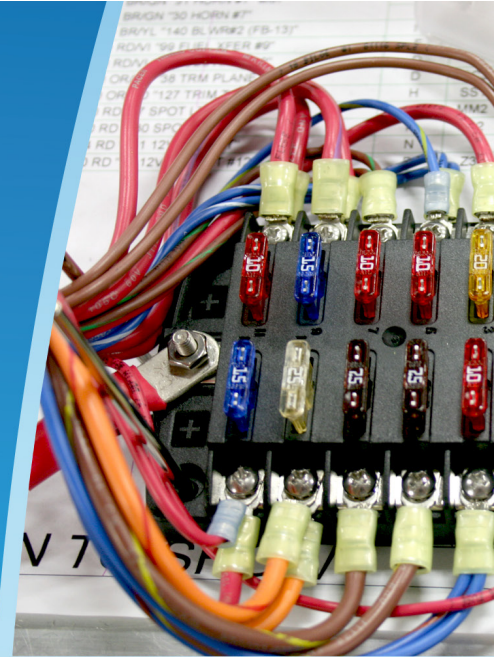


Pacer
Group

PRODUCT CATALOG

WIRE & CABLE • WIRE MANAGEMENT • TERMINALS & LUGS • I.D. PRODUCTS • ELECTRICAL PARTS • ELECTRICAL SOLUTIONS

www.pacergroup.net





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Pacer offers an unparralled inventory of marine wire, cable & electrical products.

ORDERING: Pacer's friendly sales staff is experienced and qualified to answer any questions regarding our products. Orders can be placed online, in store, or by contacting one of our experts. Prices do not include freight or any local, state or federal taxes, and are subject to change without notice. Commercial accounts may apply for terms.



At Pacer Group we're not about the transaction - we're about the relationship.

SHIPPING: Orders placed after 12pm EST are not guaranteed to ship the same day. All material is shipped F.O.B. from our fulfillment center. Use Pacer routing for best way shipping or specify your own preferred carrier.



At Pacer Group we're able to keep minimums low & our prices competitive across all our product lines.

RETURNS: Pacer strives to serve our customers to the best of our ability. Most products can be returned for a full refund within 15 days of receipt. Contact customer service to obtain an approved RMA (Return Material Authorization). Product returned without an RMA will not be accepted. After 15 days, a 20% restocking fee will apply. Sales of non-standard products (cut-to-length, striped, cable assemblies, etc.) or after 90 days are non-returnable, non-refundable. Please inspect all items received for transport damage as freight claims are against the carrier.

Price gets us in the door, commitment to quality keeps us there, and day to day service builds long term relationships.

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MEMBERS



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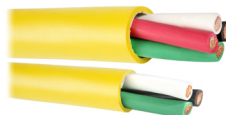
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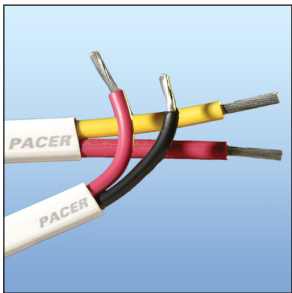


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NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Stranded, tinned copper
- Color coded conductors
- Tough PVC jacket
- Highly flexible
- Easy to strip & route

COMPLIANCES:

- UL standard 1426
- ABYC: E-11.14
- Coast Guard: 33 CFR part 183
- RoHS compliant
- UL compliant

CHARACTERISTICS:

Conductor:

Annealed Fine Stranded Tinned Copper ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible, Color Coded PVC

Temperature Rating:

105°C Dry, 75°C Wet

60°C Oil

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

PRINT:

PACER E157097 (UL) BOAT CABLE _AWG/_COND 600V 105°C DRY, 75°C WET BC-5W2 OIL RESISTANT 1

Length of Print is 1 FT

PACER TO PACER = 1FT

APPLICATIONS:

Two conductor boat cable is a durable product for use in DC circuits as well as low voltage AC applications.

UL 2-CONDUCTOR BOAT CABLE 600V 105°C



Pacer's manufacturing process extrudes a flexible yet tough PVC jacket. The extrusion process fills the voids between the conductors leaving no airspace for condensation to accumulate. The inner wires are talcum powder coated allowing for the easy removal of the jacket. The finished product is flexible, durable and easy to install.

PART NUMBER	AWG NO.	NO. OF COND.	CONDUCTOR STRANDING	NOM. JACKET THICKNESS (IN.)	NOM. CABLE O.D. (IN.)	STANDARD PUT-UPS	APPRX LB/M
"DC" Red + Black Conductors, White Jacket							
W18/2DC	18	2	16/0.0100	0.035	0.185 x 0.300	C,TL,D,M	40
W16/2DC	16	2	26/0.0100	0.035	0.200 x 0.330	C,TL,D,M	51
W14/2DC	14	2	41/0.0100	0.035	0.225 x 0.370	C,TL,D,M	65
W12/2DC	12	2	65/0.0100	0.035	0.245 x 0.410	C,TL,D,M	82
W10/2DC	10	2	105/0.0100	0.035	0.265 x 0.455	C,TL,D,M	128
W8/2DC	8	2	7X24/0.0100	0.040	0.350 x 0.630	L,C,TL,D	230
W6/2DC	6	2	7x38/0.0100	0.045	0.450 x 0.800	L,C,TL,D	364
"Safety Wire" Red + Yellow Conductors, White Jacket							
W18/2RYW	18	2	16/0.0100	0.035	0.190 X 0.300	C, TL, D, M	40
W16/2RYW	16	2	26/0.0100	0.035	0.200 x 0.330	C,TL,D,M	51
W14/2RYW	14	2	41/0.0100	0.035	0.225 x 0.370	C,TL,D,M	65
W12/2RYW	12	2	65/0.0100	0.035	0.245 x 0.410	C,TL,D,M	82
W10/2RYW	10	2	105/0.0100	0.035	0.265 x 0.455	C,TL,D,M	128
W8/2RYW	8	2	7x24/0.0100	0.040	0.350 x 0.630	C,TL,D	230
W6/2RYW	6	2	7x38/0.0100	0.045	0.450 x 0.800	C,TL,D	364
White + Black Conductors, White Jacket							
W16/2	16	2	26/0.0100	0.035	0.200 x 0.330	C,TL,D,M	51
W14/2	14	2	41/0.0100	0.035	0.225 x 0.370	C,TL,D,M	65
W12/2	12	2	65/0.0100	0.035	0.245 x 0.410	C,TL,D,M	82
W10/2	10	2	105/0.0100	0.035	0.265 x 0.455	C,TL,D	128

Standard Put-Ups:

L=50 ft,C=100 ft, TL=250 ft, D=500 ft, M=1000 ft

Ordering Information:

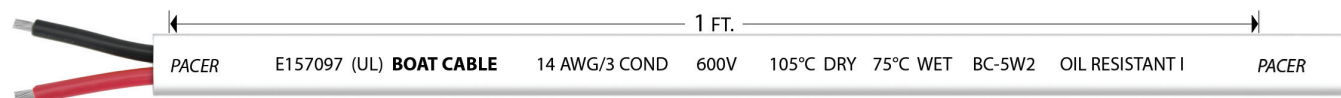
Combine part number with put-up designation.

Example: 16 AWG 2 Conductor, 100 feet = W16/2DC-C

REEL MEASUREMENTS

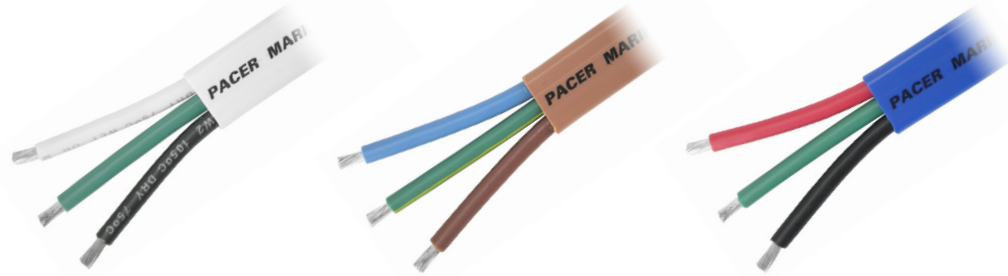
PART	-L 50	-C 100	-TL 250	-D 500	-M 1000
W16/2x	-	#4	#9	#10	#14
W14/2x	-	#4	#9	#10	#14
W12/2x	-	#5	#9	#14	#16
W10/2x	-	#6	#10	#14	#16
W8/2x	#9	#9	#14	#16	-
W6/2x	#10	#10	#16	#18	-

See page 90 for spool size dimensions. Longer put-up lengths are available. Please call or email a Pacer expert.



