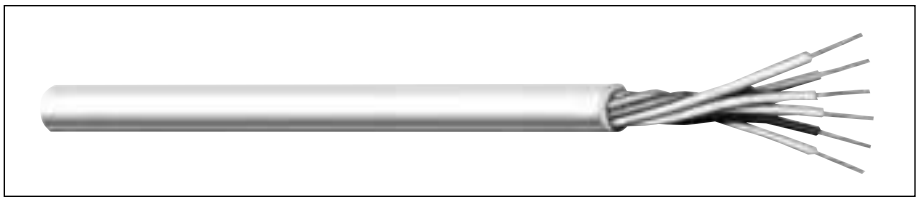
NO. OF CONDUCTORS	COLORS
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
7	White, Red, Green, Blue, Yellow, Brown, Orange
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black
9	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple
10	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple, Gray

APPROXIMATE VOLTAGE DROP/AMP AT 68ºF



Thermostat Wire

105°C 150 Volt UL Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m(S)	STD. CTN.
				INCHES	mm	INCHES	mm		
20 AWG THERMOSTAT WIRE – 150 VOLT – UL TYPE CL2									
05482	2	20	Solid	0.008	0.203	0.128	3.25	11	1000'
05483	3	20	Solid	0.008	0.203	0.135	3.43	16	1000'
05484	4	20	Solid	0.008	0.203	0.144	3.66	19	500'
05485	5	20	Solid	0.008	0.203	0.158	4.01	24	500'
05486	6	20	Solid	0.008	0.203	0.177	4.46	27	500'
05487	7	20	Solid	0.008	0.203	0.175	4.45	31	500'
05488	8	20	Solid	0.008	0.203	0.186	4.72	35	500'
05489	9	20	Solid	0.008	0.203	0.210	5.33	40	500'
05481	10	20	Solid	0.008	0.203	0.235	5.97	45	250'
18 AWG THERMOSTAT WIRE – 150 VOLT – UL TYPE CL2									
05582	2	18	Solid	0.009	0.203	0.155	3.94	16	1000'
05583	3	18	Solid	0.009	0.203	0.164	4.17	22	1000'
05584	4	18	Solid	0.009	0.203	0.180	4.57	28	500'
05585	5	18	Solid	0.009	0.203	0.200	5.08	36	500'
05586	6	18	Solid	0.009	0.203	0.215	5.46	42	500'
05587	7	18	Solid	0.009	0.203	0.215	5.46	48	500'
05588	8	18	Solid	0.009	0.203	0.235	5.97	54	500'
05589	9	18	Solid	0.008	0.203	0.245	6.22	61	500'
05581	10	18	Solid	0.008	0.203	0.300	7.62	69	250'

(S) Actual shipping weight may vary.

Product Construction:

Conductors:

- 20 and 18 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Color code: See chart below

Jacket:

- Polyvinylchloride (PVC), white
- Temperature range: -20°C to +105°C

Jacket Marking:

- CAROL AWG TYPE CL2 E# (UL) 105°C SUNLIGHT RESISTANT - MADE IN USA

Applications:

- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Industry Approvals:

- UL Listed Type CL2

Compliances:

- RoHS Compliant Directive 2002/95/EC

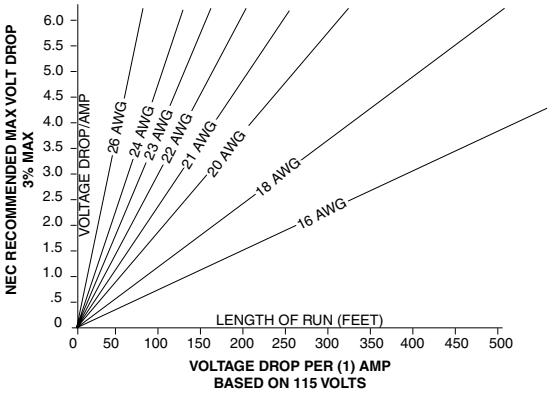
Packaging:

- Please contact Customer Service for packaging and color options

Color Code Chart

NO. OF CONDUCTORS	COLOR
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
7	White, Red, Green, Blue, Yellow, Brown, Orange
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black
9	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple
10	White, Red, Green, Blue, Yellow, Brown, Orange, Black, Purple, Gray

APPROXIMATE VOLTAGE DROP/AMP AT 68°F



CAROL BRAND UL LISTED RoHS Compliant Directive 2002/95/EC General Cable

Thermostat Wire, Unjacketed

60ºC Low Voltage and Intercom Cable

Product Construction:

Conductors:

- 20 AWG annealed solid bare copper per ASTM B-3

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -20ºC to +60ºC
- Color code: See chart below

Jacket:

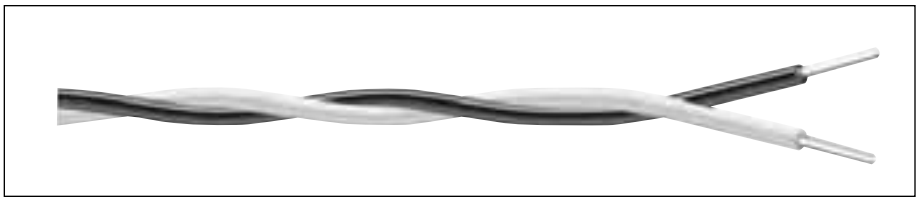
- This product is unjacketed

Applications:

- Thermostat control
- Heating and air conditioning installations
- Touch-plate systems
- Burglar alarms
- Intercom systems
- Door bells
- Annunciator and bell systems
- Remote control units
- Signal systems
- Other low-voltage installations

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.		APPROX. NET WEIGHT LBS/m(S)	STD. CTN.
				INCHES	mm	INCHES	mm		
20 AWG – TWISTED CONDUCTORS – NO JACKET									
05782	2	20	Solid	0.008	0.203	0.098	2.49	7.5	4000'
05783	3	20	Solid	0.008	0.203	0.106	2.69	11.0	2000'
05784*	4	20	Solid	0.008	0.203	0.119	3.01	15.0	2000'
05785*	5	20	Solid	0.008	0.203	0.133	3.38	18.5	1000'
05786*	6	20	Solid	0.008	0.203	0.147	3.73	22.0	1000'
05788*	8	20	Solid	0.008	0.203	0.162	4.11	30.0	1000'

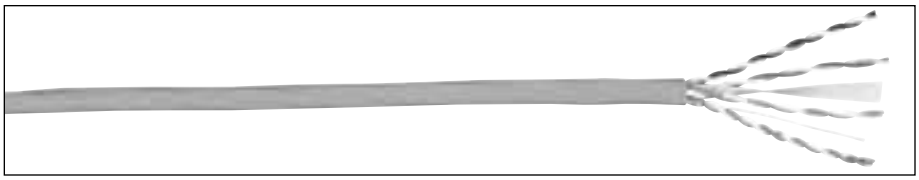
*Non-stock item; minimum quantity purchase required.
(S) Actual shippng weight may vary.

Color Code Chart

NO. OF CONDUCTORS	COLOR
2	White, Red
3	White, Red, Green
4	White, Red, Green, Blue
5	White, Red, Green, Blue, Yellow
6	White, Red, Green, Blue, Yellow, Brown
8	White, Red, Green, Blue, Yellow, Brown, Orange, Black

Carol® Helix/Hi-Temp® Category 6 Cable

Standard-Compliant Solution



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	**CR6.30.07**	**CP6.30.07**	**CR6.A3.07**	**CP6.A3.07**
White	**CR6.30.02**	**CP6.30.02**	**CR6.A3.02**	**CP6.A3.02**
Gray	**CR6.30.10**	**CP6.30.10**	**CR6.A3.10**	**CP6.A3.10**
Green	**CR6.30.06**	**CP6.30.06**	**CR6.A3.06**	**CP6.A3.06**
Yellow	**CR6.30.05**	**CP6.30.05**	**CR6.A3.05**	**CP6.A3.05**
Red	**CR6.30.03**	**CP6.30.03**	**CR6.A3.03**	**CP6.A3.03**

ELECTRICAL PERFORMANCE

FREQUENCY MHZ	PSACR (MIN)	ACR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELFEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)	LCL (MIN)	ELTCTL (MIN)
1	70.3	72.3	2.0	72.3	74.3	64.8	67.8	20.0	40.0	35.0
4	59.3	61.5	3.8	63.3	65.3	52.8	55.7	23.0	40.0	23.0
10	51.3	53.3	6.0	57.3	59.3	44.8	47.8	25.0	40.0	15.0
16	46.7	48.7	7.6	54.2	56.2	40.7	43.7	25.0	38.0	10.9
20	44.3	46.3	8.5	52.8	54.8	38.8	41.7	25.0	37.0	9.0
31.25	39.2	41.2	10.7	49.9	51.9	34.9	37.9	23.6	35.1	5.1
62.5	29.9	32.0	15.4	45.4	47.4	28.9	31.8	21.5	32.0	5.0
100	22.5	24.5	19.8	42.3	44.3	24.8	27.8	20.1	30.0	5.0
150	14.9	16.9	24.7	39.7	41.7	21.3	24.3	18.9	28.2	5.0
200	8.8	10.8	29.0	37.8	39.8	18.8	21.8	18.0	27.0	5.0
250	3.5	5.5	32.8	36.3	38.3	16.8	19.8	17.3	26.0	5.0
350	—	—	39.8	34.1	36.1	13.9	16.9	16.3	—	—
400	—	—	43.0	33.3	35.3	12.8	15.8	15.9	—	—
500	—	—	48.9	31.8	33.8	10.8	13.8	15.2	—	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.205	0.200
Nominal Cable Weight (lbs/1000ft)	28	28
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	32	32
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-20 to +75	-20 to +75

ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C		9.38
DC Resistance Unbalance (max) Individual Pair %		4.0
Delay Skew (max) ns/100m		45
Nom. Velocity of Propagation % Speed of Light		CMP: 70 CMR: 68
Characteristic Impedance Frequency (f):	1-250 MHz	Ohms 100 ± 15
Input Impedance Frequency (f):	 1-100 MHz 100-250 MHz	Ohms 100 ± 15 100 ± 22

Data subject to change without notice.

Product Construction:

Conductors:
- 23 AWG solid bare annealed copper

Separator
- Tape

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

Rip Cord
- Applied longitudinally under jacket

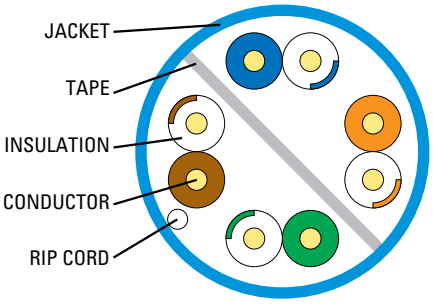
Jacket
- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- ANSI/TIA/EIA 854: 1000 BASE-TX
- 155 Mp/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (PoE)
- Digital video

Compliances:
- ANSI/TIA/EIA 568 B.2-1 (Category 6)
- ANSI/TIA/EIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class E)
- ICEA S-102-700 (Category 6)
- UL & c(UL) Type CMP (NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2002/95/EC
- Third-party verified for guaranteed performance

Packaging:
- 1000' Pull-Pac® II
- 1000' Spool-Pac®

CATEGORY 6 CROSS-SECTION



CAROL BRAND

Helix/HiTemp® VERIFIED

TIA/EIA 568B

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

RoHS Compliant Directive 2002/95/EC

General Cable

Carol® Helix/Hi-Temp® Category 5e Cable

Enhanced Transmission Throughput

Product Construction:

Conductors:
- 24 AWG solid bare annealed copper

Insulation
- Non-Plenum: Polyolefin
- Plenum: Fluoropolymer

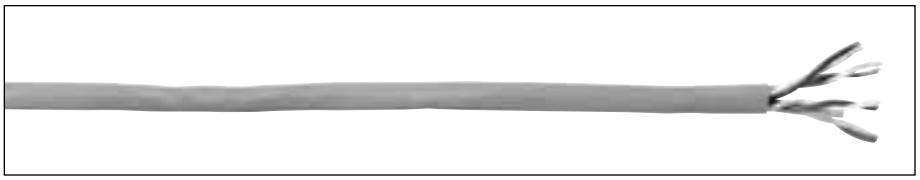
Rip Cord
- Applied longitudinally under jacket

Jacket
- Non-Plenum: flame-retardant PVC
- Plenum: low-smoke, flame-retardant PVC
- TRU-Mark® print legend contains footage markings from 1000' to 0'

Applications:
- IEEE 802.3: 1000 BASE-T (Gigabit Ethernet), 100 BASE-TX, 10 BASE-T
- 52/155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4/16 Mp/s token ring

Compliances:
- ANSI/TIA/EIA 568 B.2 (Category 5e)
- ICEA S-90-661 (Category 5e)
- UL & c(UL) Type CMR (UL 1666) for Non-Plenum
- UL & c(UL) Type CMP (NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications)
- UL 444
- RoHS Compliant Directive 2002/95/EC
- Third-party verified for guaranteed performance

Packaging:
- 1000' Pull-Pac® II
- 1000' Spool-Pac®



PART NUMBERS

JACKET COLOR	PULL-PAC® II		SPOOL-PAC®	
	CMR (NON-PLENUM)	CMP (PLENUM)	CMR (NON-PLENUM)	CMP (PLENUM)
Blue	**CR5.30.07**	**CP5.30.07**	**CR5.A3.07**	**CP5.A3.07**
White	**CR5.30.02**	**CP5.30.02**	**CR5.A3.02**	**CP5.A3.02**
Gray	**CR5.30.10**	**CP5.30.10**	**CR5.A3.10**	**CP5.A3.10**
Green	**CR5.30.06**	**CP5.30.06**	**CR5.A3.06**	**CP5.A3.06**
Yellow	**CR5.30.05**	**CP5.30.05**	**CR5.A3.05**	**CP5.A3.05**
Red	**CR5.30.03**	**CP5.30.03**	**CR5.A3.03**	**CP5.A3.03**

ELECTRICAL PERFORMANCE

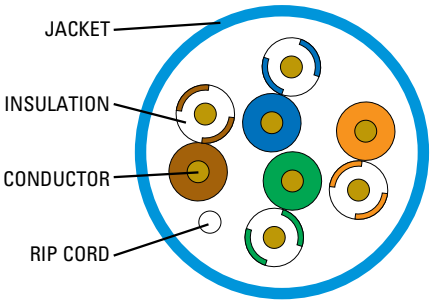
FREQUENCY MHZ	PSACR (MIN)	ACR (MIN)	ATTENUATION (MAX)	PSNEXT (MIN)	NEXT (MIN)	PSELFEXT (MIN)	ELFEXT (MIN)	RETURN LOSS (MIN)
1	60.3	63.3	2.0	62.3	65.3	60.8	63.8	20.0
4	49.2	52.2	4.1	53.3	56.3	48.7	51.7	23.0
10	40.8	43.8	6.5	47.3	50.3	40.8	43.8	25.0
16	36.0	39.0	8.2	44.2	47.2	36.7	39.7	25.0
20	33.5	36.5	9.3	42.8	45.8	34.7	37.7	25.0
25	30.9	33.9	10.4	41.3	44.3	32.8	35.8	24.3
31.25	28.2	31.2	11.7	39.9	42.9	30.9	33.9	23.6
62.5	18.4	21.4	17.0	35.4	38.4	24.8	27.8	21.5
100	10.3	13.3	22.0	32.3	35.3	20.8	23.8	20.1
155	1.4	4.4	28.1	29.4	32.4	16.9	19.9	—
200	—	—	32.4	27.8	30.8	14.7	17.7	—
250	—	—	36.9	26.3	29.3	12.8	15.8	—
350	—	—	44.9	24.1	27.1	9.9	12.9	—

Notes: Values are expressed in dB per 100m (328 ft.) length. Values above 250 MHz are for informational purposes only.

PHYSICAL DATA

	CMR (NON-PLENUM)	CMP (PLENUM)
Nominal Cable Diameter (in)	0.200	0.180
Nominal Cable Weight (lbs/1000ft)	21	19
Minimum Bend Radius (in)	1.0	1.0
Maximum Pulling Force (lbs)	25	25
Temperature Rating (˚C)		
Installation:	0 to +60	0 to +60
Operation:	-10 to +60	-10 to +60

CATEGORY 5e CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance (max) Ohms/100m (328ft) @ 20˚C	8.9
DC Resistance Unbalance (max) Individual Pair %	3.0
Mutual Capacitance (nom) pF/ft @ 1 KHz	14
Delay Skew (max) ns/100m	45
Nom. Velocity of Propagation % Speed of Light	CMP: 72 CMR: 70
Characteristic Impedance Frequency (f): 1-100 MHz	Ohms 100 ± 15

Data subject to change without notice.

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

TIA/EIA 568B

VERIFIED

CAROL BRAND Helix/HiTemp®

Audio/Video & Home Entertainment Cable 8

General Cable offers a variety of Carol® Brand wire and cable for audio/video and direct burial applications. From field production cable to microphone, snake, guitar and speaker cable, General Cable supports the increasingly demanding entertainment industry.

For extreme hard service, General Cable's rubber microphone cables offer the ultimate in performance and service life. The rubber designs are highly flexible and designed to lie flat on studio floors, as well as provide high impact and abrasion resistance.

For outdoor and cold weather applications, microphone cable jacketed with Carolprene® provides the ultimate protection against ozone, oil and ultraviolet radiation.

These technically sophisticated cables are required to contain sources of interference and to protect against difficulties where they are unavoidable. In addition to providing the needed electrical characteristics, the cables are properly designed to handle demanding conditions, such as microphone hum, handling noise, crosstalk, electrostatic hum, SCR noise and common ground noise—either on stage, in a studio or at a remote venue.

For more information on these cables or for other special applications, please contact your General Cable sales representative.

Command® Series Home Entertainment Cables

Carol® Brand Command® Series Speaker Cables offer outstanding performance at an affordable price. The cables are highly flexible and available in a wide variety of options for in-wall use for home theaters as well as high definition applications. Whether your choice of speaker cable is constructed with Oxygen-Free Copper (OFC) or the more universally accepted Tough Pitch Copper (ETP), your speaker system will perform as designed and to your expectations.

- OFC copper is defined as 99.95% pure. The refining process provides reduced oxygen content and other impurities.
- High Conductive Electrolytic Tough Pitch Copper is the most widely used refined copper within the electronic cable industry. It is defined as 99.9%-99.94% oxygen-free and provides the same level of conductivity as OFC.

There are a number of considerations to be made when choosing the proper speaker cable:

- Choose the proper AWG size for your system design (Speaker Impedance, 4 or 8 ohm) and acceptable loss for the required cable distance.
- Choose an acceptable stranding that will provide both ease of installation and flexibility.
- Choose a cable that is appropriate to the installation relative to any building standards or codes.
    1. UL/CSA
    2. NEC Riser, Plenum
- Select individual jacket colors as necessary to contribute to room or circuit identification.
- Most importantly, choose the cable that you feel comfortable with. If you are convinced that OFC provides a benefit that you can hear, select our OFC product. If you choose our speaker cables that utilize our high-conductive ETP, you will have selected a cable with the same resistance for equal cable run distances. The cable resistance is the primary selection criteria.

Command® Series PREMIUM-Grade Speaker Cable NEC Type CL2

Applications:
Digital audio with high strand, rope lay construction for superior flexibility

Catalog No.	Conductors	AWG (Stranding)	Length
C1458.55.90	2	16 (105 x 36)	25' Coil
C1458.56.90	2	16 (105 x 36)	50' Coil
C1458.57.90	2	16 (105 x 36)	100' Coil
C1458.15.90	2	16 (105 x 36)	250' Spool
C1461.55.90	2	14 (105 x 34)	25' Coil
C1461.56.90	2	14 (105 x 34)	50' Coil
C1461.57.90	2	14 (105 x 34)	100' Coil
C1461.15.90	2	14 (105 x 34)	250' Spool
C1463.55.90	2	12 (259 x 36)	25' Coil
C1463.56.90	2	12 (259 x 36)	50' Coil
C1463.15.90	2	12 (259 x 36)	250' Spool

Command® Series Home Entertainment Speaker Cable NEC Type CL3, CM, AWM 1/11 A/B

Applications:
In-wall speakers and home theater systems

Catalog No.	Conductors	AWG (Stranding)	Length
C1700	2	12 (65 x 30)	500' Boxes
C1701	4	12 (65 x 30)	500' Boxes
C1702	2	14 (41 x 30)	500' Boxes
C1703	4	14 (41 x 30)	500' Boxes
C1704	2	16 (26 x 30)	500' Boxes
C1705	4	16 (26 x 30)	500' Boxes

Command® Series "HIGH DEF" Home Entertainment Speaker Cable NEC Type CL3, CM, AWM 1/11 A/B

Applications:
High definition, flexible in-wall speakers and home theater systems

Features:
Oxygen-Free Cu Conductors

Semi-extruded jacket provides a uniform round cable construction

Catalog No.	Conductors	AWG (Stranding)	Length
C1800	2	12 (105 x 32)	500' Reels
C1801	4	12 (105 x 32)	500' Reels
C1802	2	14 (105 x 34)	500' Boxes
C1803	4	14 (105 x 34)	500' Reels
C1804	2	16 (65 x 34)	500' Boxes
C1805	4	16 (65 x 34)	500' Boxes

Command® Series Speaker Wire UL Listed (Wires, Misc)

Applications:
Digital audio, stereo systems

Catalog No.	Conductors	AWG (Stranding)	Length
C1356	2	24 (7 x 32)	500' Reels
C1362	2	22 (7 x 30)	500' Reels
C1360	2	20 (10 x 30)	500' Reels
C1357	2	18 (16 x 30)	500' Reels
C1358	2	16 (26 x 30)	500' Reels
C1361	2	14 (41 x 30)	500' Reels
C1363	2	12 (65 x 30)	500' Reels

Command® Series Twisted Pair Speaker Cable NEC Type CMR

Applications:
Home theaters, home audio systems

Catalog No.	Conductors	AWG (Stranding)	Length
C1000A	2	22 (7 x 30)	500' Reels
C1001A	2	20 (7 x 28)	500' Reels
C1002A	2	18 (7 x 26)	500' Reels
C1003A	2	16 (19 x 29)	500' Reels
C1004A	2	14 (42 x 30)	500' Reels
C1005A	2	12 (65 x 30)	500' Reels

Commercial-Grade Speaker Cables NEC Type CMR

Applications:
Movie theaters, commercial sound installations

Catalog No.	Conductors	AWG (Stranding)	Length
E1042S	2	16 (19/.0117)	500' Reels
E1044S	4	16 (19/.0117)	500' Reels
E1052S	2	14 (19/.0147)	500' Reels
E1054S	4	14 (19/.0147)	500' Reels
E1062S	2	12 (19/.0185)	500' Reels
E1064S	4	12 (19/.0185)	500' Reels

Rubber Jacketed Microphone Cable—High- and Low-Impedance

Applications:
Low- and high-impedence microphones, broadcast and studio use, communication and audio systems, shielded power supplies, control circuits, video and audio interconnecting cables, suggested voltage rating of 300

Catalog No.	Conductors	AWG
C1300	1	#20 (26 x 34)
C1301	2	#18 (41 x 34)
C1302	2	#20 (26 x 34)

Command® Series Cruise Ship Cables

CAROL® BRAND

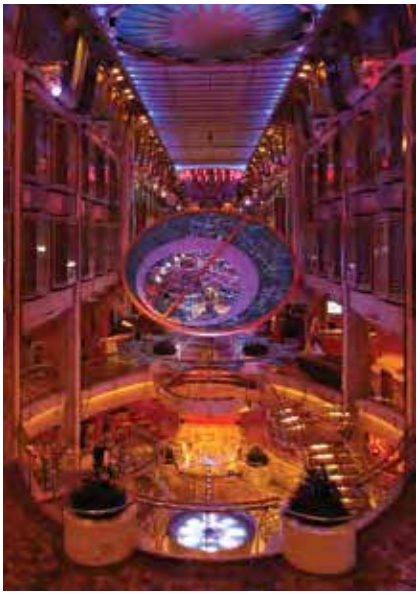
CAROL BRAND COMMAND SERIES

ELECTRONICS WIRE & CABLE

General Cable's Carol® Brand Command Series Cruise Ship Cables are manufactured for use on cruise ships and yachts. These cables, which contain low smoke, zero halogen jackets, are designed to deliver premier audio, video and data communications capabilities aboard marine vessels.

The Carol Brand Command Series Cruise Ship Cables are RoHS compliant and approved by the American Bureau of Shipping (ABS) for use in marine applications. ABS is the leading international organization committed to promoting the security of life, property and the natural environment primarily through the development and verification of standards for the design, construction and operational maintenance of marine-related facilities. Their stamp on Carol Brand Command Series Cruise Ship Cables means that our cables have been certified for product compliance and will perform reliably in marine and off-shore environments. For more information on ABS, please visit: www.eagle.org

When your cruise ship or yacht project requires high-quality performance, think of Carol Brand Command Series Cruise Ship Cables. You can always *Demand Better…Expect More*™ with General Cable Carol Brand Electronic cables. We manufacture over 1,300 standard electronic cables that we can ship direct from stock, and we have the technical staff and design expertise to meet any customer cable requirement.



Special Application Cable
Hook-Up Wire
Plenum Cable
Coaxial Cable
Microphone Cable
Computer Cable
General Purpose Cable
Multi-Conductor Communication & Control Cable
Multi-Paired Communication & Control Cable
Fire Alarm Cable
Sound & Security Cable

General Cable

RoHS Compliant Directive 2002/95/EC

ABS

c UL us LISTED

CAROL® BRAND

Command® Series Cruise Ship Cables ABS Listed

Carol® Brand Command® Series Audio Control & Instrumentation Cable–Multi-Pair, Foil Shield

PART NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND.	JACKET TYPE	JACKET COLOR/ TEMPERATURE	NOMINAL O.D.		INSULATION TYPE	INSULATION THICKNESS		CONDUCTOR COLOR CODE	NOM. CAP.* pF/FT	
						INCHES	mm		INCHES	mm		A	B
C2520ACS	1 Pair	22	7/30 Tinned Copper	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.162	4.11	-40°C to +105°C Polypropylene	0.008	0.20	Black - Red	35	67
C1352ACS	2 Pair	22	7/30 Tinned Copper	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.196	4.98	-40°C to +105°C Polypropylene	0.008	0.20	P1: Black - Red, P2: Green - White	35	62
C6040ACS	3 Pair	22	7/30 Tinned Copper	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.270	6.86	-40°C to +105°C Polypropylene	0.010	0.25	P1: Black - Red, P2: Black - White, P3: Black - Green	30	55
APPROVALS - (UL) c(UL) Listed Communication Cable Type CMG-LS 75°C, ABS Listed, & RoHS Compliant													

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to the shield

Carol® Brand Command® Series RG-6 Coaxial Cable

PART NUMBER	DESCRIPTION	JACKET TYPE	JACKET COLOR/ TEMPERATURE	NOMINAL O.D.		INSULATION TYPE	INSULATION THICKNESS		NOM. IMP. (Ω)	NOMINAL VEL. OF PROP.	NOM. CAP.** pF/FT	NOMINAL ATTENUATION			
				INCHES	mm		INCHES	mm				MHz	dB/ 100 FT	MHz	dB/ 100 FT
C5775ACS	18 AWG Solid Copper-Clad Steel, Dual Shielded, CATV Coaxial Cable	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.274	6.96	Gas Injected Foam Polyethylene	0.0700	1.78	75±3	83%	16.2	5.00 55.00 211.00 270.00 300.00 350.00 400.00 450.00	0.67 1.60 2.87 3.24 3.43 3.72 4.00 4.26	550 750 870 1000 1450 1800 2250 3000	4.71 5.59 6.00 6.54 8.30 9.30 10.60 11.90
C5814ACS	18 AWG Solid Bare Copper, Dual Shielded, Video Coaxial Cable	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.274	6.96	Gas Injected Foam Polyethylene	0.0700	1.78	75	82%	16.2	1.00 3.58 5.00 7.00 10.00 67.50 71.50 88.50 100.00 135.00 143.00 180.00	0.24 0.45 0.54 0.63 0.72 1.57 1.60 1.75 1.84 2.10 2.16 2.42	270 360 540 720 750 1000 1500 2000 2250 3000 4500 —	2.97 3.43 4.25 4.95 5.00 5.89 7.33 8.57 9.14 10.67 13.29 —
C8029ACS	Element 1 - 18 AWG Solid Bare Copper, Video Coaxial Cable	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.275	6.99	Gas Injected Foam Polyethylene	0.0700	1.78	75	83%	16.3	1.00 5.00 10.00 50.00 100.00	0.20 0.45 0.64 1.46 2.10	200 400 700 900 1000	3.00 4.30 5.80 6.70 7.10
	Element 2 - 2 Cond. 18 AWG 7/.0152" Stranded Bare Copper, Power Pair	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-30°C +75°C	0.186	4.72	-40°C to +105°C Polypropylene	0.0065	0.17	—	—	24**	—		—	
APPROVALS - (UL) c(UL) Listed Communication Cable Type CMG-LS 75°C, ABS Listed, & RoHS Compliant															

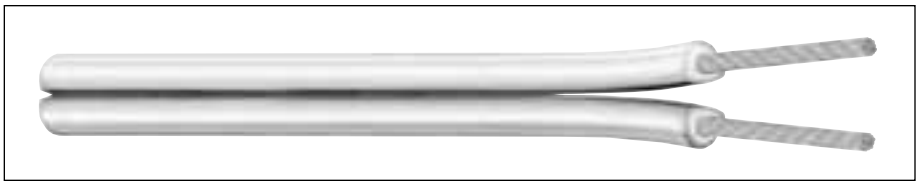
** Capacitance between conductors

Carol® Brand Command® Series Category 5e Cable

PART NUMBER	DESCRIPTION	JACKET TYPE	JACKET COLOR/ TEMPERATURE	NOMINAL O.D.		INSULATION TYPE	INSULATION THICKNESS		CONDUCTOR COLOR CODE	INPUT IMP. (Ω)	FRE-QUENCY	PSCAR	ACR	ATTENUATION	PSNEXT	NEXT	PSELFEXT	ELFEXT	RL
												VALUES ARE EXPRESSED IN dB PER 100m (328 FT) LENGTH							
				INCHES	mm		INCHES	mm				MIN.	MIN.	MAX.	MIN.	MIN.	MIN.	MIN.	MIN.
CR5ACS	4 Pair 24 AWG Solid Bare Copper ScTP Category 5e Cable	Flame Retardant Low Smoke Halogen Free Polyolefin PVC	Black/-20°C +75°C	0.260	6.60	Polyolefin	0.010	0.25	P1: White/Blue - Blue P2: White/Orange - Orange P3: White/Green - Green P4: White/Brown - Brown	100±15	0.772 1.000 4.000 8.000 10.000 16.000 20.000 25.000 31.250 62.500 100.000	62.2 60.3 49.2 43.0 40.8 36.1 33.5 30.9 28.2 18.4 10.3	65.2 63.3 52.2 46.0 43.8 39.1 36.5 33.9 31.2 21.4 13.3	1.8 2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0	64.0 62.3 53.3 48.8 47.3 44.3 42.8 41.3 39.9 35.4 32.3	67.0 65.3 56.3 51.8 50.3 47.3 45.8 44.3 42.9 38.4 35.3	63.0 60.8 48.7 42.7 40.8 36.7 34.7 32.8 30.9 24.8 20.8	66.0 63.8 51.7 45.7 43.8 39.7 37.7 35.8 33.9 27.8 23.8	— 20.0 23.0 24.5 25.0 25.0 25.0 24.3 23.6 21.5 20.1
APPROVALS - (UL) c(UL) Listed Communication Cable Type CMG-LS 75°C, ABS Listed, & RoHS Compliant																			

Command® Series Premium Grade Speaker Cable

NEC Type CL2



Product Description:

Command® Series Premium Grade Speaker Cable was designed to offer outstanding performance at an affordable price. The cables are highly flexible and can be used for in-wall installations, making them ideal for use in home theater systems.

The Premium Grade Speaker Cable is available in 250' spools for custom-cut lengths, and in 25-, 50- and 100-foot clam-shells. The packaged cables are ideal for display on pegboard, gondolas or H-frame shelves.

Product Construction:

Conductor:

- 16 through 12 AWG fully annealed stranded bare copper conductor per ASTM B-3

Insulation:

- Premium-grade, clear PVC
- Temperature range: -20°C to +60°C

Applications:

- Digital audio
- Stereo systems
- In-wall speakers
- Home theater

Features:

- High-strand, rope-lay conductors give the cable extra flexibility
- Convenient footage and polarity markers, at one-foot intervals to make installation easy
- Paintable to match any décor

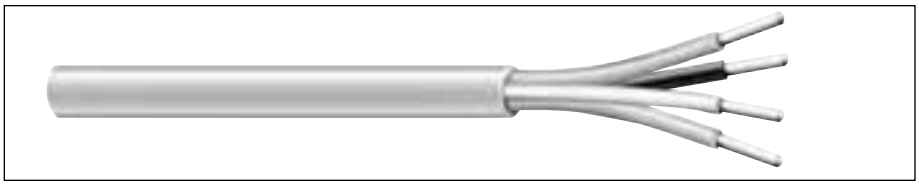
Compliances:

- NEC Article 725 Type CL2
- RoHS Compliant Directive 2002/95/EC

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	LENGTH	COLOR OF JACKET	PACKAGE TYPE	PKG PER CARTON	CARTON WEIGHT (LBS)	CARTON DIMENSIONS (H x W x D)	CARTON CUBE	UPC NUMBER
16 AWG CONDUCTORS											
C1458.55.90	2	16	66/34	25'	Clear	Coil	6	6.4	12.5 x 8.1 x 10.0	0.586	0 79407 76307 8
C1458.56.90	2	16	66/34	50'	Clear	Coil	6	10.4	12.5 x 8.1 x 10.0	0.586	0 79407 76308 5
C1458.57.90	2	16	66/34	100'	Clear	Coil	6	18.6	15.5 x 8.1 x 10.0	0.727	0 79407 76309 2
C1458.15.90	2	16	66/34	250'	Clear	Spool	1	8.5	6.6 x 6.6 x 6.3	0.159	0 79407 76273 6
14 AWG CONDUCTORS											
C1461.55.90	2	14	105/34	25'	Clear	Coil	6	8.5	12.5 x 8.1 x 10.0	0.586	0 79407 76310 8
C1461.56.90	2	14	105/34	50'	Clear	Coil	6	14.5	12.5 x 8.1 x 10.0	0.586	0 79407 76311 5
C1461.57.90	2	14	105/34	100'	Clear	Coil	6	27.0	15.5 x 8.1 x 10.0	0.727	0 79407 76312 2
C1461.15.90	2	14	105/34	250'	Clear	Spool	1	11.5	6.6 x 6.6 x 6.3	0.159	0 79407 76274 3
12 AWG CONDUCTORS											
C1463.55.90	2	12	259/36	25'	Clear	Coil	6	11.8	12.5 x 8.1 x 10.0	0.586	0 79407 76313 9
C1463.56.90	2	12	259/36	50'	Clear	Coil	6	21.4	15.5 x 8.1 x 10.0	0.727	0 79407 76314 6
C1463.15.90	2	12	259/36	250'	Clear	Spool	1	17.5	13.0 x 6.5 x 9.5	0.464	0 79407 76275 0

Command® Series Home Entertainment Speaker Cable

NEC Type CL3, CSA, CMG, AWM I/II A/B



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION WALL		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C1700†	2	12	65/30	0.009	0.15	0.021	0.53	0.254	6.45
C1701†	4	12	65/30	0.009	0.15	0.021	0.53	0.299	7.59
C1702†	2	14	41/30	0.009	0.15	0.021	0.53	0.220	5.59
C1703†	4	14	41/30	0.009	0.15	0.021	0.53	0.257	6.53
C1704	2	16	26/30	0.009	0.15	0.021	0.53	0.191	4.85
C1705	4	16	26/30	0.009	0.15	0.021	0.53	0.222	5.64

†CL3, CSA AWM I/II A/B only

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green

Product Construction:

Conductor:

- 12, 14, 16, or 18 AWG fully annealed, stranded bare copper per ASTM B-8

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Jacket:

- PVC, command blue
- Temperature range: -20˚C to +60˚C

Applications:

- Digital audio
- Stereo systems
- In-wall speakers
- Home theater
- Remote control circuits
- Security systems
- Bi-amp speakers

Features:

- Flexible

Compliances:

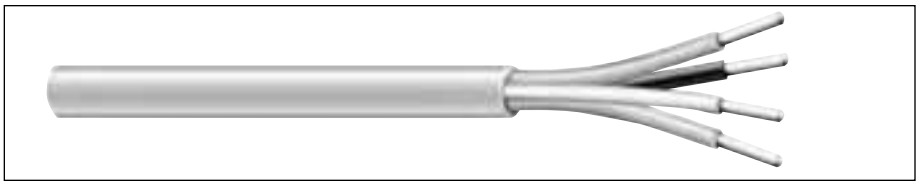
- NEC Article 725 Type CL3 (UL: 60°C)
- CSA, CMG, AWM I/II A/B
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT-4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Command® Series OFHC Home Entertainment Speaker Cable

CL3 (UL), CM (UL) c(UL), CSA, CMG, CSA TYPE AWM



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C1800**	2	12	105/32	0.009	0.23	0.021	0.53	0.264	6.71	25.5
C1801**	4	12	105/32	0.009	0.23	0.021	0.53	0.311	7.90	25.5
C1802**	2	14	105/34	0.009	0.23	0.021	0.53	0.226	5.74	23.8
C1803**	4	14	105/34	0.009	0.23	0.021	0.53	0.265	6.73	23.8
C1804	2	16	64/34	0.009	0.23	0.021	0.53	0.196	4.98	22.1
C1805	4	16	65/34	0.009	0.23	0.021	0.53	0.228	5.79	22.1

*Capacitance between conductors
**NEC Type CL3 and CSA Type AWM Only

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red
3	White
4	Green

Product Construction:

Conductor:

- 16-12 AWG fully annealed, stranded oxygen-free high conductivity bare copper per ASTM B-170

Insulation:

- Premium-grade, color-coded polypropylene

Jacket:

- PVC, command blue
- Temperature range: -20˚C to +60˚C

Applications:

- Digital audio
- Stereo systems
- In-wall speakers
- Home theater
- Remote control circuits
- Security systems
- Bi-amp speakers

Features:

- Flexible
- High conductivity, oxygen-free

Compliances:

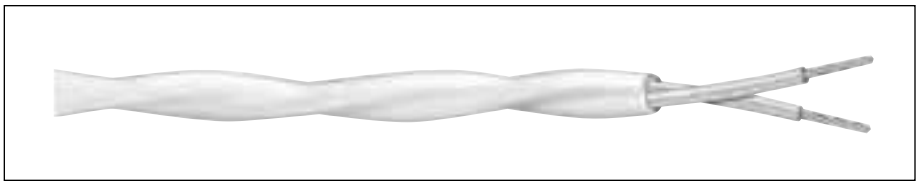
- NEC Article 725 Type CL3 (UL: 60°C)
- NEC Article 800 Type CM (UL: 60°C)
- CSA, CMG, (CSA: 80°C, 600V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test
- Passes CSA FT-4 Vertical Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

Command® Series Twisted Pair Speaker Cable

CMR (UL) c(UL) or CL3 (UL), AWM Style 2587



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
NEC Type CMR										
C1000A	2	22	7/30	0.015	0.38	0.025	0.64	0.170	4.32	20.6
C1001A	2	20	7/28	0.013	0.33	0.025	0.64	0.178	4.52	24.5
C1002A	2	18	7/26	0.022	0.56	0.028	0.71	0.235	5.97	21.3
C1003A	2	16	19/.0117	0.023	0.58	0.032	0.81	0.274	6.96	23.5
NEC Type CL3, UL Style 2587 (600V)										
C1004A*	2	14	41/30	0.031	0.79	0.032	0.81	0.340	8.64	30.3
C1005A*	2	12	65/30	0.032	0.81	0.035	0.89	0.386	9.80	32.6

*Capacitance between conductors.