PACER... to PACER equals 1 ft. on all boat and battery cables.

UL 3-CONDUCTOR BOAT CABLE 600V 105°C



Pacer Boat Cable is designed for maximum durability and ease of installation. Type 3 Class K tinned copper wire and PVC jackets provide maximum protection from moisture and fatigue due to vibration and flexing. White jacketing is typical of 120V AC US wiring, tan jacket is typical for 230V AC European wiring, and blue jacket is typical of 240V AC US wiring.

PART NUMBER	AWG NO.	NO. OF COND.	CONDUCTOR STRANDING	NOM. JACKET THICKNESS (IN.)	NOM. CABLE O.D. (IN.)	STANDARD PUT-UPS	APPRX LB/M
UL TRIPLEX CABLE - Black, Green, White Conductors, White Jacket							
W16/3	16	3	26/0.0100	0.030	0.200 x 0.465	C,TL,D,M	93
W14/3	14	3	41/0.0100	0.030	0.210 x 0.505	C,TL,D,M	99
W12/3	12	3	65/0.0100	0.030	0.230 x 0.560	C,TL,D,M	128
W10/3	10	3	105/0.0100	0.030	0.265 x 0.645	C,TL,D	180
W8/3	8	3	7x24/0.0100	0.045	0.375 x 0.930	L,C,TL,D	340
W6/3	6	3	7x38/0.0100	0.045	0.450 x 1.140	L,C,TL,D	523
UL TRIPLEX "EURO" CABLE - Brown, Green/Yellow, Lt. Blue, Tan Jacket							
W16/3EURO	16	3	26/0.0100	0.030	0.200 x 0.465	M	93
W14/3EURO	14	3	41/0.0100	0.030	0.210 x 0.505	C,TL,D,M	99
W12/3EURO	12	3	65/0.0100	0.030	0.230 x 0.560	C,TL,D,M	128
W10/3EURO	10	3	105/0.0100	0.030	0.265 x 0.645	C,TL,D	180
W8/3EURO	8	3	7x24/0.0100	0.045	0.375 x 0.930	C,TL,D	340
W6/3EURO	6	3	7x38/0.0100	0.045	0.450 x 1.140	C,TL	523
UL TRIPLEX "240-V" CABLE - Black, Green, Red Conductors, Blue Jacket							
W14/3B	14	3	41/0.0100	0.030	0.210 x 0.505	C,TL,D,M	99
W12/3B	12	3	65/0.0100	0.030	0.230 x 0.560	C,TL,D,M	128
W10/3B	10	3	105/0.0100	0.030	0.265 x 0.645	C,TL,D	180

REEL MEASUREMENTS

PART	-L 50	-C 100	-TL 250	-D 500	-M 1000
W16/3x	-	#5	#9	#10	#16
W14/3x	-	#6	#10	#14	#16
W12/3x	-	#7	#10	#14	#18
W10/3x	-	#9	#10	#14	#18
W8/3x	#9	#10	#16	#16	-
W6/3x	#10	#14	#18	#18	-

See page 90 for spool size dimensions. Longer put-up lengths are available. Please call or email a Pacer expert.

Standard Put-Ups:

L=50 ft, C=100 ft, TL=250 ft, D=500 ft, M=1000 ft

Ordering Information:

Combine part number with put-up designation.

Example:

14 AWG, 3 Conductor White Jacket, 500 ft = W14/3-D



FEATURES:

- Stranded, tinned copper
- Color coded conductors
- Tough PVC jacket
- Highly flexible
- Easy to strip & route

COMPLIANCES:

- UL standard 1426
- ABYC: E-11.16
- Coast Guard: 33 CFR part 183
- RoHS compliant
- UL compliant

CHARACTERISTICS:

Conductor:

Annealed Fine Stranded Tinned Copper ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible, Color Coded PVC

Temperature Rating:

105°C Dry, 75°C Wet
60°C Oil

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

PRINT:

PACER E157097 (UL) BOAT CABLE _AWG/_COND 600V 105°C DRY, 75°C WET BC-5W2 OIL RESISTANT 1

Length of Print is 1 FT

PACER TO PACER = 1FT

APPLICATIONS:

Pacer's UL triplex cable is perfect for AC circuits in boats and recreational vehicles.

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE	
MULTI-CONDUCTOR	
COAX CABLES	
NETWORK CABLES	
HEAT SHRINK	
ROUTING & BUNDLING MATERIALS	
CABLE TIES	
TERMINALS	
DEUTSCH & DELPHI	
LUGS & BOOTS	
ID PRODUCTS & LABELERS	
TOOLS	
BREAKERS & FUSES	
TERMINAL BLOCKS & BUS BARS	
SWITCHES & ACTUATORS	
LIGHTS & METERS	

FEATURES:

- Easy installation
- Easy to organize
- Easily sealed through bulkheads

COMPLIANCES:

- UL standard 1426 BC-5W2
- ABYC: E-11.16
- Coast Guard: 33 CFR part 183
- RoHS compliant

CHARACTERISTICS:

Conductor:

Annealed Fine Stranded
Tinned Copper
ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible,
Color Coded PVC

Temperature Rating:

105°C Dry, 75°C Wet
60°C Oil

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame,
Gasoline, Oil and Moisture

PRINT:

PACER E157097 (UL) BOAT
CABLE _AWG/_COND 600V
105°C DRY, 75°C WET BC-5W2
OIL RESISTANT 1

Length of Print is 1 FT
PACER TO PACER = 1FT

APPLICATIONS:

Pacer's round boat cable is
excellent for AC and DC internal
wiring of boats and recreational
vehicles.

UL ROUND BOAT CABLE



Pacer's round boat cable is manufactured in 2, 3, 4, 6, 9 or 12 conductors. The round shape is easy to fit through tight spaces, and is flexible in all bending directions. This style of cable is excellent for running through sailing spars, t-tops and poling platforms. Round boat cable is easily sealed when running through bulkheads or enclosures by using Liquid Tight cable gland connectors (page 31).

PART NUMBER	AWG NO.	NO. OF COND.	CONDUCTOR STRANDING	JACKET THICKNESS (IN.)	NOM. O.D. (IN.)	STANDARD PUT-UPS	CONDUCTOR COLORS	APPRX LB/M
2 CONDUCTOR, GREY JACKET								
WR16/2DCG	16	2	26/0.0100	0.030	0.350	C,TL,D,M	BK, RD	50
WR14/2DCG	14	2	41/0.0100	0.030	0.390	C,TL,D,M	BK, RD	67
WR12/2DC	12	2	65/0.0100	0.030	0.410	C,TL,D,M	BK, RD	85
WR10/2DCG	10	2	105/0.0100	0.030	0.475	C,TL,D,M	BK, RD	130
3 CONDUCTOR, GREY JACKET								
WR16/3G	16	3	26/0.0100	0.045	0.395	C,TL,D,M	BK, GN, WH	73
WR14/3G	14	3	41/0.0100	0.045	0.410	C,TL,D,M	BK, GN, WH	96
WR12/3G	12	3	65/0.0100	0.045	0.470	C,TL,D,M	BK, GN, WH	131
WR10/3G	10	3	105/0.0100	0.045	0.545	C,TL,D	BK, GN, WH	178
4 CONDUCTOR, GREY JACKET								
WR16/4G	16	4	26/0.0100	0.045	0.420	L,C,TL,D,M	BK, GN, RD, WH	108
WR14/4G	14	4	41/0.0100	0.045	0.465	L,C,TL,D,M	BK, GN, RD, WH	136
WR12/4G	12	4	65/0.0100	0.045	0.560	L,C,TL,D,M	BK, GN, RD, WH	185
WR10/4G	10	4	105/0.0100	0.045	0.600	L,C,TL,D	BK, GN, RD, WH	253
WR8/4G	8	4	7x24/0.0100	0.080	0.830	L,C,TL,D	BK, GN, RD, WH	475
WR6/3-8/1G	6	4	6 AWG @ x38/0.0100 8 AWG @ 7x24/0.0100	0.080	0.985	L,C,TL,D	6 AWG @ BK, RD, WH (8 AWG @ GN)	650
WR4/3-6/1G	4	4	4 AWG @ 7x60/0.0100 6 AWG @ 7x38/0.0100	0.080	1.155	L,C,TL	4 AWG @ BK, BK/RD, WH (6 AWG @ GN)	920
6 CONDUCTOR, GREY JACKET								
WR16/6G	16	6	26/0.0100	0.450	0.455	L,C,TL,D	BK, BR, RD, GN, BL, WH	130
WR14/6G	14	6	41/0.0100	0.450	0.530	L,C,TL,D	BK, BR, RD, GN, BL, WH	200
9 CONDUCTOR, GREY JACKET								
WR14/9G	14	9	41/0.0100	0.450	0.680	L,C,TL	*	280
12 CONDUCTOR, GREY JACKET								
WR14/12G	14	12	41/0.0100	0.600	0.700	L,C,TL	**	375