Color Code Chart
C1000A-C1001A

NO. OF COND.	COLORS
1	Black
2	Red

C1002A-C1005A

NO. OF COND.	COLORS
1	Black
2	White

Product Construction:

Conductor:
- 22-12 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded PVC
- Premium-grade, color-coded S-R PVC

Jacket:
- PVC, white
- Temperature range: -20°C to +75°C

Applications:
- Digital audio
- Stereo systems
- In-wall speakers
- Suggested voltage rating: 300 volts

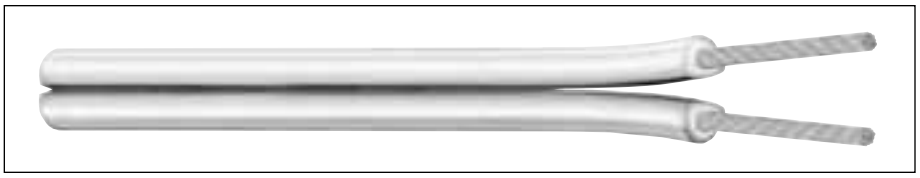
Compliances:
- NEC Article 800 Type CMR (UL, c(UL): 75°C)
- NEC Article 725 Type CL3 (UL, c(UL): 105°C)
- UL, c(UL) AWM Style 2587 (UL, c(UL): 90°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging and Jacket Colors:
- Please consult Customer Service for packaging and color options

Designed to Meet UL Vertical Tray Flame Test
Underwriters Laboratories Inc.

Command® Series Studio Grade Speaker Cable

NEC Type CL2



Product Description:

Command® Series Studio Grade Speaker Cable brings sounds to life. It is engineered to deliver the true fidelity of a music signal from the source to the speaker—maintaining the highest signal integrity for ultimate clarity. It is the perfect speaker cable for the discriminating audiophile.

Product Construction:

Conductor:

- 16 through 12 AWG fully annealed stranded silver-plated conductor per ASTM B-3

Insulation:

- Premium-grade, clear blue PVC
- Temperature range: 0°C to +60°C

Applications:

- Digital audio
- Stereo systems
- In-wall speakers

Features:

- Silver-plated conductor lowers electrical resistance for superior signal rendition
- High-strand, rope-lay conductors give the cable extra flexibility
- Convenient footage and polarity markers, at one-foot intervals to make installation easy
- Paintable to match any décor

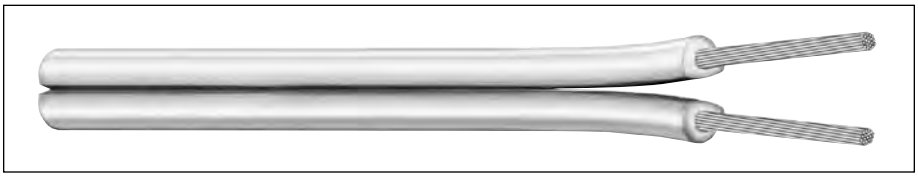
Compliances:

- NEC Article 725 Type CL2
- RoHS Compliant Directive 2002/95/EC

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	LENGTH	COLOR OF JACKET	PACKAGE TYPE	PKG PER CARTON	CARTON WEIGHT (LBS)	CARTON DIMENSIONS (H x W x D)	CARTON CUBE	UPC NUMBER
16 AWG CONDUCTORS											
C1558.15.92	2	16	105/36	250’	Clear Blue	Spool	1	8.5	6.6 x 6.6 x 6.3	0.159	0 79407 76276 7
14 AWG CONDUCTORS											
C1561.15.92	2	14	168/36	250’	Clear Blue	Spool	1	11.5	6.6 x 6.6 x 6.3	0.159	0 79407 76280 4
12 AWG CONDUCTORS											
C1563.15.92	2	12	259/36	250’	Clear Blue	Spool	1	17.5	13.0 x 6.5 x 9.5	0.464	0 79407 76280 4

Speaker Wire

UL Listed or AWM Style 1007



CATALOG NUMBER	NUMBER OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm
UL LISTED (60°C)							
C1356	2	24	7/32	0.016	0.41	0.058x0.117	1.47x2.79
C1362	2	22	7/30	0.020	0.51	0.070x0.145	1.77x3.68
C1360	2	20	10/30	0.020	0.51	0.085x0.160	2.16x4.06
C1357	2	18	16/30	0.020	0.51	0.083x0.181	2.11x4.60
C1358	2	16	26/30	0.020	0.51	0.105x0.210	2.67x5.33
C1361	2	14	41/30	0.025	0.64	0.125x0.235	3.18x5.69
C1363	2	12	65/30	0.025	0.64	0.154x0.323	3.91x8.20

Color Code Chart

ORDERING SUFFIX	COLORS
01	Black
02	White
08	Brown
10	Gray
90	Clear

Product Construction:

Conductor:

- 24 thru 12 AWG fully annealed one bare, one tin stranded copper per ASTM B-174

Insulation/Jacket:

- Premium-grade PVC
- Color code: See chart below

Applications:

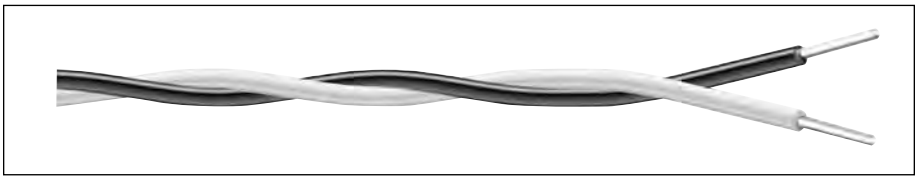
- Digital audio
- Hi-fi and stereo speaker wire
- Jukeboxes
- Not for in-wall use
- Home theater

Compliances:

- UL Wires Misc.
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service forpackaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm
AWM STYLE 1007 (80°C, 300 V)							
C7102A	2	18	7/.0152	0.020	0.51	0.172	4.37

Color Code Chart

ORDERING SUFFIX	STOCK COLOR
99	Black-White

Product Construction:

Conductor:

- 18 AWG tinned annealed stranded copper
- Stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded PVC
- Temperature range: -30°C to +80°C
- Color code: See chart below

Applications:

- Audio systems
- Not for in-wall use

Compliances:

- UL Style 1007 (UL: 80°C, 300 V)

Packaging:

- 1000' (305 m) reels

CAROL BRAND UL LISTED RoHS Compliant Directive 2002/95/EC General Cable

Superflex® Speaker Wire

UL Listed

Product Construction:

Conductor:

- 12 AWG fully annealed stranded bare copper conductor per ASTM B-3

Insulation/Jacket:

- Premium-grade, clear Superflex® PVC
- Temperature range: -20°C to +60°C
- Color code: See chart below

Applications:

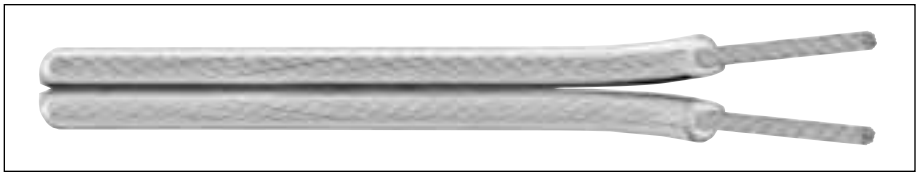
- Digital audio
- Hi-fi and stereo speaker wire
- Jukeboxes
- Not for in-wall use

Compliances:

- UL Misc. (UL: 120V)
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NUMBER OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm
C1364	2	12	7x37/36	0.060	1.52	0.220x0.456	5.59x11.58

Color Code Chart

ORDERING SUFFIX	STOCK COLOR
90	Clear

Product Construction:

Conductor:

- 18 AWG, 1 tinned and 1 bare copper conductor per ASTM B-174

Insulation:

- Premium-grade, clear PVC

Jacket:

- PVC, clear
- Temperature range: -20°C to +60°C

Applications:

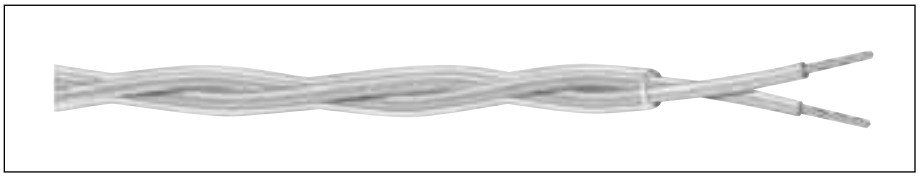
- Digital audio
- Hi-fi and stereo speaker wire
- Jukeboxes

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

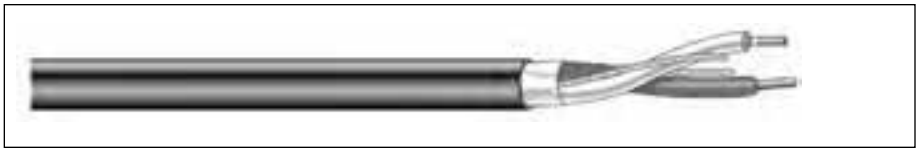


CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
C6367	2	18	16/30	0.016	0.41	0.025	0.64	0.210	5.33

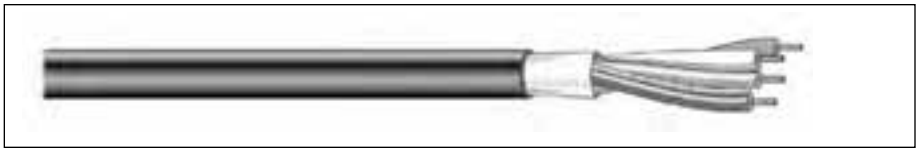
Color Code Chart

ORDERING SUFFIX	STOCK COLOR
90	Clear

Pro Audio Speaker Wire



CATALOG NUMBER	CONDUCTOR & O.D.	INSULATION & O.D.	JACKET & O.D.	WEIGHT LBS/Mft
740002	**2/C** 12 AWG Stranded 65/30 Bare Copper	PVC 0.136" Nom.	PVC 0.365" Nom.	100
740102	**2/C** 14 AWG Stranded 41/30 Bare Copper	PVC 0.118" Nom.	PVC 0.295" Nom.	75
740202	**2/C** 16 AWG Stranded 26/30 Bare Copper	PVC 0.102" Nom.	PVC 0.295" Nom.	60
740302	**2/C** 18 AWG Stranded 41/34 Bare Copper	PVC 0.079" Nom.	PVC 0.235" Nom.	38



CATALOG NUMBER	CONDUCTOR & O.D.	INSULATION & O.D.	JACKET & O.D.	WEIGHT LBS/Mft
740004	**4/C** 12 AWG Stranded 65/30 Bare Copper	PVC 0.136" Nom.	PVC 0.463" Nom.	165
740104	**4/C** 14 AWG Stranded 41/30 Bare Copper	PVC 0.118" Nom.	PVC 0.397" Nom.	107
740204	**4/C** 16 AWG Stranded 26/30 Bare Copper	PVC 0.102" Nom.	PVC 0.338" Nom.	75
740304	**4/C** 18 AWG Stranded 41/34 Bare Copper	PVC 0.079" Nom.	PVC 0.283" Nom.	53

NOTE: Cabled with jute fillers and paper tape under jacket.

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	White
3	Red
4	Green

Product Construction:

Conductor:

- 12-18 AWG stranded bare copper
- Twisted pairs

Insulation:

- PVC

Jacket:

- PVC, matte black
- High flexibility

Applications:

- Recording studios
- Commercial broadcast facilities
- Not for in-wall use

Features:

- High durability and long-lasting service

Packaging and Jacket Colors:

- Please consult Customer Service for packaging, color options and agency approvals

Special Audio, Communication & Instrumentation

UL 2095, 2093

Product Construction:

Conductor:

- 24 thru 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene (C1333A) or PVC (C1345A)
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

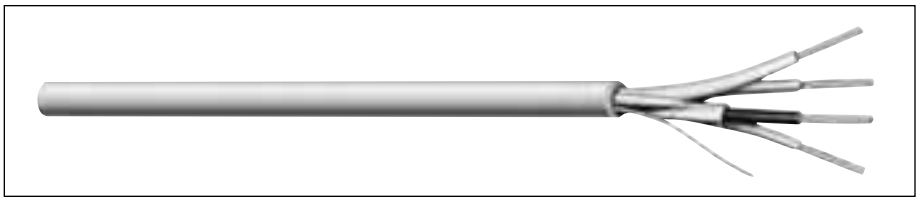
- Audio
- Communications
- EMI isolated circuits for instrumentation
- Suggested voltage rating: 300 volts

Compliances:

- UL Style 2093 (UL: 60°C, 300V)
- UL Style 2095 (UL: 80°C, 300V)
- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options



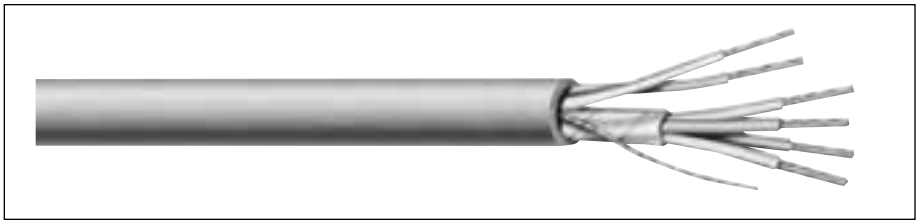
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL Style 2093, 300 VOLT											
C1333A	**3**	2-20 Shielded 1-20 Unshielded	10/30 7/28	0.015 0.016	0.38 0.41	0.028	0.71	0.206	5.23	26.0	47.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
Shielded	
1	Black
2	Red
Unshielded	
1	Natural



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL Style 2095, 300 VOLT											
C1345A	**6**	4-24 Shielded 2-22 Unshielded	7/32 7/30	0.015	0.38	0.025	0.64	0.230	5.84	32.0	57.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
Shielded	
1	Black
2	Red
3	Green
4	Yellow
Unshielded	
1	Blue
2	White

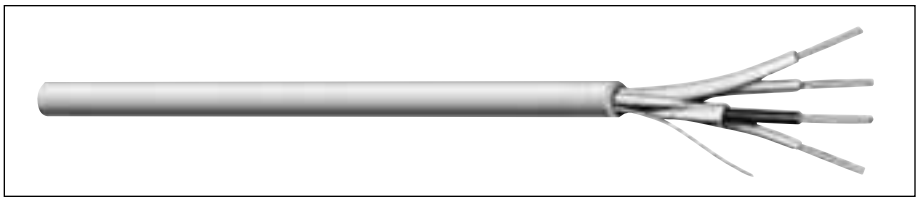
General Cable

RoHS Compliant Directive 2002/95/EC

CAROL BRAND

Special Audio, Communication & Instrumentation

UL 2095, UL 2835, UL 2094, NEC Type CL2



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
UL Style 2095, NEC Type CL2											
C1331A	4	2-20 Shielded 2-20 Unshielded	7/28	0.016	0.41	0.032	0.81	0.230	5.84	41.0	74.0
UL Style 2835											
C1340A	4	2-22 Shielded 2-22 Unshielded	7/30	0.008	0.20	0.017	0.43	0.161	4.09	29.0	52.0
UL Style 2094											
C1343A	4	2-20 Shielded 2-18 Unshielded	7/28 16/30	0.018	0.46	0.032	0.81	0.259	6.58	27.0	49.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
Shielded	
1	Black
2	Red
Unshielded	
1	Green
2	White

Product Construction:

Conductor:

- 22 thru 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- C1331A - Premium-grade, color-coded PVC
- C1340A - Premium-grade, color-coded polypropylene
- C1343A - Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 100% Flexfoil® aluminum/polyester over two conductors, 25% overlap, minimum, foil facing out
- Stranded tinned copper drain wire

Jacket:

- PVC, gray
- Temperature range: -20°C to +80°C

Applications:

- Audio
- Communications
- EMI isolated circuits for instrumentation

Compliances:

- Nec Article 725 Type CL2 (UL: 75°C, 150V)
- C1331A - UL Style 2095 (UL: 80°C)
- C1340A - UL Style 2835 (UL: 60°C)
- C1343A - UL Style 2094 (UL: 60°C)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL 70,000 BTU Vertical Tray Flame Test

Packaging:

- Please contact Customer Service for packaging and color options

CAROL BRAND UL LISTED Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc. RoHS Compliant Directive 2002/95/EC General Cable

Special Audio, Communication & Instrumentation

UL 2094

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene
- Color code: See chart below

Shield:

- 64% tinned copper braid over one pair

Jacket:

- PVC, gray
- Temperature range: -20°C to +60°C

Applications:

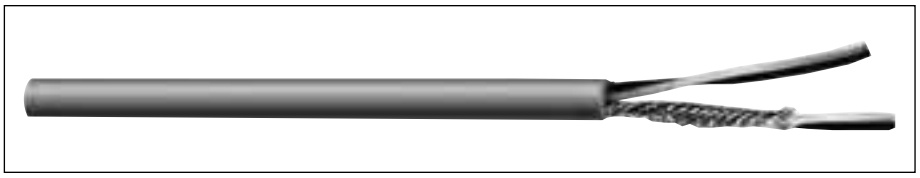
- Special audio
- Communication and control
- Instrumentation
- Applications where total isolation of signal is required
- Suggested voltage rating: 300 volts

Compliances:

- UL Style 2094 (UL: 60°C, 300V)
- RoHS Compliant Directive 2002/95/EC
- Designed to meet UL VW-1 Vertical Wire Flame Test

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1338A	2	1-22 Shielded 1-22 Unshielded	7/30	0.015	0.38	0.030	0.76	0.295	7.49	24.0	43.0

*A – Capacitance between conductors

*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black/Natural
2	Black/Natural

General Cable

RoHS Compliant Directive 2002/95/EC

Designed to Meet UL VW-1 Vertical Wire Flame Test

Underwriters Laboratories Inc.

CAROL BRAND

Low Skew 4-Pair UTP

NEC Type CMR/CMP (UL), c(UL)

Product Construction:

Conductor:
- 23 or 24 AWG solid bare copper

Insulation:
- Fluorinated ethylene propylene (FEP)
- High density propylene (HDPE)

Jacket:
- Plenum - Flexguard® green
- Riser - PVC maroon

Applications:
- Suitable for RGB video applications
- Digital CCTV cameras

Compliances:
- NEC Article 800 Type CMR (UL), c(UL)
- NEC Article 800 Type CMP (UL), c(UL)

Packaging:
- 1000' Pull-Pacs®
- Contact Customer Service for additional packaging options

Color Code Chart

NO. OF PAIRS	COLOR
1	White/Blue Stripe and Blue
2	White/Orange Stripe and Orange
3	White/Green Stripe and Green
4	White/Brown Stripe and Brown

CATALOG NUMBER	AWG SIZE	NOMINAL DCR	NOMINAL O.D. (INCHES)	INSULATION MATERIAL		NOMINAL IMPEDANCE OHMS	PROPAGATION DELAY SKEW	NOMINAL ATTENUATION		BELDEN PART NO.
				INCHES	mm			MHz	dB/328 ft.	
E3842S CMP 	24 AWG Solid Bare Copper	27.4 Ω/Mft	0.185	Fluorinated Ethylene Propylene (FEP)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.50 100 155 200 250* 300* 350*	2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0 28.1 32.0 36.4 41.0 44.8	7987P
				0.035	0.9					
E1842S CMR 	24 AWG Solid Bare Copper	27.4 Ω/Mft	0.185	High Density Propylene (HDPE)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.50 100 155 200 250* 300* 350*	2.0 4.1 5.8 6.5 8.2 9.3 10.4 11.7 17.0 22.0 28.1 32.0 36.4 41.0 44.8	7987R
				0.035	0.9					
E3843S CMP 	23 AWG Solid Bare Copper	22.0 Ω/Mft	0.200	Fluorinated Ethylene Propylene (FEP)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.50 100 155 200 250 300* 350*	2.0 3.8 5.3 6.0 7.6 8.5 9.5 10.7 15.4 19.8 25.2 29.0 32.8 35.2 39.8	7989P
				0.040	1.0					
E1843S CMR 	23 AWG Solid Bare Copper	22.0 Ω/Mft	0.213	High Density Propylene (HDPE)		100	2.2 ns/328 ft.	1 4 8 10 16 20 25 31.25 62.50 100 155 200 250* 300* 350*	2.0 3.8 5.3 6.0 7.6 8.5 9.5 10.7 15.4 19.8 25.2 29.0 32.8 35.2 39.8	7989R
				0.040	1.0					

*For information only.

CAROL BRAND® c UL us LISTED Listed Type CM Listed Type CMP

General Cable

SmartWrap™ Bundled Cable

Multiple Cable Types Depending On Application Up to 6 Cables / Jacketed and Unjacketed

Product Construction:

Fiber:
- Multimode or singlemode fibers with easily strippable 900µm tight buffering colored per TIA/EIA 598
- Cabled with aramid yarn strength member and jacketed to meet appropriate standards

Coax:
- Quad shield RG6 coax with copper-clad steel center conductor, either foamed PE (riser) or FEP (plenum) dielectric and overall PVC jacket

Twisted Pair:
- Unshielded or shielded twisted pair that meets or exceeds all TIA/EIA 568 B-2 standards for Carol® Brand Cat 5e

Binder:
- Helically wound polyester binder

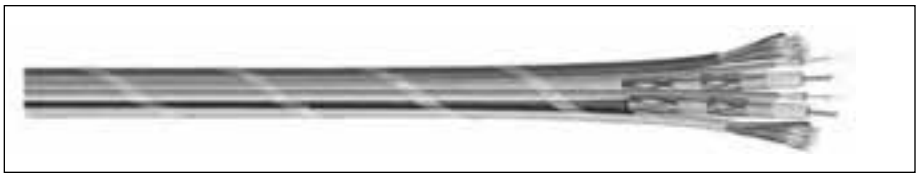
Overall Jacket (Optional):
- Riser-rated versions use a flame-retardant PVC

Applications:
- SmartWrap™ cables are several different cables available with either helical binding or overall jacketing to allow simultaneous pulling of multiple cables. Configurations include combinations of Cat 5e UTP or ScTP, RG6 video/data quad shield coax and optical fiber cables. Plenum and riser versions available

Features:
- Many cables can be pulled at once—faster installation
- TIA/EIA 568 B-2 Crosstalk-compliant
- Simplifies cable management
- Excellent for residential applications

Compliances:
- NEC Article 800 CMR, CSA FT-4 riser
- NEC Article 800 CMP, CSA FT-6 plenum

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	SAFETY RATING	BINDING OR JACKET	CONSTRUCTION
710021	Riser	Binding	4 Carol® Brand Cat 5e UTP
810021	Plenum	Binding	4 Carol® Brand Cat 5e UTP
710022	Riser	Binding	6 Carol® Brand Cat 5e UTP
810022	Plenum	Binding	6 Carol® Brand Cat 5e UTP
710023	Riser	Binding	4 Carol® Brand Cat 5e ScTP
810023	Plenum	Binding	4 Carol® Brand Cat 5e ScTP
710024	Riser	Binding	6 Carol® Brand Cat 5e ScTP
810024	Plenum	Binding	6 Carol® Brand Cat 5e ScTP
710010	Riser	Jacket	2 Carol® Brand Cat 5e UTP and 2 RG6 Quad Smart Home coax
710011	Riser	Jacket	2 Carol® Brand Cat 5e UTP, 2 RG6 Quad Smart Home coax and 2 simplex multimode fiber cables
710017	Riser	Binding	2 Carol® Brand Cat 5e UTP and 2 RG6 Quad Smart Home coax
710018	Riser	Binding	2 Carol® Brand Cat 5e UTP, 2 RG6 Quad Smart Home coax and 2 simplex multimode fiber cables

The above listings are for stock cables. Custom configurations are available. Information is subject to change without notice. Consult Customer Service for a variety of alternate constructions for specific applications.

DATA TRANSMISSION PERFORMANCE FOR CAT 5E CABLES

FREQUENCY (MHZ)	INSERTION LOSS TYPICAL • MAX* (dB/100m)	NEXT TYPICAL • MIN* (dB)	PSNEXT TYPICAL • MIN* (dB)	ACR TYPICAL • MIN* (dB/100m)	PSACR TYPICAL • MIN* (dB/100m)	ELFEXT TYPICAL • MIN* (dB/100m)	PSNEXT TYPICAL • MIN* (dB/100m)	RETURN LOSS MIN (dB)
1	19.3 • 22.0	51.9 • 35.3	43.8 • 32.3	32.6 • 13.3	24.5 • 10.3	43.7 • 23.8	38.8 • 20.8	20.1

*Max/min measurements match TIA/EIA 568 B-2 standards

ELECTRICAL CHARACTERISTICS FOR CAT 5E CABLES

DC Resistance	≤9.38 Ohms/100 Meters • 28.6 Ohms/1000 Feet	Input Impedance	100 Ohms ± 15% @ 1 - 100 MHz
DCR Unbalanced	≤5%	Propagation Delay (Skew)	45 nanoseconds/100 meters max
Mutual Capacitance	≤55.8 pF/m • 17 pF/ft	Velocity of Propagation	72% plenum/69% riser

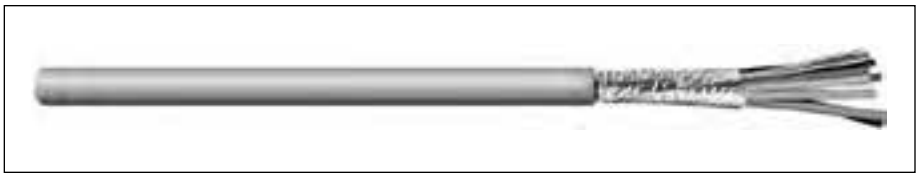
ELECTRICAL CHARACTERISTICS FOR RG6 CABLES

Capacitance	≤53.2 pF/m • 16.2 pF/ft	Attenuation (dB/100 ft)	0.21@ 1 MHz • 6.04 dB @ 1000MHz
Characteristic Impedance	75 Ohms	Velocity of Propagation	83% riser

General Cable

CAROL® BRAND

Direct Burial, Audio & Communication



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C2509A	2	20	Solid	0.013	0.33	0.037	0.94	0.190	4.83	25.0	44.0
C2510A	3	20	Solid	0.013	0.33	0.039	0.99	0.205	5.21	22.0	40.0
C2511A	10	20	Solid	0.013	0.33	0.039	0.99	0.310	7.87	20.5	37.0

*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Product Construction:

Conductor:
- 20 AWG fully annealed solid tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded polypropylene

Shield:
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing out
- Solid tinned copper drain wire

Jacket:
- Permaline® high-density polyethylene, black
- Temperature range: -20°C to +80°C

Applications:
- Suitable for direct burial
- Outdoor uses
- 100% shielded cable where RF shielding is required
- Suggested voltage rating: 350 volts

Features:
- Permaline® jackets resist deterioration
- Sunlight-resistant
- Highly durable jacket

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options

CAROL BRAND® RoHS Compliant Directive 2002/95/EC

General Cable

Direct Burial, Audio & Communication

Product Construction:

Conductor:
- 20 AWG fully annealed stranded tinned copper per ASTM B-33
- Twisted pairs

Insulation:
- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:
- 100% Flexfoil® aluminum/polyester with 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire each pair
- Individually shielded pairs

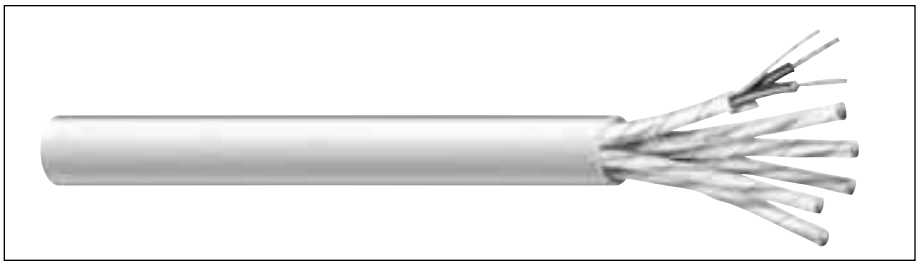
Jacket:
- Permaline® high-density polyethylene, black
- Temperature range: -20°C to +80°C

Applications:
- Suitable for direct burial
- Outdoor uses
- Applications where total isolation of signal is required
- Suggested voltage rating: 350 volts

Features:
- Permaline® jackets resist deterioration
- Sunlight-resistant

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C6061A	3	20	10/30	0.013	0.33	0.047	1.19	0.340	8.64	22.0	39.0
C6062A	6	20	10/30	0.013	0.33	0.047	1.19	0.442	11.23	22.0	39.0

*A – Capacitance between conductors

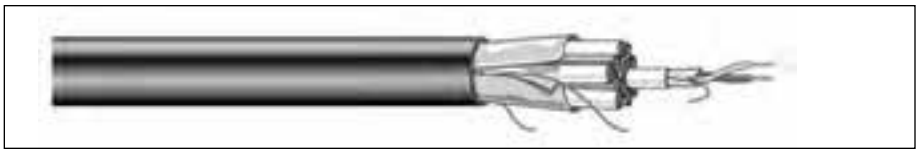
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF PAIRS	COLOR
1	Black paired with Red
2	Black paired with White
3	Black paired with Green
4	Black paired with Blue
5	Black paired with Yellow
6	Black paired with Brown

Digital Audio Snake Cable

AES/EBU 110 Ohm Multi-Pair Individually Shielded & Jacketed, NEC Type CM/CL2



CATALOG NUMBER	CONDUCTOR	INSULATION & O.D.	SHIELD (COV.)	JACKET & O.D.	WT. #/m	IMPED. OHMS	CAPAC. pF/ft.
740601	**1/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.176" Nom.	13.5	110	12.5
740604	**4/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.525" Nom.	100	110	12.5
740608	**8/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.700" Nom.	183	110	12.5
740612	**12/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.850" Nom.	250	110	12.5
740616	**16/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 1.000" Nom.	370	110	12.5
740620	**20/PR** 24 AWG Stranded 7/32 Tinned Copper	HD-Cellular PE 0.066" Nom.	Individual Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 1.100" Nom.	425	110	12.5

NOTE: General Cable manufactures the above cables in a wide range of alternate AWG sizes, pair counts and jacket colors. Please consult Customer Service for details.

Product Construction:

Conductor:

- 24 AWG stranded tinned copper
- Twisted pairs

Insulation:

- High-density foamed polyethylene

Shield:

- Individually shielded pairs with 24 AWG drain wire
- Overall foil shield with 18 AWG drain wire

Jacket:

- PVC, matte black
- High-flex, flame-retardant

Applications:

- Digital audio
- Interconnection and audio components for console board equipment used in recording studios, radio and television stations, and post-production facilities
- Sound system installations

Features:

- High impedance, 78% velocity and low capacitance providing error-free transmissions over extended distances
- PVC jacketing compound for ultimate cosmetics, durability and flexibility
- Jacketed pairs can be split out of overall jacket for any length without use of heat-shrink tubing
- Individual pair jackets are color-coded and number-printed for easy identification

Compliances:

- NEC Article 725 Type CL2
- NEC Article 800 Type CM
- Meets/exceeds requirements of Audio Engineering Society (AES) and European Broadcast Union (EBU)

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options

Analog Audio Snake Cable

70 Ohm Low Capacitance Multi-Pair Individually Shielded & Jacketed, NEC Type CM/CL2

Product Construction:

Conductor:
- 24 AWG stranded tinned copper
- Twisted pairs

Insulation:
- Polyolefin

Shield:
- Individually shielded pairs with 24 AWG drain wire
- Overall foil shield 24 AWG drain wire

Jacket:
- PVC, matte black
- High-flex, flame-retardant

Applications:
- Analog audio
- Line level microphone
- Interconnection and audio components for console board equipment used in recording studios, radio and television stations, and post-production facilities
- Sound system installations

Features:
- PVC jacketing compound for superior cosmetics, durability and flexibility
- Individually shielded and jacketed pairs with an overall shield
- Individual pair jackets alpha-numerically numbered for easy identification

Compliances:
- NEC Article 725 Type CL2
- NEC Article 800 Type CM

Packaging and Jacket Colors:
- Please consult Customer Service for packaging and color options

CATALOG NUMBER	CONDUCTOR	INSULATION & O.D.	SHIELD (COV.)	JACKET & O.D.	WT. #/m	IMPED. OHMS	CAPAC. pF/ft
STRANDED CONDUCTORS							
740501	**1/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.137" Nom.	11	65	24
740504	**4/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.385" Nom.	64	65	24
740508	**8/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.490" Nom.	107	65	24
740512	**12/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.610" Nom.	160	65	24
740516	**16/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.680" Nom.	205	65	24
740520	**20/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.700" Nom.	248	65	24
740528	**28/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.820" Nom.	340	65	24
740542	**42/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 1.050" Nom.	485	65	24
740552	**52/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.024" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 1.150" Nom.	595	65	24

NOTE: General Cable manufactures the above cables in a wide range of alternate AWG sizes, pair counts and jacket colors. Please consult Customer Service for details.

Analog Audio Snake Cable

70 Ohm Low Capacitance Multi-Pair Individually Shielded, NEC Type CM/CL2

CATALOG NUMBER	CONDUCTOR	INSULATION & O.D.	SHIELD (COV.)	JACKET & O.D.	WT. #/m	IMPED. OHMS	CAPAC. pF/ft
740701	**1/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.137" Nom.	11	65	24
740704	**4/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.280" Nom.	39	65	24
740706	**6/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.330" Nom.	55	65	24
740708	**8/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.350" Nom.	69	65	24
740709	**9/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.380" Nom.	76	65	24
740712	**12/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.425" Nom.	96	65	24
740716	**16/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.490" Nom.	130	65	24
740720	**20/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.540" Nom.	158	65	24
740728	**28/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.655" Nom.	221	65	24
740742	**42/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.775" Nom.	327	65	24
740752	**52/PR** 24 AWG Stranded 7/32 Tinned Copper	Polyolefin 0.044" Nom.	Overall Foil w/ 24 AWG Drain Overall Foil w/ 18 AWG Drain	FR-PVC Matte Finish 0.845" Nom.	391	65	24

NOTE: General Cable manufactures the above cables in a wide range of alternate AWG sizes, pair counts and jacket colors. Please consult Customer Service for details.