*WR14/9G Colors: Black, Red, Orange, Yellow, Green, Blue, Violet, Grey, White

**WR14/12G Colors: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Grey, White, White/Black, White/Brown

Standard Put-Ups: L=50 FT, C=100 ft, TL=250 ft, D=500 ft, M=1000 ft

Ordering Information: Combine part number and put-up designation.

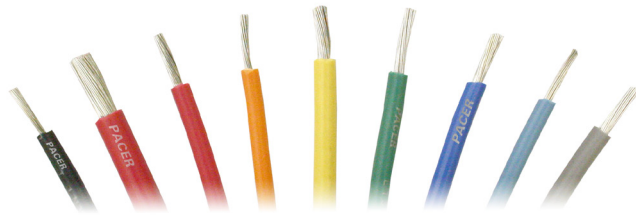
Example: 10/4 Round, 100 ft = WR10/4G-C

See page 90 for spool size dimensions.

Longer put-up lengths are available.

Please call or email a Pacer expert.

UL TINNED COPPER PRIMARY WIRE



Our wire is constructed from Type 3 Class K tinned copper conductor and is insulated with flexible PVC. Pacer's UL wire has been the choice of hundreds of boat builders for over 30 years.

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	NOM. CIRCULAR MILS	STANDARD PUT-UPS	APPRX LB/M
22 AWG - 18 AWG UL1015/1230 CSA TEW 600V 105°C Dry, 60°C Wet							
WUL22	22	7/0.0100	0.030	0.093	700	C, TL, D, M	6.4
WUL20	20	10/0.0100	0.030	0.100	1000	C, TL, D, M	7.8
WUL18	18	16/0.0100	0.030	0.114	1600	C, TL, D, M	10.3
16 AWG - 8 AWG UL Standard 1426 BC-5W2 600V 105°C Dry, 75°C Wet							
WUL16	16	26/0.0100	0.032	0.125	2600	C, TL, D, M	14.8
WUL14	14	41/0.0100	0.032	0.145	4100	C, TL, D, M	22.0
WUL12	12	65/0.0100	0.032	0.160	6500	C, TL, D, M	32.0
WUL10	10	105/0.0100	0.032	0.185	10500	C, TL, D, M	49.0
WUL8	8	168/0.0100	0.045	0.265	16800	C, TL, D, M	80.0

UL Tinned Copper Primary Wire Ordering Information:

Build the part number. Select (A) Wire Gauge, (B) Jacket Color, (C) Wire Stripe Color, (D) Spool Size

(A) Select Wire Gauge

22	20	18	16	14	12	10	8
(WUL22)	(WUL20)	(WUL18)	(WUL16)	(WUL14)	(WUL12)	(WUL10)	(WUL8)

(B) Select Jacket Color

Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
(BK)	(BR)	(RD)	(OR)	(YL)	(GR)	(LG)	(BL)	(LB)	(VI)	(GY)	(WH)	(TN)	(PK)

(C) Select Stripe Color: Optional*

Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
(-0)	(-1)	(-2)	(-3)	(-4)	(-5)	(-15)	(-6)	(-16)	(-7)	(-8)	(-9)	(-11)	(-12)

*Striped wire is non-returnable, non-refundable, requires a minimum order of 500 feet.

(D) Select Spool Size

Cut to Order	100 FT.	250 FT.	500 FT.	1000 FT.
(-B)	(-C)	(-TL)	(-D)	(-M)

Longer lengths available. Please call or email a Pacer expert.

Example: UL 8 AWG, Red, 250 ft = WUL8RD-TL

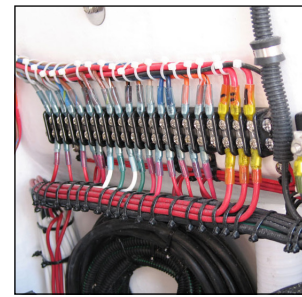
STANDARD JACKET COLORS

	Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
WUL22														
WUL20														
WUL18														
WUL16														
WUL14														
WUL12														
WUL10														
WUL8														

REEL MEASUREMENTS

	-C 100	-TL 250	-D 500	-M 1000
WUL22	#2	#2	#2W	#3
WUL20	#2	#2W	#3	#4
WUL18	#2	#2W	#4	#7
WUL16	#2	#2W	#4	#9
WUL14	#2	#3	#5	#9
WUL12	#2W	#4	#7	#9
WUL10	#3	#5	#9	#10
WUL8	#4	#9	#10	#14

See table on page 90 for dimensions.



FEATURES:

- Stranded, tinned copper conductors
- Highly flexible color coded insulation

CHARACTERISTICS:

Conductor:

Type III Annealed Finely Stranded Tinned Copper ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible, Color Coded PVC

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

COMPLIANCES:

22 AWG - 18 AWG

- UL1015/1230
- CSA: TEW
- Temperature Rating: 105°C Dry, 60°C Wet

16 AWG - 8 AWG

- UL standard 1426 BC-5W2
- UL: AWM 1028/1231 (8 AWG)
- ABYC: E-11.14
- UL: MTW
- Coast Guard: 33 CFR 183.401 Subpart 1-Electrical Systems
- Temperature Rating: 105°C Dry, 75°C Wet

PRINT:

(For 16-10 AWG)

PACER E157097 (UL)_AWG 600V BC-5W2 105°C DRY, 75° WET OR MTW OR AWM 1015/1230 (1028/1231 -8AWG ONLY) VW-1 OIL RESISTANT I

Length of Print is 1 FT

PACER TO PACER = 1 FT

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

Pacer Group - Sarasota
1-800-424-9549 • Fax: 941-379-9015

www.pacergroup.net
www.pacerwire.com



Pacer Group - Hollywood
1-800-634-5031 • Fax: 954-767-0775

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WIRE & CABLE	
MULTI-CONDUCTOR	
COAX CABLES	
NETWORK CABLES	
HEAT SHRINK	
ROUTING & BUNDLING MATERIALS	
CABLE TIES	
TERMINALS	
DEUTSCH & DELPHI	
LUGS & BOOTS	
ID PRODUCTS & LABELERS	
TOOLS	
BREAKERS & FUSES	
TERMINAL BLOCKS & BUS BARS	
SWITCHES & ACTUATORS	
LIGHTS & METERS	



FEATURES:

Easy to strip, bend and route.
Excellent flexibility with the durable properties of PVC.

COMPLIANCES:

- UL standard 1426 BC-5W2
- AWM 1232/1283 (6-2 AWG)
- AWM 1232/1284 (1-4/0)
- MTW
- CSA: TEW
- ABYC: E-11.16
- Coast Guard: 33 CFR part 183 Subpart 1

CHARACTERISTICS:

Conductor:
Annealed Fine Stranded Tinned Copper ASTM B172 Class K

Insulation:
-20°C to 105°C Flexible, Color Coded PVC

Temperature Rating:
105°C Dry, 75°C Wet
60°C Oil

Voltage Rating:
600V

Resistant to:
Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

PRINT:
PACER E157097 (UL) _AWG
600V BC-5W2 105°C DRY,
75°C WET OR MTW OR AWM
1232/1283 (1284 1-4/0) VW-1 OIL
RESISTANT 1 LL102583
CSA TEW 105°C FT1

Length of Print is 1 FT
PACER TO PACER = 1FT

APPLICATIONS:

Connecting a battery or generator to a switch, starter or ground, windlass, inverter or in any high amperage equipment.