Product Construction:

Conductor:

- 24 AWG stranded tinned copper
- Twisted pairs

Insulation:

- Polyolefin

Shield:

- Individually shielded pairs with 24 AWG drain wire
- Overall foil shield 24 AWG drain wire

Jacket:

- PVC, matte black
- High-flex, flame-retardant

Applications:

- Line level microphone
- Interconnection and audio components for console board equipment used in recording studios, radio and television stations, and post-production facilities
- Sound system installations

Features:

- PVC jacketing compound for superior cosmetics, durability and flexibility
- Individually shielded pairs are color-coded for easy identification

Compliances:

- NEC Article 725 Type CL2
- NEC Article 800 Type CM

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options

Guitar/Instrument Cable

Product Construction:

Conductor:
- 20 or 24 AWG stranded bare copper

Insulation:
- Dual layer of semi-conductive PVC over polyethylene

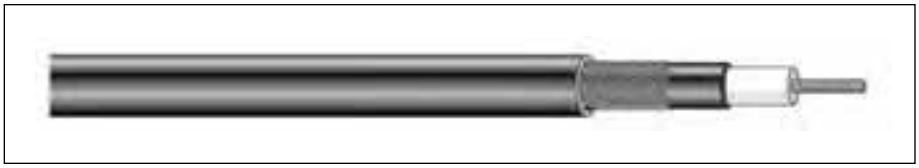
Shield:
- 36 AWG bare copper braid or spiral

Jacket:
- High quality audio (HQA) PVC, matte black
- Superior flexibility

Applications:
- Guitars
- Basses
- Keyboards and other instruments to amplifiers, mixers and effects pedals
- All outdoor signal processing gear

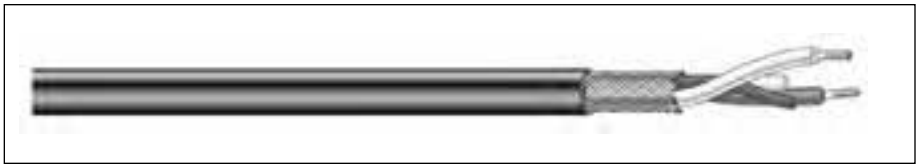
Features:
- Low capacitance to provide excellent structural return loss characteristics
- Specially formulated vinyl sleeving reduces triboelectric charges which cause microphonic handling noise in high-gain amplification applications

Packaging and Jacket Colors:
- Please consult Customer Service for packaging and color options



CATALOG NUMBER	CONDUCTOR	INSULATION & O.D.	SHIELD (COV.)	JACKET & O.D.	WT. #/m	IMPED. OHMS	CAPAC. pF/ft.
743601	**1/C** 20 AWG Stranded 41/36 Bare Copper	0.038" Poly 0.010" Semi Conductive Vinyl	36 AWG 95% Nom. Bare Copper Braid	"HQA" PVC 0.240 Nom. Black	34	47	33
743602	**1/C** 20 AWG Stranded 41/36 Bare Copper	0.038" Poly 0.010" Semi Conductive Vinyl	36 AWG 65% Nom. Bare Copper Spiral	"HQA" PVC 0.240 Nom. Black	34	47	33
743603	**1/C** 20 AWG Stranded 41/36 Bare Copper	0.038" Poly 0.010" Semi Conductive Vinyl	36 AWG 95% Nom. Bare Copper Braid	"HQA" PVC 0.240 Nom. Black	34	47	33
743604	**1/C** 20 AWG Stranded 22/34 Bare Copper	0.025" Poly 0.010" Semi Conductive Vinyl	36 AWG 65% Nom. Bare Copper Spiral	"HQA" PVC 0.235 Nom. Black	36	47	33
743605	**1/C** 24 AWG Stranded 7/32 Bare Copper	0.040" Poly 0.010" Semi Conductive Vinyl	36 AWG 95% Nom. Bare Copper Spiral	"HQA" PVC 0.235 Nom. Black	30	47	33

Ultra Flexible, Low Impedance 2-Conductor Microphone Cable



CATALOG NUMBER	CONDUCTOR	INSULATION & O.D.	SHIELD (COV.)	JACKET & O.D.	WT. #/m	IMPED. OHMS	CAPAC. pF/ft
743701	**2/C** 24 AWG Stranded 105/44 Bare Copper	PVC 0.045" Nom.	80% Nom. Bare Copper Braid	"HQA" PVC 0.176" Nom. Black	22	65	30
743704	**2/C** 24 AWG Stranded 41/40 Bare Copper	Polyethylene 0.050" Nom.	95% Tinned Copper Braid	"HQA" PVC 0.194" Nom. Black	23	80	20
743705	**2/C** 24 AWG Stranded 16/36 Bare Copper	Polyethylene 0.050" Nom.	95% Bare Copper Spiral	"HQA" PVC 0.225" Nom. Black	29	80	20
743706	**2/C** 22 AWG Stranded 26/36 Bare Copper	Polyethylene 0.062" Nom.	85% Bare Copper Braid	"HQA" PVC 0.232" Nom. Black	34	85	18
743707	**2/C** 20 AWG Stranded 41/36 Bare Copper	Polyethylene 0.074" Nom.	85% Bare Copper Braid	"HQA" PVC 0.262" Nom. Black	40	80	20

Product Construction:

Conductor:
- 20-24 AWG stranded bare copper
- Twisted pairs

Insulation:
- PVC or polyethylene

Shield:
- Braid or spiral, bare or tinned copper (choice of shielding configurations)

Jacket:
- High quality audio (HQA) PVC, matte black
- Superior flexibility

Applications:
- General-purpose audio applications
- Home entertainment
- Musical instruments

Features:
- Twisted conductor construction minimizes effects of EMI
- Precise application of filler maintains mechanical durability to resist annoying handling noise
- Braid shield guards against crosstalk and EMI while minimizing capacitive reactance, which causes hum and buzz
- High strand conductor plus HQA jacket results in ultimate flexibility

Packaging and Jacket Colors:
- Please consult Customer Service for packaging and color options

Multi-Conductor, Flexfoil® Shield

Product Construction:

Conductor:

- 24 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polypropylene
- Color code: See chart below

Shield:

- Conductive tape applied over the core
- 100% Flexfoil® aluminum/polyester, 25% overlap, minimum, foil facing in
- Stranded tinned copper drain wire

Jacket:

- PVC, black
- Temperature range: -20°C to +75°C

Applications:

- Electronic circuits where RF shielding is required
- Radio transmitters
- Sound systems
- Recording studios
- Suggested voltage rating: 300 volts

Features:

- Excellent shielding to reduce noise

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1228A	2	24	19/36	0.008	0.20	0.022	0.56	0.135	3.43	27.0	48.5

*A – Capacitance between conductors

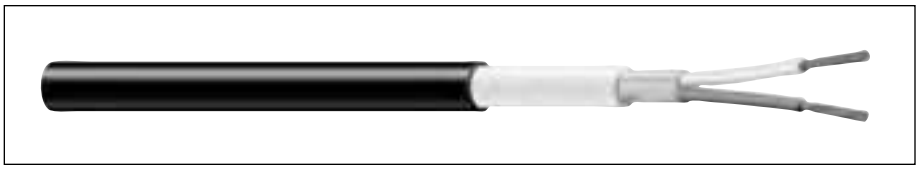
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	Black
2	Red

Multi-Conductor, Rubber, Braid Shield Microphone Cable

High and Low Impedance



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C1300	1	20	26/34	0.042	1.07	0.035	0.89	0.230	5.84	42.0
C1301	1	18	41/34	0.040	1.02	0.035	0.89	0.240	6.10	46.0
C1302	2	20	26/34	0.020	0.51	0.035	0.89	0.270	6.86	50.0

*Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	White
2	Black

Product Construction:

Conductor:

- 18 and 20 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded rubber insulation
- Color code: See chart below

Shield:

- Clear Mylar® wrap
- 80% tinned copper braid
- Cotton wrap

Jacket:

- Rubber, black
- Temperature range: -20°C to +60°C

Applications:

C1300, C1301:

- High-impedance microphones
- Broadcast and studio use
- Communication and audio system
- Shielded power supplies
- Suggested voltage rating: 300 volts

C1302:

- Low-impedance microphones
- Studio use
- Control circuits
- Video and audio interconnecting cables
- Shielded power supplies
- Suggested voltage rating: 300 volts

Features:

- Precision engineered to transmit clear, noise-free signals
- Minimizes electrical “hum”
- Braid shield provides extra flexibility

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

Multi-Conductor, Spiral Shield

Product Construction:

Conductor:
- 24 AWG annealed stranded bare copper per ASTM B-3

Insulation:
- Premium-grade, color-coded PVC
- Color code: See chart below

Shield:
- 85% spiral-tinned copper

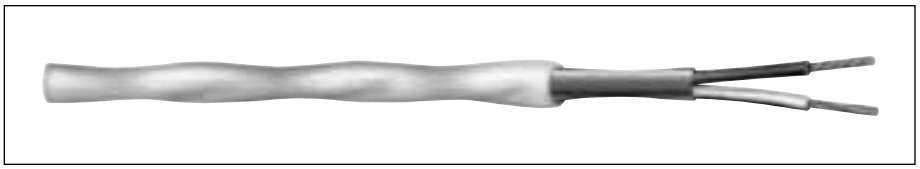
Jacket:
- PVC, black
- Temperature range: -20°C to +90°C

Applications:
- Electronic circuits where RF shielding is required
- Radio transmitters
- Sound systems
- Recording studios
- Suggested voltage rating: 300 volts

Features:
- Spiral shield provides extra flexibility
- Excellent shielding to reduce noise

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
C1226A	2	24	105/44	0.012	0.30	0.030	0.76	0.176	4.47	43.0	77.0

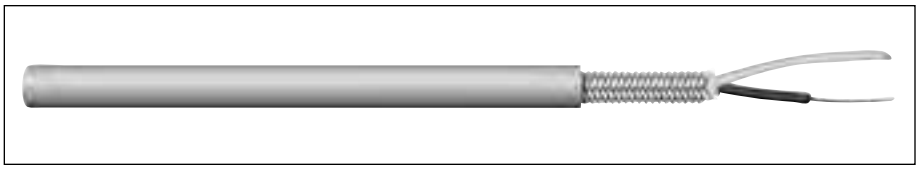
*A – Capacitance between conductors
*B – Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	White
2	Green

Multi-Conductor, Braid Shield

Low Impedance



CATALOG NUMBER	TYPE	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft
					INCHES	mm	INCHES	mm	INCHES	mm	
C1322A	Low Imped.	2	22	16/34	0.025	0.64	0.025	0.64	0.239	6.07	31.0

*Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	White
2	Black

Product Construction:

Conductor:

- 22 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- Premium-grade, color-coded polyethylene
- Fillers where required
- Color code: See chart below

Shield:

- 80% tinned copper braid

Jacket:

- PVC, gray
- Temperature range: -20°C to +75°C

Applications:

- Low-impedance microphones
- Suggested voltage rating: 1000 volts

Features:

- Flexlife® jacket provides extreme flexibility
- High abrasion resistance
- Outstanding appearance

Compliances:

- RoHS Compliant Directive 2002/95/EC

Packaging:

- Please contact Customer Service for packaging and color options

Microphone Cable, Multi-Conductor, Carolprene®, Braid Shield High and Low Impedance

Product Construction:

Conductor:
- 18 and 16 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:
- Premium-grade, color-coded rubber
- Color code: See chart below

Shield:
- Clear Mylar® wrap
- 80% braid tinned copper
- Cotton wrap

Jacket:
- Carolprene®, black
- Temperature range: -20°C to +60°C

Applications:

C1201:
- High-impedance microphones
- Broadcast and studio use
- Communication and audio systems
- Suggested voltage rating: 300 volts

C1202, C1602:
- Low-impedance microphones
- Studio use
- Control circuits
- Video and interconnecting cables
- Shielded power supplies
- Suggested voltage rating: 300 volts

Features:
- Precision engineered to transmit clear, noise-free signals
- Minimizes electrical “hum”
- Resistant to oil, acid, sunlight, abrasion and aging
- Excellent noise rejection

Compliances:
- RoHS Compliant Directive 2002/95/EC

Packaging:
- Please contact Customer Service for packaging and color options

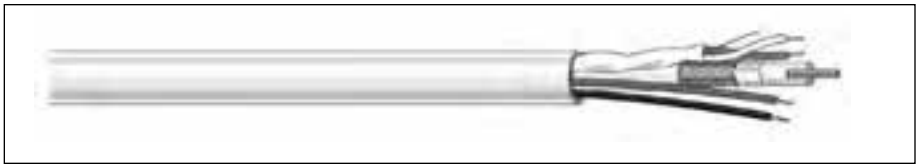
CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOM. CAP.* pF/ft
				INCHES	mm	INCHES	mm	INCHES	mm	
C1201	1	18	41/34	0.040	1.02	0.035	0.89	0.240	6.10	46.0
C1202	2	18	41/34	0.020	0.51	0.035	0.89	0.295	7.49	61.0
C1602	2	16	65/34	0.025	0.64	0.035	0.89	0.335	8.51	55.0

*Capacitance between one conductor and other conductors connected to shield

Color Code Chart

NO. OF COND.	COLOR
1	White
2	Black

SMPTE-311 Hybrid Fiber Optic/Copper Camera Cable



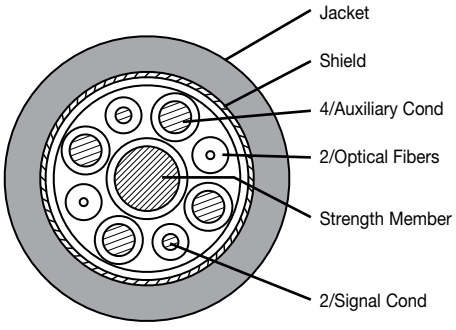
CATALOG NUMBER	AUXILIARY CONDUCTOR	SIGNAL COND.	OPTICAL FIBER	STRENGTH MEMBER	SHIELD	JACKET
742608	(4) 20 AWG 26/34 Strand Tinned Cu High-density Polyethylene Insul. O.D. 0.060"	(2) 25 AWG 7/33 Strand Tinned Cu High-density Polyethylene Insul. O.D. 0.045"	(2) 9.5 Micron Single-Mode	14 AWG 19/27 Strand Galvanized Steel	95% Braid Tinned CU	Flexible PVC (HQA) Black 0.362" O.D. 9.20 mm
574608	(4) 20 AWG 26/34 Strand Tinned Cu High-density Polyethylene Insul. O.D. 0.060"	(2) 25 AWG 7/33 Strand Tinned Cu High-density Polyethylene Insul. O.D. 0.045"	(2) 9.5 Micron Single-Mode	14 AWG 19/27 Strand Galvanized Steel	95% Braid Tinned CU	Ruggedized Outdoor TPR Black 0.362" O.D. 9.20 mm

NOTE: General Cable manufactures the above cables in a wide range of alternate AWG sizes, pair counts and jacket colors. Please consult Customer Service for details.

Cable Characteristics

ELEMENT NUMBER	(1) AUXILIARY CONDUCTORS	(2) SIGNAL CONDUCTORS	(3) SINGLEMODE FIBER OPTIC	
CONDUCTOR DCR	35.29Ω/Km max @20˚C	97.5ΩKm max @20˚C	***Mode Field Data***	9.5+/-1 Micron
DC LOOP RESISTANCE	43Ω/Km max @20˚C	184ΩKm max @20˚C	***Cladding Data***	125+/-1 Micron
INSULATION RESISTANCE	10,000Ω/Km max @20˚C	10,000ΩKm max @20˚C	***Buffer Material***	Thermoplastic
DIELECTRIC STRENGTH	1750V RMS@20˚C, 60Hz for 1 min	1750V RMS@20˚C, 60Hz for 1 min		
VOLTAGE RATING	300V Max	300V Max		
COLOR	C1, C3-Black C2, C4-White	C1-Red C2-Gray		C1-Blue C2-Yellow

TYPICAL CROSS SECTION



Product Construction:

Conductor:

- Element #1: 4 auxiliary conductors (used as two)
  - Size: 20 AWG; stranded tinned annealed copper
  - Insulation: High-density polyethylene O.D.: 0.060" nom. (1.53mm)
- Element #2: 2 single conductors
  - Size: 24 AWG; stranded tinned annealed copper
  - Insulation: High-density polyethylene: 0.045" nom. (1.12mm)
- Element #3: Singlemode fiber optic
- Element #4: Strength member in core
  - Size: 16 AWG; stranded insulated galvanized steel cable
  - Color: White
  - O.D.: 0.083" nom. (2.1mm)

Fillers:

- Fibrillated polypropylene as needed for roundness

Binder:

- Paper tape with 25% overlap

Braid Shield:

- Flexibly designed braid shield with 85% nom. coverage

Jacket:

- Flexible PVC (HQA)
- Temperature range: -40˚C to +75˚C
- Humidity 0 to 95%
- TPR ruggedized outdoor version

Jacket Marking:

- HELIX/HITEMP P/N XXXXXX* SINGLE-MODE FIBER OPTIC/ELECTRICAL HD CAMERA CABLE (RU) AWM STYLE 21059 80C 300V VW-1

Cable Weight:

- 87.6 lbs/Mft nom. (130.8Kg/KM)

Performance:

- Meets/exceeds SMPTE-311 M-1998

Connector:

- LEMO connector (call LEMO for more information at 800.444.5366)
- SMPTE standard 304 video connector

Compliances:

- UL Subject 758
- AWM Style 21059

Packaging:

- Please consult Customer Service for packaging and color options

*XXXXXX - indicates part number

CAROL BRAND UL LISTED

General Cable

Electronic News Gathering/Field Production Camera Cable

Product Construction:

Applications:

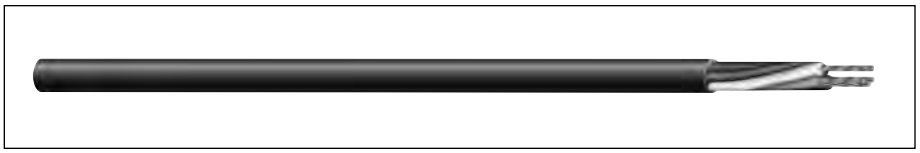
- Ideal for TV broadcast and CCTV applications
- Suited for controlling, powering and transmitting audio and video signals for TV cameras
- Additional uses include remote control, monitor and cue line systems

Features:

- Provides excellent circuit isolation
- Superior durability characteristics in a variety of environmental conditions

Packaging and Jacket Colors:

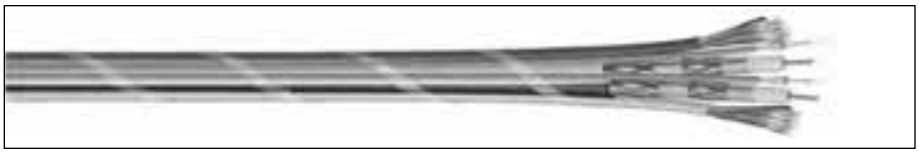
- Please contact Customer Service for packaging and color options



CATALOG NUMBER	COAXIAL COMPONENT	SIGNAL PAIR	POWER PAIR	JACKET
742605	1/C 25 AWG Stranded 7/33 Bare Copper High-density Polyethylene Insulation 90% Bare Copper Braid PVC Jacket O.D. 0.175" Nom.	1/PR 24 AWG Stranded 19/36 Bare Copper Polyethylene Insulation + Foil 24 AWG Drain O.D. 0.140" Nom.	1/PR 22 AWG Stranded 26/36 Bare Copper PVC Insulation O.D. 0.100" Nom.	Matte Black "HQA" PVC O.D. .495" Nom.

NOTE: General Cable manufactures the above cables in a wide range of alternate AWG sizes, pair counts and jacket colors. Please consult Customer Service for details.

Specialty Cable 9



General Cable has a variety of wire and cable available for special applications. This section includes an array of products from our Fluorobus flat bus ground/power distribution cable to high-speed serial interface cable, known as Fire Wire, and computer cables.

For more information on these cables or for other special applications, please contact your General Cable sales representative.

CAROL® BRAND ELECTRONICS WIRE & CABLE

Armored Electronics Products

General Cable now offers the capability to armor virtually any Carol® Brand Electronics cable. This rugged exterior and protection allows for the installation of almost any Electronics cable in markets with the toughest and most rigorous building code requirements. Cables placed in armor are not only acceptable for use in Riser applications, but according to NEC Article 300.22(B), these cables are acceptable in Plenum applications as well.

The process to convert a standard Carol Brand Electronics cable to an armored cable is simple and is explained on the back of this bulletin. All you really need to know is: 1) which cable you want to armor, 2) whether you want steel or aluminum interlock armor, and 3) what put-up lengths you would like to receive product on.

General Cable continues to expand its Carol Brand Electronics product offering to allow our customers to participate in more diversified markets. You can always *Demand Better...Expect More*™ with General Cable Carol Brand Electronics cables. We manufacture over 1,300 standard electronic cables that we ship direct from stock, and we have the technical staff and design expertise to meet any customer cable requirement.

Special Application Cable
Hook-Up Wire
Plenum Cable
Coaxial Cable
Microphone Cable
Computer Cable
General Purpose Cable
Multi-Conductor Communication & Control Cable
Multi-Paired Communication & Control Cable
Fire Alarm Cable
Sound & Security Cable

General Cable

CAROL® BRAND

HOW TO ARMOR YOUR ELECTRONICS

Step 1 - Find a Carol Brand part # in the catalog that you want to armor.

Carol® Brand Communication & Control Cable, Multi-Conductor, Unshielded

CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND.	NOM. INSULATION THICKNESS		NOMINAL JACKET THICKNESS		NOMINAL O.D.		NOM. C-C CAP. pF/FT
				INCHES	mm	INCHES	mm	INCHES	mm	
C2409A	2	14	19/.0147	0.030	0.81	0.032	0.81	0.260	6.81	30.5

Step 2 - Build your Carol Brand Armored part #

❶ Pick the root part # you want to armor.
❷ Pick the put-up length that you want.
❸ Pick the color of jacket for the wire.
❹ Pick the type of armor you want.

❶	❷	❸	❹
C2409A	41	02	A
Root #	Put-Up	Cable Jacket Color	Armor Indicator

Armored Part # looks like: C2409A.41.02A

Description is now: 14 AWG / 2 Conductor, Unshielded, White Jacket Communication Cable in Aluminum Armor on a 1000' Reel.

Armor Codes & Charts

Armor Sizing Chart

CABLE DIAMETER	ARMOR STRIP WIDTH	CLEARANCE (IN)	ARMOR O.D. (IN)	ARMOR WEIGHT (LBS/mFT)
0.190	3/8"	0.060	0.350	29.000
0.250	3/8"	0.100	0.450	38.600
0.300	3/8"	0.100	0.500	43.400
0.350	3/8"	0.100	0.550	48.300
0.400	3/8"	0.100	0.600	53.100
0.450	3/8"	0.100	0.650	57.900
0.500	3/8"	0.100	0.700	62.700
0.550	3/8"	0.100	0.750	67.600
0.600	3/8"	0.100	0.800	72.400
0.650	3/8"	0.100	0.850	77.200
0.700	1/2"	0.100	0.900	109.400
0.750	1/2"	0.100	0.950	115.800
0.800	1/2"	0.100	1.000	122.300

Wire Jacket Color

CODE	COLOR
01	BLACK
02	WHITE
03	RED
04	ORANGE
05	YELLOW
06	GREEN
07	DARK BLUE
08	BROWN
09	MAROON
10	GRAY
11	ANTIQUE GOLD
12	IVORY
13	PINK

NOTE: Additional colors available

Armor Codes

TYPE	CODE
Aluminum	A
Steel	S

Put-Up Codes

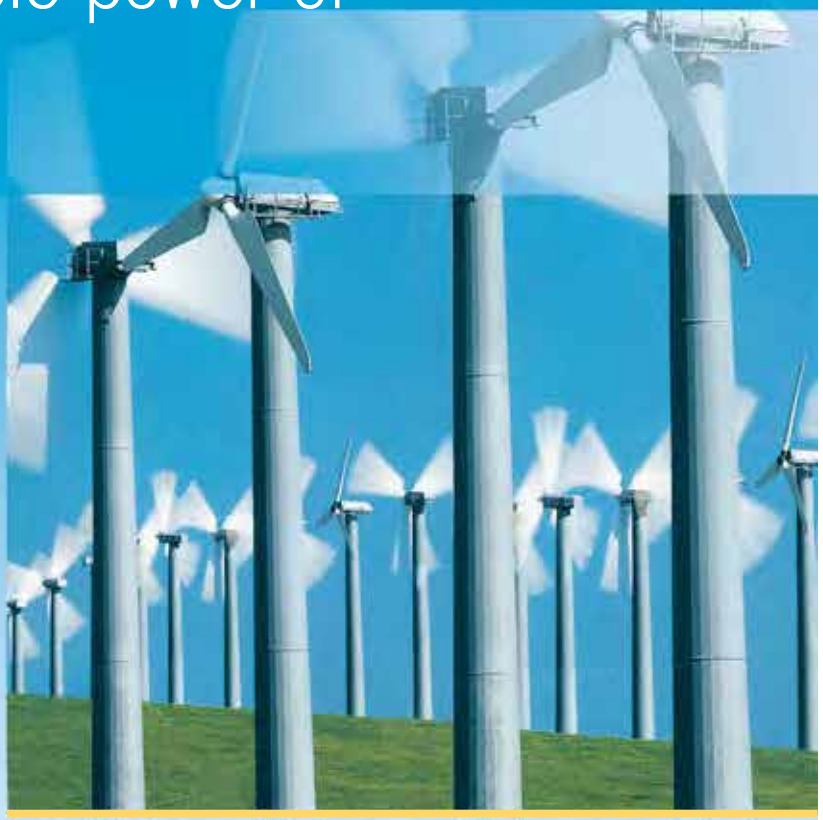
SIZE	CODE
250'	35
500'	38
1000'	41

NOTE 1: Consult factory for additional put-up lengths
NOTE 2: Product provided on reels

Products in the Electronics Catalog that can be armored:

Section 2 - Communication & Control Cable, Multi-Conductor
Section 3 - Communication & Control Cable, Multi-Paired
Section 4 - Computer Cable
Section 5 - Coaxial Cable
Section 6 - Fire Alarm / Life Safety Cable
Section 7 - Sound, Alarm, & Security
Section 8 - Audio / Home Entertainment Cable

Delivering the renewable power of
Wind Energy



Wind knows no boundaries, and neither does General Cable.

Answering the Call
Wind. It's plentiful, renewable, and clean. That's why wind power has increased more than fivefold since the beginning of the 21st century, taking center stage as the fastest growing alternative energy source in the global arena. With increased energy demand and mounting political pressure, alternative energy mandates are cropping up all over the world, with many countries calling for significant growth in wind generation capacity over the next decade. General Cable has the experience, the innovation, and the global presence to answer that call.

Since the first modern wind turbine was developed in the 1980s, General Cable has been committed to delivering the renewable power of wind energy through ground-breaking wire and cable technologies. General Cable has developed cables that are flexible yet tough enough to withstand the continuous motion of today's wind turbines. Our commitment to providing the highest quality and reliable products lowers cost and extends turbine operating life by reducing failures and maintaining continuous power.

Knowing No Boundaries
Wind knows no boundaries, and neither does General Cable. From Brazil, Mexico, and the U.S. to Germany, Spain, China, India, and Australia, initiatives are in place to increase wind power, with targets to support a significantly higher percentage of energy needs.

With a solid presence in North America, South America, Europe, Asia, Africa, the Middle East, and Oceania, General Cable has the geographical presence to focus on region-specific wind power needs and to meet domestic and global specifications. At the same time, General Cable's *One Company* approach means we have a keen ability to unite and leverage our broad knowledge and shared resources to bring innovative solutions to the entire world.

Setting the Benchmark
Whether it is terrestrial wind farms requiring direct buried cables or offshore wind farms requiring high-performance submarine cables, General Cable has one of the most diverse and expansive ranges of products to meet virtually every application in the wind power industry. From fiber optic and bare overhead conductors to underground URD and low-voltage power, control, and electronic cables, General Cable offers the full array of cables needed for wind turbines to generate, distribute, and transmit energy.

As the benchmark in the wire and cable industry, renowned for our engineering and material development capabilities, General Cable is positioned to rapidly respond to the needs of the evolving wind farm market with next-generation cabling systems.

Call us today at **888.593.3355** for additional information.

General Cable

Fluorobus Cable

Flat Bus Ground / Power Distribution Cable

CATALOG NUMBER	CONDUCTOR	INSULATION	FINISHED DIMENSIONS	DCR	POWER RATING
SP00C0011010	Flat Solid BC 0.010" x 0.987"	Tetzel® (ETFE)	0.028 x 1.022	0.82 Ohms per 1000 ft. @ 25°C	32 Amps Nom. 100 Amps Max.
SP00C0012010	Flat Solid BC 0.020" x 0.987"	Tetzel® (ETFE)	0.037 x 1.022	0.41 Ohms per 1000 ft. @ 25°C	64 Amps Nom. 100 Amps Max.

Information is subject to change without notice.

Applications:

- Ideally suited for low-voltage primary and secondary power distribution in electronic and data processing equipment. High-speed, solid-state circuits require relatively high currents with low voltage. For this reason, it is essential that DC power distribution lines have low inductance, low resistance and high capacitance. More important, tightly bundled or laminated flat cable source-and-return circuits deliver lower impedance and higher capacitance by one to two orders of magnitude, compared to round wire circuits with equal resistance.
- This system can serve as a low-cost flexible alternative to laminated bus bars. The Fluorobus low-profile routing capability is a useful packaging feature, and its large surface area (relative to round wire conductor of equal resistance) provides improved heat dissipation, minimizes voltage drop and results in a higher current rating.
- This flat conductor circuit delivers superior EMI/RFI performance, both as a source and as a receiver.

Features	Benefits
Low Profile:	Conserves space
Flexible:	Ease of routing
Large Surface Area:	Improved heat dissipation minimizes voltage drop High current rating

Temperature Rating:

- -50°C to +150°C

Voltage Rating:

- 300 volts and 600 volts (AWM) available (consult Customer Service)

Dielectric Constant:

- 2.6

Dielectric Strength:

- 900 VRMS

Packaging and Color:

- Please consult Customer Service for packaging and color options

Fire Wire*

IEEE 1394 High-Speed Serial Interface

Applications:

- Transport digital data for computers and for professional and consumer electronic products
- Personal computers
- Audio/image/video products
- Printers/scanners
- Disc arrays
- Digital video cameras/displays/recorders

Compliances:

- UL: AWM 20276
- 80°C 30V VW-1
- CSA: PCC FT1

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options

CATALOG NUMBER

Z028C0061110

SIGNAL PAIRS	POWER CONDUCTOR	OVERALL SHIELDING	OVERALL JACKET	SIGNAL PR. IMPED.	SIGNAL PR. CAPAC.	NOM. MHz	ATTENUATION	
							DB	100'
2/C #22 7/36 TC Foam Poly Insulation Individual Foil & Braid No. 1: Red, Green No. 2: Blue, Orange	2/C #22 7/36 TC Polyolefin Insulation Black, White	Aluminum/ Mylar® (Foil Out) + 95% Braid	Flexible PVC	110 Ohms	12.5 pF/ft	1000.0	37	55

* Apple Computer trademark

Computer Cable

Mainframes, Data Transfer, Tape Drives, File Servers, Disc Drives, Workstations, Disc Arrays, Personal Computers, etc.

PART NUMBER	APPLICATION	DESCRIPTION
EO28P0501510	HIPPI	50 Pair, 28 AWG, 105 Ohm
EO24C0045510	Fiber Channel	2 Pair “Quad”, 24 AWG, 150 Ohm
EO26C0045510	Fiber Channel	2 Pair “Quad”, 26 AWG, 150 Ohm
EO28C0045510	Fiber Channel	2 Pair “Quad”, 28 AWG, 150 Ohm
EO30C0045510	Fiber Channel	2 Pair “Quad”, 30 AWG, 150 Ohm
EO28P0181510	IEEE-1284	18 Pair, 28 AWG, O/A Foil + Braid

Test & Measurement, Data Transfer, Electronic Publishing, Video Conferencing, Sound Synthesizers, PC Workstations, Multi-Media, Consumer Electronics, Cable TV, Digital Cameras/Camcorders, etc.

PART NUMBER	APPLICATION	DESCRIPTION
Z028C0066110	IEEE-1394 (Fire Wire)	2 Pair, 28 AWG, 2/C 22 AWG

ISDN, CD-ROM Drives, Modems, Scanners, Printers, Audio I/O Devices, Keyboards, Telephone ISDN, etc.

PART NUMBER	APPLICATION	DESCRIPTION
ZO28C0042010	Universal Serial Bus	1 Pair, 28 AWG, 2/C 20 AWG
ZO28C0042210	Universal Serial Bus	1 Pair, 28 AWG, 2/C 22 AWG
ZO28C0042410	Universal Serial Bus	1 Pair, 28 AWG, 2/C 24 AWG
ZO28C0042610	Universal Serial Bus	1 Pair, 28 AWG, 2/C 26 AWG
ZO28C0042810	Universal Serial Bus	1 Pair, 28 AWG, 2/C 28 AWG

Video Monitors, CRTs, Workstations

PART NUMBER	APPLICATION	DESCRIPTION
ZO28C0101120	Monitor 10/C	3/Coax 28 AWG, 7/C 28 AWG

Applications:

- General Cable manufactures a diverse array of multiconductor cables for computers and the interconnection of their peripherals. Today’s need for speed and signal capacity demands the most in cable materials and construction. Our state-of-the-art manufacturing allows us to control impedance, minimize signal skew and provide the proper shielding for applications from USB and Fire Wire right up through the latest Fiber Channel protocols. Whether your applications require parallel or serial signal transmission, General Cable has the technology to fill your needs.

Packaging and Jacket Colors:

- Please consult Customer Service for packaging and color options

Composite Data and Control Cable

NEC Type CMP (UL) c(UL)

Product Construction:

Conductor:

- 22 AWG and 18 AWG fully annealed stranded tinned copper per ASTM B-33

Insulation:

- 22 AWG - foam FEP
  18 AWG - plenum PVC
- Color code: See chart below

Pair Shield (22 AWG):

- 100% Flexfoil® aluminum/polyester foil with 25% overlap, minimum
- Stranded tinned copper drain wire

Jacket:

- Plenum PVC, natural or as requested
- Temperature range: -20°C to +75°C

Applications:

- Multimedia systems
- Data and control circuits
- Suggested voltage rating: 300 volts

Compliances:

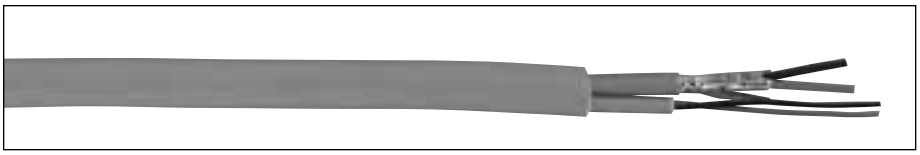
- NEC Article 800
- Designed to meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Features:

- Fire-retardant, low-smoke jacket

Packaging:

- Please contact Customer Service for packaging and color options



CATALOG NUMBER	NO. OF PAIRS	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET THICKNESS		NOMINAL O.D.		NOMINAL CAP. * pF/ft	
				INCHES	mm	INCHES	mm	INCHES	mm	A	B
22 AWG SHIELDED PAIR AND 18 AWG UNSHIELDED PAIR WITH OVERALL JACKET											
C8125	1 each	(22	7/30 TC	0.020	0.51)	0.015	0.381	0.195	4.95	13 (22)	35.0
		(18	16/30 TC	0.009	0.23)					30 (18)	

*A - Capacitance between conductors
*B - Capacitance between one conductor and other conductors connected to shield

Color Code Chart

AWG	COLOR
22	Blue & White
18	Black & Red

Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications

Underwriters Laboratories Inc.

c UL us LISTED

CAROL BRAND

Technical Information 10

As technology becomes more complex, specifying wire and cable products to meet system performance demands becomes more time-consuming and complex.

Today's system designer must be aware not only of the general transmission line types, but also of the myriad of materials available to meet specific environmental or electrical performance criteria.

This technical section is presented to aid in the selection of materials and designs which will best suit the combination of hardware and transmission media.

For technical questions regarding specific transmission designs or applications, please contact General Cable's Engineering Department.

Insulation & Jacket Properties

TYPICAL PROPERTIES OF COMMON INSULATING MATERIALS

PARAMETER	PVC	PE	PP	XLPE	NYLON	FEP	TFE	BUTYL RUBBER	SILICONE RUBBER	TPR
Specific Gravity	1.37	0.92	0.89	0.93-1.18	1.09	2.16	2.17	1.40	1.24	1.16-1.20
Dielectric Constant (a) 60 Hz (b) 1000 Hz	 6.0 5.0	 2.26 2.26	 2.6	 3.0 3.0	 4.6 4.5	 2.15 2.15	 2.1 2.1	 4.1 4.0	 3.3 3.1	 2.8 2.8
Dielectric Strength, v/mil (a) 0.010" wall (b) 0.040" wall	 1800 800	 2100 1050	 850 450	 - 700	 1000 470	 2000 950	 2000 950	 700 500	 600 400	 625
Tensil Strength, PSI x 1000	1.5-3.8	1.4-2.4	2.9-4.5	1.8-2.5	8.8-11.9	2.3-3.1	2.0-6.0	0.5-1.5	0.6-1.2	2.3
Service Temp, Range, °C	-55/+105	-90/+90	-40/+105	-80/+75	-55/+105	-90/+200	-90/+260	-40/+90	-80/+200	-55/+90
Elongation, %	200-375	350-550	700	250-400	150-380	200-330	200-500	200-400	125-400	500
Water Absorption, % in 24 hr	<0.75	<0.02	<0.02	<0.01	2.5	<0.01	<0.01	<1.0	<1.0	<0.6
Flame Resistance	Self Extinguishing	Supports Flame	Supports Flame	Slow Flame	Self Extinguishing	Non-Flammable	Non-Flammable	Slow Burning	Slow (Non-Cond. Ash)	Flammable
Ozone Resistance	Excellent	Good	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent
Flexibility	Good	Good	Good	Good-Fair	Good-Fair	Good	Good	Excellent	Excellent	Excellent
Abrasion Resistance	Good	Good	Fair	Excellent	Excellent	Excellent	Excellent	Poor	Poor	Good-Fair
Acid Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Good	Excellent
Base Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good	Excellent
Hydraulic Fluid Resistance	Good-Fair	Fair-Poor	Fair	Good-Fair	Good-Fair	Excellent	Excellent	Poor	Fair-Poor	Poor
Organic Solvent Resistance	Fair-Poor	Poor	Fair	Fair	Good-Fair	Excellent	Excellent	Good-Fair	Poor	Poor

NOTE: The above is representative of performance. For specific compound performance, consult Customer Service.

TYPICAL PROPERTIES OF COMMON JACKETING MATERIALS

PARAMETER	PVC	PE	NYLON	FEP	TFE	SILICONE RUBBER	NEOPRENE	POLY-URETHANE	TPR
Specific Gravity	1.37	0.92	1.09	2.16	2.17	1.24	1.52	1.3	1.16-1.20
Tensil Strength, PSI x 1000	1.5-3.8	1.4-2.4	8.8-11.9	2.3-3.1	2.0-6.0	0.6-1.2	2.5-4.0	>3.5	2.3
Elongation, %	200-375	350-550	150-380	200-330	200-500	125-400	300-500	540-700	500
Service Temp, Range, °C	-55/+105	-80/+75	-55/+105	-90/+200	-90/+200	-80/+200	-65/+90	-65/+75	-55/+90
Ozone Resistance	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent	Good	Excellent
Weatherability	Good-Fair	Excellent-Good	Fair-Poor	Excellent	Excellent	Excellent	Good	Good	Excellent
Flame Resistance	Self Extinguishing	Supports Flame	Flammable	Non-Flammable	Non-Flammable	Slow-Burn (Non-Cond. Ash)	Self Extinguishing	Slow Burn	Flammable
Flexibility	Good	Good	Good-Fair	Good	Good	Excellent	Excellent	Excellent	Excellent
Abrasion Resistance	Good	Good	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Good-Fair
Acid Resistance	Excellent	Excellent	Poor	Excellent	Excellent	Poor	Good	Fair	Excellent
Base Resistance	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Good	Fair	Excellent
Hydraulic Fluid Resistance	Good-Fair	Fair-Poor	Good-Fair	Excellent	Excellent	Fair-Poor	Good	Poor	Good
Organic Solvent Resistance	Fair-Poor	Poor	Good-Fair	Excellent	Excellent	Poor	Good	Poor	Poor
Resistance to Tearing	Good	Good	Excellent	Good	Good	Fair	Good	Excellent	Good-Fair

NOTE: The above is representative of performance. For specific compound performance, consult Customer Service.