UL TINNED COPPER BATTERY CABLE



Pacer uses finely stranded tinned copper conductors for superior corrosion protection in conjunction with highly flexible PVC compound. Pacer Battery Cables offer easy workability when installing in tight spaces such as boats, cars, industrial equipment and power generators.

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	NOM. CIRCULAR MILS	NOM. MM²	STANDARD PUT-UPS	APPRX LB/M
WUL6	6	7x38/0.0100	0.060	0.350	26600	13.5	L,C,TL,D	136
WUL4	4	7x60/0.0100	0.060	0.400	42000	21.3	L,C,TL,D	189
WUL2	2	7x95/0.0100	0.060	0.465	66500	33.7	L,C,TL,D	292
WUL1	1	19x44/0.0100	0.080	0.550	83600	42.4	L,C,TL,D	360
WUL1/0	1/0	19x56/0.0100	0.080	0.600	106400	53.9	L,C,TL	450
WUL2/0	2/0	19x70/0.0100	0.080	0.650	133000	67.4	L,C,TL	551
WUL3/0	3/0	19x88/0.0100	0.080	0.705	167200	84.7	L,C,TL	670
WUL4/0	4/0	19X111/0.0100	0.080	0.780	210900	106.9	L,C,TL	820

UL Tinned Copper Battery Cable Ordering Information:

Build the part number.
Select (A) Wire Gauge, (B) Jacket Color, (C) Spool Size

(A) Select Wire Gauge

6	4	2	1	1/0	2/0	3/0	4/0
(WUL6)	(WUL4)	(WUL2)	(WUL1)	(WUL1/0)	(WUL2/0)	(WUL3/0)	(WUL4/0)

(B) Select Jacket Color

Black	Red	Orange	Yellow	Green	White
(BK)	(RD)	(OR)	(YL)	(GR)	(WH)

(C) Select Spool Size

Cut to Order	50 FT.	100 FT.	250 FT.	500 FT.
(-B)	(-L)	(-C)	(-TL)	(-D)

Longer lengths available. Please call or email a Pacer expert.

Example: UL 1/0 AWG, Red, 250 ft = WUL1/ORD-TL

STANDARD JACKET COLORS

	Black	Red	Orange	Yellow	Green	White
WUL6						
WUL4						
WUL2						
WUL1						
WUL1/0						
WUL2/0						
WUL3/0						
WUL4/0						

REEL MEASUREMENTS

PART	-L 50 ft	-C 100 ft	-TL 250 ft	-D 500 ft
WUL6	#3	#6	#10	#14
WUL4	#4	#9	#10	#14
WUL2	#6	#9	#14	#16
WUL1	#9	#10	#14	#18
WUL1/0	#9	#10	#16	-
WUL2/0	#9	#14	#16	-
WUL3/0	#10	#14	#18	-
WUL4/0	#10	#14	#18	-

See page 90 for spool size dimensions.



MARINE SAE SGT FLEXIBLE BATTERY CABLE



Pacer's flexible SGT battery cable offers dramatic ease of installation and usability. All battery cables are insulated with Pacer's high flex PVC compound. By replacing traditional coarse copper stranding with flexible fine stranded rope constructed conductors of equivalent circular mil area our SGT cable is economical and efficient to install. Intended for applications operating at potentials of 60V DC or less.

PART NUMBER	NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	NOM. CIRCULAR MILS	NOM. MM ²	STANDARD PUT-UPS	APPRX LB/M
WSA4	4	7x55/0.0100	0.065	0.400	38500	19.5	L,C,T,L,D	175
WSA2	2	7x91/0.0100	0.065	0.465	63700	32.3	L,C,T,L,D	285
WSA1/0	1/0	19x53/0.0100	0.065	0.560	100700	52.0	L,C,T,L	422

Marine SAE SGT Flexible Battery Cable Ordering Information:

Build the part number.

Select (A) Wire Gauge, (B) Jacket Color, (C) Spool Size

(A) Select Wire Gauge

4	2	1/0
(WSA4)	(WSA2)	(WSA1/0)

(B) Select Jacket Color

Black	RED	GREEN
(BK)	(RD)	(GR)

(C) Select Spool Size

Cut to Order	50 FT.	100 FT.	250 FT.	500 FT.	1000 FT.
(-B)	(-L)	(-C)	(-TL)	(-D)	(-M)

Longer lengths available. Please call or email a Pacer expert.

Example: 2 gauge, Red, 50 ft = WSA2RD-L

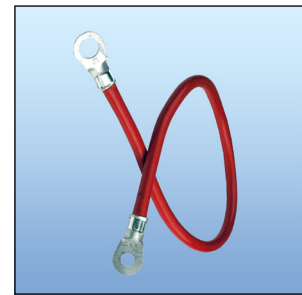
STANDARD JACKET COLORS

WSA4			
WSA2			
WSA1/0			

REEL MEASUREMENTS

PART	-L 50 ft	-C 100 ft	-TL 250 ft	-D 500 ft
WSA4	#4	#7	#10	#14
WSA2	#6	#9	#14	#16
WSA1/0	#9	#10	#14	-

See page 90 for spool size dimensions.



FEATURES:

Finely stranded rope conductors combined with a highly flexible PVC jacket redefines traditional SGT cable while remaining economical. Flexible SGT offers speed and easy installation.

COMPLIANCES:

- SGT J1127 & J378
- ABYC: E-11.14
- Coast Guard: 33 CFR part 183.430

CHARACTERISTICS:

Conductor:

Soft Annealed Stranded Bare Copper

Insulation:

Flexible PVC, 105°C

Temperature/Voltage Rating:

105°C Dry / 60V DC

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

PRINT:

PACER No. _TYPE SGT 105°C 60V J1127 AND J378

Length of Print is 1 FT

PACER TO PACER = 1FT

APPLICATIONS:

Automotive battery cable, connecting a battery or generator to a switch, windless starter or ground, operating at potentials of less than 60V.

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

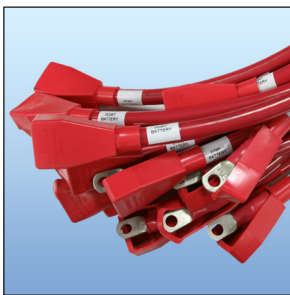
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

Easy to bend and route. Excellent flexibility with the durable properties of PVC.

COMPLIANCES (SAE):

- SGT J1127 & J378
- ABYC: E-11.14
- Coast Guard: 33 CFR part 183.430

CHARACTERISTICS (SAE):

Conductor:

Soft Annealed Stranded Bare Copper

Insulation:

-20°C to 105°C Flexible, PVC

Temperature Rating:

105°C Dry

Voltage Rating:

60V DC

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

COMPLIANCES (UL):

- UL Standard 1426 BC-5W2
- AWM 1232/1283 (6-2 AWG)
- AWM 1232/1284 (1-4/0)
- MTW
- CSA: TEW
- ABYC: E-11.16
- Coast Guard: 33 CFR part 183 Subpart 1

CHARACTERISTICS (UL):

Conductor:

Annealed Fine Stranded Tinned Copper ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible, Color Coded PVC

Temperature Rating:

105°C Dry, 75°C Wet

60°C Oil

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

BATTERY CABLE ASSEMBLIES

Pacer manufactures cable assemblies using a precision cut & strip machine for repeatable and accurate cuts. Our hydraulic-pneumatic crimper creates a superior gas tight crimp. We combine this process with epoxy lined heat shrink to give you a moisture and air tight connection.

(1st Lug)			(2nd Lug)				
B	40	Y	-	A	12	-	S P - #
(A)	(B)	(C)		(D)	(E)		(F)
Style	Gauge	Color		Boot	Lug		Length

Battery Cable Assembly Ordering Information:

Build the part numbers. Select (A) Cable Style, (B) Gauge Size, (C) Cable Color, (D) Boot Type, (E) Lug Type, (F) Length. All battery cable assemblies are made to order and are not refundable.

(A) Cable Style



SAE

(A)



UL

(B)

(B) Gauge Size

6 AWG	4 AWG	2 AWG	1 AWG	1/0	2/0	3/0	4/0
(6)	(4)	(2)	(1)	(10)	(20)	(30)	(40)

(C) Cable Color



Red

(R)



Black

(B)



Yellow

(Y)

(D) Boot Type



Alternator

(A)



Marine

(M)



Straight

(S)

(E) Lug Type



#10

(10)



1/4"

(14)



5/16"

(56)



3/8"

(38)



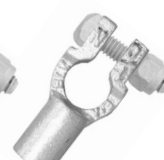
1/2"

(12)



Positive

(P)



Negative

(N)

(F) Length

(Length in Inches)

Battery Cable Assemblies are made to order and are non-returnable, non-refundable. Additional configurations available. Call customer service for additional options.

Examples of Common Battery Cable Assemblies:



B40Y-A12-SP-12



B2B-38-38-15



B4R-N-P-18



A4B-56-N-20



B20R-56-P-48

MARINE SAE TINNED COPPER WIRE

SAE flexible tinned copper wire provides an excellent cost effective alternative to traditional bare copper automotive wire. Its tinned copper, highly flexible stranding and premium insulation offer superior corrosion resistance. This highly flexible wire made to SAE specifications, fits all major connector systems, and is intended for use at potentials under 60V DC.

PART NUMBER	NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	NOM. CIRCULAR MILS	NOM. MM ²	STANDARD PUT-UPS	APPRX LB/M
WST16	16	24/0.0100	0.023	0.105	2400	1.22	C,TL,D,M	13
WST14	14	38/0.0100	0.023	0.120	3800	1.93	C,TL,D,M	18
WST12	12	60/0.0100	0.026	0.145	6000	3.04	C,TL,D,M	28
WST10	10	96/0.0100	0.031	0.173	9600	4.86	C,TL,D,M	43
WST8	8	96/0.0126	0.037	0.225	15240	7.72	C,TL,D,M	70
WST6	6	7x36/0.0100	0.060	0.335	25200	12.77	C,TL,D	107

Marine SAE Tinned Copper Wire Ordering Information:

Build the part number. Select (A) Wire Gauge, (B) Jacket Color, (C) Wire Stripe Color, (D) Spool Size

(A) Select Wire Size

16	14	12	10	8	6
(WST16)	(WST14)	(WST12)	(WST10)	(WST8)	(WST6)

(B) Select Jacket Color

Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
(BK)	(BR)	(RD)	(OR)	(YL)	(GR)	(LG)	(BL)	(LB)	(VI)	(GY)	(WH)	(TN)	(PK)

(C) Select Stripe Color: Optional*

Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
(-0)	(-1)	(-2)	(-3)	(-4)	(-5)	(-15)	(-6)	(-16)	(-7)	(-8)	(-9)	(-11)	(-12)

*Striped wire is non-returnable, non-refundable, requires a minimum order of 500 feet.

(D) Select Spool Size

Cut to Order	100 FT.	250 FT.	500 FT.	1000 FT.
(-B)	(-C)	(-TL)	(-D)	(-M)

Longer lengths available. Please call or email a Pacer expert.

Example: SAE No. 14, Violet, 250 ft = WST14VI-TL

STANDARD JACKET COLORS

	Black	Brown	Red	Orange	Yellow	Green	Lt. Green	Blue	Lt. Blue	Violet	Grey	White	Tan	Pink
WST16														
WST14														
WST12														
WST10														
WST8														
WST6														

REEL MEASUREMENTS

PART	-C 100	-TL 250	-D 500	-M 1000
WST16	#2	#2W	#3	#6
WST14	#2	#2W	#4	#9
WST12	#2W	#3	#6	#9
WST10	#2W	#4	#9	#10
WST8	#3	#7	#9	#14
WST6	#6	#10	#14	-

See page 90 for spool size dimensions.

ZIP CORD

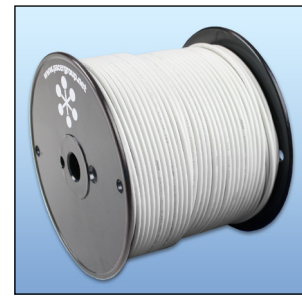
An economical alternative to jacketed cable, low voltage lights and trailer lights where multiple conductors need to be routed quickly and easily. Constructed from 105°C bare copper primary wire.

PART NUMBER	AWG NO.	NO. OF COND.	STRANDING	CONDUCTOR COLORS	APPROX LB/M
WB16BK-RD	16	2	19/0.0112	Black, Red	25
WB16BK-DKBL	16	2	19/0.0112	Black, Dark Blue	25
WB16BK-GY	16	2	19/0.0112	Black, Grey	25
WB16BK-PK	16	2	19/0.0112	Black, Pink	25
WB16-3	16	3	19/0.0112	Brown, Yellow, Green	38
WB16-4	16	4	19/0.0141	Brown, Yellow, Green, White	50
WB14BK-RD	14	2	19/0.0141	Black, Red	35
WB14BK-BL	14	2	19/0.0141	Black, Blue	35
WB14BK-GY	14	2	19/0.0141	Black, Grey	35

Ordering Information: Sold by the foot. Minimum 25 ft.

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LIGHTS &
METERS

COMPLIANCES:

- GPT J1128 & J378 (No. 16-8)
- SGT J1127 & J378 (No. 6)
- ABYC: E-11.14
- Coast Guard: 33 CFR part 183.430

CHARACTERISTICS:

Conductor:

No. 16 to No. 6 Soft Annealed Stranded Tinned Copper

Insulation:

-20°C to 105°C Flexible, PVC

Temperature / Voltage Rating:
105°C Dry / 60V DC

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

PRINT:

PACER MARINE TINNED COPPER
MARINE SAE No. _TYPE GPT
105°C 60V J1128 AND J378

Length of Print is 1 FT
PACER TO PACER = 1FT



FEATURES:

- Annealed stranded bare copper (Type II)
- Color coded parallel bonded conductors

CHARACTERISTICS:

Temperature Rating:

-20°C to 105°C

Voltage Rating:

60V DC

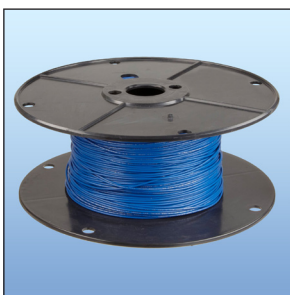
APPLICATIONS:

- Low voltage lights
- Trailer lights
- DC circuits

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SWITCHES & ACTUATORS	
LIGHTS & METERS	



APPLIANCE WIRE TYPES

UL1061 Appliance

Wiring Material:

Thin wall, SRPVC Color Coded Insulation, Tinned Copper Conductors; Rated for 80°C 300V

UL1007/1569 Appliance

Wiring Material:

Medium Wall, PVC Color Coded Insulation, Tinned Copper Conductors. Rated for 80°C/105°C 300V, Oil 60 °C Flame Resistant VW-1, FT1

Applications Include:

Internal wiring in electronic equipment/appliances.

UL1429 Appliances

Wiring Material:

Thin wall, irradiated PVC color coded insulation, tinned copper conductors. Rated for 80°C 150V

UL1430 Appliances

Wiring Material:

Thin wall, irradiated PVC color coded insulation, tinned copper conductors. Rated for 105°C 300V

Applications Include: Internal wiring of appliances where solder iron resistance is necessary.

TEFLON WIRE

NEMA HP-3, formerly "MIL-W 16878/4 TYPE E" 600V 200°C

Thin wall, PTFE color coded insulation, silver plated copper conductors. Rated for 200°C 600V

Applications Include: High temperature electronic applications. M16878/4 has excellent thermal aging, solder damage, flame, and moisture resistance. Teflon is especially suitable for internal wiring-soldering applications where insulation melt back is a specific problem.

RoHS, VW-1 compliant.

HOOK-UP PRIMARY WIRE

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	APPRX LB/M
UL 1061 300V 80°C VW-1 CSA Type II SR-PVC 80°C					
W61-247	24	7/0.0100	0.010	0.044	2.5
W61-227	22	7/0.0100	0.010	0.050	3.0
W61-2010	20	10/0.0100	0.010	0.056	4.7
W61-1816	18	16/0.0100	0.010	0.067	7.0

UL 1007/1569 300V 80°C/105°C VW-1 CSA TYPE TR-64 FT1

W07-247	24	7/0.0800	0.015	0.056	3.1
W07-227	22	7/0.0100	0.015	0.062	4.0
W07-2010	20	10/0.0100	0.015	0.067	5.4
W07-1816	18	16/0.0100	0.015	0.079	7.6
W07-1626	16	26/0.0100	0.015	0.092	11.1

Ordering Information: Order in multiples of 100 ft.