Decimal Conversion Factors

FRACTIONS, DECIMALS AND MILLIMETER CONVERSION CHART

FRACTIONS OF AN INCH						EQUIVALENTS	
64	32	16	8	4	2	DECIMALS	mm
1						0.016	0.40
2	1					0.031	0.79
3						0.047	1.19
4	2	1				0.063	1.59
5						0.078	1.98
6	3					0.094	2.38
7						0.109	2.78
8	4	2	1			0.125	3.18
9						0.141	3.57
10	5					0.156	3.97
11						0.172	4.37
12	6	3				0.188	4.76
13						0.203	5.16
14	7					0.219	5.56
15						0.234	5.95
16	8	4	2	1		0.250	6.35
17						0.266	6.75
18	9					0.281	7.14
19						0.297	7.54
20	10	5				0.313	7.94
21						0.328	8.33
22	11					0.344	8.73
23						0.359	9.13
24	12	6	3			0.375	9.53
25						0.391	9.92
26	13					0.406	10.32
27						0.422	10.72
28	14	7				0.438	11.11
29						0.453	11.51
30	15					0.469	11.91
31						0.484	12.30
32	16	8	4	2	1	0.500	12.70

FRACTIONS OF AN INCH						EQUIVALENTS	
64	32	16	8	4	2	DECIMALS	mm
33						0.516	13.10
34	17					0.531	13.49
35						0.547	13.89
36	18	9				0.563	14.29
37						0.578	14.68
38	19					0.594	15.08
39						0.609	15.48
40	20	10	5			0.625	15.88
41						0.641	16.27
42	21					0.656	16.67
43						0.672	17.07
44	22	11				0.688	17.46
45						0.703	17.86
46	23					0.719	18.26
47						0.734	18.65
48	24	12	6	3		0.750	19.05
49						0.766	19.45
50	25					0.781	19.84
51						0.797	20.24
52	26	13				0.813	20.64
53						0.828	21.03
54	27					0.844	21.43
55						0.859	21.83
56	28	14	7			0.875	22.23
57						0.891	22.62
58	29					0.906	23.02
59						0.922	23.42
60	30	15				0.938	23.81
61						0.953	24.21
62	31					0.969	24.61
63						0.984	25.00
64	32	16	8	4	2	1.000	25.40

Unit Conversion Factors

CONVERSION FACTORS

UNIT	X	CONSTANT	=	UNIT
British Thermal Unit (BTU)		778.0		foot-pound (ft-lb)
British Thermal Unit (BTU)		1054.35		joules (j)
British Thermal Unit (BTU)		0.293		watt-hours (w-hr)
centimeters (cm)		0.032808		feet (ft)
centimeters (cm)		0.3937		inches (in)
centimeters (cm)		0.00001		kilometers (km)
centimeters (cm)		0.010		meters (m)
centimeters (cm)		10.0		millimeters (mm)
circular mils (cmil)		0.00064516		circular millimeters
circular mils (cmil)		0.0000007854		inches^2 (in^2)
circular mils (cmil)		0.00050671		square millimeters (mm^2)
circular mils (cmil)		0.7854		mils^2
cubic centimeter (cm^3)		0.000035314		cubic foot (ft^3)
cubic centimeter (cm^3)		0.061023		cubic inch (in^3)
cubic centimeter (cm^3)		0.000001		cubic meter (m^3)
cubic centimeter (cm^3)		0.00026417		gallons (gal)
cubic foot (ft^3)		1728.0		cubic in (in^3)
cubic foot (ft^3)		28317.847		cubic centimeter (cm^3)
cubic inch (in^3)		0.00057870		cubic feet (ft^3)
cubic inch (in^3)		0.000016387		cubic meter (m^3)
cubic inch (in^3)		16.387064		cubic centimeter (cm^3)
cubic meter (m^3)		1000000.0		centimeter (cm)
cubic meter (m^3)		35.314666		cubic foot (ft^3)
cubic meter (m^3)		264.17		gallons (gal)
feet (ft)		0.00018939		miles (mi)
feet (ft)		0.33333		yards (yd)
feet (ft)		12		inches (in)
feet (ft)		0.00030480		kilometer (km)
feet (ft)		0.30480		meters (m)
feet (ft)		30.480		centimeters (cm)
feet (ft)		304.80		millimeters (mm)
feet/pound (ft/lb)		0.00067197		meters/grams (m/g)
foot-pound (ft-lb)		0.001285		British Thermal Unit (BTU)
foot-pound (ft-lb)		1.356		joules (j)
foot-pound (ft-lb)		0.1383		kilogram/meter (kg/m)

UNIT	X	CONSTANT	=	UNIT
gallons (gal)		3.785411		liters (l)
gallons (gal)		0.13368		cubic foot (ft^3)
gallons (gal)		231.0		cubic inch (in^3)
gallons (gal)		3785.411		cubic centimeter (cm^3)
grams (g)		15.432		grains
gram/centimeter^3 (gm/cm^3)		0.0361275		pounds/in^3 (lb/in^3)
horsepower (hp)		33013.26		ft-lb/min
horsepower (hp)		550.0		ft-lb/sec
horsepower (hp)		745.7		watts (w)
inch (in)		0.027178		yards (yd)
inch (in)		0.083333		feet (ft)
inch (in)		0.00002540		kilometer (km)
inch (in)		0.025400		meter (m)
inch (in)		2.54000514		centimeter (cm)
inch (in)		25.4000514		millimeter (mm)
inch (in)		1000.0		mils
joules (j)		0.000948		British Thermal Unit (BTU)
joules (j)		10^7		ergs
liters (l)		61.02374		cubic inch (in^3)
meters (m)		1.093611		yard (yd)
meters (m)		3.2808333		feet (ft)
meters (m)		39.37		inch (in)
meters (m)		100.0		centimeter (cm)
miles (mi)		1760.0		yards (yd)
miles (mi)		5280.0		feet (ft)
miles (mi)		1.6093		kilometer (km)
millimeters (mm)		0.0032808		feet (ft)
millimeters (mm)		0.03937		inch (in)
millimeters (mm)		0.001		meters (m)
millimeters (mm)		0.01		centimeters (cm)
millimeters (mm)		39.3701		mils
millimeters (mm)		1000.0		microns (µ)
watts (w)		44.25		ft-lb/minute
watts (w)		0.737562		ft-lb/sec
watts (w)		0.001341		horsepower
watt-hours (w-hr)		3.414462		British Thermal Unit (BTU)

Temperature Conversion Chart

To use this chart, find your known temperature (°F) in the shaded column.

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-45.0	**-49.0**	-17.2	**1.0**	10.6	**51.0**	38.3	**101.0**	66.1	**151.0**
-44.4	**-48.0**	-16.7	**2.0**	11.1	**52.0**	38.9	**102.0**	66.7	**152.0**
-43.9	**-47.0**	-16.1	**3.0**	11.7	**53.0**	39.4	**103.0**	67.2	**153.0**
-43.3	**-46.0**	-15.6	**4.0**	12.2	**54.0**	40.0	**104.0**	67.8	**154.0**
-42.8	**-45.0**	-15.0	**5.0**	12.8	**55.0**	40.6	**105.0**	68.3	**155.0**
-42.2	**-44.0**	-14.4	**6.0**	13.3	**56.0**	41.1	**106.0**	68.9	**156.0**
-41.7	**-43.0**	-13.9	**7.0**	13.9	**57.0**	41.7	**107.0**	69.4	**157.0**
-41.1	**-42.0**	-13.3	**8.0**	14.4	**58.0**	42.2	**108.0**	70.0	**158.0**
-40.6	**-41.0**	-12.8	**9.0**	15.0	**59.0**	42.8	**109.0**	70.6	**159.0**
-40.0	**-40.0**	-12.2	**10.0**	15.6	**60.0**	43.3	**110.0**	71.1	**160.0**
-39.4	**-39.0**	-11.7	**11.0**	16.1	**61.0**	43.9	**111.0**	71.7	**161.0**
-38.9	**-38.0**	-11.1	**12.0**	16.7	**62.0**	44.4	**112.0**	72.2	**162.0**
-38.3	**-37.0**	-10.6	**13.0**	17.2	**63.0**	45.0	**113.0**	72.8	**163.0**
-37.8	**-36.0**	-10.0	**14.0**	17.8	**64.0**	45.6	**114.0**	73.3	**164.0**
-37.2	**-35.0**	-9.4	**15.0**	18.3	**65.0**	46.1	**115.0**	73.9	**165.0**
-36.7	**-34.0**	-8.9	**16.0**	18.9	**66.0**	46.7	**116.0**	74.4	**166.0**
-36.1	**-33.0**	-8.3	**17.0**	19.4	**67.0**	47.2	**117.0**	75.0	**167.0**
-35.6	**-32.0**	-7.8	**18.0**	20.0	**68.0**	47.8	**118.0**	75.6	**168.0**
-35.0	**-31.0**	-7.2	**19.0**	20.6	**69.0**	48.3	**119.0**	76.1	**169.0**
-34.4	**-30.0**	-6.7	**20.0**	21.1	**70.0**	48.9	**120.0**	76.7	**170.0**
-33.9	**-29.0**	-6.1	**21.0**	21.7	**71.0**	49.4	**121.0**	77.2	**171.0**
-33.3	**-28.0**	-5.6	**22.0**	22.2	**72.0**	50.0	**122.0**	77.8	**172.0**
-32.8	**-27.0**	-5.0	**23.0**	22.8	**73.0**	50.6	**123.0**	78.3	**173.0**
-32.2	**-26.0**	-4.4	**24.0**	23.3	**74.0**	51.1	**124.0**	78.9	**174.0**
-31.7	**-25.0**	-3.9	**25.0**	23.9	**75.0**	51.7	**125.0**	79.4	**175.0**
-31.1	**-24.0**	-3.3	**26.0**	24.4	**76.0**	52.2	**126.0**	80.0	**176.0**
-30.6	**-23.0**	-2.8	**27.0**	25.0	**77.0**	52.8	**127.0**	80.6	**177.0**
-30.0	**-22.0**	-2.2	**28.0**	25.6	**78.0**	53.3	**128.0**	81.1	**178.0**
-29.4	**-21.0**	-1.7	**29.0**	26.1	**79.0**	53.9	**129.0**	81.7	**179.0**
-28.9	**-20.0**	-1.1	**30.0**	26.7	**80.0**	54.4	**130.0**	82.2	**180.0**
-28.3	**-19.0**	-0.6	**31.0**	27.2	**81.0**	55.0	**131.0**	82.8	**181.0**
-27.8	**-18.0**	0.0	**32.0**	27.8	**82.0**	55.6	**132.0**	83.3	**182.0**
-27.2	**-17.0**	0.6	**33.0**	28.3	**83.0**	56.1	**133.0**	83.9	**183.0**
-26.7	**-16.0**	1.1	**34.0**	28.9	**84.0**	56.7	**134.0**	84.4	**184.0**
-26.1	**-15.0**	1.7	**35.0**	29.4	**85.0**	57.2	**135.0**	85.0	**185.0**
-25.6	**-14.0**	2.2	**36.0**	30.0	**86.0**	57.8	**136.0**	85.6	**186.0**
-25.0	**-13.0**	2.8	**37.0**	30.6	**87.0**	58.3	**137.0**	86.1	**187.0**
-24.4	**-12.0**	3.3	**38.0**	31.1	**88.0**	58.9	**138.0**	86.7	**188.0**
-23.9	**-11.0**	3.9	**39.0**	31.7	**89.0**	59.4	**139.0**	87.2	**189.0**
-23.3	**-10.0**	4.4	**40.0**	32.2	**90.0**	60.0	**140.0**	87.8	**190.0**
-22.8	**-9.0**	5.0	**41.0**	32.8	**91.0**	60.6	**141.0**	88.3	**191.0**
-22.2	**-8.0**	5.6	**42.0**	33.3	**92.0**	61.1	**142.0**	88.9	**192.0**
-21.7	**-7.0**	6.1	**43.0**	33.9	**93.0**	61.7	**143.0**	89.4	**193.0**
-21.1	**-6.0**	6.7	**44.0**	34.4	**94.0**	62.2	**144.0**	90.0	**194.0**
-20.6	**-5.0**	7.2	**45.0**	35.0	**95.0**	62.8	**145.0**	90.6	**195.0**
-20.0	**-4.0**	7.8	**46.0**	35.6	**96.0**	63.3	**146.0**	91.1	**196.0**
-19.4	**-3.0**	8.3	**47.0**	36.1	**97.0**	63.9	**147.0**	91.7	**197.0**
-18.9	**-2.0**	8.9	**48.0**	36.7	**98.0**	64.4	**148.0**	92.2	**198.0**
-18.3	**-1.0**	9.4	**49.0**	37.2	**99.0**	65.0	**149.0**	92.8	**199.0**
-17.8	**0.0**	10.0	**50.0**	37.8	**100.0**	65.6	**150.0**	93.3	**200.0**

TEMPERATURE CONVERSION FORMULA

$°C = \frac{5}{9}(°F - 32)$ $°F = \frac{9}{5}°C + 32$

CAROL BRAND

General Cable

Conduit Capacity Chart

Conduit Trade Size		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
I.D. Inches		0.622	0.824	1.049	1.380	1.610	2.067	2.731	3.356	3.834	4.334
Internal Area, In^2		0.304	0.533	0.864	1.496	2.036	3.356	5.858	8.846	11.545	14.753
1 Conductor (53% fill)		0.161	0.283	0.458	0.793	1.079	1.778	3.105	4.688	6.119	7.819
2 Conductors (31% fill)		0.094	0.165	0.268	0.464	0.631	1.040	1.816	2.742	3.579	4.573
Conductors (40% fill)		0.122	0.213	0.346	0.598	0.814	1.342	2.343	3.538	4.618	5.901
Cable OD Inches	Cable Area In^2	Numbers listed below are based on the 2008 NEC (40% fill) for 3 or more non-lead covered cables.									
0.100	0.008	15	26	43	76	104	170	244	375	504	648
0.125	0.012	9	17	27	48	66	109	156	240	322	414
0.150	0.018	6	11	19	33	46	75	108	166	224	288
0.175	0.024	5	8	14	24	34	55	79	122	164	211
0.200	0.031	3	6	10	19	26	42	81	93	126	162
0.225	0.040	3	5	8	15	20	33	48	74	99	128
0.250	0.049	1	4	6	12	16	27	39	60	80	103
0.275	0.059	1	3	5	10	13	22	32	49	66	85
0.300	0.071	1	2	4	8	11	18	27	41	56	72
0.325	0.083	1	1	4	7	9	16	23	35	47	61
0.350	0.096	1	1	3	6	8	13	19	30	41	52
0.375	0.110	1	1	3	5	7	12	17	26	35	46
0.400	0.126	1	1	2	4	6	10	15	23	31	40
0.425	0.142	1	1	1	4	5	9	13	20	27	35
0.450	0.159	1	1	1	3	5	8	12	18	24	32
0.475	0.177	0	1	1	3	4	7	10	17	22	28
0.500	0.196	0	1	1	3	4	6	9	15	20	25
0.525	0.216	0	1	1	2	3	6	8	13	18	23
0.550	0.238	0	1	1	1	3	5	8	12	16	21
0.575	0.260	0	1	1	1	3	5	7	11	15	19
0.600	0.283	0	0	1	1	2	4	6	10	14	18
0.625	0.307	0	0	1	1	2	4	6	9	12	16
0.650	0.332	0	0	1	1	1	4	5	8	11	15
0.675	0.358	0	0	1	1	1	3	5	8	11	14
0.700	0.385	0	0	1	1	1	3	5	7	10	13
0.725	0.413	0	0	1	1	1	3	4	7	9	12
0.750	0.442	0	0	1	1	1	3	4	6	8	11
0.775	0.472	0	0	0	1	1	2	4	6	8	10
0.800	0.503	0	0	0	1	1	2	3	5	7	10
0.825	0.535	0	0	0	1	1	1	3	5	7	9
0.850	0.567	0	0	0	1	1	1	3	5	6	8
0.875	0.601	0	0	0	1	1	1	3	4	6	8
0.900	0.636	0	0	0	1	1	1	3	4	6	8
0.925	0.672	0	0	0	1	1	1	2	4	5	7
0.950	0.709	0	0	0	1	1	1	2	4	5	7
0.975	0.747	0	0	0	1	1	1	1	3	5	6
1.000	0.785	0	0	0	1	1	1	1	3	5	6
1.025	0.825	0	0	0	0	1	1	1	3	4	6
1.050	0.866	0	0	0	0	1	1	1	3	4	5
1.075	0.908	0	0	0	0	1	1	1	3	4	5

Notice: 1. The reader is cautioned to consult the 2008 NEC for specific informatioon regarding conduit fill.
2. This Conduit Capacity Chart should only be used as a guide when attempting to estimate conduit fill.
3. For additional information, the reader should refer to the 2008 National Electrical Code, Chapter 9.

General Cable

CAROL BRAND

Coax Connector Cross Reference

BNC TYPE CONNECTORS

	CAMBRIDGE	GEM	LRC	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC CRIMP PLUG	BNC COMPRESSION PLUG	SNAP-N-SEAL	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 6/U					
C3521	CPMC-68-36	–	–	RFB-1707-Q1	105-1516-9
C3523	CPMC-68-36	302-510CS	–	–	105-1516-9
C3524	CPMC-68-36	302-510CS	–	–	105-1516-9
C3525	CPMC-68-36	–	–	–	105-1516-9
C5760	CPMC-68-45	–	–	RFB-1707-Q1	105-1516-9
C5761	CPMC-68-45	302-5CSQS	SNS6BNC	–	UPL20-34
C5775	CPMC-68-45	302-5CSQS	SNS6BNC	–	105-1153-9
C5776	CPMC-68-45	–	SNS6BNC	–	105-1153-9
C5777	CPMC-68-45	–	SNS6BNC	RFB-1707-Q	105-1153-9
C5778	CPMC-68-45	–	SNS6BNC	RFB-1707-Q	105-1153-9
C5785	CPFI-UG88-3 (TWIST ON)	302-5CSQS	SNS6QSBNC	–	UPL20-41
C5802	CPMC-68-45	–	SNS6BNC	RFB-1707-Q	UPL20-41
C5804	CPMC-68-45	–	SNS6BNC	RFB-1707-Q	UPL20-41
C5814	CPMC-68-45	302-5CSQS	SNS6BNC	RFB-1707-Q	UPL20-41
C5822	CPMC-68-45	302-5CSQS	SNS6BNC	RFB-1707-Q	UPL20-41
C5886	CPMC-68-45	–	SNS6BNC	RFB-1707-Q	105-1153-9
C5889	CPFI-UG88-3 (TWIST ON)	302-5CSQS	SNS6QSBNC	–	UPL20-41
C8029	CPMC-68-45	302-5CS	SNS6BNC	RFB-1707-Q	UPL20-41
C8031	CPMC-68-36	–	–	RFB-1707-Q1	105-1516-9

	TROMPETER
CATALOG NUMBER	BNC CRIMP PLUG
RG 7/U	
C5851	PL20-48
C5853	105-1677-1
C5856	PL20-48
C5857	PL20-48

	AMP	CAMBRIDGE	GEM	KINGS ELECTRONICS	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC PLUG	BNC CRIMP PLUG
RG 8/U						
C1108	–	CPMC-88-17	305-17	–	RFB-1107-1X	PL20-52
C1154	2-225295-1	–	–	KC-59-577 MO6	RFB-1101-1EN	PL20-6A
C1180	–	–	–	KC-59-642 MO6	RFB-1101-1EN	N/A
C1197	–	–	–		RFB-1101-1SI	PL20-6A
C1198	–	–	–		RFB-1101-1SI	PL20-6A

	CAMBRIDGE	GEM	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 11/U				
C1160	CPMC-88-26	305-26	RFB-1707-R1	UPL20-6A
C3528	CPMC-88-27	–	–	UPL20-6A
C3529	CPMC-88-28	–	–	UPL20-6A
C5011	CPMC-88-29	–	RFB-1707-R	UPL20-6A
C5025	CPMC-88-30	–	RFB-1707-R	UPL20-6A
C5029	CPMC-88-30	–	RFB-1707-R	UPL20-6A
C5034	CPMC-88-32	–	RFB-1707-R	UPL20-6A
C5039	CPMC-88-33	–	RFB-1707-R	UPL20-6A
C5043	CPMC-88-35	–	RFB-1707-R	UPL20-6A
C5044	CPMC-88-36	–	RFB-1707-R	UPL20-6A

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BNC TYPE CONNECTORS

	AMP	CAMBRIDGE	GEM	IDEAL	KINGS ELECTRONICS	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 58/U							
C1117	22709-5	CPMC-88-1	305-1	IA-3620	755-115-5	RFB-1106-2	PL20-1
C1155	22709-5	CPMC-88-1	305-1	IA-3620	755-115-5	RFB-1106-2	PL20-1
C1166	22709-5	CPMC-88-1	305-1	IA-3620	755-115-5	RFB-1106-2	PL20-1
C1178	22709-5	CPMC-88-1	305-1	IA-3620	755-115-5	RFB-1106-2	PL20-1
C1188	22709-5	CPMC-88-1	305-1	IA-3620	–	RFB-1106-2	PL20-1
C3519	6-22709-8	CPMC-88-11	305-11	–	–	RFB-1707-7	PL20-4
C3579	6-22709-8	CPMC-88-11	305-11	IA-3623	–	RFB-1707-7	PL20-4
C5779	6-22709-8	CPMC-88-1	305-1	–	–	–	105-1598-1

	AMP	CAMBRIDGE	GEM	KINGS ELECTRONICS	LRC	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC COMPRESSION PLUG	BNC CRIMP PLUG	SNAP-N-SEAL BNC	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 59/U							
C1102	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D1	UPL20-2
C1103	–	CPMC-78-2	307-2CS	–	–	RFB-1707-D1	UPL20-2
C1104	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D	UPL20-2
C1106	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D	UPL20-2
C1110	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D	UPL20-2
C1112	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D	UPL20-2
C1135	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D	UPL20-2
C1142	–	CPMC-68-35	307-2CS	–	SNS59BNC	RFB-1707-W	UPL20-2A
C1158	–	CPMC-78-18	307-18 (Crimp)	–	–	–	UPL20-22
C3500	–	CPMC-68-35	302-10CS	–	–	–	105-1287-9
C3526	–	CPMC-68-50	–	–	–	–	105-1184-9
C3527	–	CPMC-68-35	–	–	–	–	UPL20-53
C5770	–	CPMC-68-35	302-2CS	–	–	RFB-1707-W	UPL20-2A
C5780	–	CPMC-68-35	302-2CS	–	SNS59BNC	RFB-1707-W	UPL20-2A
C5784	–	CP-88-4 (TWIST ON)	–	–	–	–	105-1558-9
C5830	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	RFB-1707-D1	UPL20-2
C8025	–	CPMC-78-2	302-10CS	–	–	RFB-1707-D	UPL20-2
C8027	–	CPMC-78-2	302-10CS	–	–	–	UPL20-2
C8028	–	CPMC-78-2	307-2 (Crimp)	–	SNS59BNC	–	UPL20-2
C8030	–	CPMC-68-10	–	–	–	RFB-1707-D3	105-1287-9

	AMP	CAMBRIDGE	GEM	KINGS ELECTRONICS	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 62/U					
C1162	22709-7	CPMC-78-2	307-2	755-155-5	UPL20-2
C1164	22709-7	CPMC-78-2	307-2	755-155-5	UPL20-2
C3520	4-22709-9	CPMC-68-2	–	–	105-1287-1

	AMP	CAMBRIDGE	GEM	KINGS ELECTRONICS	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG
RG 174/U						
C1156	1-22709-6	CPMC-88-19	305-19	KC-59-557 M06	RFB-1106-5	PL20-5

	AMP	CAMBRIDGE	GEM	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	BNC PLUG	BNC CRIMP PLUG	BNC CRIMP PLUG	BNC CLAMP PLUG	BNC CLAMP PLUG
RG 213 /U					
C1176A	2-225395-1	CPMC-88-26	305-26	RFB-1101-1SI	PL20-6A

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F-TYPE CONNECTORS

	CAMBRIDGE	GEM	GILBERT		IDEAL INDUSTRIES
CATALOG NUMBER	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE
RG 6/U					
C3521	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	Contact Gilbert	–
C3523	CPF-56-ALM	0406-610CS	NS-8101-15	Contact Gilbert	–
C3524	CPF-56-ALM	0406-610CS	Contact Gilbert	Contact Gilbert	–
C3525	CPF-56-ALM	0406-4 (Crimp)	Contact Gilbert	Contact Gilbert	–
C5760	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	–
C5761	CPF-56-ALM	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-037
C5775	CPF-56-ALM	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-037
C5776	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	85-037
C5777	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	85-037
C5778	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	–
C5785	CPF-56-ALM	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-057
C5802	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	85-037
C5804	CPF-56-ALMWP	–	GF-6-AHS/USA	GF-UR-6	85-037
C5814	CPF-56-ALM	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-037
C5822	CPF-56-ALM	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-037
C5886	CPF-56-ALM	0406-4 (Crimp)	GF-6-AHS/USA	GF-UR-6	85-037
C5889	CPF-56-ALS	0406-6CSQS	GF-6-AHS/USA	GF-UR-6	85-057
C8029	CPF-56-ALM	0406-6CS	Contact Gilbert	Contact Gilbert	–
C8031	CPF-56-ALM	0406-4 (Crimp)	Contact Gilbert	Contact Gilbert	–

	LRC		PPC			TROMPETER
CATALOG NUMBER	F-TYPE CRIMP	SNAP-N-SEAL	U SERIES U-INDOOR SU-OUTDOOR	UV SERIES UV-INDOOR SUV INDOOR/OUTDOOR	EX INDOOR/OUTDOOR	F-TYPE CRIMP
RG 6/U (cont.)						
C3521	–	–	CFS 6 PL	–	EX6P or EX6XLP	–
C3523	–	–	CFS 6 PL	–	EX6P or EX6XLP	–
C3524	–	–	CFS 6 PL	–	EX6P or EX6XLP	–
C3525	–	–	–	–	–	–
C5760	–	–	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	–
C5761	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5774	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5775	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	–
C5776	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5777	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5778	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5785	AMF6	SNS6QS	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	–
C5802	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5804	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5810	–	–	–	–	–	PL130SC-017
C5812	–	–	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	–
C5814	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5822	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5824	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5826	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5886	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	–
C5888	AMF6	SNS6	CFS 6 U (SU)	CFS 6 UV (SUV)	EX6 or EX6XLP	PL130SC-020
C5889	AMF6	SNS6QS	–	–	–	–
C5890	AMF6	SNS6	–	–	–	PL130SC-020
C8029	AMF6	SNS6	–	–	–	PL130SC-020
C8031	–	–	–	–	–	–

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Coax Connector Cross Reference

F-TYPE CONNECTORS

	GILBERT		LRC		PPC		
CATALOG NUMBER	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE CRIMP	SNAP-N-SEAL	U SERIES U-INDOOR SU-OUTDOOR	PNU SERIES PNU-INDOOR PNSU INDOOR/ OUTDOOR	EX INDOOR/OUTDOOR
RG 7/U							
C5851	GAF-236/051-AHS/368	GAF-UST-7	AMF7	SNS7B	CFS 7 U (SU)	CFS 7 PNU (PNSU)	EX 7
C5853	GAF-236/051-AHS/368	GAF-UST-7	–	–	CFS 7 U (SU)	CFS 7 PNU (PNSU)	EX 7
C5856	GAF-236/051-AHS/368	GAF-UST-7	–	–	CFS 7 U (SU)	CFS 7 PNU (PNSU)	EX 7
C5857	GAF-236/051-AHS/398	GAF-UST-7Q	–	–	CFS 7 U (SU)	CFS 7 PNU (PNSU)	–

	CAMBRIDGE	GILBERT		LRC		PPC		
CATALOG NUMBER	F-TYPE CRIMP	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE CRIMP	SNAP-N-SEAL	U SERIES U-INDOOR SU-OUTDOOR	UV SERIES UV-INDOOR SUB INDOOR/ OUTDOOR	EX INDOOR/ OUTDOOR
RG 11/U								
C1160	CPF-11-ALM	Contact Gilbert	Contact Gilbert	–	–	–	–	–
C3528	CPF-11-ALM	Contact Gilbert	Contact Gilbert	–	–	–	–	–
C3529	CPF-11-ALM	Contact Gilbert	Contact Gilbert	–	–	–	–	–
C5011	CPF-11-ALM	GF-11-AHS/460	GAF-UST-11	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5025	CPF-11-ALM	Contact Gilbert	Contact Gilbert	–	–	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5029	CPF-11-ALM	GF-11-AHS/460	GAF-UST-11	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5034	CPF-11-ALM	GF-11-AHS/460	GAF-UST-11	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5039	CPF-11-ALM	GF-11-AHS/460	GAF-UST-11	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5043	CPF-11-ALM	GF-11-AHS/460	GAF-UST-11	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11
C5044	–	GF-11-AHS/480	GAF-UST-11Q	AMF11	SNS11AS	CFS 11 U (SU)	CFS 11 PNU (PNSU)	EX 11

	CAMBRIDGE	GEM	GILBERT		IDEAL INDUSTRIES	LRC	
CATALOG NUMBER	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE CRIMP	F-TYPE COMPRESSION	F-TYPE	F-TYPE CRIMP	SNAP-N-SEAL
RG 59/U							
C1102	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1103	CPF-59-ALM	0459-2CS	GF-59-AHS/USA	GF-UR-59	85-036	–	–
C1104	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1106	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1110	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1112	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1135	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1142	CPF-59-ALM	0459-2CS	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C1158	–	–	GF-1097-17	Contact Gilbert	–	–	–
C3500	–	0459-10CS	Contact Gilbert	Contact Gilbert	–	–	–
C3526	–	–	Contact Gilbert	Contact Gilbert	–	–	–
C3527	CPF-59-ALM	0459-2M (Crimp)	Contact Gilbert	Contact Gilbert	–	–	–
C5770	CPF-59-ALM	0459-2CS	Contact Gilbert	Contact Gilbert	85-036	–	–
C5780	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C5784	–	–	GF-59-AHS/357	Contact Gilbert	85-059	–	SNS59QS
C5830	CPF-59-ALM	0459-2M (Crimp)	GF-59-AHS/USA	GF-UR-59	85-036	AMF59	SNS59
C8025	CPF-59-ALM	0459-10CS	Contact Gilbert	Contact Gilbert	–	–	–
C8027	CPF-59-ALM	0459-10CS	Contact Gilbert	Contact Gilbert	–	–	–
C8028	CPF-59-ALM	0459-2M (Crimp)	Contact Gilbert	Contact Gilbert	–	AMF59	SNS59
C8030	CPF-59-ALM	0459-2M (Crimp)	Contact Gilbert	Contact Gilbert	–	–	–

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F-TYPE CONNECTORS

	PPC			TROMPETER
CATALOG NUMBER	U SERIES U-INDOOR SU-OUTDOOR	UV SERIES UV-INDOOR SUV INDOOR/ OUTDOOR	EX INDOOR/OUTDDOR	F-TYPE CRIMP
RG 59/U (cont.)				
C1102	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-014
C1103	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1104	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1106	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1110	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1112	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1135	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013
C1142	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-023
C1158	–	–	–	PL130SC-008
C3500	–	–	–	–
C3526	–	–	–	–
C3527	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-023
C5770	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-022
C5780	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-023
C5784	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	–
C5830	CFS 59 U (SU)	CFS 59 UV (SUV)	EX59 or EX59XL	PL130SC-013A
C8025	–	–	–	PL130SC-013
C8027	–	–	–	PL130SC-013
C8028	–	–	–	PL130SC-013A
C8030	–	–	–	–

	TROMPETER
CATALOG NUMBER	F-TYPE CRIMP
RG 62/U	
C1162	PL130SC-013
C1164	PL130SC-013
C3520	–

	TROMPETER
CATALOG NUMBER	F-TYPE CRIMP
RG 174/U	
C1156	PL130SC-004

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Coax Connector Cross Reference

	TROMPETER
CATALOG NUMBER	N-TYPE CRIMP PLUG
RG 6/U	
C3521	–
C3523	–
C3524	–
C3525	–
C5760	–
C5761	UPL95-34
C5775	–
C5776	–
C5777	–
C5778	–
C5785	–
C5802	–
C5804	–
C5814	–
C5822	UPL95-41
C5886	–
C5889	UPL95-41
C8029	UPL95-41
C8031	–

N-TYPE CONNECTORS

	TROMPETER
CATALOG NUMBER	N-TYPE CRIMP PLUG
RG 7/U	
C5851	PL95-48
C5853	N/A
C5856	PL95-48
C5857	PL95-48

	AMP	CAMBRIDGE	KINGS ELECTRONICS	LRC	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE PLUG
RG 8/U						
C1108	–	–	–	–	RFN-1007-2SX	–
C1154	225661-2 (Mil)	CPN-68-8	KN-59-176	–	RFN-1006-3E	PL95-6A
	415232-6				RFN-1006-3E	
C1180	–	CPN-8/110	1205-4-9	NM8HB10	RFN-1006-3I	–
C1198	1-225661-6 (Mil)	CPN-68-8	1205-4-9	–	RFN-1006-3I	PL95-6A
	414160-4					

	CAMBRIDGE	TROMPETER
CATALOG NUMBER	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG
RG 11/U		
C1160	CPN-8	UPL95-6A
C3528	CPN-8	UPL95-6A
C3529	CPN-8	UPL95-6A
C5011	CPN-8	UPL95-6A
C5025	CPN-68-8	UPL95-6A
C5029	CPN-8	UPL95-6A
C5034	CPN-8	UPL95-6A
C5039	CPN-8	UPL95-6A
C5043	CPN-8	UPL95-6A
C5044	CPN-68-8	UPL95-6A

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Cambridge	www.cambridgeconnectors.com
GEM	www.gemelec.com
Ideal	www.idealindustries.com
Kings Electronics	www.kingselectronics.com
RF Industries	www.rfindustries.com
Trompeter	www.trompeter.com

General Cable

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Coax Connector Cross Reference

N-TYPE CONNECTORS

	AMP	CAMBRIDGE	KINGS ELECTRONICS	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG
RG 58/U					
C1117	1-225661-2 (Mil) 415232-2	CPN-68-1	1205-19-5	RFN-1005-3C	PL95-1
C1155	1-225661-2 (Mil) 415232-2	CPN-68-1	1205-19-5	RFN-1005-3C	PL95-1
C1166	1-225661-2 (Mil) 415232-2	CPN-68-1	1205-19-5	RFN-1005-3C	PL95-1
C1178	1-225661-2 (Mil) 415232-2	CPN-68-1	1205-19-5	RFN-1005-3C	PL95-1
C1188	1-225661-2 (Mil) 415232-2	CPN-68-1	—	RFN-1005-3C	PL95-1
C3519	—	CPN-1	—	—	PL95-4
C3579	—	CPN-1	—	—	PL95-4
C5779	—	CPN-1	—	—	—

	AMP	CAMBRIDGE	GEM	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG
RG 59/U					
C1102	—	—	—	RFN-1907-2S	UPL95-2
C1103	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1104	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1106	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1110	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1112	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1135	—	CPN-2	400-2	RFN-1907-2S	UPL95-2
C1142	—	—	—	—	UPL95-2A
C1158	—	—	—	—	UPL95-22
C3500	—	—	—	—	—
C3526	—	—	—	—	—
C3527	—	—	—	—	—
C5770	—	—	—	—	UPL95-2A
C5780	—	—	—	—	UPL95-2A
C5784	—	—	—	—	—
C5830	—	—	—	RFN-1907-2S	UPL95-2
C8025	—	CPN-2	400-2	—	UPL95-2
C8027	—	CPN-2	400-2	—	UPL95-2
C8028	—	—	—	—	UPL95-2
C8030	—	—	—	—	—

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AMP	www.tycoelectronics.com
Cambridge	www.cambridgeconnectors.com
GEM	www.gemelec.com
Ideal	www.idealindustries.com
Kings Electronics	www.kingselectronics.com
RF Industries	www.rfindustries.com
Trompeter	www.trompeter.com

General Cable

Coax Connector Cross Reference

N-TYPE CONNECTORS

	AMP	CAMBRIDGE	GEM	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE PLUG
RG 62/U				
C1162	—	CPN-2	400-2	UPL95-2
C1164	—	CPN-2	400-2	UPL95-2
C3520	—	—	—	—

	AMP	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE PLUG	N-TYPE PLUG
RG 174/U			
C1156	—	RFN-1005-B-03	PL95-5

	AMP	CAMBRIDGE	KINGS ELECTRONICS	RF INDUSTRIES	TROMPETER
CATALOG NUMBER	N-TYPE PLUG	N-TYPE CRIMP PLUG	N-TYPE CRIMP PLUG	N-TYPE PLUG	N-TYPE PLUG
RG 213/U					
C1176A	1-227086-0 (MIL) 415232-6	CPN-68-8	KN-59-202	RFN-1006-3I	PL95-6A

ONE-PIECE CONNECTORS

GENERAL CABLE	WHITE SANDS ENGINEERING ONE-PIECE CONNECTOR
RG 6/U	
395025	SLC59
	SLCUHEC2
395011	SLC6/SLC6O
	SLC6Q/SLC6QO
395025	BNCFP59
395025	BNCFPSLC59
	BNCFPSLCHEC
395011	BNCFP6
395011	BNCFPSLC6/BNCFPSLC6G
	BNCFPSLC6Q/BNCFPSLC6QG
395025	RCAFP59
395025	RCAFPSLC59/RCAFPSLC59G
395011	RCAFPSLC6/RCAFPSLC6G
	RCAFPSLC6QG

AMP	www.tycoelectronics.com
Cambridge	www.cambridgeconnectors.com
GEM	www.gemelec.com
Ideal	www.idealindustries.com
Kings Electronics	www.kingselectronics.com
RF Industries	www.rfindustries.com
Trompeter	www.trompeter.com
White Sands	www.whitesandsengineering.com

General Cable

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AWG Conductor Chart

COPPER CONDUCTOR DATA

The conductors used by General Cable meet the applicable requirements of ASTM specifications B-3, B-33, B-172, B-173, B-174 and B-286 and Federal Specification QQ-W-343.

The following data covers the more commonly used conductor constructions in the electrical and electronics industry. Special constructions, not shown, are available or can be designed to meet specific requirements. It is suggested that the General Cable Product Engineering Department be contacted before a specification is finalized.