Stocked Colors: Black, Blue, Green, Grey, Orange, Red, White, Yellow. Other Colors are available upon request.

Striped wire is non-returnable, non-refundable, requires a minimum order of 500 feet.

UL IRRADIATED PVC PRIMARY WIRE

Irradiated Wire is a type of PVC hook up wire that has a solder iron resistant insulation. Irradiated PVC hook up wire is highly used in the manufacturing of wire harnesses and assemblies involving solder. Irradiated hook up wire resists the strong heat of a solder gun, unlike standard PVC wire which melts if the solder iron is touching the wire for too long.

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	APPRX LB/M
UL 1429 150V 80°C CSA AWM					
W29-227	22	7/0.0080	0.010	0.050	2.5
UL 1430 300V 105°C CSA REW, RR64					
W30-227	22	7/0.0100	0.016	0.060	4.0
W30-1819	18	19/0.0300	0.016	0.076	8
W30-1619	16	19/0.0117	0.016	0.089	11

Ordering Information: Order in multiples of 100 ft.

Stocked Colors: Black, Red, White, Green.

Striped wire is non-returnable, non-refundable, requires a minimum order of 500 feet.

TEFLON INSULATED PRIMARY WIRE

Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions. Teflon is rated for continuous operating temperatures from -55°C to 200°C. It is resistant to nearly all chemicals, has a low coefficient of friction and has outstanding electrical properties.

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. INSULATION (IN.)	NOM. O.D. (IN.)	APPRX LB/M
NEMA HP-3, formerly "MIL-W 16878/4 TYPE E" 600V 200°C					
WE-2419	24	19/36	0.010	0.045	2.9
WE-2219	22	19/34	0.010	0.051	3.6
WE-2019	20	19/32	0.010	0.058	4.9
WE-1819	18	19/30	0.010	0.069	7.3
WE-1619	16	19/29	0.010	0.080	10.7
WE-1419	14	19/27	0.010	0.095	14.4

Ordering Information: Order in multiples of 100 ft. Striped wire available in 250 ft reels.

Stocked Colors: Black, Red, White, Green. Other colors are available upon request.

SEOOW “Ship-To-Shore” FLEXIBLE CORD

SEOOW cords are ideal for custom or replacement shore power cords in harsh environments where the highest degree for oil resistance and extended service life are essential.

PART NUMBER	AWG NO.	NO. OF CONDUCTORS	CONDUCTOR STRANDING	NOM. O.D. (IN.)	*AMPS	APPROX LB/M
MSTO16/3	16	3	26/30	0.400	10	90
MSTO14/3	14	3	41/30	0.541	18	160
MSTO12/3	12	3	65/30	0.614	25	205
MSTO12/4	12	4	65/30	0.665	20	250
MSTO10/3	10	3	105/30	0.661	30	260
MSTO10/4	10	4	105/30	0.718	25	320
MSTO6/3	6	3	266/30	0.818	55	452
MSTO6/4	6	4	266/30	0.892	45	575
MSTO2/3	2	3	665/30	1.158	95	985
MSTO2/4	2	4	665/30	1.260	80	1241

* Ampacities based on 90°C conductor and 30°C ambient temperature per Table 400.5(A) of the National Electrical Code. Pacer cannot recommend or express the use of these ampacities since the exact application may need approval from the authority having local jurisdiction.

Ordering Information: Sold by the foot. No minimums, non-refundable, non-returnable.

SPEAKER WIRE

This speaker wire is for use with digital audio, stereo speakers, jukeboxes, and home theaters but is not rated for in-wall use. It is constructed from finely stranded tinned and bare copper wire and insulated with premium clear PVC.

PART NUMBER	AWG NO.	CONDUCTOR STRANDING	NOM. O.D. (IN.)	APPROX LB/M
W18-2ACLR	18	16/0.0100	0.100 X 0.187	17
W16-2ACLR	16	26/0.0100	0.112 X 0.210	25
W14-2ACLR	14	41/0.0100	0.120 X 0.230	35
M12-2ACLR	12	65/0.0100	0.160 X 0.335	55

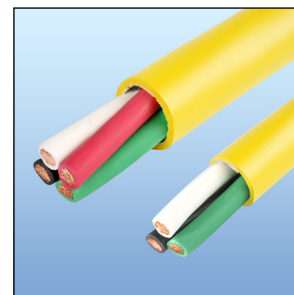
Ordering Information: Sold by the foot. Minimum 25 ft.

BUS BAR WIRE

Bus bar wire has one conductor. It is an uninsulated, unshielded and unjacketed solid tinned copper wire that is made in accordance to QQ-W-343-F.

PART NUMBER	AWG NO.	NOM. CMIL AREA	NOM. O.D. (IN.)	APPROX LB/M
WBB22	22	650	0.026	2
WBB20	20	1056	0.033	3.1
WBB18	18	1648	0.041	6
WBB16	16	2673	0.052	9
WBB14	14	4251	0.065	14
WBB12	12	6872	0.083	23

Ordering Information: Order in multiples of 100 ft.



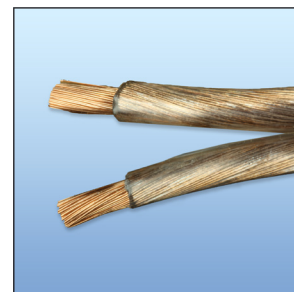
FEATURES:

- Lightweight
- Oil-resistant jacket
- Non-marking
- Very good flexibility
- Excellent molding characteristics
- Water-resistant jacket, insulation and non-wicking plastic fillers

CHARACTERISTICS:

Conductor:
Fully Annealed Stranded Bare Copper per ASTM B-174

Insulation:
TPE, Color: Yellow
Temp. Range: -50°C to 105°C
Voltage Rating: 600V



COMPLIANCES:

- RoHS Compliant Directive 2002/95/EC

CHARACTERISTICS:

Conductor:
Fully annealed stranded one bare, one tinned copper per ASTM B-174

Insulation:
Clear PVC
Temp. Range: -20°C to 80°C
Voltage Rating: 90V



WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

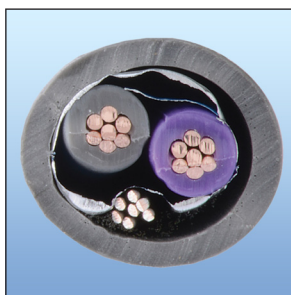
BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE
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TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



MULTI-CONDUCTOR, SHIELDED



FEATURES:

- 100% Flexfoil™ aluminum/ polyester foil facing out
- Stranded tinned copper drain wire
- Fully annealed stranded tinned copper per ASTM B-33
- Premium grade color coded PVC insulation
- Gray PVC jacket

COMPLIANCES:

- NEC Article 800 Type CM (UL:75°C)
- UL Style 2464 (UL:80°C, 300V, VW-1)
- CSA CMG (CSA: 60°C)
- CE: Low Voltage Directive (LVD 2006/95/EC)
- RoHS compliant directive 2011/65/EU
- Vertical tray cable flame test per UL1581 and IEEE 383 (70,000 BTU)

APPLICATIONS:

- Consumer electronics
- Industrial process control equipment
- Suitable for EIA RS-232 applications
- Advanced signal transmission in controlled environments

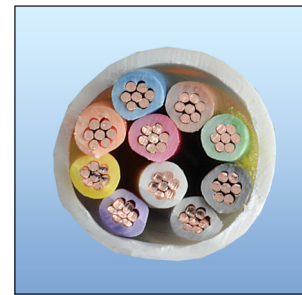
PART NUMBER	NO. OF COND.	COND. STRAND	NOM. CAP pF/ft**		NOM. INSULATION THICKNESS (IN.)	NOM. JACKET THICKNESS (IN.)	NOM. O.D. (IN.)
			A	B			
M22/2F	2	7/30	36.0	65.0	0.010	0.032	0.169
M22/3F	3	7/30	36.0	65.0	0.010	0.032	0.177
M22/4F	4	7/30	36.0	65.0	0.010	0.032	0.190
M22/6F	6	7/30	34.0	61.0	0.010	0.032	0.219
M22/8F	8	7/30	34.0	61.0	0.010	0.032	0.235
M22/10F	10	7/30	34.0	61.0	0.010	0.032	0.269
M22/15F	15	7/30	34.0	61.0	0.010	0.032	0.304
M20/2F	2	7/28	39.0	70.0	0.016	0.032	0.207
M20/3F	3	7/28	39.0	70.0	0.016	0.032	0.217
M20/4F	4	7/28	39.0	70.0	0.016	0.032	0.236
M20/6F	6	7/28	37.0	66.0	0.016	0.032	0.276
M20/8F	8	7/28	37.0	66.0	0.016	0.032	0.297
M20/10F	10	7/28	37.0	66.0	0.016	0.032	0.345
M20/15F	15	7/28	37.0	66.0	0.016	0.032	0.393
M18/2F*	2	16/30	54.5	98.0	0.013	0.037	0.221
M18/3F*	3	16/30	49.0	88.0	0.013	0.037	0.232
M18/4F	4	16/30	N/A	N/A	0.010	0.032	0.238
M18/6F	6	16/30	N/A	N/A	0.016	0.032	0.310
M18/8F	8	16/30	N/A	N/A	0.016	0.032	0.330
M18/10F	10	16/30	N/A	N/A	0.016	0.032	0.390
M18/15F	15	16/30	N/A	N/A	0.016	0.032	0.450
M16/2F*	2	19/0.0117	64	115.5	0.013	0.037	0.243
M16/3F*	3	19/0.0117	56.5	102.0	0.013	0.037	0.255
M16/4F	4	19/0.0117	N/A	N/A	0.016	0.032	0.290
M16/6F	6	19/0.0117	N/A	N/A	0.016	0.032	0.350
M16/8F	8	19/0.0117	N/A	N/A	0.016	0.032	0.380
M14/2F*	2	19/0.0147	66.0	118.5	0.013	0.042	0.288
M14/3F*	3	19/0.0147	57.0	103.0	0.013	0.042	0.298
M12/2F	2	19/0.0185	80.0	145.0	0.013	0.042	0.315

*Compliances: NEC Art. 725 Power-Limited Tray Cable (UL: 105°C 300V) Passes UL 70,000 BTU Vertical Tray Flame Test, Sunlight resistant.

Nom. Capacitance: **A-Between Conductors **B**-Between Conductor and Shield

Ordering Information: Sold by the foot. Minimum 25 ft.

MULTI-CONDUCTOR, UNSHIELDED



PART NUMBER	NO. OF COND	COND. STRAND	NOM. CAP. pF/ft**	NOM. INSULATION THICKNESS (IN.)	NOM. JACKET THICKNESS (IN.)	NOM. O.D. (IN.)
M22/2	2	7/30	24.5	0.010	0.032	0.130
M22/3	3	7/30	24.5	0.010	0.032	0.176
M22/4	4	7/30	24.5	0.010	0.032	0.189
M22/5	5	7/30	24.5	0.010	0.032	0.203
M22/6	6	7/30	24.5	0.010	0.032	0.218
M22/7	7	7/30	24.5	0.010	0.032	0.218
M22/8	8	7/30	24.5	0.010	0.032	0.230
M22/10	10	7/30	24.5	0.010	0.032	0.249
M22/12	12	7/30	24.5	0.010	0.032	0.276
M22/15	15	7/30	24.5	0.010	0.032	0.303
M22/25	25	7/30	24.5	0.010	0.032	0.368
M20/2	2	7/28	28.0	0.016	0.032	0.192
M20/3	3	7/28	28.0	0.016	0.032	0.216
M20/4	4	7/28	28.0	0.016	0.032	0.235
M20/5	5	7/28	28.0	0.016	0.032	0.254
M20/7	7	7/28	28.0	0.016	0.032	0.275
M20/9	9	7/28	28.0	0.016	0.032	0.317
M20/12	12	7/28	28.0	0.016	0.032	0.354
M20/15	15	7/28	28.0	0.016	0.032	0.392
M18/2*	2	16/30	32.5	0.013	0.037	0.216
M18/3*	3	16/30	32.5	0.013	0.037	0.227
M18/4*	4	16/30	N/A	0.013	0.037	0.245
M18/5	5	16/30	N/A	0.016	0.032	0.272
M18/6	6	16/30	N/A	0.016	0.032	0.290
M18/7	7	16/30	N/A	0.016	0.032	0.309
M18/8	8	16/30	N/A	0.016	0.032	0.306
M18/9	9	16/30	N/A	0.016	0.032	0.358
M18/12	12	16/30	N/A	0.016	0.032	0.401
M16/2*	2	19/0.0117	37.0	0.013	0.037	0.238
M16/3*	3	19/0.0117	37.0	0.013	0.037	0.250
M16/4	4	19/0.0117	N/A	0.021	0.032	0.306
M16/5	5	19/0.0117	N/A	0.021	0.032	0.334
M16/7	7	19/0.0117	N/A	0.021	0.032	0.363
M16/8	8	19/0.0117	N/A	0.021	0.032	0.393
M16/12	12	19/0.0117	N/A	0.021	0.032	0.476
M14/2*	2	19/0.0117	40.5	0.013	0.042	0.278
M14/4	4	19/0.0147	40.5	0.033	0.042	0.391

*Power Limited Tray Cable, NEC Type PLTC, 105°C, Sunlight resistant. **Capacitance between conductors

Ordering Information: Sold by the foot. Minimum 25 ft.

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TERMINALS

DEUTSCH &
DELPHI

LUGS
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TOOLS

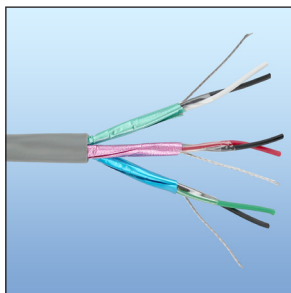
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
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FEATURES:

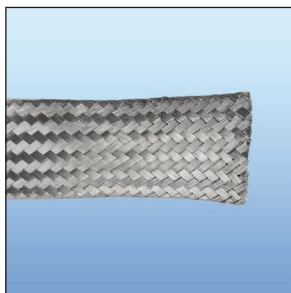
- Finely stranded tinned copper conductors
- 100% aluminum polyester foil with a stranded tinned copper drain wire with cables that have individually shielded pairs
- Color coded PVC insulation
- Grey PVC jacket

CHARACTERISTICS:

- Voltage rating: 300V
- Temp rating: -20°C to 80°C

COMPLIANCES:

- RoHS compliant directive 2011/65/EU



FEATURES:

- Soft annealed tinned copper braid, tightly woven
- Low resistance way to create a point-to-point ground strap

APPLICATIONS:

- Useful as battery grounding
- Bonding strap for aircraft, vehicles, marine equipment
- Eliminates ignition interference

MULTI-PAIR & INDIVIDUALLY FOILED

PART NUMBER	NO. OF PAIRS	COND. STRAND	NOM. CAP pF/ft*		NOM. INSULATION THICKNESS (IN.)	NOM. JACKET THICKNESS (IN.)	NOM. O.D. (IN.)
			A	B			

MULTI-PAIR, OVERALL SHIELD

Applications: Computers, Industrial Equipment, Data Transmission, Control Circuits.

Provides good flexibility and superior shielding where noise rejection is critical.

Compliances: NEC Art. 800 Type CM (UL 105°C, 300V), UL Style 2464, CSA CMG

M22/2PRF	2	7/30	32.0	57.0	0.015	0.042	0.294
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MULTI-PAIR, INDIVIDUALLY SHIELDED

Applications: Computers, Industrial Equipment, Control Circuits where total isolation of signal is required.

Provides excellent high frequency properties and mechanical durability.

Compliances: NEC Art. 800 Type CM (UL 75°C, 300V), UL Style 2835, CSA EMH

M22/2PRIF	2	7/30	30.0	45.0	0.007	0.020	0.160
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MULTI-PAIR, INDIVIDUALLY SHIELDED, NO OVERALL SHIELD

Compliances: NEC Art. 800 Type CM, UL Style 2919, CSA CMH

M22/3PRIF	3	7/30	24.4	43.9	0.011	0.032	0.292
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POWER-LIMITED TRAY CABLE, INDIVIDUALLY SHIELDED PAIRS

Applications: Burglar Alarms, Power Limited Circuits, Intercom Systems, Computer Interconnects

Provides superior temperature characteristics, shielded with a robust, highly durable, and sunlight resistant jacket.