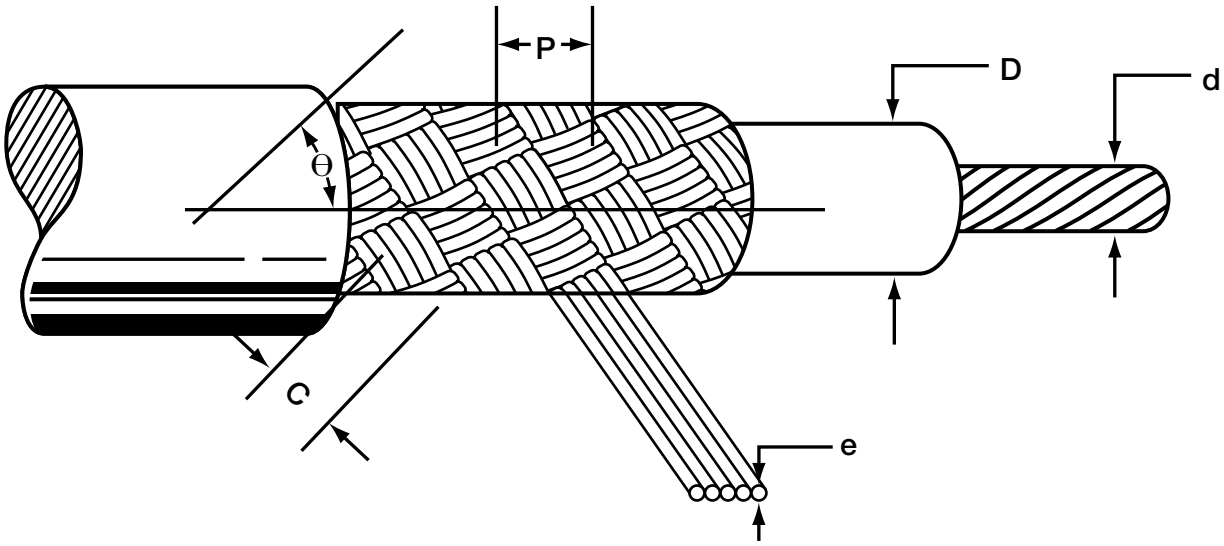
AWG	STRANDING	TYPE STRANDING(1)	DIAMETER(4)		AREA		WEIGHT		D.C. RESISTANCE 20°C(2)				BREAK STR. LBS
									TIN COATING(3)		BARE OF SILVER COATING		
			in	mm	circ. mils	sq. mm	lbs/Mft	kg/km	Ω/Mft	Ω/km	Ω/Mft	Ω/km	
32	7/40	Co or Bu	.0096	.254	100	.051	.21	.31	176.00	577.00	164.00	538.00	1.986
30	Solid	–	.010	.254	100	.051	.30	.45	113.00	371.00	104.00	340.00	3.157
	7/38	Bu	.012	.305	112	.057	.35	.52	106.00	348.00	92.60	303.00	
28	Solid	–	.01264	.321	159	.081	.48	.72	70.80	232.00	65.30	214.00	5.020
	7/36	Co	.015	.381	175	.089	.55	.82	67.50	221.00	59.30	194.00	
27	Solid	–	.0142	.361	202	.102	.61	.91	55.60	182.00	51.40	169.00	6.331
	7/35	Co or Bu	.017	.432	220	.111	.69	1.04	53.80	176.00	–	–	
26	Solid	–	.016	.404	253	.128	.77	1.14	44.50	146.00	41.00	135.00	7.983
	7/34	Co or Bu	.019	.483	278	.141	.87	1.29	42.50	139.00	37.30	122.00	
	10/36	Bu	.0193	.490	250	.127	.78	1.15	47.30	155.00	40.40	133.00	
	19/38	Bu or Co	.021	.533	304	.154	.97	1.44	38.90	128.00	34.10	112.00	
24	Solid	–	.0201	.511	404	.205	1.22	1.82	27.20	89.20	25.70	84.20	12.690
	7/32	Co or Bu	.024	.610	448	.227	1.38	2.05	25.70	84.20	23.10	75.90	
	16/36	Bu	.024	.610	400	.201	1.25	1.64	29.50	96.80	27.50	90.20	
	19/36	Co or Bu	.025	.635	475	.241	1.48	2.20	24.90	81.70	21.80	71.60	
22	Solid	–	.025	.643	643	.324	1.94	2.89	16.70	54.80	16.20	53.20	19.430
	7/30	Co or Bu	.030	.762	700	.355	2.19	3.26	16.60	54.40	14.80	48.60	
	19/34	Bu or Eq	.0315	.800	754	.382	2.35	3.50	15.50	50.80	13.80	45.10	
20	Solid	–	.032	.813	1,020	.519	3.10	4.61	10.50	34.40	10.10	33.20	30.890
	7/28	Co or Bu	.038	.965		.562	3.49	5.19	10.30	33.80	9.33	30.60	
	10/30	Bu	.037	.940	1,111	.507	3.14	4.67	11.40	37.40	10.40	34.00	
	19/32	Co, Bu or Eq	.040	1.02	1,000	.616	3.84	5.71	9.48	31.10	8.53	28.00	
	26/34	Bu	.039	.940	1,216	.523	3.28	4.88	11.30	37.10	–	–	
19	Solid	–	.0359	.912	1,032	.653	3.90	5.80	–	–	8.05	26.40	38.950
18	Solid	–	.0403	1.024	1,290	.823	4.92	7.32	6.77	22.20	6.39	21.00	49.120
	7/26	Co or Bu	.048	1.22	1,620	.897	5.55	8.26	6.45	21.20	5.55	19.20	
	16/30	Bu	.0475	1.207	1,770	.810	5.01	7.45	7.15	23.40	6.48	21.30	
	19/30	Co, Bu or Eq	.050	1.27	1,600	.963	5.95	8.85	6.10	20.00	5.46	17.90	
	41/34	Bu	.049	1.244	1,900	.824	5.09	7.08	7.08	23.20	6.60	21.60	
16	Solid	–	.0508	1.29	1,627	1.31	7.81	11.60	4.47	14.70	4.16	13.60	78.100
	19/294	Bu or Eq	.057	1.45	2,580	1.23	7.52	11.20	4.82	15.80	4.27	14.00	
	19/.0117	Bu	.0585	1.50	2,426	1.32	8.02	11.90	4.39	14.40	4.13	13.50	
	26/30	Bu	.0606	1.54	2,601	1.32	8.15	12.10	4.39	14.40	3.99	13.10	
	65/34	Bu	.060	1.52	2,600	1.31	8.20	11.90	4.47	14.70	4.16	13.60	
14	Solid	–	.0641	1.63	2,581	2.08	12.4	18.50	2.68	8.79	2.52	8.28	124.200
	7/.0242	Co	.073	1.85	4,110	2.08	12.7	18.90	–	–	2.61	8.56	
	19/274	Co, Eq or Un	.071	1.80	4,100	1.94	12.1	18.00	3.05	10.00	2.71	8.88	
	19/.0147	Bu	.074	1.88	3,831	2.08	12.7	18.90	2.73	–	2.61	8.56	
	41/30	Bu	.077	1.96	4,106	2.08	12.9	19.20	2.81	9.22	2.53	8.30	
12	Solid	–	.0808	2.05	4,100	3.31	19.8	29.50	1.69	5.54	1.59	5.21	197.500
	7/.0305	Bu	.092	2.34	6,530	3.30	20.2	30.10	–	–	1.64	5.38	
	19/254	Co, Eq or Un	.0905	2.299	6,512	3.08	19.4	28.90	1.87	6.13	1.70	5.59	
	19/.0185	Cu	.0925	2.35	6,088	3.30	20.2	30.10	–	–	1.64	5.25	
	65/30	Bu	.094	2.388	6,503	3.29	20.8	31.10	1.82	5.97	1.64	5.25	
10	Solid	–	.1019	2.588	6,500	5.26	31.4	46.80	–	–	1.00	3.28	314.500
	7/.0385	Co	.116	2.95	10,380	5.25	32.0	47.60	–	–	1.00	3.28	
	19/.0234	Bu	.117	2.97	10,376	5.27	32.0	47.60	–	–	.98	3.21	
	37/.0169	Co	.112	2.84	10,404	4.74	29.2	43.40	–	–	1.25	4.10	
	105/30	Bu	.126	3.20	9,361	5.32	33.8	49.20	1.10	3.61	.99	3.24	
8	7/.0486	Bu	.146	3.71	10,500	8.38	50.1	74.50	–	–	.65	2.13	
	19/.0295	Bu or Eq	.144	3.66	16,534	8.38	50.0	74.40	–	–	.65	2.13	
	133/29	Ro 19 x 7/29	.169	4.293	16,535	8.61	54.0	80.40	.71	2.33	–	–	
	168/30	Ro 7 x 24/30	.174	4.42	16,983	8.51	53.4	79.00	.70	2.30	–	–	
6	19/.0374	Bu	.188	4.775	16,800	13.33	81.1	121.00	–	–	.40	1.30	
	133/27	Ro 19 x 7/27	.213	5.41	26,576	13.60	84.1	125.00	.43	1.41	–	–	
	266/30	Ro 7 x 38/30	.222	5.64	26,818	13.49	83.2	124.00	.44	1.44	–	–	
4	133/25	Ro 19 x 7/25	.257	6.53	26,600	21.61	135.0	201.00	.29	.95	–	–	
	420/30	Ro 7 x 60/30	.270	6.850	42,615	21.29	140.0	208.00	.28	.92	–	–	
2	665/30	Ro 19 x 35/30	.338	8.59	42,000	33.72	213.0	317.00	.18	.59	–	–	

(1) Bu - Bunched; Co - Concentric; Eq - Equilay; Ro - Rope; Un - Unilay
(2) Typical DC resistance values for uninsulated wires. Multiply by 1.04 for typical values after insulation
(3) Values are for tinned, heavy tinned, prefused, overcoated or topcoated conductors
(4) Does not meet UL conductor stranding requirements

CAROL BRAND

General Cable

Cable Design Equations—Braid Shield



BRAID ANGLE:

$$\Theta = \tan^{-1}\left[\frac{2\Pi\ (D-+-2e)\ P}{C}\right], \text{ DEGREES}$$

BRAID PICKS PER INCH:

$$P = \frac{(C)\ (\tan\ \Theta)}{2\Pi\ (M)}, \text{ PICKS/INCH}$$

BRAID SHIELD WEIGHT:

$$W = \frac{(n)\ (C)\ (l)}{\cos\ \Theta}, \text{ LBS/M FT}$$

BRAID SHIELD DC RESISTANCE:

$$R_{dc} = \cos\ \frac{r_{dc}}{(n)\ (C)\ (\cos\ \Theta)}, \ \Omega/\text{kft}$$

% Coverage: $\%C = (2F - F^2)\ x\text{-}100$

% Coverage Factor for Common Coverage:	
F	% Coverage
0.368	60
0.409	65
0.453	70
0.500	75
0.553	80
0.617	85

where:

D	= diameter under shield, inches
d	= diameter of center conductor, inches
C	= number of carriers
e	= diameter of end
P	= pick (measured in picks per linear inch)
Θ	= braid angle, degrees
W	= weight of shield, lbs/M ft
n	= number of ends in one carrier
l	= weight of one end in lbs/M ft
M	= D + build-up of braid on one shield wall, inches
R_{dc}	= dc resistance of the braid shield, Ω/M ft
r_{dc}	= dc resistance of one strand (end) of shield, Ω/M ft
% C	= percent braid coverage
F	= % coverage factor

Cable Design Equations—Coaxial Cable

COAXIAL CABLE CAPACITANCE:

$$C = \frac{7.36\varepsilon}{LOG\left(\frac{D}{fd}\right)}, \text{ pF/ft}$$

COAXIAL CABLE VELOCITY OF PROPAGATION:

$$V_p = \frac{100}{\varepsilon^{1/2}}, \%$$

COAXIAL CABLE INDUCTANCE:

$$L = 0.140 \text{ LOG } \left(\frac{D}{fd}\right), \mu\text{H/ft}$$

COAXIAL CABLE TIME DELAY:

$$t_d = 1.016\ \varepsilon^{1/2}, \text{ nsec/ft}$$

COAXIAL CABLE IMPEDANCE:

$$Z_o = \frac{138}{\varepsilon^{1/2}} \text{ LOG } \left(\frac{D}{fd}\right), \Omega$$

COAXIAL CABLE CUTOFF FREQUENCY:

$$f_{co} = \frac{7.50}{\varepsilon^{1/2}\,(D + fd)}, \text{ GHz}$$

where:

- C = capacitance, pF/ft
- ε = insulation dielectric constant (see table below)
- D = diameter under the shield, inches
- d = diameter of the center conductor, inches
- L = inductance, μH/ft
- f = strand factor (see Table II, page 194)
- Z_o = characteristic impedance, Ω
- V_p = velocity of propagation, %
- t_d = time delay, nsec/ft
- f_{co} = cutoff frequency, GHz

MATERIAL	ε	POWER FACTOR, PF
FEP Teflon® (Cellular)	1.40	0.0002
FEP Teflon® (Solid)	2.10	0.0003
PE (Cellular)	1.56	0.0003
PE (Solid)	2.26	0.0003
PE (Semi-Solid)	1.29	0.0003

Cable Design Equations—Balanced Pair

CAPACITANCE (UNSHIELDED TWISTED PAIR):

$$C = \frac{2.2\ \varepsilon}{\text{LOG}\left[\frac{1.3\ (D)}{(f)\ (d)}\right]},\ \text{pF/ft}$$

IMPEDANCE (UNSHIELDED TWISTED PAIR):

$$Z_o = \frac{1016\ \varepsilon^{1/2}}{C},\ \Omega$$

CAPACITANCE (SHIELDED TWISTED PAIR):

$$C = \frac{3.7\ \varepsilon}{\text{LOG}\left[\frac{1.2\ (D)}{(f)\ (d)}\right]},\ \text{pF/ft}$$

IMPEDANCE (SHIELDED TWISTED PAIR):

$$Z_o = \frac{276}{\varepsilon^{1/2}}\ \text{LOG}\left[\frac{1.2\ (D)}{(f)\ (d)}\right],\ \Omega$$

CAPACITANCE (OVERALL SHIELDED & CABLED):

$$C = \frac{2.9\ \varepsilon}{\text{LOG}\left[\frac{1.5\ (D)}{(f)\ (d)}\right]},\ \text{pF/ft}$$

IMPEDANCE (OVERALL SHIELDED & CABLED):

$$Z_o = \frac{347}{\varepsilon^{1/2}}\ \text{LOG}\left[\frac{1.5\ (D)}{(f)\ (d)}\right],\ \Omega$$

where:

- C = mutual capacitance, pF/ft
- ε = insulation dielectric constant (see Table I)
- f = stranding factor (see Table II)
- d = diameter of the conductor, inches
- D = diameter over the insulation, inches
- Z_o = characteristic impedance Ω

TABLE I

DIELECTRIC CONSTANTS & V_p OF INSULATIONS

MATERIAL	ε	V_p, %
ECTFE (Halar™)	2.60	63
FEP	2.15	68
PFA Teflon®	2.15	68
PVC	5.00	45
PVC (Semi-rigid)	3.60	53
PVDF (Kynar™, SOLEF™)	7.70	36
Polyethylene	2.29	66
Polypropylene	2.25	67
Polyurethane	6.50	39
Rubber, butyl	4.0	50
Rubber, natural	5.0	45
Rubber, SBR	4.0	50
Rubber, silicone	3.1	57
TFE Teflon®	2.1	69
TPE	5.0	45
Teflon®	2.10	69
Tefzel®	2.6	62

TABLE II

NO. OF STRANDS	*f*
1	1.000
7	0.939
19	0.970
37	0.980
61	0.985
91	0.988

Engineering Prefixes

PREFIX	SYMBOL	MULTIPLYING FACTOR	
		SCIENTIFIC	CONVENTIONAL
tera	T	10^{12}	1,000,000,000,000
giga	G	10^{9}	1,000,000,000
mega	M	10^{6}	1,000,000
kilo	k	10^{3}	1,000
hecto	h	10^{2}	100
deca	da	10^{1}	10
deci	d	10^{-1}	0.1
centi	c	10^{-2}	0.01
milli	m	10^{-3}	0.001
micro	μ	10^{-6}	0.000001
nano	*n*	10^{-9}	0.000000001
pico	*p*	10^{-12}	0.000000000001
femto	*f*	10^{-15}	0.000000000000001
atto	*a*	10^{-18}	0.000000000000000001

Glossary

Abrasion Resistance: Resistance to surface wear.
AC Alternating Current (a.c.): Current in which the charge-flow periodically reverses and is represented by: $I = I_o \cos(2\text{-}f +\text{-}\phi)$ where, I is the current, I_o is the amplitude, f the frequency, ϕ the phase angle.
Accelerated Aging: A test that attempts to duplicate long-time environmental aging in comparatively short time spans.
Accelerator: A chemical additive which hastens a chemical reaction under specific conditions.
Accordion: (1) A retractile cable with a series of equally-spaced transverse folds. (2) A connector contact with a "Z" shaped flat spring to permit high deflection without overstress.
Adapter: A device that enables any or all of the following 1) different sizes or types of plugs to mate with one another or to fit into a telecommunications outlet/connector; 2) the rearrangement of leads; 3) large cables with numerous wires to fan out into smaller groups of wires, 4) interconnection between cables.
Adhesive Bonded: Cables bonded by adding an adhesive coating to the surface of the cable components, then joining and curing the adhesive to form a cable. See *Bonded Cable.*
Administration: The method for labeling, identification, documentation and usage needed to implement moves, additions and changes of the telecommunications infrastructure.
Admittance: The measure of the ease with which an alternating current flows in a circuit. The reciprocal of impedance.
Aerial Cable: A cable suspended in the air on poles or other overhead structure.
Aging: The change in properties of a material with time under specific conditions.
Air Core Cable: A cable in which the interstices in the cable core are not filled with a moisture barrier.
Air-Handling Plenum: A designated area, closed or open, used for environmental air.
Air Spaced Coaxial Cable: One in which air is essentially the dielectric material. A spirally wound synthetic filament, beads or braided filaments may be used to center the conductor.
All-Rubber Cable: A cable in which all interstices between conductors are filled with rubber compound.
Alligator Clip: A mechanical device shaped like alligator jaws used as a temporary connection on the end of interconnections wire.
Alloy: A metal formed by combining two or more different metals to obtain desirable properties.
Aluminum Conductor: An aluminum wire or group of wires not suitably insulated to carry electrical current.
Aluminum-Steel Conductor: A composite conductor made up of a combination of aluminum and steel wires.
Ambient Temperature: The temperature of a medium (gas or liquid) surrounding an object.
American Wire Gauge (AWG): The standard system used for designating wire diameter. The lower the AWG number, the larger the diameter. Also called the Brown and Sharpe (B&S) wire gauges.
Ampacity: See *Current Carrying Capacity.*
Ampere: The unit of current. One ampere is the current flowing through one ohm of resistance at one volt potential.
Analog: A signaling format that uses continuous physical variables such as voltage amplitude or frequency variations to transmit information.
Anneal: Relief of mechanical stress through heat and gradual cooling. Annealing copper renders it less brittle.
Annular Conductor: A number of wires stranded in three reversed concentric layers around a core.
Annunciator: A signaling device, usually electrically operated, that gives an audible or visual signal (or both) when energized.
Anti-Oxidant: A substance which prevents or slows down oxidation of material exposed to air.
Appliance Wire and Cable: A classification covering insulated wire and cable for internal wiring of appliances and equipment.
Arc Resistance: The time required for an arc to establish a conductive path in a material.
Armored Cable: A cable provided with a wrapping of metal for mechanical protection.
Attenuation: The decrease in magnitude of the power of a signal in transmission between points. Attenuation is usually measured in decibels per unit length at a specific frequency.
Attenuation to Crosstalk Ratio (ACR): The difference between attenuation and crosstalk, measured in dB, at a given frequency. Important characteristic in networking transmission to assure that signal sent down a twisted pair is stronger at the receiving end, after being attenuated, than are any interference signals imposed on that same pair by crosstalk from other pairs, represented by NEXT.
Audio Frequency: The range of frequencies audible to the human ear. Usually 20-20,000 Hz.
Backbone: A facility (e.g. pathway, cable or conductors) between telecommunications closets or floor distribution terminals, the entrance facilities and the equipment rooms within or between buildings.
Backbone Cable or Wire: Cable or wire found in the backbone; see *Backbone.*
Balanced Line: A cable having two identical conductors which carry voltages opposite in polarity and equal in magnitude with respect to ground.
Balun: A device for matching an unbalanced coaxial transmission line to a balanced two-wire system.
Band Marking: A continuous circumferential band applied to a conductor at regular intervals for identification.
Banded Cable: Two or more cables banded together by stainless steel strapping.
Bandwidth: A continuous range of frequencies extending between two limiting frequencies. Also referred to as a frequency band.
Barrel-Packed: Method of coiling into a fiber drum for shipment.
Baseband: In data transmission, the use of a dedicated end-to-end connection to carry a single channel only.
Beaded Coax: Coaxial cable with a dielectric consisting of beads made of various materials.
Belt: Number of layers of insulation on a conductor, or number of layers of jacket on a cable.
Belted-Type Cable: Multiple conductor cable having a layer of insulation over the assembled insulated conductors.
Bend Loss: A form of increased attenuation caused by (1) having an optical fiber curved around a restrictive radius of curvature or (2) microbends caused by minute distortions in the fiber imposed by externally induced forces.
Bend Radius: Radius of curvature that a fiber optic or metallic cable can bend without any adverse effects.
Bifilar: A winding made non-inductive by winding together (as one wire) two wires carrying current in opposite directions.
Billion Conductor Feet (BCF): A quantity derived by multiplying the number of conductors in a cable by the amount of cable. Usually used to indicate plant capacity or an annual requirement.
Bimetallic Wire: A wire formed of two different metals joined together (not alloyed). It can include wire with a steel core clad wire, or plated or coated wire.
Binder: A spirally served tape or thread used for holding assembled cable components in place awaiting subsequent manufacturing operations.
Binding Post: A device for clamping or holding electrical conductors in a rigid position.
Bit: One binary (0 or 1) digit.
Blown Jacket: Outer cable covering applied by controlled inflation of the cured jacket tube then pulling the cable through it.
Bond Strength: Amount of adhesion between bonded surfaces, e.g. in cemented ribbon cable.
Bondable Wire: An insulated wire treated to facilitate adherence to materials such as potting compounds. Also, magnet wires used in making coils when bonding the turns together is desired.
Bonded Cable: Cable consisting of pre-insulated conductors or multiconductor components laid-in parallel and bonded into a flat cable. See Solvent-Bonded; Adhesive-Bonded; Film-Bonded.
Bonded Construction: An insulation construction in which the glass braid and nylon jacket are bonded together.
Bonding: The permanent joining of metallic parts to form an electrically conductive path that will assure electrical continuity and the capacity to conduct safely any current likely to be imposed on it.
Booster: A device inserted into a line (or cable) to increase the voltage.
Boot: (1) Protective covering over a cable, wire or connector in addition to the normal jacketing or insulation. (2) A form placed around wire termination of a multiple-contact connector to contain the liquid potting compound before it hardens.
Braid: A fibrous or metallic group of filaments interwoven in cylindrical form to form a covering over one or more wires.
Braid Angle: The smaller of the two angles formed by the shielding strand and in the axis of the cable being shielded.
Braid Carrier: A spool or bobbin on a braid which holds one group of strands or filaments consisting of a specific number of ends. The carrier revolves during braiding operations.

Glossary

Braid Ends: The number of strands used to make up one carrier. The strands are wound side by side on the carrier bobbin and lie parallel in the finished braid.
Braiding Machine: Machine used to apply braids to wire and cable and to produce braided sleeving and braids for tying or lacing purposes. Braiding machines are identified by the number of carriers.
Breakdown (Puncture): A disruptive discharge through the insulation.
Breakdown Voltage: The voltage at which the insulation between two conductors breaks down.
Breakout: The point at which a conductor or group of conductors breaks out from a multiconductor cable to complete circuits at various points along the main cable.
Bridge: A device used to expand a local area network by forwarding frames between data link layers.
Bridged Tap: The multiple appearances of the same cable pair at several distribution points.
British Standard Wire Gauge: A modification of the Birmingham Wire Gauge and the legal standard of Great Britain for all wires. Also known as Standard Wire Gauge (SWG), New British Standard (NBS), English Legal Standard and Imperial Wire Guide.
Broadband: In data transmission, the use of a carrier signal, rather than direct modulation, to carry several simultaneous channels.
Buffer: (fiber optic) A soft material which mechanically isolates individual fibers in a fiber optic cable or bundle from small geometrical irregularities, distortions or roughness of adjacent surfaces.
Buffing Stripper: A motorized device for removing flat cable insulation by means of buffing wheels that melt the insulation and brush it away from the conductors. Also called Abrasion Stripper.
Building Entrance Area: See *Entrance Room* or *Space, Telecommunications.*
Building Wire: Wire used for light and power, 600 volts or less, usually not exposed to outdoor environment.
Bunched Stranding: A group of strands twisted together in a random manner and the same direction without regard to geometric arrangement of specific strands.
Buncher: A machine that twists wires together in random arrangement.
Bundle: (fiber optic) A number of fibers grouped together, usually carrying a common signal.
Buried Cable: A cable installed directly in the earth without use of underground conduit. Also called "direct burial cable."
Bus: Wire used to connect two terminals inside of an electrical unit.
Bushing: A mechanical device used as a lining for an opening to prevent abrasion to wire and cable.
Butt: Joining of two conductors end-to-end, with no overlap and with the axes in line.
Butt Splice: A splice wherein two wires from opposite ends butt against each other, or against a stop, in the center of a splice.
Butt Wrap: Tape wrapped around an object or conductor in an edge-to-edge condition.
Byte: Typically a group of eight binary digits.
Cable: A stranded conductor with or without insulation and other coverings (single-conductor cable), or a combination of conductors (multiple-conductor cable). In fiber optics, a jacketed fiber or jacketed bundle in a form which can be terminated.
Cable Assembly: Typically, the cable and associated connectors; ready to install.
Cable Clamp: A device used to give mechanical support to the wire bundle or cable at the rear of a plug or receptacle.
Cable Clamp Adapter: A mechanical adapter that attaches to the rear of a plug or receptacle to allow the attachment of a cable clamp.
Cable Core: The portion of an insulated cable lying under a protective covering.
Cable Core Binder: A wrapping of tapes or cords around the conductors of a multiple-conductor cable used to hold them together.
Cable Filler: The material used in multiple-conductor cables to occupy the interslices formed by the assembly of the insulated conductors, thus forming a cable core.
Cable Rack: The vertical or horizontal open support (usually made of aluminum or steel) that is attached to a ceiling or wall.
Cable Sheath: The overall protective covering applied to cables.
Cable Tray: A ladder, trough, solid-bottom or channel raceway system intended for, but not limited to, the support of telecommunications media (e.g., cable).
Cable Vulcanizer: Compression molding machine used to repair cable jacketing that has had a part removed for splicing, for adding connectors or other devices or for replacing damaged sections.
Cabling: (1) A combination of all cables, wire, cords and connecting hardware. (2) Twisting together two or more insulated conductors by machine to form a cable. In fiber optics, a method by which a group or bundle of fibers is mechanically assembled.
Cabling Factor: Used in the formula for calculating the diameter of an unshielded, unjacketed cable. D = Kd, where D is the cable diameter, K is the factor and d is the diameter of one insulated conductor.
Campus: The building and grounds of a complex (e.g. a university, college, industrial park or military establishment).
Canadian Standards Association (CSA): A non-profit independent organization which operates a listing service for electrical and electronic materials and equipment. The Canadian counterpart of the Underwriter's Laboratories.
Capacitance: The ratio of the electrostatic charge on a conductor to the potential difference between the conductors required to maintain that charge.
Capacitance, Direct: The capacitance measured from one conductor to another conductor through a single insulating layer.
Capacitance, Mutual: The capacitance between two conductors (typically of a pair) with all other conductors, including shield, short circuited to ground.
Carolprene®: Proprietary rubber compound.
Carrier: The woven element of a braid consisting of one or more ends (strands) which creates the interlaced effect. Also, a spindle, spool, tube, or bobbin (on a braiding machine) containing yarn or wire, employed as a braid.
Cellular Plastics: Expanded or "foam," consists of individual closed cells of inert gas suspended in a plastic medium, resulting in a desirable reduction of the dielectric constant.
Central Office: The place where communications common carriers terminate customer lines and locate switching equipment that interconnects those lines.
Certificate of Compliance (C of C): A written statement; normally generated by a quality control department, which states that the product being shipped meets customer's specifications.
Certified Test Report (CTR): A report reflecting actual test data on the cable shipped. Tests are normally conducted by the quality control department, and show that the product being shipped meets the required test specifications.
Characteristic Impedance: The impedance that, when connected to the output terminals of a transmission line of any length, makes the line appear indefinitely long.
Chlorosulfonated Polyethylene (CSPE): A rubbery polymer used for insulations and jackets. Manufactured by E.I. DuPont under the trade name of Hypalon®.
Cigarette Wrap: Tape insulation wrapped longitudinally instead of spirally over a conductor.
Circuit: A complete path over which electrons can flow from the negative terminals of a voltage source through parts and wires to the positive terminals of the same voltage source.
Circuit Sizes: A popular term for building wire sizes 14 through 10 AWG.
Circular Mil: The area of a circle one mil (.001") in diameter; 7.854 x 10^{-7} sq. in. Used in expressing wire cross sectional area.
Cladding: Method of applying a layer of metal over another metal whereby the junction of the two metals is continuously welded. In fiber optics, a sheathing intimately in contact with the core of a higher refractive index material which serves to provide optical insulation and protection to the reflection interface.
Closed End Splice: An insulated splice in which two or more wires overlap and enter the splice from the same end of the barrel.
Closet, Telecommunications: An enclosed space for housing telecommunications equipment, cable terminations and cross-connect cabling. The closet is the recognized location of the cross-connect between the backbone and horizontal facilities.
Coaxial Cable: A cable consisting of two cylindrical conductors with a common axis, separated by a dielectric.
Coaxial Connector: A connector that has a coaxial construction and is used with coaxial cable.
Coherent Source: (fiber optic) A light source which emits a very narrow, unidirectional beam of light of one wavelength (monochromatic).
Coil Effect: The inductive effect exhibited by a spiral-wrapped shield, especially above audio frequencies.

Glossary

Cold Flow: Permanent deformation of the insulation due to mechanical force of pressure (not due to heat softening).
Color Code: A color system for wire or circuit identification by use of solid colors, tracers, braids, surface printing, etc.
Commercial Building: A building or portion thereof, that is intended for office use.
Common Axis Cabling: In multiple cable constructions, a twisting of all conductors about a "common axis" to result in smaller diameter constructions. Tends to result in greater susceptance to electromagnetic and electrostatic interference.
Compact Conductor: Stranded conductor rolled to deform the round wires to fill the normal interstices between the wires in a strand.
Composite (Clad) Wire: A wire having a core of one metal with a fused outer shell of different metals.
Composite Conductor: Two or more strands of different metals assembled and operated in parallel.
Compound: An insulating or jacketing material made by mixing two or more ingredients.
Compression Cable: A pipe type cable in which the pressure medium is separated from the insulation by a membrane or sheath.
Concentric: A central core surrounded by one or more layers of helically wound strands in a fixed round geometric arrangement.
Concentric-Lay Cable: A concentric-lay conductor, or a multiple-conductor cable composed of a central core surrounded by one or more layers of helically laid insulated conductors.
Concentric Strand: A strand that consists of a central wire or core surrounded by one or more layers of spirally laid wires.
Concentricity: The measurement of the location of the center of the conductor with respect to the geometric center of the circular insulation.
Conductance: The ability of a conductor to carry an electric charge. The ratio of the current flow to the potential difference causing the flow. The reciprocal of resistance.
Conductivity: The capacity of a material to carry electrical current—usually expressed as a percentage of copper conductivity (copper being 100%).
Conductor: A wire (or combination of wires not insulated from one another) suitable for carrying electric current.
Conduit: A rigid or flexible metallic or nonmetallic raceway of circular cross-section through which cables can be pulled or housed.
Connecting Hardware: A device providing mechanical cable terminations.
Connector: A device used to provide rapid connect/disconnect service for electrical cable and wire terminations.
Contact: The part of a connector which actually carries the electrical current, and are touched together or separated to control the flow.
Contact Inspection Hole: A hole in the cylindrical rear portion of contact used to check the depth to which a wire has been inserted.
Contact Size: The largest size wire which can be used with the specific contact. Also, the diameter of the engagement end of the pin.
Continuity Check: A test to determine whether electrical current flows continuously throughout the length of a single wire or individual wires in a cable.
Continuous Vulcanization: Simultaneous extrusion and vulcanization of rubber-like wire coating materials.
Contrahelical: Cable spiralling in an opposite direction than the preceding layer within a wire or cable.
Control Cable: A multi-conductor cable made for operation in control of signal circuits.
Controlled Impedance Cable: Package of two or more insulated conductors where impedance measurements between respective conductors are kept essentially constant throughout the entire length.
Copolymer: A compound resulting from the polymerization of two different monomers.
Copper-Clad: Steel with a coating of copper welded to it before drawing as opposed to copper-plated. Synonymous with Copperweld.
Copperweld: The trade name of Flexo Wire Division (Copperweld Steel Corp.) for their copper-clad steel conductors.
Cord: A small, flexible insulated cable.
Cord Set: Portable cords fitted with a wiring device at one or both ends.
Cord, Telecommunications: A cable using stranded conductors for flexibility, as in distribution cords or line cords. Line cords can also use tinsel conductors.
Core: In cables, a component or assembly of components over which other materials are applied, such as additional components, shield, sheath or armor. In fiber optics, the transparent glass or plastic section with a high refractive index through which the light travels by internal reflections.
Corona: A discharge due to ionization of air around a conductor due to a potential gradient exceeding a certain critical value.
Corona Resistance: The time that the insulation will withstand a specified level of field-intensified ionization that does not result in the immediate complete breakdown of the insulation.
Corrosion: The destruction of the surface of a metal by chemical reaction.
Coupling Loss: (fiber optic) Signal losses due to small differences in numerical aperture, core diameter, core concentricity and tolerances in splicing connectors when two fibers are aligned. Also known as Splicing Loss and Transfer Loss.
Coupling Ring: A device used on cylindrical connectors to lock plug and receptacle together.
Coverage: The calculated percentage which defines the completeness with which a metal braid covers the underlying surface. The higher percentage of coverage, the greater the protection against external interference.
Covering: Textile braid or jacket of rubber, plastics or other materials applied over wire and cables to provide mechanical protection and identification.
Crazing: The minute cracks on the surface of plastic materials.
Creep: The dimensional change with time of a material under load.
Creepage: The conduction of electricity across the surface of a dielectric.
Creepage Path: The path across the surface of a dielectric between two conductors.
Creepage Surface: An insulating surface which provides physical separation as a form of insulation between two electrical conductors of different potential.
Crimp: Act of compressing a connector barrel around a cable in order to make an electrical connection.
Crimp Termination: Connection in which a metal sleeve is secured to a conductor by mechanically crimping the sleeve with pliers, presses or automated crimping machines.
Cross-Connect: A facility enabling the termination of cable elements and their interconnection, and/or cross-connection, primarily by means of a patch cord or jumper.
Cross-Linked: Inter-molecular bonds between long-chain thermoplastic polymers by chemical or electron bombardment means. The properties of the resulting thermosetting material are usually improved.
Crosstalk: Undesired electrical currents in conductors caused by electromagnetic or electrostatic coupling from other conductors or from external sources. Also, leakage of optical power from one optical conductor to another.
CSA: Canadian Standards Association.
C-SJ: Same as SJ except extra-flexible conductor.
C-SJO: Same as SJO except extra-flexible conductor.
Cure: To change the physical properties of a material by chemical reaction.
Curing Cycle: The time, temperature and pressure required for curing.
Curl: The degree to which a wire tends to form a circle after removal from a spool. An indication of the ability of the wire to be wrapped around posts in long runs.
Current: The rate of transfer of electricity. Practical unit is the ampere which represents the transfer of one coulomb per second. In a simple circuit, current (I) produced by a cell or electromotive force (E) when there is an external resistance (R) and internal resistance (r) is: $I = \frac{E}{R+r}$
Current Carrying Capacity: The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations.
Customer Premises: Building(s) with grounds and appurtenances (belongings) under the control of the customer.
Cut-Through Resistance: The ability of a material to withstand mechanical pressure, usually a sharp edge or small radius, without separation.
Cycle: The complete sequence including reversal of the flow of an alternating electric current.
Decibel (dB): A unit to express differences of power level. Used to express power gain in amplifiers or power loss in passive circuits or cables.
Delay Line: A cable made to provide very low velocity of propagation with long electrical delay for transmitted signals.
Demarcation Point: A point where the operational control or ownership changes.

Glossary

Depth of Crimp: Thickness of the crimped portion of a connector measured between two opposite points on the crimped surface.
Derating Factor: A factor used to reduce the current carrying capacity of a wire when used in environments other than that for which the value was established.
Detector: (fiber optic) A device that picks up light from fiber and converts the information into an electrical signal.
Device, As Related to a Work Station: An item such as a telephone, personal computer or graphic or video terminal.
Device, As Related to Protection: A protector, a protector mount, a protector unit or a protector module.
Dielectric: An insulating medium which intervenes between two conductors and permits electrostatic attraction and repulsion to take place across it.
Dielectric Breakdown: The voltage required to cause an electrical failure or breakthrough of the insulation.
Dielectric Constant (K): The ratio of the capacitance of a condenser with dielectric between the electrodes to the capacitance when air is between the electrodes. Also called Permittivity and Specific Inductive Capacity.
Dielectric Loss: Power dissipated in an insulating medium as the result of the friction caused by molecular motion when an AC electric field is applied.
Dielectric Strength: The voltage which an insulation can withstand before breakdown occurs. Usually expressed as a voltage gradient (such as volts per mil).
Dielectric Test: A test in which a voltage higher than the rated voltage is applied for a specified time to determine the adequacy of the insulation under normal conditions.
Digital: Transmission data representative by discrete characters.
Dip Coating: An insulating coating applied to the conductor by passing the conductor through an applicator containing liquid insulating medium.
Direct Burial Cable: A cable installed directly in the earth.
Direct Capacitance: The capacitance measured directly from conductor to conductor through a single insulating layer.
Direct Current (d.c.): An electric current which flows in only one direction.
Direct Current Resistance (DCR): The resistance offered by any circuit to the flow of direct current.
Direction of Lay: The lateral direction in which the strands of a conductor run over the top of the cable conductor as they recede from an observer looking along the axis of the conductor or cable. Also applies to twisted cable.
Discrete Wiring: Wire or wires having distinct identity and purpose.
Dispersion: (fiber optic) The variation of the refractive index of a material with wavelength, causing light of different wavelengths to travel at different velocities in the material.
Disruptive Discharge: A sudden, large increase in current through an insulation medium due to the complete failure of the medium under the electrostatic stress.
Dissipation Factor: The tangent of the loss angle of the insulating material. (Also referred to as loss tangent, tan δ, and approximate power factor.)
Distribution Cable: In telecommunications and CATV systems, the transmission cable between the distribution amplifier and the drop wire.
Distribution Frame: A structure with terminations for connecting the permanent cabling of a facility in such a manner that interconnection or cross-connections may be readily made.
Disturbed Conductor: A conductor that receives energy generated by the field of another conductor or an external source such as a transformer.
Drain Wire: In a cable, the uninsulated wire laid over the component or components and used as a ground connection.
Draw Feed Stock: Rod or wire that is subsequently drawn to a smaller size.
Drawing: In wire manufacture, pulling the metal through a die or series of dies to reduce diameter to a specified size.
Drop Ceiling: See *False Ceiling.*
Drop Wire: In telecommunications and CATV systems, the transmission cable from the distribution cable to a dwelling.
Dual Coaxial Cable: Two individually insulated conductors laid parallel or twisted and placed within an overall shield and sheath.
Duct: 1) A single enclosed raceway for wires or cables. See also *Conduit, Raceway;* 2) a single enclosed raceway for wires or cables usually used in soil or concrete, 3) an enclosure in which air is moved. Generally part of the HVAC system of a building.
Duplex: Two way data transmission on a four-wire transmission line or two fiber.
Duplex Cable: (1) A cable composed of two insulated single-conductor cables twisted together. (2) A cable composed of two fibers, typically 62.5/125 μm multimode, placed in parallel under a thermoplastic sheath.
Duplex Parallel: Typically used in the thermocouple industry to denote two parallel conductors of dissimilar metals insulated in parallel without twist and jacketed. Commonly applied to thermocouple grades and extension wires.
Eccetricity: Like concentricity, a measure of the center of a conductor's location with respect to the circular cross section of the insulation. Expressed as a percentage of displacement of one circle within the other.
Eddy Current: Circulating currents induced in conducting materials by varying magnetic fields.
Elastomer: A rubber or rubber-like material which will stretch repeatedly to 200 percent or more and return rapidly and with force to its approximate original shape.
Electro-Tinned: Electrolytic process of tinning wire using pure tin.
Electrode: A conductor through which a current enters or leaves a nonmetallic conductor.
Electromagnetic Coupling: Energy transfer by means of a varying magnetic field.
Electromagnetic Field: A rapidly moving electric field and its associated moving magnetic field.
Electromagnetic Induction: The production of a voltage in a coil due to a change in the number of magnetic lines of forces (flux linkages) passing through the coil.
Electromagnetic Interference (EMI): The interference in signal transmission or reception resulting from the radiation of electrical and magnetic fields. Synonym: Radio Frequency Interference.
Electromotive Force (e.m.f.): Pressure or voltage. The forces which cause current to flow in a circuit.
Electronic Wire and Cable: A length of conductive or semiconductive material used in an electronic application.
Electrostatic: Pertaining to static electricity, or electricity at rest. An electric charge, for example.
Elongation: The fractional increase in the length of a material stressed in tension.
Embossing: A marker identification by means of thermal indentation leaving raised lettering on the sheath material of cable.
Emergency Overload: Load which occurs when larger than normal currents are carried through a cable or wire over a certain period of time.
Enameled Wire: A conductor with a baked-on enamel film insulation. In addition to magnet wire, enameled insulation is used on thermocouple type wires and other wires.
Ends: In braiding, the number of essentially parallel wires of threads on a carrier.
Energize: To apply rated voltage to a circuit or device in order to activate it.
Entrance Facility, Telecommunications: An entrance to a building for both public and private network service cables (including antennae) including the entrance point at the building wall and continuing to the entrance room or space.
Entrance Point, Telecommunications: The point of emergence of telecommunications conductors through an exterior wall, a concrete floor slab or from a rigid metal conduit or intermediate metal conduit.
Entrance Room or Space, Telecommunications: A space in which the joining of inter- or intra-building telecommunications backbone facilities takes place. An entrance room may also serve as an equipment room.
Equilay: More than one layer of helically laid wires with the direction of lay reversed for successive layers, but with the length of lay the same for each layer.
Equipment Room, Telecommunications: A centralized space for telecommunications equipment that serves the occupants of the building. An equipment room is considered distinct from a telecommunications closet because of the nature of complexity or the equipment.
Etched Wire: A process applied to fluoroplastic wire in which the wire is passed through a sodium bath to create a rough surface to allow epoxy resin to bond the fluoroplastic.
Exit Angle: The angle between the output radiation vectors and the axis of the fiber or fiber bundle.
External Interference: The effects of electrical waves or fields which cause sounds other than the desired signal. Static.

Glossary

External Wiring: Electronic wiring which interconnects subsystems within the system.
Extruded Cable: Cable with conductors which are uniformly insulated and formed by applying a homogeneous insulation material in a continuous extrusion process.
Extrusion: Method of continuously forcing plastic, rubber, or elastomer material through an orifice to apply insulation or jacketing over a conductor or cable core.
False Ceiling: A ceiling that creates an area or space between the ceiling material and the structure above the material. Synonym: *Drop Ceiling, Suspended Ceiling.*
Farad: A unit of electrical capacity.
Fatigue Resistance: Resistance to metal crystallization which leads to conductors or wires breaking from flexing.
Feed-Through Insulators: Insulators that carry a metal conductor through the chassis while preventing the "hot" lead from shorting to the ground chassis.
Feedback: Energy that is extracted from a high-level point in a circuit and applied to a lower level. Positive feedback reduces the stability of a device and is used to increase the sensitivity or produce oscillation in a system. Negative feedback, also called inverse feedback, increases the stability of a system as the feedback improves stability and fidelity.
Feeder Cable: In telecommunication or CATV systems, the transmission cable from the head end (signal pickup) to the trunk amplifier. Also called a trunk cable.
Feedthrough: (1) A conductor that connects patterns on opposite sides of a PCB. Also called Interfacial connection. (2) A connector or terminal block, usually having double-ended terminals which permit simple distribution and bussing of electrical circuits.
Ferrous: Composed of and/or containing iron. A ferrous metal exhibits magnetic characteristics.
Ferrule: A short tube used to make solderless connections to shielded or coaxial cable.
Fiber: A thread or threadlike structure. Also, a single discrete element used to transmit optical (light wave) information.
Fiber Dispersion: (fiber optic) Pulse spreading in a fiber caused by differing transit times of various modes.
Fiber Optics: A lightwave or optical communications system in which electrical information is converted to light energy, transmitted to another location through optical fibers, and is there converted back into electrical information.
Fiber Tubing: A loose, crush-resistant cylinder applied over individual fibers to provide mechanical protection.
Field: An area of influence around a magnet or electric charge.
Field Coil: A suitable insulated winding to be mounted on a field pole to magnetize it.
Figure 8 Cable: An aerial cable configuration in which the conductors and the steel strand which supports the cable are integrally jacketed. A cross-section of the finished cable approximates the figure "eight."
Filament: Fiber characterized by extreme length.
Filled Cable: A telephone cable construction in which the cable core is filled with a material that will prevent moisture from entering or passing through the cable.
Filler: (1) A material used in multiconductor cables to occupy large interstices formed by the assembled conductors. (2) An inert substance added to a compound to improve properties or decrease cost.
Film: A thin plastic sheet.
Fine Stranded Wire: Stranded wire with component strands of 36 AWG or smaller.
Firestop: A material, device or assembly of parts installed in a cable system in a fire-rated wall or floor to prevent passage of flame, smoke or gasses through the rated barrier.
Flame Resistance: The ability of a material not to propagate flame once the heat source is removed.
Flammability: The measure of the material's ability to support combustion.
Flashover: A disruptive discharge around or over the surface of a solid or liquid insulator.
Flat Braid: A woven braid of tinned copper strands rolled flat at time of manufacture to a specified width.
Flat Cable: A cable with two smooth or corrugated but essentially flat surfaces.
Flat Conductor: A wire having a rectangular cross-section as opposed to a round or square conductor.
Flat Conductor Cable: A cable with a plurality of flat conductors.
Flexfoil®: Proprietary aluminum laminated shielding tapes.
Flex Life: The measurement of the ability of a conductor or cable to withstand repeated bending.
Flexibility: The ease with which a cable may be bent.
Flexible: That quality of a cable or cable component which allows for bending under the influence of outside force, as opposed to limpness which is bending due to the cable's own weight.
Floating: Referring to a circuit which has no connection to ground.
Flux: (1) The lines of force which make up an electrostatic field. (2) The rate of flow of energy across or through a surface. (3) A substance used to promote or facilitate fusion.
FNC: Federal Networking Council (formerly FRICC).
Foamed Plastics: See *Cellular Plastic.*
Foil: A thin, continuous sheet of metal.
Free Connector: A connector for attachment to the free end of a wire or cable.
Frequency: The number of times a periodic action occurs in a unit of time. The number of cycles that an electric current completes in one second.
Frequency Response: The characteristic of a device denoting the range of frequencies over which it may be used effectively.
Funnel Entry: Flared or widened entrance to a terminal or connector wire barrel.
Fuse Wire: Wire made from an alloy that melts at a relatively low temperature.
Fused Coating: A metallic coating which has been melted and solidified, forming a metallurgical bond to the base material.
Fused Conductors: Individual strands of heavy tinned copper wire stranded together and then bonded together by induction heating.
Fused Spiral Tape: A PTFE insulated hookup wire. The spiral wrapped conductor is passed through a sintering oven where overlaps are fused together.
Gain: The increase of voltage, current or power over a standard or previous reading. Usually expressed in decibels.
Galvanometer: An instrument for detecting or measuring small electrical current.
Gas-Filled Cable: A self-contained pressure cable in which the pressure medium is an inert gas having access to the insulation.
Gauge: A term used to denote the physical size of a wire.
Giga: A numerical prefix denoting one billion (10^9).
Gigahertz (GHz): A unit of frequency equal to one billion hertz.
Gimmick: A short length of wire soldered onto a circuit component and used as a small adjustable capacitor.
Graded-Index: A type of optical fiber in which the refractive index of the core is in the form of a parabolic curve, decreasing toward the cladding. This type of fiber provides high bandwidth capabilities.
Ground: A conducting connection, whether intentional or accidental, between an electrical circuit (e.g. telecommunications) or equipment and the earth, or to some conducting body that serves in place of the earth.
Ground Conductor: A conductor in a transmission cable or line that is grounded.
Ground Insulation: The insulation used between a winding and the magnetic core or other structural parts, usually at ground potential.
Ground Loop: The generation of undesirable current flow within a ground conductor, owing to the circulation currents which originate from a second source of voltage.
Ground Plane: Expanded copper mesh which is laminated into some flat cable constructions as a shield.
Ground Potential: Zero potential with respect to the ground or earth.
Hard Drawn Copper Wire: Copper wire that has not been annealed after drawing.
Harness: An arrangement of wires and cables usually with many breakouts, which have been tied together or pulled into a rubber or plastic sheath, used to interconnect an electric circuit.
Hash Mark Stripe: A non-continuous helical stripe applied to a conductor for identification.
Heat Distortion: Distortion of flow of a material or configuration due to the application of heat.
Heat Seal: Method of sealing a tape wrap jacket by means of thermal fusion.
Heater Cord: Flexible stranded copper conductor, cotton wrapped, with rubber insulation and asbestos roving.
Helical Stripe: A continuous, colored, spiral stripe applied to a conductor for circuit identification.
Helix: Spiral winding.
Henry: The unit of inductance.
Hertz (Hz): A term replacing cycles-per-second as an indication of frequency.
Heterogeneous Insulation: A cable insulating system composed of two or more layers of different insulating materials.

Glossary

High-Temperature Wire and Cable: Electrical wire and cables having thermal operating characteristics of 150°C and higher.
High Voltage: Generally, a wire or cable with an operating voltage of over 600 volts.
Holding Strength: Ability of a connector to remain assembled to a cable when under tension.
Homogeneous Insulation: A complete cable insulation structure whose components cannot be identified as layers of different materials.
Hook-up Wire: A wire used for low-current, low-voltage (under 1000 volts) applications within enclosed electronic equipment.
Horizontal Cabling: The wiring/cabling between the telecommunications outlet/connector and the horizontal cross-connect.
Horizontal Cross-Connect: A cross-connect of horizontal cabling to other cabling, e.g. horizontal, backbone or equipment.
Hot Stamping: Method of alpha numerical coding. Identification markings are made by pressing heated type and marking foil into softened insulation surfaces. See Surface Printing.
Hot Tin Dip: A process of passing bare wire through a bath of molten tin to provide a coating.
Hybrid Cable: An assembly of two or more cables (of the same or different types or categories) covered by one overall sheath.
Hygroscopic: Capable of absorbing moisture from the air.
Hypalon®: DuPont's trade name for their chlorosulfonated polyethylene, an ozone-resistant synthetic rubber.
Impact Tool: Device used to punch new conductor onto IDs. This tool is typically equipped with a cutting blade for either 66 or 110 blocks.
Impedance: The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency. It is a combination of resistance R and reactance X, measured in Ω.
Impedance-Matching Transformer: A transformer designed to match the impedance of one circuit to that of another (BALUN).
Impulse: A surge of unidirectional polarity.
Impulse Strength: The voltage breakdown of insulation under voltage surges on the order of microseconds in duration.
Impulse Test: An insulation test in which the voltage applied is an impulse voltage of specified wave shape.
Incoherent Source: (fiber optic) A light source which emits wide, diffuse beams of light of many wave lengths.
Index-Matching Fluid: (fiber optic) Fluid with refractive index same as fiber core; used to fill air gap between fiber ends at connectors.
Index of Refraction: The ratio of light velocity in a vacuum to its velocity in a given transmitting medium.
Inductance: The property of a circuit or circuit element that opposes a change in current flow, thus causing current changes to lag behind voltage changes. It is measured in henrys.
Inductive Coupling: Crosstalk resulting from the action of the electromagnetic field of one conductor on the other.
Infrastructure, Telecommunications: A collection of those telecommunications components, excluding equipment, that together provide the basic support for the distribution of all information within a building or campus.
Insertion Loss: As measure of the attenuation of a device by determining the output of a system before and after the device is inserted into the system.
Insertion Tool: A small, hand-held tool used to insert contacts into a connector.
Insulated Wire: A conductor of electricity covered with a non-conducting material.
Insulating Joint: A device which mechanically couples and electrically insulates the sheath and armor of contiguous lengths of cable.
Insulation: A material having high resistance to the flow of electric current. Often called a dielectric in radio frequency cable.
Insulation Adhesion: The degree of tightness of the insulation over the base conductor, measured in terms of force required to remove a specified length of insulation from the wire.
Insulation Crimp: The area of a terminal, splice or contact that has been formed around the insulation of the wire.
Insulation Grip: Extended cylinders at the rear of crimp-type contacts designed to accept the bared wire and a small length of its insulation.
Insulation Piercing: A method of crimping whereby lances cut the insulation of the wires and enter into the strands to make electrical contact.
Insulation Resistance: The ratio of the applied voltage to the total current between two electrodes in contact with a specific insulation, usually expressed in megΩ-M feet.
Insulation System: All of the insulation materials used to insulate a particular electrical or electronic product.
Integral Belt: A layer of insulation or semiconductive material applied by extrusion over two or more insulated, twisted or parallel conductors, to form a round, smooth diameter.
Interconnect: A connection scheme that provides for the direct connection of individual cables to another cable or to an equipment cable without a patch cord.
Interconnecting Cable: The wiring between modules, between units or the larger portions of a system.
Interconnecting Wire: The physical wiring between components (outside a module), between modules, between units or between larger portions of a system or systems.
Interconnection: Mechanically joining devices together to complete an electrical circuit.
Interface: The two surfaces on the contact side of both halves of a multiple-contact connector which face each other when the connector is assembled.
Intermediate Cross-Connect: A cross-connect between 1st level and 2nd level backbone cabling.
Internal Wiring: Electronic wiring which interconnects components, usually within a sealed subsystem.
Interstices: Voids or valleys between individual strands in a conductor or between insulated conductors in a multiconductor cable.
Ionization Voltage (Corona Level): The minimum value of falling rms voltage which sustains electrical discharge within the vacuous or gas-filled spaces in the cable construction or insulation.
Irradiation: In insulations, the exposure of the material to high energy emissions for the purpose of favorably altering the molecular structure.
Jack: A plug-in type terminal widely used in an electronic apparatus for temporary connections.
Jacket: An outer protective sheath over primary insulation, braids, shields, cable components or over the cable itself. In fiber optics, a covering, over a fiber, bundle of fibers or cable which protects against the environment.
JAN Specification: Joint Army-Navy specification (replaced by current Military Specifications).
Jumper: An assembly of twisted pairs without connectors, used to join telecommunications circuits/links at the cross connect.
Junction: A point in a circuit where two or more wires are connected.
Keying: The mechanical feature of a connector system that guarantees correct orientation of a connection, or prevents the connection to a jack, or to an optical fiber adapter of the same type intended for another purpose.
Kynar®: Pennwalt trade name for polyvinylidene fluoride. Typically used as insulation for wire wrap wire.
Lacing and Harnessing: A method of grouping wires by securing them in bundles of designated patterns.
Lacquer: A liquid resin or compound applied to textile braid to prevent fraying, moisture absorption, etc.
Laminated Tape: A tape consisting of two or more layers of different materials bonded together.
Laser Diode: (fiber optic) A semiconductor diode that, when pulsed, a laser diode emits coherent light.
Launch Angle: (fiber optic) The angle between the radiation vector and the axis of the fiber or fiber bundle.
Lay: The length measured along the axis of a wire or cable required for a single strand (in stranded wire) or conductor (in cable) to make one complete turn about the axis of the conductor or cable.
Layer: Consecutive turns of a coil lying in a single plane.
Leaching and Non-Leaching: In a leaching wire, the plasticizer will migrate when exposed to heat. A non-leaching wire will retain its plasticizer under extreme temperature conditions and remain flexible after baking.
Lead: A wire, with or without terminals, that connects two points in a circuit.
Lead-Cured: A cable that is cured or vulcanized in a metallic lead mold.
Lead Dress: The placement or routing of wire and component leads in an electrical circuit.
Lead-in: The conductor or conductors that connect the antenna proper to electronic equipment.
Leakage Current: The undesirable flow of current through or over the surface of an insulation.

Glossary

Life Cycle: A test to determine the length of time before failure in a controlled, usually accelerated, environment.
Light Commercial Building: A building or portion thereof that is intended for use with one to four (1-4) non-residential exchange access lines per tenant.
Light-Intensity Ratio: (fiber optic) Ratio of input light intensity to the output light intensity.
Light Source: (fiber optic) An object capable of emitting light. In fiber optics, the light source is normally an LED or a laser.
Lightguide: (fiber optic) A flexible bundle of fibers used to transmit light.
Lightwave Communications: (fiber optic) Communications using light to carry the information.
Limits of Error: The maximum deviation (in degrees of percent) of a thermocouple or thermocouple extension wire from standard emf-temperature to be measured.
Limpness: The ability of a cable to lay flat or conform to a surface.
Line Balance: The degree to which the conductors of a cable are alike in their electrical characteristics with respect to each other, to other conductors and to ground.
Line Drop: A voltage loss occurring between any two points in a transmission line, due to the resonance, reactance or leakage of the line.
Line Loss: The total of the various energy losses occurring in a transmission line.
Line Voltage: Voltage existing in a cable or circuit.
Link: An assembly of telecommunications facilities between two points, not including terminal equipment.
Listed: Equipment included in a list published by an organization, acceptable to the authority having jurisdiction, that maintains periodic inspection of production of listed equipment, and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.
Local Area Network (LAN): A geographically limited communications network intended for the local transport of data, video and voice.
Longitudinal Shield: A tape shield, flat or corrugated, applied longitudinally with the axis of the core being shielded.
Longitudinal Wrap: Tape applied longitudinally with the axis of the core being covered.
Loop Resistance: The total resistance of two conductors measured round-trip from one end. Commonly used term in the thermocouple industry.
Looping-in: Wiring method which avoids tee joints by carrying the conductor or cable to and from the point to be supplied.
Loss: Energy dissipated without accomplishing useful work.
Loss Factor: The product of the dissipation and dielectric constant of an insulating material.
Lossy Line: A cable having large attenuation per unit of length.
Low-Loss Dielectric: An insulating material that has a relatively low dielectric loss, such as polyethylene or Teflon®.
Low-Noise Cable: Cable configuration specially constructed to eliminate spurious electrical disturbances caused by capacitance changes or self-generated noise induced by either physical abuse or adjacent circuitry.
Low Tension: Low voltage, as applied to ignition cable.
Lug: Termination, usually crimped or soldered to the conductor, with provision for screwing on to the terminal.
m: Meter.
Magnet Wire: Insulated wire intended for use in windings on motor, transformer and other coils for electromagnetic devices.
Magnetic Field: The region within which a body or current experiences magnetic force.
Magnetic Flux: The rate of flow of magnetic energy across or through a surface (real or imaginary).
Magnetic Noise: Caused by change in current level, e.g. ac powerline (creates magnetic field around the cable) this magnetic field causes the magnetic noise.
Main Cross-Connect: A cross-connect for 1st level backbone cables, entrance cables and equipment cables.
Marker Tape: A tape laid parallel to the conductors under the sheath in a cable, imprinted with the manufacturer's name and the specification to which the cable is made.
Master Antenna Television (MATV): A combination of components providing multiple television receiver operations from one antenna or group of antennas normally on a single building.
Material Scattering Loss: (fiber optics) Loss due to fluctuations in the refractive index and to inhomogeneities in material composition and temperature.
Media, Telecommunications: Wire, cable or conductors used for telecommunications.
Megarad: A unit for measuring radiation dosage.
Messenger: Supporting member, usually a high-strength steel wire, used to suspend aerial cable. The messenger may be an integral part of the cable, or exterior to it (lashed messenger).
Microbending Loss: (fiber optic) Loss due to small geometrical irregularities along the core-clad interface of the fiber.
Microfarad: One-millionth of a farad, commonly abbreviated m-F.
Micromicrofarad: One-millionth of a microfarad. (uuf, uufd, mmf, mmfd μ‴μ F are common abbreviations.)
Microwave: A short (usually less than 30 cm.) electrical wave.
Mil: A unit used in measuring diameter of a wire or thickness of insulation over a conductor. One-one thousandth of an inch (.001").
Mineral-Insulated: Cable and thermocouple wire consisting of one or more conductors surrounded by magnesium oxide insulation and enclosed in a liquid- and gas-tight metallic sheathing.
Miniature Wire: Insulated conductors of approximately 20-34 AWG.
Mis-Match: A termination having a different impedance than that for which a circuit or cable is designed.
Mode: One of the components of a general configuration of a propagating wave front.
Modem: Device which places and receives data signals over a common carrier's communication facility.
Modular Jack: This term is outmoded; see *Outlet/Connector, Telecommunications.*
Modular Plug: A telecommunications connector for wire or cords per the Part 68 Rules. A modular plug can have 6 or 8 contact positions, but not all the positions need be equipped with contacts.
Modulation: A process whereby certain characteristics of a wave, often called the carrier, are varied or selected in accordance with a modulating function.
Modulus of Elasticity: The ratio of stress to strain in an elastic material.
Moisture Absorption: The amount of moisture, in percentage, that a material will absorb under specified conditions.
Moisture Resistance: The ability of a material to resist absorbing moisture from the air or when immersed in water.
Molded Plug: A connector molded on either end of a cord or cable.
Monomer: The basic chemical unit used in building a polymer.
Motor Lead Wire: Wire which connects to the fragile magnet wire found in coils, transformers and stator or field windings.
Multiconductor: More than one conductor within a single cable complex.
Multimode Optical Fiber: An optical fiber that will allow many bound modes to propagate. The fiber may be either a graded-index or step-index fiber. See also: *Optical Fiber Cable.*
Multiple Conductor Cable: A combination of two or more conductors cabled together and insulated from one another and from sheath or armor where used.
Multiple Conductor Concentric Cable: An insulated central conductor with one or more tubular stranded conductors laid over it concentrically and insulated from one another.
Multiplexing: Simultaneous transmission of two or more messages over the same cable pair.
Mutual Capacitance: Capacitance between two conductors when all other conductors are connected together to shield and ground.
Mylar®: DuPont trademark for polyester film.
Nanometer (nm): One billionth of a meter (10^{-9} meter).
Nanosecond: One billionth of a second (10^{-9} seconds).
National Electric Code (NEC): A set of regulations governing construction and installation of electrical wiring and apparatus in the United States, established by the American National Board of Fire Underwriters.
Neoprene: A synthetic rubber with good resistance to oil, chemical and flame. Also called polychloroprene.
Noise: In a cable or circuit, any extraneous signal which tends to interfere with the signal normally present in or passing through the system.
Nomex®: DuPont trademark for a temperature-resistant, flame-retardant nylon.
Non-Contaminating: Type of PVC jacket material whose plasticizer will not migrate into the dielectric of a coaxial cable and thus avoids contaminating and destroying the dielectric.

Glossary

Nylon: Thermoplastic with good chemical and abrasion resistance.
NVP: Nominal Velocity of Propagation.
Off Center: Conductor displaced within the cross-section of its insulation.
Offgassing: Percentage of a specified gas released during the combustion of insulation or jacketing material.
Ohm: A unit of electrical resistance.
Oil Aging: Cable aged in an accelerated manner by placement in an oil bath and heated to a pre-set temperature for a stated time.
Oil-Filled Cable: A self-contained pressure cable in which the pressure medium is low viscosity oil having access to the insulation.
Opaque: (fiber optic) Not permitting the passage of light.
Open Cell: Foamed or cellular material with cells which are generally interconnected.
Optical Communication Cable: (fiber optic) Fiber with a protective jacket around it.
Optical Conductors: (fiber optic) Materials which offer a low optical attenuation to transmission of light energy.
Optical Fiber Cable: An assembly consisting of one or more optical fibers.
Optical Fiber Duplex Adapter: A mechanical media termination device designed to align and join two duplex connectors.
Optical Fiber Duplex Connector: A mechanical media termination device designed to transfer optical power between two pairs of optical fibers.
Optical Waveguide: (fiber optic) A fiber used for optical communications. Analogous to a waveguide used for microwave communications.
Oscillatory Surge: A surge which includes both positive and negative polarity values.
Outgassing: The dissipation of gas from a dielectric evidencing decomposition.
Outlet Box, Telecommunications: A metallic or nonmetallic box mounted within a wall, floor or ceiling and used to hold telecommunications outlet/connectors or transition devices.
Outlet/Connector, Telecommunications: A connecting device in the work area on which horizontal cable terminates.
Overall Diameter: Finished diameter over wire or cable.
Overcoat Conductor: A stranded conductor made from individual strands of tin-coated wire stranded together, and then given an overall tin coat.
Overlap: The amount the trailing edge laps over the leading edge of a spiral tape wrap.
Oxygen Index: Percentage of oxygen necessary to support combustion in a gas mixture.
Ozone: Reactive form of oxygen, typically found around electrical discharges and present in the atmosphere in small quantities.
Packing Fraction: (fiber optic) The ratio of active cross-sectional area of fiber core, or cores, to the total end surface of the fiber, or fiber bundle.
Pair: Two insulated wires of a single circuit associated together, also known as a "balance" transmission line.
Parallel Pair: A duplex construction of two insulated conductors laid parallel and then covered overall with a braid or jacket.
Parallel Stripe: A stripe applied longitudinally on a wire or cable parallel to the axis of the conductor.
Patch Cord: A length of cable with connectors on one or both ends used to join telecommunications links/circuits at the cross-connect.
Patch Cord Cable: Bulk cable used in the manufacture of patch cords.
Patch Panel: A cross-connect system of mateable connectors that facilitates administration.
Pathway: A facility for the placement of telecommunications cable. Synonym: *Raceway.*
Pay-Off: The process of feeding a cable or wire from a bobbin, reel or other package.
Percent Plating: Quantity of plating on a conductor expressed as a percentage by weight.
Percentage Conductivity: Conductivity of a material expressed as a percentage of that of copper.
Periodicity: The uniformly spaced variations in the insulation diameter of a transmission cable that result in reflections of a signal, when its wavelength or a multiple thereof is equal to the distance between two diameter variations.
Permittivity: See *Dielectric Constant.*
Phase: An angular relationship between waves.
Phase Shift: A change in the phase relationship between two alternating quantities.
Photodetector (Receiver): Converts light energy to electrical energy.
Pick: Distance between two adjacent crossover points of braid filaments. The measurement in picks per inch indicates the degree of coverage.
Picofarad: One-millionth of one-millionth of a farad. A micromicrofarad or picofarad (abbreviation pf). (See μμ F).
Pigtail Wire: Fine-stranded, extra-flexible, rope-lay lead wire attached to a shield for terminating purposes.
Pitch: In flat cable, the nominal distance between the index edges of two adjacent conductors.
Pitch Diameter: Diameter of a circle passing through the center of the conductors in any layer of a multiconductor cable.
Plain Conductor: A conductor consisting of only one metal.
Plain Weave: A weave used on woven cables. Threads between the wires act as binders and give the cable lateral stiffness and linear flexibility. Also called Standard and Square Weave.
Planetary Cabler: A cabler capable of laying down any number of shielded, overbraided or jacketed singles, pairs, called groups, or any combination of them in sequence.
Planetary Twister: A twisting machine whose payoff spools are mounted in rotating cradles that hold the axis of the spool in a fixed direction as the spools are revolved so no twist is built up in each wire.
Plastic Deformation: Change in dimensions under load that is not recovered when the load is removed.
Plasticizer: A chemical agent added to plastics to make them softer and more pliable.
Plenum: The air return path of a central air handling system, either ductwork or open space over a suspended ceiling.
Plenum Cable: Cable approved by a recognized agency such as UL for installation in plenums without the need for conduit.
Plug: The part of the two mating halves of a connector which is moveable when not fastened to the other mating half.
Ply: The number of individual strands or filaments twisted together to form a single thread.
Point-to-Point: A type of connection established between two specific locations, as between two buildings.
Point-to-Point Wiring: An interconnecting technique wherein the connections between components are made by wires routed between connecting points.
Polarization: The orientation of a flat cable or a rectangular connector.
Polishing: (fiber optic) Act of smoothing ends of fibers to an 'optically smooth' finish, generally using abrasive.
Polyester: Polyethylene terephthalate, used extensively as a moisture-resistant cable core wrap.
Polyethylene: A thermoplastic material having excellent electrical properties.
Polyhalocarbon: A general name for polymers containing halogen atoms. The halogens are fluorine, chlorine, bromine and iodine.
Polymer: A material of high molecular weight formed by the chemical union of monomers.
Polyolefin: Any of the polymers and copolymers of the ethylene family of hydrocarbons.
Polypropylene: A thermoplastic similar to polyethylene but stiffer and having higher softening point (temperature); excellent electrical properties.
Polyurethane: Class of polymers known for good abrasion and solvent resistance (may be applied in solid or cellular form).
Porosity: Multiple voids in an insulation cross-section.
Potting: The sealing of a cable termination or other component with a liquid which thermosets into an elastomer.
Power Cables: Cables of various sizes, construction and insulation, single or multi-conductor designed to distribute primary power to various types of equipment.
Power Factor: The ratio of resistance to impedance. The ratio of the actual power of an alternating current to apparent power. Mathematically, the cosine of the angle between the voltage applied and the current resulting.
Pre-Bond: Stranded wire which has been fused, topcoat-tinned or overcoat-tinned.
Prewiring: Wiring installed
- Before walls are enclosed or finished.
- In anticipation of future use or need.

Primary: The transformer winding which receives the energy from a supply circuit.
Primary Insulation: The first layer of non-conductive material applied over a conductor, whose prime function is to act as electrical insulation.
Primary Protection: The minimum protection required on all exposed facilities to comply with NEC requirements.
Primary Wiring: A printed circuit intended to provide point-to-point electrical connections.
Programming: Ability to select various circuit patterns by interconnecting appropriate contacts on one side of a connector plug or panel.
Propagation Delay: Time delay between input and output of signal.

Glossary

Propagation Time: Time required for a wave to travel between two points on a transmission line.
Protocol: A set of rules for communicating.
Proximity Effect: Nonuniform current distribution over the cross-section of a conductor caused by the variation of the current in a neighboring conductor.
Pull Box: A device to access a raceway used to facilitate placing of wire or cables.
Pull Cord/Pull Wire: Cord or wire placed within a raceway and used to pull wire and cable through the raceway.
Pull Strength: See *Pull Tension.*
Pull Tension: The maximum pulling force that can be safely applied to a cable without damage.
Pulling Eye: A device used to pull cable into or from a duct.
Pulse: Energy which changes abruptly from an intensity to another. May be light energy or electrical energy.
Pulse Cable: A type of coaxial cable constructed to transmit repeated high-voltage pulses without degradation.
Polyvinyl Chloride (PVC): A general-purpose thermoplastic widely used for wire and cable insulations and jackets.
Quad: A series of four separately insulated conductors, generally twisted together in pairs. Also, a series-parallel combination of transistors with increased reliability because failure of one transistor will not disable the entire circuit.
Quadders: Three-bay machines which can twist four wires together and cable braided and shielded wires with varying lay lengths.
Raceway: Any channel designed for holding wires or cables, e.g. conduit, electrical metallic tubing, sleeves, slots, underfloor raceways, cellular floors, surface raceways, lighting fixture raceways, wireways, cable troughs, busways, auxiliary gutters and ventilated flexible cableways. Synonym: *Pathway.*
Rack: See: *Cable Rack.*
Radio Frequency: The frequencies in the electromagnetic spectrum that are used for radio communications.
Random Winding: A winding in rotating equipment wherein the wires do not lie in an even pattern.
Reactance: The opposition offered to the flow of alternating current by inductance or capacitance of a compound or circuit.
Red Plaque: A powdery, brown-red growth found on silvercoated copper conductors and shield braids.
Redraw: The consecutive drawing of wire through a series of dies to reach a desired wire size.
Reducing Joint: A joint between two lengths of cable where the conductors are not the same size.
Reel: A revolvable flanged device made of wood or metal, used for winding flexible metal wire or cable.
Reflection: (fiber optic) Change in direction of a light wave or ray.
Reflection Loss: The part of a signal which is lost due to reflection of power at a line discontinuity.
Refraction: (fiber optic) The bending of lightwaves or rays as they go from one material to another due to the difference in velocities in the materials.
Reinforced Sheath: The outermost covering of a cable that has cable sheath constructed in layers with the addition of a reinforcing material, usually a braided fiber, molded in place between layers.
Remanence: The magnetic induction that remains in a magnetic circuit after the removal of an applied magnetomotive force.
Repeater: A device which consists of a transmitter and a receiver or transmitter, used to regenerate a signal to increase the system transmission length.
Resistance: A measure of the difficulty in moving electrical current through a medium when voltage is applied. It is measured in Ω.
Resistive Conductor: A conductor with high electric resistance.
Retractile Cord: A cord having specially treated insulation or jacket so that it will retract.
Return Wire: A ground wire or the negative wire in a direct-current circuit.
Ribbon Cable: A flat cable of individually insulated conductors lying parallel and held together by means of adhesive or woven textile yarn.
Ridge Marker: One or more ridges running laterally along the outer surface of a plastic-insulated wire for purposes of identification.
Rigid Bay: Cabling equipment that maintains component sequence, and can produce cables with distinct layers.
Rigid Coaxial Cable: Nonflexible coaxial cable, usually a metal tube armored coaxial cable.
Ring Tongue: A solderless terminal that connects wire to a stud.
Ringing Out: Locating or identifying specific conductive paths by passing current through selected conductors.
Rip-Cord: 1.) Two or more insulated conductors in a parallel configuration which may be separated to leave the insulation of each conductor intact. 2.) A small filament cord used to rip through the outer cable sheath.
RoHS (Restriction on Hazardous Substances): European Union directive that restricts use of heavy metal substances.
Rope Concentric: A group of standard conductors assembled in a concentric manner.
Rope Lay Conductor: A conductor composed of a central core surrounded by one or more layers of helically laid groups of wires.
Rope Unilay: A group of stranded conductors assembled in a unilay manner.
Round Wire Shields: Shields constructed from bare, tinned or silver-plated copper wire that include braided, spiral and reverse spiral.
Routers: A device that determines how to forward a packet toward its destination, based on tables that indicate the costs, congestion status and other factors associated with possible routes. Also called a level 3 relay or an intermediate system.
Rubber (Wire Insulation): Term used to describe wire insulations made of thermosetting elastomers; occurs naturally or may be made synthetically.
Rulan®: DuPont's trade name for their flame-retardant polyethylene insulating material.
Screen: A shield placed over the entire core.
Secondary Insulation: A nonconductive material that protects the conductor against abrasion and provides a second electrical barrier.
Segmental Conductor: A stranded conductor consisting of three or more stranded conducting elements, each element having approximately the shape of the sector of a circle, assembled to give a substantially circular cross-section.
Selenium Cure: Process used to cure neoprene and rubber jacketed wires and cables.
Self-Extinguishing: Characteristic of a material whose flame is extinguished after the igniting flame source is removed.
Semi-Conducting Jacket: A jacket having a sufficiently low resistance so that its outer surface can be kept at substantially ground potential.
Semi-Rigid: A cable containing a flexible inner core and a relatively inflexible sheathing.
Semi-Solid: An insulation cross-section having a partially open space between the conductor and the insulation perimeter.
Separator: A layer of insulating material which is placed between a conductor and its dielectric between a cable jacket and the components it covers, or between various components of a multiple-conductor cable.
Series Circuit: A circuit in which the components are arranged end to end to form a single path for current.
Serve: A filament or group of filaments such as fibers or wires, wound around a central core.
Serving: A wrapping applied over the core of a cable or over a wire.
Sheath: See *Cable Sheath.*
Shield: In cables, a metallic layer placed around a conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires or external fields.
Shield Coverage: Amount of outer cable covered by the shielding material.
Shield Effectiveness: The ability of a shield to screen out undesirable signals.
Shielded Line: A transmission line whose elements confine propagated radio waves to an essentially finite space inside a tabular conducting surface called the sheath, thus preventing the line from radiating radio waves.
Shielded-Type Cable: A cable in which the surface of the insulation is at ground potential.
Shunt Wire: A conductor joining two parts of an electric circuit to divert part of the current.
Signal: A current used to convey information, either digital, analog, audio or video.
Silicone: A material made from silicon and oxygen. Can be in thermosetting elastomer or liquid form. The thermosetting elastomer form is noted for high heat resistance.
Silicone Treating: A silicone liquid treatment applied to insulated conductors to allow for easy jacket stripping.
Sine Wave: A wave that can be expressed as the sine of a linear function of time, or space or both.
Single-ended: Unbalanced, such as grounding one side of a circuit or transmission line.
Single-Faced Tape: Fabric tape finished on one side with a rubber or synthetic compound.
Singlemode Fiber: A fiber wave guide in which only one mode will propagate. The fiber has a very small core diameter of approximately 8mm. It permits signal transmission at extremely high bandwidths and is generally used with laser diodes.

Glossary

Sizing: Applying a material to a surface to fill pores.
Skeleton Braid: Widely separated braid of fiber copper or steel, used to hold core together, for reinforcing jacket or for shielding.
Skew Rays: A ray that does not intersect the fiber axis. Generally, a light ray that enters the fiber core at a very high angle.
Skim Tape: Filled tape coated on one or both sides with a thin film of uncured rubber or synthetic compound to produce a coating suitable for vulcanization.
Skin Effect: The tendency of alternating current, as its frequency increases, to travel only on the surface of a conductor.
Sleeve: A braided, knitted or woven tube used over wires or components as insulation tubing. Also called Sleeving.
Solid Conductor: A conductor consisting of a single wire.
Source Coupling Loss: (fiber optic) Loss of light intensity as light from source passes into fiber.
Space, Telecommunications: An area used for housing the installation and termination of telecommunications equipment and cable, e.g. telecommunications closets, work areas and manhole/handholes.
Span: (1.) In flat conductors, distance between the reference edge of the first and the last conductor. (2.) In round conductors, distance between centers of the first and last conductors. (3.) In aerial cable, the distance between poles or support clamps.
Spark Test: A test designed to locate pin-holes in the insulation of a wire or cable by application of a voltage for a very short period of time while the wire is being drawn through the electrode field.
Specific Gravity: The ratio of the density (mass per unit volume) of a material to that of water.
Spectral Bandwidth: The difference between wavelengths at which the radiant intensity of illumination is half its peak intensity.
Spectral Response: (fiber optic) The response of a detector (or a system) over different wavelengths.
Spectrum: Frequencies that exist in a continuous range and have a common characteristic.
Speed of Light (c): 2.998×10^8 meters per second.
Spiral Shield: A metallic shield of fine-stranded wires applied spirally rather than braided.
Spiral Stripe: A color-coding stripe applied helically to the surface of an insulated wire or cable.
Spiral Wrap: The helical wrap of a tape or thread over a core.
Splice: A joining of conductors, generally from separate sheaths.
Splice Closure: A device used to protect a cable or wire splice.
Spread Spectrum: A modulation technique for multiple access, or for increasing immunity to noise and interference.
Standing Wave: The stationary pattern of waves produced by two waves of the same frequency traveling in opposite directions on the same transmission line.
Standing Wave Ratio (SWR): In a transmission line, waveguide, or analogous system, a figure of merit used to express the efficiency of the system in transmitting power.
Star Topology: A topology in which each telecommunications outlet/connector is directly cabled to the distribution device.
Stay Cord: A component of a cable used to anchor the cable ends at their points of termination and to keep any pull of the cable from being transferred to the electrical connections.
Step Index Fiber: (fiber optic) A multimode fiber consisting of a core of uniform refractive index surrounded by cladding of slightly lower refractive index.
Strand: One of the wires of any stranded conductor.
Strand Lay: The distance of advance of one strand of a spirally stranded conductor, in one turn, measured axially.
Stranded Conductor: A conductor composed of groups of wires twisted together.
Strap: Square- or rectangular-section bare conductor manufactured and used in coil form.
Strip: To remove insulation from a cable.
Structural Return Loss: Backward reflected energies from uneven parts of the cable structure causing impedance variations are termed structural return loss.
Surface Resistivity: The resistance of a material between two opposite sides of a unit square of its surface. It is usually expressed in Ω.
Surge: A temporary and relatively large increase in the voltage or current in an electric circuit or cable. Also called Transient.
Suspended Ceiling: See *False Ceiling.*
Sweep-test: Pertaining to cable, the frequency response is verified by generating an rf voltage whose frequency is swept repeatedly through a given frequency range at a rapid constant rate while the cable response is observed.
Take-Up: The process of accumulating wire or cable onto a reel, bobbin or some other type of pack. Also, the device for pulling wire or cable through a piece of equipment or machine.
Tank Test: A voltage dielectric test in which the test sample is submerged in water and voltage is applied between the conductor and water as ground.
Tape: A relatively narrow woven or cut strip of fabric, paper or film material.
Tape Cable: A form of multiple conductor consisting of parallel metal strips imbedded in insulating material.
Tape Wrap: A spirally applied tape over an insulated or uninsulated wire.
Taped Insulation: Insulation of helically wound tapes applied over a conductor or over an assembled group of insulated conductors.
Taping: Process of insulating continuous length, large diameter wires with tape of non-extrudable materials.
TB: Terminal Block
Tear Strength: The force required to initiate or continue a tear in a material under specified conditions.
Teflon®: DuPont company trade name for fluorocarbon resins. FEP, PFA and TFE are typical materials.
Tefzel®: DuPont trade name for a fluorocarbon material typically used as a wire wrap insulation.
Telecommunications: The communication of information over some distance, including interbuilding and intrabuilding distances.
Telecommunications Closet: See *Closet, Telecommunications.*
Telecommunications Entrance Facility: See *Entrance Facility, Telecommunications.*
Telecommunications Entrance Point: See *Entrance Point, Telecommunications.*
Telecommunications Entrance Room or Space: See *Entrance Room* or *Space, Telecommunications.*
Telecommunications Equipment Room: See *Equipment Room, Telecommunications.*
Telecommunications Grounding Busbar: A common point of connection for telecommunications system and bonding to ground, which is located in the telecommunications closet or equipment room.
Telecommunications Infrastructure: See *Infrastructure, Telecommunications.*
Telecommunications Outlet/Connector: See *Outlet/Connector, Telecommunications.*
Telemetry Cable: Cable used for transmission of information from instruments to the peripheral recording equipment.
Temperature Rating: The maximum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.
Tensile Strength: The pull stress required to break a given specimen.
Tension Member: A member included in a fiber cable to add tensile strength.
Terminal: (1) A point at which information may enter or leave a communications network; (2) the input-output associated equipment; or (3) a device by means of which wires may be connected to each other.
Termination Hardware: This term is outmoded. See *Connecting Hardware.*
Test Lead: A flexible, insulated lead wire used for making tests, connecting instruments to a circuit temporarily or for making temporary electrical connections.
Textile Braid: Any braid made from threads of cotton silk, or synthetic fibers.
Thermal Aging: Exposure to a thermal condition or programmed series of conditions for predescribed periods of time.
Thermocouple Lead Wire: An insulated pair of wires used from the couple to a junction box.
Thermoplastic: A material which softens when heated and becomes firm on cooling.
Thermoset: A material which hardens or sets when heat is applied, and which, once set, cannot be resoftened by heating. The application of heat is called "curing."
Three-Phase Current: Current delivered through three wires, with each wire serving as a return for the other two.
Three-Phase Three-Wire System: An alternating current supply system comprising three conductors over which three-phase power is sent.
Three-Wire System: A d-c or single-phase a-c system comprising three conductors, one of which is maintained at a potential midway between the potential of the other two.
Tin Overcoat (TOC): Tinned copper wire, stranded, then coated with pure tin.

Glossary

Tinsel Wire: A low-voltage stranded wire, with each strand a very thin conductor ribbon spirally wrapped around a textile yarn.
Topcoat: Bare (untinned) copper wire, stranded then coated with pure tin.
Topology: The physical or logical arrangement of a telecommunications system.
Tracer: A means of identifying polarity.
Transducer: A device for converting mechanical energy to electrical energy.
Transfer Impedance: The ratio of the source voltage of the wires inside the cable to the shield current of the cable or connectorized cable assembly.
Transition Point: A location in the horizontal cabling where flat undercarpet cable connects to round cable.
Transmission: Transfer of electric energy from one location to another through conductors or by radiation or induction fields.
Transmission Cable: Two or more transmission lines. See *Transmission Line.*
Transmission Line: An arrangement of two or more conductors or a wave guide used to transfer signal energy from one location to another.
Transmission Loss: The decrease or loss in power during transmission of energy from one point to another. Usually expressed in decibels.
Transmission Media: The various types of wire and optical fiber cable used for transmitting voice or data signals. Typically, wire cable includes twisted pair, coaxial and twinaxial. Optical fiber cable includes single, dual, quad, stranded and ribbon (Al).
Transmitter: The electronic package that injects an electrical signal or light signal over the transmission medium.
Transparent: (fiber optic) Transmitting rays of light so that objects can be seen through the material.
Transposition: Interchanging the relative positions of wires to neutralize the effects of induction to or from other circuits or, to minimize interference pickup by the lead-in during reception.
Tray Cable: A factory-assembled multiconductor or multipair control cable approved under the National Electrical Code for installation in trays.
Triaxial: A three-conductor cable with one conductor in the center, a second circular conductor shield concentric with the first, and third circular conductor shield insulated from and concentric with the first and second, usually with insulation, and over a braid or impervious sheath overall.
Triboelectric Noise: Noise generated in a shielded cable due to variations in capacitance between shielding and conductor as the cable is flexed.
Triple Cable: A cable composed of three insulated single conductors and one bare conductor, all twisted together. It may or may not have a common covering of binding.
True Concentric: A cable in which each successive layer has a reversed direction of lay from the preceding layer.
Trunk Cable: See *Feeder Cable.*
Tubing: A tube of extruded non-supported plastic material.
Twin Cable: A pair of insulated conductors twisted, sheathed or held together mechanically and not identifiable from each other in a common covering.
Twin Coaxial: A configuration containing two separate, complete coaxial cables laid parallel or twisted around each other in one complex.
Twin Line: A transmission line which has a solid insulating material, in which the two conductors are placed in parallel to each other.
Twinner: A device for twisting together two conductors.
Twisted Pairs: A cable composed of two small insulated conductors twisted together without a common covering.
Unbalanced Line: A transmission line in which voltages on the two conductors are unequal with respect to ground.
Unidirectional Concentric Stranding: A stranding where each successive layer has a different lay length, thereby retaining a circular form without migration of strands from one layer to another.
Unidirectional Stranding: A term denoting that in a stranded conductor, all layers have the same direction of lay.
Unilay Strand: A conductor constructed with a central core surrounded by more than one layer of helically-laid wires, with all layers having a common length and direction of lay.
Velocity of Propagation (VP): The speed of an electrical signal down a length of cable compared to speed in free space expressed as a percent. It is the reciprocal of the square root of the dielectric constant of the cable insulation.
Volt: A unit of electromotive force.
Voltage: The term most often used in place of electromotive force, potential difference or voltage drop to designate the electric pressure that exists between two points and is capable of producing a current when a closed circuit is connected between two points.
Voltage Drop: The voltage developed across a component or conductor by the current in the resistance or impedance of the component or conductor.
Voltage Rating: The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.
Voltage Standing Wave Ratio (VSWR): The ratio of the maximum effective voltage to the minimum effective voltage measured along the length of a mis-matched radio frequency transmission line.
Volume Resistivity (Specific Insulation Resistance): The electrical resistance between opposite faces of a 1 cm. cube of insulating material, commonly expressed in Ω/centimeter.
Vulcanization: A chemical reaction in which the physical properties of an elastomer are changed by reacting it with sulfur or other cross-linking agents.
Wall Thickness: The thickness of the applied insulation or jacket.
Water Absorption: A test to determine the water absorbed by a material after a given immersion period.
Waterblocked Cable: A cable constructed with no internal voids in order to allow no longitudinal water passage under a given pressure.
Watt: A unit of electric power.
Wave Form: A graphical representation of a varying quantity. Usually, time is represented on the horizontal axis, and the current or voltage value is represented on the vertical axis.
Wave Length: The distance, measured in the direction of propagation, of a repetitive electrical pulse or waveform between two successive points that are characterized by the same phase of vibration.
Wicking: The longitudinal flow of a liquid in a wire or cable due to capillary action.
Wire: A conductor, either bare or insulated.
Wire and Cable Marker: Device for identification marking of wire and cable.
Wire and Cable Tying, Clamping, and Harnessing Devices: Tying tapes, lacing cords and flexible sleevings which are used for wire and cable bundling, harnessing and holding. Other devices include plastic ties or clamps, spiral-cut plastic tubing and plastic U-shaped trays or ducts.
Wire and Lead Cutters: Tools for cutting that range from plier-type cutters to semiautomatic or fully automatic machines integrated with other wire processing operations such as stripping, forming and terminating.
Wire Gauge: A system of numerical designation of wire sizes.
Wire Nut: A closed-end splice that is screwed on instead of crimped.
Wire Wrapped Connection: A solderless connection made by wrapping bare wire around a square or rectangular terminal with a power or hand tool.
Wire Wrapping Tools: Portable electric tools and automatic stationary machines used to make solderless wrapped connections of wires to terminals.
Wiring Closet: See *Telecommunications Closet.*
Work Area (Work Station): A building space where the occupants interact with telecommunications terminal equipment.
Wrapper: An insulating barrier applied as a sheet or tape wrapped around a coil periphery.
Yield Strength: The minimum stress at which a material will start to physically deform without increase in load.
Zytel®: DuPont's trade name for nylon resins.

Abbreviations & Acronyms

A-D: Analog to digital conversion
ac: Alternating current
AC: Armored Cable, NEC Article 333 Cable Designation
AC0: Analog Central Office
ACR: Attenuation to Crosstalk Ratio
ADO: Auxiliary Disconnect Outlet
AER: Aerial
AF: Audio frequency
AIA: American Institute of Architects
ALPETH: An aerial telephone cable having an aluminum shield and polyethylene jacket
ALS: A type of cable consisting of insulated conductors enclosed in a continuous, closely fitting aluminum tube
ALVYN: An indoor, riser rated telephone cable having an aluminum shield and vinyl jacket (PVC)
AM: Amplitude Modulation
ANSI: American National Standards Institute
ARPANET: Advanced Research Projects Agency Network
ASCII: American Standard Code for Information Interchange
ASME: American Society of Mechanical Engineers
ASP: A filled, direct burial telephone cable used in areas subject to rodent attack. It consists of a filled cable core, corrugated aluminum shield, corrugated steel tape, flooding compound and polyethylene jacket.
ASTA: United Kingdom approval agency
ASTM: American Society for Testing and Materials
AWG: American Wire Gauge
AWM: Appliance wiring material
B & S Gauge: See American Wire Gauge (AWG)
B or BUR: Buried
AWM: Appliance wiring material
BCF: Billion Conductor Feet
BEF: Building Entrance Facility
BER: Bit Error Rate
BIC: Building Industry Consultant
BICSI: Building Industry Consulting Service International
BISDN: Broadband Integrated Services Digital Network
BTU: British Thermal Unit
CA: Cable
CATV: (1) Community Antenna Television; Cable Access Television (2) CATV Cable, NEC Article 820 Cable Designation
CATVP: CATV Plenum Cable, NEC Article 820 Cable Designation
CATVR: CATV Riser Cable, NEC Article 820 Cable Designation
CATVX: CATV Limited Use Cable, NEC Article 820 Cable Designation
CB: Citizens band
C-C: Conductor to conductor capacitance
CCITT: The International Telegraph and Telephone Consultative Committee
CCTV: Closed-circuit television
CDDI: Copper Distributed Data Interface
CDF: Central Distribution Frame
CDO: Community Dial Office
CEBEC: Belgium approval agency; Commite Electrotechnique Belge Service de la Marque
CEE: European standards agency; International Commission on Rules for the Approval of Electrical Equipment
CEN: European Committee for Standardization
CENELEC: European Committee for Electrotechnical Standardization
CFC: Communications Flat Cable
ckt: Circuit
CLT or CLOS: Closet
CL2: Class 2 Circuit Cable, NEC Article 725 Cable Designation
CL2P: Class 2 Circuit Plenum Cable, NEC Article 725 Cable Designation
CL2R: Class 2 Circuit Riser Cable, NEC Article 725 Cable Designation
CL2X: Class 2 Circuit Limited Use Cable, NEC Article 725 Cable Designation
CL3: Class 3 Circuit Cable, NEC Article 725 Cable Designation
CL3P: Class 3 Circuit Plenum Cable, NEC Article 725 Cable Designation
CL3R: Class 3 Circuit Riser Cable, NEC Article 725 Cable Designation
CL3X: Class 3 Circuit Limited Use Cable, NEC Article 725 Cable Designation
CM: Communications Cable, NEC Article 800 Cable Designation
CMA: Circular Mil Area
CMP: Communication Cable Plenum, NEC Article 800 Cable Designation
CMR: Communications Cable Riser, NEC Article 800 Cable Designation
CMX: Communications Limited Use Cable, NEC Article 800 Cable Designation
CO: Central Office
codec: Coder decoder
COE: Central Office Equipment
COS: Cooperation for Open Systems
COSINE: Cooperation for Open Systems Interconnection Network in Europe
COT: Central Office Terminal
CPC: Customer Premises Communication
CPE: (1) Chlorinated Polyethylene (2) Customer Premises Equipment or Customer Provided Equipment
CPU: Central Processing Unit
CRT: Cathode Ray Tube
CSMA/CD: Carrier Sense Multiple Access/ Collision Detection
CSPE: Chlorosulfonated Polyethylene
CTR: Certified Test Report
CV: Continuous vulcanization
D-A: Digital to analog conversion
DAF: Dedicated Access Facility
dB: Decibel
DBS: Direct Broadcast Satellite
dc: Direct current
DCE: Data Circuit-Terminating Equipment
DCO: Digital Central Office
DCR: Direct Current Resistance
DD: Distribution Designer or Distribution Device
DEMARC: Demarcation point
DEMKO: Approval agency of Denmark
DGM: Data Grade Medium
DISA: Defense Information Systems Agency (formerly DCA)
DISI: Directory Information Services Infrastructure
DIST: District
DRT: Plastic range and dryer cord (CSA)
DTE: Data Terminal Equipment
DVD: Digital Versatile Disc
DW: Distribution Wire
E: Symbol for voltage. Usually used to represent direct voltage or the effective (root-mean-square) value of an alternating voltage
EFTS: Electronic funds transfer system
EIA: Electronic Industries Association
EMF: Electromotive Force
EMI: Electromagnetic Interference
EMT: Electric Metallic Tubing
EP: Entrance point
EPDM: Ethylene-propylene-diene monomer rubber
EPOS: Electronic Point-Of-Sale
EPR: Ethylene-propylene rubber
ER: Equipment room
ESS: Electronic Switching System
ESTA: Australian approval agency; Electricity Trust of South Australia
ETPC: Electrolytic Tough Pitch Copper
ETV: Educational Television
E/W: Equipped With
EX or EXT: Extension
EXCH: Exchange
f: Frequency
FAA: Federal Aeronautics Administration
FCC: (1) Federal Communications Commission (2) Flat Conductor Cable, NEC Article 328 Cable Designation
FDDI: Fiber Distributed Data Interface
FDM: Frequency-Division Multiplexing
FDR: Feeder
FEP: Fluorinated ethylene propylene
FEXT: Far End Crosstalk
FI: Approval agency of Finland; Electrical Inspectorate
FIPS PUB: Federal Information Processing Standard Publication
FM: Frequency modulation
FOCIS: Fiber Optic Connector Intermateability Standard
FOTP: Fiber Optic Test Procedure
FOTS: Fiber Optics Transmission System
FPL: Power Limited Fire Protective Signaling Circuit Cable, NEC Article 760 Cable Designation
FPLP: Power Limited Fire Protective Signaling Circuit Plenum Cable, NEC Article 760 Cable Designation
FPLR: Power Limited Fire Protective Signaling Circuit Riser Cable, NEC Article 760 Cable Designation
FR-1: A flammability rating established by Underwriter's Laboratories for wires and cables that pass a specially designed vertical flame test
freq: Frequency
FRICC: Federal Research Internet Coordinating Committee (now FNC)
FRPE: Flame Retardant Polyethylene
ft: Foot
FTP: Fire Transfer Protocol
ga: Gauge
gHZ: Gigahertz
grd: Ground
GTO: Gas tube sign and oil-burner ignition cable. 5,000V-15,000V.
H: Designation for intensity of magnetic energy
hc: Handset combination (single-line telephone)
HC: Horizontal cross-connect
hck: Handset combination; key (six-button telephone)
HDPE: High Density Polyethylene
HF: High Frequency

Abbreviations & Acronyms

hh: Handhole
Hi-Pot: A test designed to determine the highest voltage that can be applied to a conductor without breaking through the insulation.
HPD: Rubber- and asbestos-insulated heater cord. No braid on individual conductors but with braid overall. Also made with neoprene insulation and no asbestos or PVC/NBC.
HPN: Two-conductor, neoprene-insulated heater cord. Parallel construction. For use in damp locations.
HSJ: Same as type HS but with #18, #16 and #14 conductors and differing thickness of jacket.
HVAC: Heating, ventilation and air conditioning
Hz: Hertz
i: Symbol used to designate current
IC: Intermediate cross-connect
ICEA: Insulated Cable Engineers Association
IDC: Insulation Displacement Connector
IEC: Internation Electrotechnical Commission
IEEE: Institute of Electrical and Electronics Engineers
IGS: Integrated Gas Spacer Cable, NEC Article 325 Cable Designation
IMSA: International Municipal Signal Association
in: Inch
IRSG: Internet Research Steering Group
IRTF: Internet Research Task Force
IS: International Standard
ISA: Instrument Society of America
ISDN: Integrated Services Digital Network
ISO: International Organization for Standardization
ISOC: Internet Society
ITCO: Independent Telephone Company
ITU-T: International Telecommunications Union - Telecommunications Standardization Section
IW (C): Inside Wiring (cable)
J: Joule
kcmil: One thousand circular mils
KEMA KEUR: Approval agency of the Netherlands
kft: An abbreviation for 1000 ft.
kHz: Kilohertz
Kilo: A numerical prefix denoting 1000 (10^3)
km: Kilometer
KTS: Key Telephone Service
kV: Kilovolt
kVA: Kilovolt Ampere
kW: Kilowatt
LAN: Local Area Network
LASER: Light Amplification by Stimulated Emission of Radiation
LATA: Local Access Transport Area
lbf: Pound force
LBO: Line Buildout
LDPE: Low Density Polyethylene
LEC: Local Exchange Carrier
LED: Light-Emitting Diode
LLDPE: Linear Low Density Polyethylene
LOCA: Loss of Coolant Accident
locap: Low-capacitance, low-loss paired cable
MAC: Moves, Adds and Changes
MAP: Manufacturing Automation Protocol
MATV: Master Antenna Television
Mbps: Megabits per second
MC: (1) main cross-connect (2) Metal Clad Cable, NEC Article 334 Cable Designation
MCM: One thousand circular mils
MDF: Main Distribution Frame
MDPE: Medium Density Polyethylene
Meg or Mega: A numerical prefix denoting 1,000,000 (10^6)
M/G: Motor/Generator Set
MH: Manhole
Mho: The unit of conductivity. The reciprocal of an ohm.
MHz: Megahertz
MI: Mineral Insulated Cable, NEC Article 330 Cable Designation
Micro: A numerical prefix denoting one-millionth (10^6)
MIL STD: Military Standard
MILNET: Military Network
MLT: Multi-Level Threshold
mm: Millimeter
Modem: Modulator demodulator
MTT: Main Telephone Terminal
MTW: Machine Tool Wire
MV: Medium Voltage Cable, NEC Article 326 Cable Designation
MW: Radio hookup wire with polyvinyl insulation and plain or nylon jacket or braid, or shield, 1000V
N: Newton
NAIC: Network Applications and Information Center
NASA: National Aeronautics and Space Administration
NBR: Natural butadiene-acrylonitrile copolymer rubber
NBS: National Bureau of Standards (now NIST)
NEC: National Electrical Code
NEMA: National Electrical Manufacturers Association
NEMKO: Approval agency of Norway
NESC: National Electrical Safety Code
NEXT: Near End Crosstalk
nf: Nanofarad
NFPA: National Fire Protection Association
NI: Network Interface
NID: Network Interface Device
NIST: National Institute of Standards and Technology (formerly NBS)
NIU: Network Interface Unit
nm: Nanometer
NM & NMC: Non Metallic Sheathed Cable, NEC Article 336 Cable Designation
NPLF: Non Power-Limited Fire Protective Signaling Circuit Cable, NEC Article 760 Cable Designation
NPLFP: Non Power-Limited Fire Protective Signaling Circuit Plenum Cable, NEC Article 760 Cable Designation
NPLFR: Non Power-Limited Fire Protective Signaling Circuit Plenum Cable, NEC Article 760 Cable Designation
NRZ: Non Return to Zero
NRZI: Non Return to Zero Inverted
OC: Optical Carrier
ODC: Ozone Depleting Chemical
OP: Outside Plant
OPE: Outside Plant Engineer
OSHA: Occupational Safety and Health Administration
OSI: Open Systems Interconnection
OVE: Approval agency of West Germany; Oesterreichischer Verband fur Elektrotechnik
PABX: Private Automatic Branch Exchange
PAM: Pulse Amplitude Modulation
PAP: A commonly used term for air core (unfilled) direct burial telephone cable with a corrugated aluminum shield
PBX: Private Branch Exchange
PC: Personal Computer
PCB: Printed Circuit Board
P-FEP: General Cable proprietary dielectric material used injunction with FEP.
PCM: Pulse Code Modulation
PCP: A commonly used term for air core (unfilled) direct burial cable with a corrugated copper shield
PE: Polyethylene
pf: Picofarad
PFA: Polyfluoroalkoxy
PIC: A general term for any type of plastic insulated telephone cable
Pico: A numerical prefix denoting one-millionth of one-millionth (10^{-12})
PL: Private Lines
PLSJ: All-rubber, parallel-jacketed, two-conductor, light-duty cord for pendant or portable use in damp locations. 300V.
PLT: (1) Plant (2) Same as PLSJ except thermo-plastic insulation
PLTC: Power Limited Tray Cable, NEC Article 725 Cable Designation
PM: Phase Modulation
POI: Point Of Interface
POSJ: All-rubber, parallel, light duty rip-cord for use on lamps and small appliances, 300V, 60°C
POT: Thermoplastic, parallel, light duty rip-cord. 300V, 60°C to 105°C.
POTS: Plain Old Telephone Service (colloquial)
PP: Polypropylene
PR: Pair
PTFE: Polytetrafluoroethylene
PTSS: Passive Transmission Sub-System
PVC: Polyvinyl Chloride
PVDF: Polyvinylidene Fluoride
R: Symbol for resistance
R-F: Radio-frequency
RCDD: Registered Communication Distribution Designer
REA: Rural Electrification Administration
REP: Repair
RFQ: Request for Quote
RG/U: General utility grade military coaxial cable
RH: Relative humidity
RJ-45: A specific pin-point assignment for an eight position modular telecommunications connector.
RMS: (1) rack mount space (2) Root Mean Squares
RoHS: Restriction on Hazardous Substances
S: Heavy-duty, rubber-insulated portable cord. Stranded copper conductors with separator and individual rubber insulation. Two or more color-coded conductors cabled with filler, wrapped with separator and rubber jacketed overall, 600 Volts.
SAE: Society of Automotive Engineers
SANZ: Standards Association of New Zealand
SBR: Styrene Butadiene Rubber
ScTP: Screened Twisted Pair
SDN: Switched Digital Network

Abbreviations & Acronyms

SE: Service Entrance Cable, NEC Article 338 Cable Designation
SEMKO: Approval agency for Sweden
SFTP: Simple File Transfer Protocol
SI: System Internationale
SJ: Junior hard-service, rubber-insulated pendant or portable cord. Same construction as type S, but 300V. Jacket thickness different.
SJO: Same as SJ, but carolprene, oil-resistant compound outer jacket. Can also be made "water-resistant." 300V, 60°C.
SJT: Junior hard service thermoplastic or rubber-insulated conductors with overall thermoplastic jacket, 300V, 60°C to 105°C.
SJTO: Same as SJT but oil-resistant thermoplastic outer jacket. 60°C.
SMTP: Simple Mail Transfer Protocol
SNA: Systems Network Architecture
SNM: Shielded Non Metallic Sheathed Cable, NEC Article 337 Cable Designation
SNMP: Simple Network Management Protocol
SNR: Signal to Noise Ratio
SO: Hard-service cord, same construction as type S except oil-resistant carolprene jacket, 600V, 60° to 90°C.
SONET: Synchronous Optical Network
SP-1: All rubber, parallel-jacketed, two-conductor light-duty cord for pendant or portable use in damp locations. 300V.
SP-2: Same as SP-1, but heavier construction, with or without third conductor for grounding purposes. 300V.
SP-3: Same as SP-23, but heavier construction for refrigerators or room air conditioners. 300V.
SPC: Stored Program Control
SPG: Single Point Ground
SPT-1: Same as SP-1, except all-thermoplastic. 300V. With or without third conductor for grounding.
SPT-2: Same as SP-2, except all-thermoplastic. 300V. With or without third conductor for grounding.
SPT-3: Same as SP-3, except all-thermoplastic. 300V. With or without third conductor for grounding.
SRD: Portable range or dryer cable. Three or four rubber-insulated conductors with rubber or neoprene jacket, flat or round construction. 300V, 60°C.
SRDT: Same as SRD, except all-thermoplastic with a maximum temperature of 90°C.
SRL: Structural return loss
ST: Hard-service cord, jacketed, same as type S except all-plastic construction, 600V, 60°C to 105°C.
STA: Station
STO: Same as ST but with oil-resistant thermoplastic outer jacket. 600V, 60°C.
STP: Shielded twisted pair
SV: Vacuum cleaner cord, two or three-conductor, rubber-insulated. Overall rubber jacket. For light-duty in damp locations. 300V, 60°C.
SVO: Same as SV except carolprene jacket, 300V, 60°C.
SVT: Same as SV except all-plastic construction. With or without third conductor for grounding purposes only. 300V, 60°C to 90°C.
SW: Station Wire
SWB: Switchboard
SWR: Standing Wave Ratio
SYS: System
TC: (1) Power and Control Tray Cable, NEC Article 340 Cable Designation (2) Telecommunications Closet
TCP: Transmission Control Protocol
TDM: Time-Division Multiplexing
TEL: Telephone
TELCO: Telephone Company
TERM: Terminal or termination
TEW: Canadian Standard Association type appliance wires. Solid or stranded single conductor, plastic-insulated, 600V, 105°C.
TF: Fixture wire, thermoplastic-covered solid or seven strands. 60°C.
TFE: Tetrafluoroethylene
TFF: Same as TF but flexible stranding. 60°C.
THHN: 90°C, 600V nylon jacketed building wire
THW: Thermoplastic vinyl-insulated building wire. Flame-retardant, moisture- and heat-resistant. 75°C. Dry and wet locations.
THWN: Same as THW but with nylon jacket overall. 75°C.
TIA: Telecommunications Industry Association
TOC: Tin Overcoat
TP: Transport Protocol
TP-PMD: Twisted Pair-Physical Medium Dependent
TPDDI: Twisted Pair Distributed Data Interface
TSB: Telecommunications System Bulletin
TT: Telephone Terminal
TTB: Telephone Terminal Board
TTY: Text Telephones
TW: Thermoplastic vinyl-jacketed building wire, moisture-resistant. 60°C.
UCC: Uniform Code Council
UF: Thermoplastic underground feeder and branch circuit cable
UF: Underground Feeder and Branch Circuit Cable, NEC Article 339 Cable Designation
UG: Underground
UHF: Ultra High Frequency, 300 to 3,000 MHz
UL: Underwriter's Laboratories, Inc.
µm: Micron or micrometer
UPC: Universal Packaging Code
UPS: Uninterruptible Power Supply
USE: Underground Service Entrance Cable, NEC Article 338 Cable Designation
UTE: Approval agency for France; Union Technique de l'Electricite
UTP: Unshielded twisted-pair
V: Volt
VDE: West Germany approval agency
VHF: Very High Frequency, 30 to 300 MHz
VP: Velocity of Propagation
VSWR: Volume Standing Wave Radio
VW-1: A flammability rating established by Underwriters Laboratories for wires and cables that pass a specially designed vertical flame test, (formerly designated FR-1)
W: Symbol for watt or wattage
WA: Work area
WP: Waterproof Outlet
X: Cross-connect
XLPE: Crosslinked polyethylene
Z: Symbol for impedance

Hook-Up Wire Product Finder

TEMP. °C	VOLTAGE	UL	UL	CSA	MIL	AWG	P/N	STRAND TYPE	PAGE
60	1500*	—	—	—	—	20	C1326	STRANDED	7
60	3000*	—	—	—	—	20	C1319	STRANDED	7
60	5000*	—	—	—	—	18	C1320A	STRANDED	7
60	5000*	—	—	—	—	18	C1321	STRANDED	7
60	10000*	—	—	—	—	18	C1318	STRANDED	7
80	1000	—	—	—	W-76B	24	C7600A	STRANDED	4
80	1000	—	—	—	W-76B	22	C7602A	STRANDED	4
80	1000	—	—	—	W-76B	20	C7604A	STRANDED	4
80	1000	—	—	—	W-76B	18	C7606A	STRANDED	4
80	1000	—	—	—	W-76B	16	C7608A	STRANDED	4
80	1000	—	—	—	W-76B	14	C7610A	STRANDED	4
80	1000	—	—	—	W-76B	12	C7611A	STRANDED	4
80/105	300	1007	1569	TR-64	—	24	C2003A	SOLID	2
80/105	300	1007	1569	TR-64	—	24	C2015A	STRANDED	2
80/105	300	1007	1569	TR-64	—	22	C2004A	SOLID	2
80/105	300	1007	1569	TR-64	—	22	C2016A	STRANDED	2
80/105	300	1007	1569	TR-64	—	20	C2028A	SOLID	2
80/105	300	1007	1569	TR-64	—	20	C2040A	STRANDED	2
80/105	300	1007	1569	TR-64	—	18	C2052A	SOLID	2
80/105	300	1007	1569	TR-64	—	18	C2064A	STRANDED	2
80/105	300	1007	1569	TR-64	—	16	C2053A	SOLID	2
80/105	300	1007	1569	TR-64	—	16	C2065A	STRANDED	2
105	600	1015	—	TEW	—	24	C2100A	STRANDED	3
105	600	1015	—	TEW	—	22	C2101A	STRANDED	3
105	600	1015	—	TEW	—	22	C2117A	SOLID	3
105	600	1015	—	TEW	—	20	C2102A	STRANDED	3
105	600	1015	—	TEW	—	20	C2118A	SOLID	3
105	600	1015	—	TEW	—	18	C2103A	STRANDED	3
105	600	1015	—	TEW	—	18	C2119A	SOLID	3
105	600	1015	—	TEW	—	16	C2104A	STRANDED	3
105	600	1015	—	TEW	—	14	C2105A	STRANDED	3
105	600	1015	—	TEW	—	12	C2106A	STRANDED	3
105	600	1015	—	TEW	—	10	C2107A	STRANDED	3

* For intermittent duty only

Multi-Conductor Cable Product Finder

NO. COND.	STRAND TYPE	AWG 28	AWG 24	AWG 22	AWG 20	AWG 19	AWG 18	AWG 16	AWG 14	AWG 12
		P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE
1	SOLID									
	STRANDED		743605 B 169		743601 B 169 743602 B 169 743603 B 169 743604 B 169 C1300 B,R 172		C1201 B,C 175 C1301 B,R 172			
2	SOLID			C2515A F 23 C2676A B 34 C4008A U 9, 43 C4167A F 29 C4408 U 138 E1000S U 134 E1482S U 117 E2000S F 135 E2100S F-P 137 E2482S S 119 E3000S U-P 136 E3482S U-P 121 E3542S F-P 123	C2509A F 164 C4311A C 9	C2754A 9	C0471 U 125 C0472 F 126 C3060 F-P 28 C3110 U-P 17 C3167 F-P 128 C3200 U-P 122 C3240 U-P 127 C3260 F-P 124 C4304A U 118 C4334A F 120 E1030S U 134 E1502S U 117 E2030S F 135 E2200S F-P 137 E2402S U 117 E2502S F 119 E3030S U-P 136 E3502S U-P 121 E3602S F-P 123	C0473 U 125 C0474 F 126 C3168 F-P 128 C3210 U-P 122 C3241 U-P 127 C3270 F-P 124 C4321A U 118 C4344A F 120 E1512S U 117 E2404S U 117 E2522S F 119 E3512S U-P 121 E3612S F-P 123	C0475 U 126 C0491 U 125 C3172 F-P 128 C3220 U-P 122 C3224 U-P 122 C3244 U-P 127 C3280 F-P 124 C4163A F 29 C4324A U 118 C4347A F 120 E1522S U 117 E2406S U 117 E2532S F 119 E3522S U-P 121 E3622S F-P 123	C0476 F 126 C0492 U 125 C3174 F-P 128 C3224 U-P 122 C3246 U-P 127 C3282 F-P 124 C4164A F 29 C4327A U 118 C4348A F 120 E1532S U 117 E2542S F 119 E3532S U-P 121 E3632S F-P 123
2	STRANDED	C6500A B 37	743701 B 170 743704 B 170 743705 B 170 C0740A F 68 C1226A S 173 C1228A F 172 C1356 U 156 C2461A U 11 C2513A F 23 C4152A F 29 C4216A F 31	743706 B 170 C0431A U 22 C0450A F 32 C0760A F 69 C1322A B 174 C1362 U 156 C2514A F 23 C2516A F 23 C2518A F 24 C2520A F 24 C2677A B 34 C2679A B 36 C2882A S 33 C3105 U-P 16 C3115 U-P 17 C3154 F-P 27 C3158 F-P 28 C4100A U 18 C4153A F 29 C4168A F 29 C4192A F 30 C4210A F 30 C6310 UJ 138 C6348A U 12 E1002S U 134 E2002S F 135 E2102S F-P 137 E3002S U-P 136	743707B 170 C0433A U 22 C0452A F 32 C1302 B,R 40, 172 C1360 U 156 C1642A B 35 C2519A F 24 C2524A F 23 C2540A F 23 C2681A B 36 C2888A S 33 C3320 F-P 27 C3602 U-R 21 C4117A U 19 C4154A F 29 C4166A F 30 C4211A F 30 C6311 UJ 138 C6351A U 13 E1022S U 134 E2022S F 135 E2122S F-P 137 E3022S U-P 136		740302 U 158 C0435A U 22 C0454A F 32 C1202 B,C 41, 175 C1357 U 156 C2521A F 24 C2534A F 23 C2686A B 23 C2830A U 13 C2892A S 33 C3062 F-P 28 C3102 U-P 16 C3112 U-P 17 C3162 F-P 27 C4114A U 18 C4125A U 19 C4155A F 29 C4197A F 30 C4212A F 30 C5460 U 139 C6312 UJ 138 C6367 U 157 C7102A UJ 156 C8116 U-P 45 C8122 U-P 45 E1032S U 134 E2032S F 135 E2202S F-P 137 E3032S U-P 136	740202 U 158 C0437A U 22 C0456A F 32 C1358 U 158 C1602 B,C 41, 175 C1704 U 152 C2405A U 14 C2536A F 17 C2895A S 33 C3068 F-P 28 C3127 U-P 17 C3169 F-P 27 C3193 U-P 16 C4135A U 20 C4162A F 29 C4213A F 30 C8111 FB-P 39 E1042S U 134 E2042S F 135 E2242S F-P 137 E3042S U-P 136	740102 U 158 C0439A U 22 C0458A F 32 C1361 U 156 C1612 B,C 41 C1702 U 152 C2409A U 14 C2538A F 17 C3126 U-P 16 C4146 U-P 20 C4201A F 30 C4215A F 30 E1052S U 134 E2052S F 135 E2252S F-P 137 E3052S U-P 136	740002 U 158 C0441A U 22 C0460A F 32 C1363 U 156 C1364 U 157 C1700 U 152 C2410A U 14 C2539A F 17 C3129 U 17 C4150A U 20 C4202A F 30 E1062S U 134 E2062S F 135 E2262S F-P 137 E3062S U-P 136
3	SOLID			C4410 U 138	C2510A F 164		C1201 B,C 175 C1301 B,R 172 C3114 U-P 17 C4305A U 118 C4335A F 120 E1503S U 117 E2503S S 119 E3503S U-P 121 E3603S F-P 123	C4322A U 118 C4345A F 120	C4325A U 118	
	STRANDED	C0530A FB 72 C0939A FB 70 C6501A B 37	C0680A FB 72 C0741A F 68 C0951A FB 70 C2462A U 11 C4217A F 31 C8115 FB-P 39	C0432A U 22 C0451A F 32 C0761A F 69 C0971A FB 71 C1335A S 33 C2517A F 23 C2526A F 23 C2678A B 36 C3310 F-P 27 C4062A U 12 C4101A U 18 C4156A F 29 C4169A F 29 C4193A F 30 E1003S U 154 E2003S F 135 E2103S F-P 137 E3003S U-P 136	C0434A U 15 C0781A F 69 C1304 B,R 40 C1332A B 36 C1333A F 159 C1643A B 35 C2525A F 23 C2528A F 23 C3321 F-P 28 C3603 U,R 21 C4118A U 19 C4157A F 29 C4158A F 29 C6352A U 13 E1023S U 134 E2023S F 135 E2123S F-P 137 E3023S U-P 136		C0436A U 22 C0455A F 32 C1203 B,C 41 C2535A F 23 C2768A S 33 C2831A U 13 C3064 F-P 28 C3120 U-P 17 C3164 F-P 27 C3190 U-P 16 C4126A U 19 C4159A F 29 C4198A F 30 C8106 F-P 26 C8107 FB-P 39 E1033S U 134 E2033S F 135 E2203S F-P 137 E3033S U-P 136	C0438A U 22 C0457A F 32 C1603 B,C 41 C2406A U 14 C2537A F 23 C3194 U-P 16 C3340 F-P 27 C4136A U 20 C4165A F 29 C4200A F 30 C8119 FB-P 39 E1043S U 134 E2043S F 135 E2243S F-P 137 E3043S U-P 136	C0440A U 22 C0459A F 32	

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General Cable

Multi-Conductor Cable Product Finder

NO. COND.	STRAND TYPE	AWG 28	AWG 24	AWG 22	AWG 20	AWG 19	AWG 18	AWG 16	AWG 14	AWG 12
		P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE
4	SOLID			C4412 U 138 E1001S U 134 E1484S U 117 E2484S F 119 E3001S U-P 136			C0485 U 125 C0494 F 126 C3061 F-P 28 C3111 U-P 17 C3170 F-P 128 C3201 U-P 122 C3242 U-P 127 C3261 F-P 124 C4306A U 118 C4336A F 120 E1504S U 117 E2504S F 119 E3504S U-P 121 E3604S F-P 123	C0486 U 125 C3171 F-P 128 C3211 U-P 122 C3243 U-P 127 C3271 F-P 124 C4323A U 118 C4346A F 120 E1514S U 117 E2524S F 119 E3514S U-P 121 E3614S F-P 123	C0496 F 126 C3173 U-P 128 C3223 U-P 122 C3245 U-P 127 C3284 F-P 124 C4326A U 118 E1524S U 117 E2534S F 119 E3524S U-P 121 E3624S F-P 123	C0497 F 126 C3175 F-P 128 C3225 U-P 122 C3247 U-P 127 C3283 F-P 124 E1534S U 117 E2544S F 119 E3534S U-P 121 E3634S F-P 12
	STRANDED	C0531A FB 72 C0940A FB 70 C6502A B 37	C0681A FB 72 C0742A F 68 C0952A FB 70 C2463A U 11 C4218A F 3	C0762A F 69 C0972A FB 71 C1118 U 139 C1337A S 33 C1340A F 160 C2523A F 23 C2680A B 36 C3106 U-P 16 C3116 U-P 17 C3155 F-P 27 C3159 F-P 28 C4063A U 12 C4102A U 18 C4160A F 29 C4194A F 30 C5076 U 139 E1004S U 134 E2004S F 135 E2104S F-P 137 E3004S U-P 136	C0782A F 69 C1119 U 139 C1305 B,R 40 C1331A F 160 C1343A F 160 C1644A B 35 C2555A F 23 C2683A B 36 C3322 F-P 27 C3604 U,R 21 C4119A U 19 C4161A F 29 C4196A F 30 C5078 U 139 C6353A U 13 E1024S U 134 E2024S F 135 E2124S F-P 137 E3024S U-P 136		740304 U 158 C0444A U 22 C1123 U 139 C1204 B,C 41 C2404A U 13 C2543A F 25 C2688A B 36 C3063 F-P 28 C3103 U-P 16 C3113 U 17 C3163 F-P 27 C4127A U 19 C4204A F 30 C5084 U 139 C8102 U-P 15 C8110 FB-P 39 C8114 F-P 26 E1034S U 134 E2034S F 135 E2204S F-P 137 E3034S U-P 136	740204 U 158 C1604 B,C 41 C1705 U 152 C2425A U 14 C3195 U-P 16 C3341 F-P 27 C4137A U 20 E1044S U 134 E2044S F 135 E2244S F-P 137 E3044S U-P 136	740104 U 158 C1614 B,C 41 C1703 U 152 C2430A U 14 C4147A U 20 E1054S U 134 E2054S F 135 E2254S F-P 137 E3054S U-P 136	740004 U 158 C1701 U 152 C2440A U 14 C4151A U 20 E1064S U 134 E2064S F 135 E2264S F-P 137 E3064S U-P 136
5	SOLID						C3117 U-P 17 C4307A U 118 C4337A F 120	C4349A U 118 C4350A F 120		
	STRANDED	C0532A FB 72 C0941A FB 70	C0682A FB 72 C0753A F 68 C0953A FB 70 C2464A U 11 C4219A F 31	C0973A FB 71 C1124 U 139 C4064A U 12 C4103A U 18 C5086 U 139	C1126 U 139 C1308 B,R 40 C1645A B 35 C3605 U,R 21 C4120A U 19 C6355A U 13		C2420A U 13 C4128A U 19	C2434A U 14 C4138A U 20	C2437A U 14 C4148A U 20	
6	SOLID			C4300A U 118			C3118 U-P 17 C4308A U 118 C4338A F 120 E1506S U 117 E2506S F 119 E3506S U-P 121 E3606S F-P 123			
	STRANDED	C0533A FB 72 C0942A FB 70 C6503A B 37	C0683A FB 72 C0743A F 68 C0954A FB 70 C1345A F 159 C2466A U 11 C4220A F 31	C0763A F 69 C0974A FB 71 C1341A S 33 C3311A F-P 27 C4066 U 12 C4104A U 18 C4207A F 30 E1006S U 134 E2006S F 135 E2106S F-P 137 E3006S U-P 136	C0783A F 69 C1310 B,R 40 C1646A B 35 C3606 U,R 21		C1206 B,C 41 C3065 F-P 28 C3121 U-P 17 C3166 F-P 27 C3192 U-P 16 C4205A F 30 C4206A U 19 C8120 FB-P 39 E1036S U 134 E2036S F 135 E2206S F-P 137 E3036S U-P 136	C1606 B,C 41 C8108 FB-P 39		
7	SOLID						C4309A U 118 C4339A F 120			
	STRANDED	C0534A FB 72 C0943A FB 70	C0684A FB 72 C0754A F 68 C0955A FB 70 C2488A U 11 C4221A F 31	C0975A FB 71 C4088A U 12 C4105A U 18	C1312 B,R 40 C3607 U,R 21 C4121A U 19 C6356A U 13		C2421A U-P 13 C4129A U 19	C2426A U 14 C4139A U 20	C2431A U 14 C4149A U 20	
8	SOLID						C3119 F 17 C4310A U 118 C4340A F 120 E1508S 117 E2508S 119			
	STRANDED	C0535A FB 72 C0944A FB 70 C6504A B 37	C0685A FB 72 C0744A F 68 C0956A FB 70 C2465A U 11 C4222A F 31	C0764A F 69 C0976A FB 71 C1130A U 139 C4065A U 12 C4080 U 139 C4106A U 18 C4208A F 30 C5096 U 139 E1008S U 134 E2008S F 135 E2108S F-P 137 E3008S U-P 136	C0784A F 69 C1313 B,R 40 C1648A FB 38 C3608 U,R 21 C4090 U 139		C1208 B,C 41 C3122 U-P 17 C3180 F-P 27 C3191 U-P 16 E1038S U 134 E2038S F 135 E2208S F-P 137 E3038S U-P 136	C1608 B,C 41 C2443A U 14 C4140A U 20		

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General Cable

CAROL® BRAND

Multi-Conductor Cable Product Finder

NO. COND.	STRAND TYPE	AWG 28	AWG 24	AWG 22	AWG 20	AWG 19	AWG 18	AWG 16	AWG 14	AWG 12
		P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE	P/N SHIELD PAGE
9	SOLID						C4312A U 118 C4341A F 120			
	STRANDED	C0536A FB 72 C0945A FB 70	C0686A FB 72 C0755A F 68 C0957A FB 70 C2470A U 11 C4223A F 31	C0977A FB 71 C4070A U 12 C4107A U 18	C4122A U 19 C6357A U 13		C2422A U 13 C4130A U 19	C2435A U 14 C4141A U 20		
10	SOLID				C2511A F 164		C4313A U 118 C4342A F 120			
	STRANDED	C0537A FB 72 C0946A FB 70 C6505A B 37	C0687A FB 72 C0745A F 68 C0958A FB 70 C2471A U 11	C0765A F 69 C0978A FB 71 C4071A U 12 C4108A U 18 E1010S U 134 E2010S F 135	C0785A F 69 C3610 U,R 21 C4123A U 19		C1210 B,C 41 C3178 U-P 16 C3181 F-P 27 E1040S U 134 E2040S F 135			
11	SOLID						C4314A U 118			
	STRANDED									
12	SOLID									
	STRANDED	C6506A B 37	C2467A U 11	C4067A U 12 C4109A U 18 E1012S U 134 E2012S F 135	C6360A U 13		C1212 B,C 41 C2412A U 13 C3179 U-P 16 C3182 F-P 27 C4131A U 19 E1041S U 134 E2041S F 135	C2427A U 14 C4142A U 20		
15	SOLID			C4301A U 118			C4315A U 118			
	STRANDED	C0538A FB 72 C0947A FB 70 C6507A B 37	C0688A FB 72 C0746A F 68 C0959A FB 70 C2473A U 11 C4225A F 31	C0766A F 69 C0979A FB 71 C4073A U 12 C4110A U 18	C6358A U 13 C0786A F 69 C4124A U 19		C2423A U 13 C4132A U 19	C2428A U 14 C4143A U 20		
18	SOLID									
	STRANDED			C4111A U 18						
19	SOLID									
	STRANDED						C2424A U 13 C4133A U 19	C2429A U 14 C4144A U 20		
20	SOLID			C4302A U 118			C4316A U 118			
	STRANDED	C6508A B 37	C0747A F 68 C0960A FB 70 C4226A F 31	C0767A F 69 C0980A FB 71 C4075A U 12 C4112A U 18	C0787A F 69					
21	SOLID						C4317A U 118			
	STRANDED									
25	SOLID									
	STRANDED	C0948A FB 41	C0748A F 68 C0961A FB 70 C4227A F 31	C0768A F 69 C0981A FB 71 C4076A U 12 C4113A U 18	C0788A F 69		C2433A U 13 C4134A U 19	C2436A U 14 C4145A U 20		
30	SOLID						C4318A U 118 C4343A F 120			
	STRANDED		C0749A F 68 C4228A F 31	C4077A U 12 C4114A U 18						
40	SOLID									
	STRANDED		C0750A F 68 C4229A F 31	C4079A U 12 C4116A U 18						
50	SOLID									
	STRANDED		C0751A F 68 C4230A F 31	C4079A U 12 C4116A U 18						

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General Cable

Multi-Paired Cable Product Finder

NO. PAIRS	STRAND TYPE	AWG 28			AWG 24			AWG 23			AWG 22			AWG 20			AWG 18		
		P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE
1	SOLID										C4008A	U	9, 43						
	STRANDED				740601	IF	166				C3204	F-P	48				C6101A	U	44
					740501	IF	167				C0720A	F	73				C8101	F-P	49
					740701	IF	168				C4183A	F	54				C8104	F-P	49
					C0600A	F	73				C7104A	F	46				C8123	F-P	51
					C0841A	FB	76				C7112A	FB	66						
					C4841A	FB	76				C8103	F-P	49						
					C4170A	F	53				C8109	F-P	49						
					C4209A	F	53				C8124	F-P	51						
					C8117	FB-P	57				C8126	F-P	51						
					C8127	F-P	51												
2	SOLID				C4413	U	138				C1670A	F	46						
											C4010A	U	43						
	STRANDED	C0804A	FB	79	C0515A	FB	78				C0550A	F	66	C7106A	IF	58	C0560A	F	66
					C0601A	F	73				C0570A	IF	65				C0584A	IF	65
					C0620A	FB	75				C0650A	FB	75				C3362	F-P	52
					C0829A	FB	77				C0721A	F	73				C6118A	U	44
					C0842A	FB	76				C1338A	B	161						
					C0890A	F	74				C1350A	IF	60						
					C0910A	IF	83				C1352A	IF	58						
					C0924A	IFB	84				C1353A	IF	58						
					C3028	F-P	56				C3156	IF-P	61						
					C3150	F-P	48				C3205	F-P	48						
					C3214	F-P	55				C3352	F-P	52						
					C4171A	F	53				C4184A	F	54						
					C4842A	F	76				C4203A	IF	59						
					C8118	F-P	50				C6010A	U	43						
					C8128	IF-P	64				C7114A	FB	66						
					C8129	FB-P	57				C8105	IF-P	62						
					C8134	IF-P	62				C8112	IF-P	63						
3	SOLID										C4328A	U	129						
											C6035A	F	81						
	STRANDED	C0805A	FB	79	C0516A	FB	78				C0551A	F	66	C6052A	IF	82	C0561A	F	66
					C0602A	F	73				C0571A	IF	65	C6061A	IF	165	C0585A	IF	65
					C0621A	FB	75				C0651A	FB	75				C6047A	IF	82
					C0830A	FB	77				C0722A	F	73				C6103A	U	44
					C0843A	FB	76				C3157	IF-P	61						
					C0901A	F	74				C3206	F-P	48						
					C0911A	IF	83				C3353	F-P	52						
					C0925A	IFB	84				C4185A	F	54						
					C3029	F-P	56				C6014A	U	43						
					C3153	F-P	48				C6040A	IF	82						
					C3215	F-P	55				C7116A	FB	66						
					C4172A	F	53				C8131	IF-P	62						
					C4843A	FB	76				C8132	IF-P	63						
					C6065A	IF	82												
					C8113	F-P	51												
4	SOLID				E1842S	U	162	E1843S	U	162	C1676A	F	46						
					E3842S	UP	162	E3843S	UP	162	C4015A	U	43						
	STRANDED	C0806A	FB	79	740604	IF	166				C0552A	F	66	C1368A	IF	80	C0562A	F	66
					740504	IF	167				C0572A	IF	65				C0586A	IF	65
					740704	IF	168				C0652A	FB	75				C3364	F-P	52
					C0517A	FB	78				C0723A	F	73				C6119	U	44
					C0603A	F	73				C3207	F-P	48						
					C0831A	FB	77				C3354	F-P	52						
					C0844A	FB	76				C4186A	F	54						
					C0893A	F	74												
					C0912A	IF	83												
					C0926A	IFB	84												
					C3030	F-P	56												
					C3151	F-P	48												
					C3216	F-P	55												
					C4173A	F	53												
					C4844A	FB	76												
4.5	SOLID																		
	STRANDED				C3217	F-P	55												
5	SOLID																C6120A	U	31
	STRANDED	C0807A	FB	79	C0518A	FB	78				C0653A	FB	75						
					C0604A	F	73				C0724A	F	73						
					C0623A	FB	75				C4187A	F	54						
					C0832A	FB	77												
					C4174A	F	53												

B - BRAID SHIELD
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I - INDIVIDUAL FLEXFOIL® SHIELD
IFB - INDIVIDUAL FLEXFOIL® + FLEXFOIL® /BRAID
P - PLENUM
R - RUBBER
S - SPIRAL SHIELD
U - NO SHIELD
UJ - UN-JACKETED

Multi-Paired Cable Product Finder

NO. PAIRS	STRAND TYPE	AWG 28			AWG 24			AWG 23			AWG 22			AWG 20			AWG 18		
		P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE
6	SOLID										C1671A	F	46				C4333A	U	129
											C4329A	U	129						
											C6036A	IF	81						
	STRANDED				740706	IF	168				C0553A	F	66	C6053A	IF	82	C0563A	F	66
					C0519A	FB	78				C0573A	IF	65	C6062A	IF	165	C0587A	IF	65
					C0605A	F	73				C0654A	FB	75				C6048A	IF	82
					C0624A	FB	75				C0725A	F	73				C6106A	U	44
					C0839A	FB	77				C3208	F-P	48						
					C0899A	F	74				C3356	F-P	52						
					C0913A	IF	83				C4188A	F	54						
					C3031	F-P	56				C6017A	U	43						
					C3165	F-P	48				C6041A	IF	82						
					C3218	F-P	55												
					C4175A	F	53												
					C6066A	IF	82												
7	SOLID																		
	STRANDED	C0808A	FB	79	C0520A	FB	78				C0655A	FB	75						
					C0606A	F	73												
					C0625A	FB	75												
					C0833A	FB	77												
					C4176A	F	53												
8	SOLID																		
	STRANDED				740608	IF	166				C0656A	FB	75				C6121A	U	44
					740508	F	167												
					740708	IF	168												
					C0521A	FB	78												
					C0607A	F	73												
					C0626A	FB	75												
					C4177A	F	53												
9	SOLID										C1672A	F	46						
	STRANDED				740709	IF	168				C0554A	F	66	C6054A	IF	82	C0564A	F	66
					C0608A	F	73				C0574A	IF	65				C0588A	IF	65
					C0914A	IF	83				C0726A	F	73				C6049A	IF	82
					C4178A	F	53				C4189A	F	54				C6109A	U	44
					C6067A	IF	82				C6042A	IF	82						
10	SOLID																		
	STRANDED	C0810A	FB	79	C0522A	FB	78				C0658A	FB	75						
					C0609A	F	73												
					C0628A	FB	75												
					C0835A	FB	77												
					C4179A	F	53												
11	SOLID																		
	STRANDED				C0915A	IF	83				C6043A	IF	82						
12	SOLID										C4330A	U	129						
	STRANDED	C0812A	FB	79	740512	IF	167				C6059A	IF	82	C6056A	IF	82	C6050A	IF	82
					740612	IF	166												
					740712	IF	168												
					C0836A	FB	77												
					C0916A	IF	83												
12.5	SOLID																		
	STRANDED				C0523A	FB	78				C0660A	FB	75						
					C0630A	FB	75												
					C0897A	F	74												
					C3152	F-P	48												
15	SOLID										C1673A	F	46						
											C4331A	U	129						
	STRANDED				C0524A	FB	78				C0728A	F	73	C6058A	IF	82	C6051A	IF	82
					C0610A	F	73				C4190A	F	54						
					C0917A	IF	83				C6044A	IF	82						
					C4180A	F	53												

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Multi-Paired Cable Product Finder

NO. PAIRS	STRAND TYPE	AWG 28			AWG 24			AWG 23			AWG 22			AWG 20			AWG 18		
		P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE	P/N	SHIELD	PAGE
16	SOLID																		
	STRANDED				740516 IF 740616 IF 740716 IF		167 166 168												
17	SOLID																		
	STRANDED										C6060A IF		82						
18	SOLID																		
	STRANDED				C0525A FB		78												
19	SOLID																		
	STRANDED				C0611A F C4181A F		73 53				C6045A IF		82						
20	SOLID																		
	STRANDED				740520 IF 740620 IF 740720 IF		167 166 168												
25	SOLID																		
	STRANDED				C0526A FB C0612A F C4182A F		78 73 53												
27	SOLID										C4332A U		129						
	STRANDED										C6046A IF		82						
28	SOLID																		
	STRANDED				740528 IF 740728 IF		167 168												
42	SOLID																		
	STRANDED				740542 IF 740742 IF		167 168												
51	SOLID										C6451A F		47						
	STRANDED																		
52	SOLID																		
	STRANDED				740552 IF 740742 IF		167 168												

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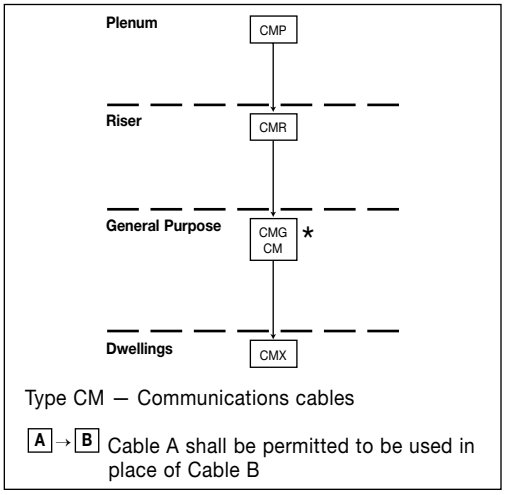
NEC/CEC Substitution Chart

Communication wire and cable for premise installations in accordance with Article 800, and other applicable parts of the National Electrical Code (NEC), latest issue. Communication wire and cables for Canada are in accordance with the harmonized Canadian Standard Association C22.2 No. 214, Underwriters Laboratories UL 444, latest issue.

Figure 800-53, Cable Substitution Hierarchy

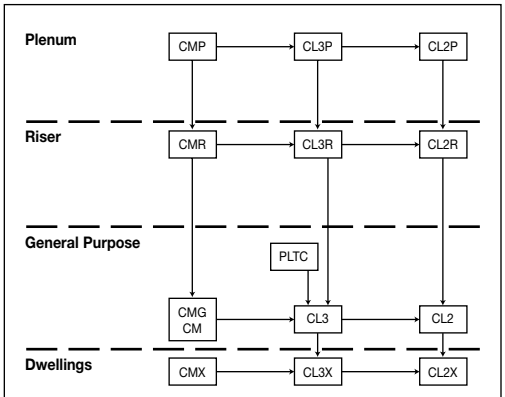


Type CM — Communications cables

A → B Cable A shall be permitted to be used in place of Cable B

*CMG can be substituted CM—CM can be substituted for CMG

Figure 725-61, Cable Substitution Hierarchy



Type CM — Communications wires and cables
Type CL2 and CL3 — Class 2 and Class 3 remote-control, signaling and power-limited cables
Type PLTC — Power-limited tray cable

A → B Cable A shall be permitted to be used in place of Cable B

FREE RESISTANCE LEVEL	TEST REQUIREMENT	NEC ARTICLE 800	725	760	820
(Highest) Plenum Cables	NFPA 262 (Steiner Tunnel) CSA-CMP (Steiner Tunnel)	CMP	CL3P CL2P	FPLP	CATVP
Riser Cables Multiple Floors	UL-16666 (Vertical Shaft) CSA-CMG (Vertical Tray)		CL3R CL2R	FPLR	CATVR
General-Purpose Cables	UL-1581 (Vertical Tray)	CMG	CL3	FPL	CATV
(Lowest) Residential Cables Restricted Use	CSA-CMG (Vertical Tray) UL-1581 VW-1	CMX	CL2 CL3X		CATVX

Notes: 1. Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level.
2. Non-fire rated outside plant telephone cables may not run outside of a rigid metal conduit more than 50 feet from the point of entrance into a building.
3. Cables rated cmg or cm may be used in runs penetrating one floor. (nec 800-53)

ARTICLE 800

Table 800-53. Cable Uses and Permitted Substitutions

CABLE TYPE	USE	REFERENCE	PERMITTED SUBSTITUTIONS
CMP (FT-6)	Communications plenum cable	800-53 (a)	
CMR (FT-4)	Communications riser cable	800-53 (b)	CMP
CMG (FT-4) CM (FT-1)	Communications general purpose cable	800-53 (c)	CMP, CMR, MPG, MP
CMX (FT-1)	Communications cable, limited use	800-53 (d)	CMP, CMR, CMG, CM

Note: See Figure 800-53, Cable Substitution Hierarchy

ARTICLE 725

Table 725-61. Cable Uses and Permitted Substitutions

CABLE TYPE	USE	REFERENCE	PERMITTED SUBSTITUTIONS
CL3P	Class 3 plenum cable	725-61(a)	CMP
CL2P	Class 2 plenum cable	725-61(b)	CMP, CL3P
CL3R	Class 3 riser cable	725-61(b)	CMP, CL3P, CMR
CL2R	Class 2 riser cable	725-6 (b)	CMP, CL3P, CL2P, CMR, CL3R
PLTC	Power-limited tray cable	725-61(c) and (d)	
CL3	Class 3 cable	725-61(b), (e) and (f)	CMP, CL3P, CMR, CL3R, CMG, CM, PLTC
CL2	Class 2 cable	725-61(b), (c) and (f)	CMP, CL3P, CL2P, CMR, CL3R, CL2R, CMG, CM, PLTC, CL3
CL3X	Class 3 cable, limited use	725-61(b) and (e)	CMP, CL3P, CMR, CL3R, CMG, CM, PLTC, CL3, CMX
CL2X	Class 2 cable, limited use	725-61(b) and (e)	CMP, CL3P, CL2P, CMR, CL3R, CL2R, CMG, CM, PLTC, CL3, CL2, CMX, CL3X

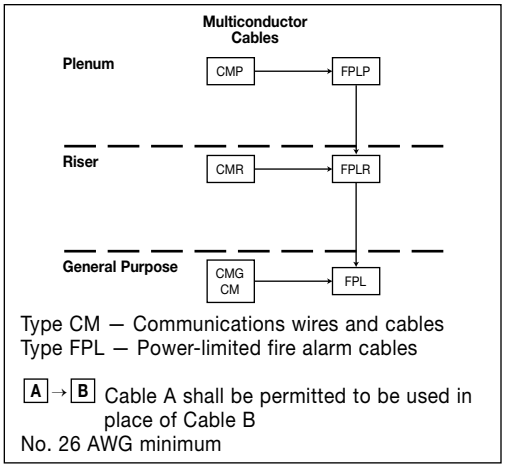
Note: See Figure 725-61, Cable Substitution Hierarchy

CAROL BRAND

General Cable

NEC/CEC Substitution Chart

Figure 760-154 (D), Cable Substitution Hierarchy



Type CM — Communications wires and cables
Type FPL — Power-limited fire alarm cables

A → B Cable A shall be permitted to be used in place of Cable B
No. 26 AWG minimum

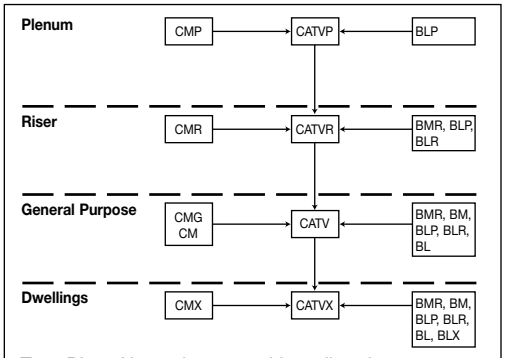
Article 760

Table 760-154 (D). Cable Uses and Permitted Substitutions

CABLE TYPE	USE	REFERENCES	PERMITTED SUBSTITUTIONS MULTICONDUCTOR
FPLP	Power-limited fire alarm plenum cable	760-154 (A)	CMP
FPLR	Power-limited fire alarm riser cable	760-154 (B)	CMP, FPLP, CMR
FPL	Power-limited fire alarm cable	760-154 (C)	CMP, FPLP, CMR, FPLR, CMG, CM

Note: See Figure 760-154 (D), Cable Substitution Hierarchy

Figure 820-154 (E), Cable Substitution Hierarchy



Type BL — Network-powered broadband communications low-power cables
Type BM — Network-powered broadband communications medium-power cables
Type CATV — Community antenna television cables
Type CM — Communications cables

A → B Coaxial Cable A shall be permitted to be used in place of Coaxial Cable B

Article 820

Table 820-154 (E). Coaxial Cable Uses and Permitted Substitutions

CABLE TYPE	USE	REFERENCES	PERMITTED SUBSTITUTIONS
CATVP	Coaxial plenum cable	820-154 (A)	CMP, BLP
CATVR	Coaxial riser cable	820-154 (B)	CATVP, CMP, CMR, BMR, BLP, BLR
CATV	Coaxial general purpose cable	820-154 (C)	CATVP, CMP, CATVR, CMR, CMG, CM, BMR, BM, BLP, BLR, BL
CATVX	Coaxial cable, limited use	820-154 (C)	CATVP, CMP, CATVR, CMR, CATV, CMG, CM, BMR, BM, BLP, BLR, BL, BLX

Note: See Figure 820-154 (E), Cable Substitution Hierarchy

Agency Symbols

UL LISTED	UL Listed Mark for the United States	CMP Certified Canadian Standard Association	CSA CMP
c UL LISTED	UL Listed Mark for Canada	CMG Certified Canadian Standard Association	CSA CMG
c UL us LISTED	UL Listed Mark for Canada and the United States	CMH Certified Canadian Standard Association	CSA CMH
	UL Recognized Component Mark for the United States	Designed to Meet NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests for Plenum Applications Underwriters Laboratories Inc.	NFPA 262 and CSA FT-6 Steiner Tunnel Fire Tests
TIA/EIA 568A	TIA/EIA 568A Cat. 3	Designed to Meet UL Vertical Tray Flame Test Underwriters Laboratories Inc.	UL Vertical Tray Flame Test
TIA/EIA 568B	TIA/EIA 568B Cat. 5e & Cat. 6	Designed to Meet UL 1666 Flame Test Underwriters Laboratories Inc.	UL 1666 Riser Flame Test
	California State Fire Marshal		IMSA
RoHS Compliant Directive 2002/95/EC	RoHS Compliant Directive 2002/95/EC		

Agency Approval Index

Jacket Color Code Chart

CODE	COLOR
1	BLACK
2	WHITE
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	DARK BLUE
8	BROWN
10	GREY
13	PINK
16	LIGHT BLUE
19	PURPLE
77	WHT/BLK/BLU

Put-Ups

CODE	PACKAGING
R5/15	250' Spool
R8/18	500' Spool
21	1000' Spool
30	1000' Spooless Pull-Pac® Carton
35	250' Reel
38	500' Reel
41	1000' Reel
44	2500' Reel
46	5000' Reel
85	250' Coil
99	Factory Reel
A3	Spool-Pac® 1000'

Put-Ups and Color Codes

PUT-UP CODES

PUT-UP CODE	PACKAGING	PUT-UP CODE	PACKAGING
03	3 ft Coax w/Connector HD	58	12 ft Sleeve w/connectors
06	6 ft Coax w/Connector HD	59	25 ft Sleeve w/connectors
11	50 ft Spool	60	Cord Hanked, coil w/cuff
12	100 ft Spool	61	Cord Set Box
13	Clamshell	62	Cord Set Bag
15	250 ft Spool	63	Cord Set Sleeve
18	500 ft Spool	64	50 ft Sleeve w/connectors
20	900 ft Spool	65	100 ft Sleeve w/connectors
21	1000 ft Spool	66	50 ft Cuff
24	2500 ft Spool	67	100 ft Cuff
25	500 ft Pull-Pac	68	3500 ft Reel
26	5000 ft Spool	69	Retail Spool-Pac
27	500 ft Pull-Pac	70	Cord Hanked, coil w/cuff
30	1000 ft Pull-Pac	73	Cord Set, long length
31	1000 ft Pull-Pac	74	12' Clamshell w/connectors
32	150 ft Reel	75	25' Clamshell w/connectors
33	100 ft Reel	76	50' Clamshell w/connectors
34	200 ft Coil	77	100' Clamshell w/connectors
35	250 ft Reel	78	15,000 ft Reel
36	300 ft Reel	79	8,000 ft Reel
38	500 ft Reel	80	Blister Pack w/connectors
39	500 Meter (1640')	85	250 ft Coil
40	Long Length Reel	86	500' Shrinkwrap coil
41	1000 ft Reel	88	12' Sleeve w/o connector
42	1500 ft Reel	89	25' Sleeve w/o connector
43	2000 ft Reel	90	50' Sleeve w/o connector
44	2500 ft Reel	91	75' Sleeve w/o connector
45	4000 ft Reel	92	100' Sleeve w/o connector
46	5000 ft Reel	93	Bulk Reel
47	7500 ft Reel	94	Display
48	10,000 ft Reel	96	Wiring Device, Skin Pack
49	1600 ft Reel	99	Factory Reel
50	1000 Meter (3280')	XX	Various Lengths
51	4500 ft Reel		
52	3000 ft Reel	A1	250 ft Spool-Pac
53	25 ft Cuff	A2	500 ft Spool-Pac
54	12 ft Clamshell	A3	1000 ft Spool-Pac
55	25 ft Clamshell	A4	2000 ft Spool-Pac
56	50 ft Clamshell	R5	250 ft Spool, Retail
57	100 ft Clamshell	R8	500 ft Spool, Retail

JACKET COLOR CODES

COLOR CODE	JACKET COLOR	COLOR CODE	JACKET COLOR
00	Uninsulated	46	Orange/Black
01	Black	47	Yellow/White
02	White	48	Yellow/Black
03	Red	49	Blue/White
04	Orange	50	Blue/Black
05	Yellow	56	Black w/White Trace
06	Green	62	Silver Gray (Lt Gray)
07	Dark Blue	66	Light Green
08	Brown	67	Lime Green
09	Maroon	68	Birch
10	Gray	69	Maple
11	Antique Gold	70	Walnut
12	Ivory	71	Wrought Iron
13	Pink	72	Copper
14	Light Green	73	White/Black/Red
15	Clear Gold	74	White/Black/Orange
16	Light Blue	75	White/Black/Yellow
17	Beige	76	White/Black/Green
18	Light Brown	77	White/Black/Blue
19	Purple	78	White/Black/Brown
20	Clear Silver	79	White/Black/Violet
21	Light Purple	80	White/Black/Gray
22	Neon Green	81	Black/Red/White
23	Mint Green	82	Orange/Green/Black
24	Raspberry	86	Natural
25	Gold	88	Tan
31	White/Black	90	Clear
33	White/Red	91	Clear Brown
34	White/Orange	92	Clear Blue
35	White/Yellow	93	Clear Red
36	White/Green	96	Twisted Cond. No Jkt
37	White/Blue	97	1 Stripe
38	White/Brown	98	2 Stripes
39	White/Violet	99	Assorted Colors
40	White/Gray		
41	Red/Green		
42	Green/White		
43	Blue/Red		
44	Blue/White		
45	Orange/Red		

CSA FIRE ALARM COLOR CODE CHART

CONDUCTOR	COLOR	CONDUCTOR	COLOR
1st	Black	16th	White w/Brown Stripe
2nd	Red	17th	Green w/Brown Stripe
3rd	Green	18th	Yellow w/Brown Stripe
4th	Blue	19th	White w/Orange Stripe
5th	Brown	20th	Black w/Orange Stripe
6th	Orange	21st	Red w/Orange Stripe
7th	Black w/White Stripe	22nd	Green w/Orange Stripe
8th	Red w/White Stripe	23rd	Brown w/Orange Stripe
9th	Green w/White Stripe	24th	White w/Blue Stripe
10th	Yellow w/White Stripe	25th	Red w/Blue Stripe
11th	Red w/Black Stripe	26th	Yellow w/Blue Stripe
12th	Green w/Black Stripe	27th	Brown w/Blue Stripe
13th	Yellow w/Black Stripe	28th	Black w/Red Stripe
14th	Green w/Red Stripe	29th	White w/Red Stripe
15th	Yellow w/Red Stripe	30th	Brown w/Red Stripe

PAIR	COLOR	PAIR	COLOR
1st	Black & Red	16th	White & Brown
2nd	Black & White	17th	White & Orange
3rd	Black & Grey	18th	Blue & Yellow
4th	Black & Blue	19th	Blue & Brown
5th	Black & Yellow	20th	Blue & Orange
6th	Black & Brown	21st	Brown & Yellow
7th	Black & Orange	22nd	Brown & Orange
8th	Black & Purple	23rd	Purple & Red
9th	Red & White	24th	Purple & White
10th	Red & Blue	25th	Purple & Blue
11th	Red & Yellow	26th	Purple & Brown
12th	Red & Brown	27th	Purple & Yellow
13th	Red & Orange		
14th	White & Blue		
15th	White & Yellow		

CAROL BRAND

General Cable

Applications Index

Applications Index

Applications Index

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5304UE	E1036S	134
5306FE	E2038S	135
5306UE	E1038S	134
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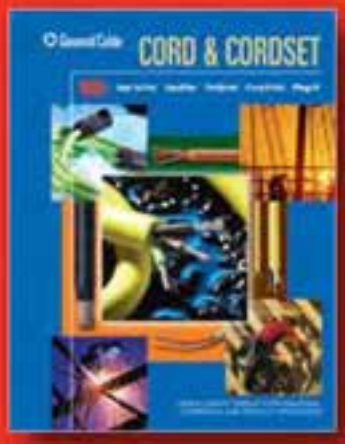

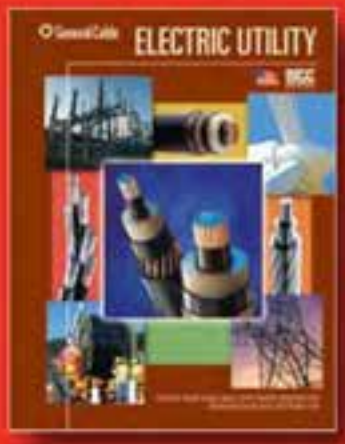

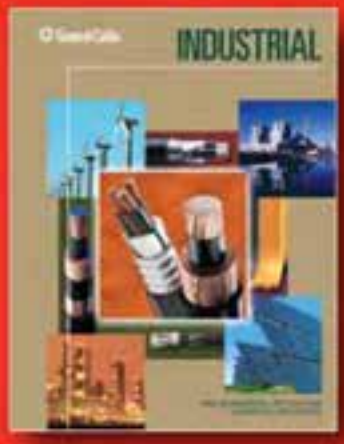

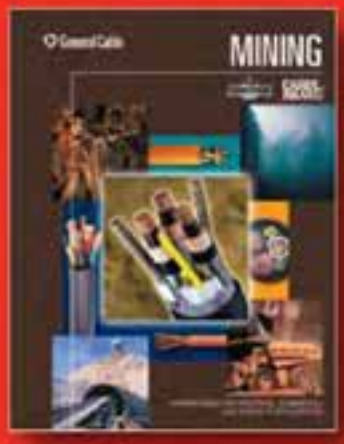

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