Compliances: NEC Art. 725 (UL 105°C, 300V) UL Style 2464, CSA CMG

M18/2PRIF	2	16/30	50.5	91.0	0.016	0.042	0.380
M18/3PRIF	3	16/30	50.5	91.0	0.016	0.053	0.437

*Nom. Capacitance: **A**-Between Conductors **B**-Between Conductor and Shield

Ordering Information: Sold by the foot, minimum 25 ft.

FLAT BRAID

Flat braided cable is a tight weave of soft drawn tinned copper wire. Originally constructed as a tube that is rolled flat creating a specific width. Excellent for use in shielding wire bundle short runs and is easily terminated. Also, flat braid is ideal for use as a low impedance ground path. The flexibility gained from the woven construction and the tinned copper conductors gives this material superb durability against harsh marine conditions.

PART NUMBER	STRAND AWG	CONSTRUCTION	NOM. CIRCULAR MILS	APPROXIMATE AWG EQUIV.	*APPROXIMATE CURRENT CAPACITY (AMPS)
M.125FB	36	24x3x36	1800	18	16
M.25FB	36	24x7x36	4200	14	32
M.375FB	36	48x6x36	7200	12	46
M.5FB	36	48x8x36	9600	10	53
M.625FB	36	48x8x36	9600	10	53
M.75FB	36	48x11x36	13200	9	62
M1FB	36	48x18x36	21600	7	88
M1.5FB	30	48x11x30	52800	3	150

*Values based on copper in free air at 65°F and intended as a guide only.

Ordering Information: Sold by the foot, minimum 5 ft.

COAX CABLES

Pacer stocks a wide variety of coaxial cables, including most standard configurations as well as specialized constructions for marine environments. Pacer stocks a range of 50 and 75 ohm cables. Let us help you find the proper cable for your application.

PART NUMBER	COND. AWG	INSULATION MATERIAL	SHIELD COVERAGE	JKT. MAT/ NOM. O.D. (IN.)	NOM. CAP		VELOCITY OF PROP. % pF/m	NOMINAL IMPEDANCE Ohms
					pF/ft	pF/m		
50 OHM COAXIAL CABLES								
MRG8U1154	13 (7x21) Bare Copper	Solid Polyethylene	95% Bare Copper Braid 1.2Ω/M	Blk. PVC 0.405	29.5	96.76	66	52
MRG8U1180	9 1/2 Bare Copper	Semi-solid Polyethylene	100% Bonded Foil +88% Tinned Cop- per Braid 1.8Ω/M	Blk. PVC 0.405	24.6	80.71	84	50
MRG8XW	16 (19x28) Tinned Copper	Solid Polyethylene	95% Bare Copper Braid 3.7Ω/M	Wht. PVC 0.242	28.0	91.84	78	50
MRG58AUW	20 (19x.0071) Tinned Copper	Solid Polyethylene	95% Tinned Copper Braid 4.1Ω/M	Wht. PVC 0.195	30.8	101.02	66	50
MRG213U	13 (7x21) Bare Copper	Solid Polyethylene	95% Bare Copper Braid 1.2Ω/M	Blk. PVC 0.405	30.8	101.02	66	50
MRG214U	13 (7x.0296) .089 Silver Coated Copper	Solid Polyethylene	98% 2 Silver Coated Copper Braid .70Ω/M	Blk. PVC 0.425	30.8	101.02	66	50
75 OHM COAXIAL CABLES								
MRG6U	18 Solid Clad Steel	Cellular Polyethylene	100% Flexfoil +61% Tinned Copper Braid 6.5Ω/M	Blk. PVC 0.275	16.2	53.15	78	75
MRG6UW-B	18 Solid Copper Clad Steel	Cellular Polyethylene	100% Flexfoil +95% Tinned Copper Braid 6.5Ω/M	Wht. PVC 0.275	16.2	53.15	78	75
MRG11U	14 Solid Bare Copper	Cellular Polyethylene	95% Bare Copper Braid 1.24Ω/M	Blk. Polyethylene 0.405	17.3	56.75	78	75
MRG59UW	22 Solid Copper Clad Steel	Solid Polyethylene	95% Tinned Copper Braid 2.6Ω/M	Wht.PVC 2.6Ω/M	20.5	N/A	66	73

Ordering Information: Sold by the foot. Minimum 25 ft.

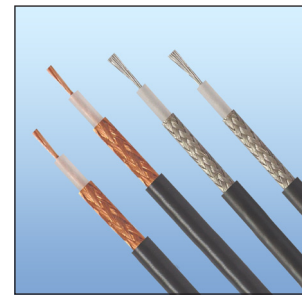
LMR CABLES



LMR (Land Mobile Radio) Cables have RF (Radio Frequency) performance comparable to traditional corrugated copper cables, but unlike corrugated cables, they are highly flexible and non-kinking. Compared to RG type braided cables, LMR Cables offer a far lower loss and better RF shielding. The polyethylene jacket, closed cell foam poly dielectric and bonded tape conductor contribute to the superior weather resistance of LMR cables.

PART NUMBER	CONDUCTOR TYPE	INSULATION MATERIAL	SHIELD TYPE	NOM. O.D. (IN.)	NOM. CAP Pf/ft	VELOCITY OF PROP. % pF/m	NOMINAL IMPEDANCE Ohms
MLMR240	SOLID BC	FOAM PE	ALUM TAPE	0.240	24.2	84%	50
MLMR400	SOLID BCCAL	FOAM PE	TINNED COPPER	0.405	23.9	85%	50
MLMR400-75	SOLID BC	FOAM PE	TINNED COPPER	0.405	15.9	85%	75

Ordering Information: Order in multiples of 100 ft.



FEATURES:

50 OHM CABLES

Used for two-way communications, RF and microwave transmission and instrument control.

APPLICATIONS:

- RF connections
- Two-way communications
- CB radio
- WLAN
- Broadcast
- RG58 used for interconnecting electronic equipment
- RG8X used for VHF<50ft
- RG8U used for VHF>50ft

FEATURES:

75 OHM CABLES

The broadcast use of coaxial cables is for video distribution. Broadcast CATV (or MATV) signals use RG-59 or RG-6 series. They are designed for use above 50MHz with high strengths, low weight and low cost being the primary factors.

APPLICATIONS:

- RF connections
- Two-way communications
- CB radio
- WLAN
- Broadcast

FEATURES:

LMR has a UV resistant polyethylene jacketed cable designed for 20 years of service for outdoor use.

APPLICATIONS:

- 2 Way land mobile
- Cellular
- Wireless local loop
- Broadband wireless
- Telemetry

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE
MULTI- CONDUCTOR
COAX CABLES
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TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



EPL259 & EPL259S



EUG175 & EUG176
EUG175S & EUG176S



EPL258



EF59 & EF6



EF59TW & EF6TW



EF81



EBNC-58 & EBNC-59



ETNC-58 & ETNC-59

COAX CONNECTORS

PART NUMBER	CONNECTOR		FOR CABLE TYPE	PLATING TYPE
EPL259	UHF Series	Plug	RG8, 11, 213, 214, LMR-400	Nickel
EPL259S	UHF Series	Plug	RG8, 11, 213, 214, LMR-400	Silver
EUG175	PL259	Reducer	RG 58	Nickel
EUG175S	PL259S	Reducer	RG 58	Silver
EUG176	PL259	Reducer	RG 59, 62, 8X, LMR-240	Nickel
EUG176S	PL259S	Reducer	RG 59, 62, 8X, LMR-240	Silver
EPL258	Jack to Jack PL259	Coupler	-	Nickel
EF59	F-Connector	Plug	RG 59	Nickel
EF59TW	F-Connector	Twist On	RG 59	Nickel
EF6	F-Connector	Plug	RG 6	Nickel
EF6TW	F-Connector	Twist On	RG 6	Nickel
EF81	F-to-F Connector	Coupler	-	Nickel
EBNC-58	BNC Series	3 Pc	RG 58	Nickel
EBNC-59	BNC Series	3 Pc	RG 59, 62	Nickel
ETNC-58	TNC Series	3 Pc	RG 58	Nickel
ETNC-59	TNC Series	3 Pc	RG 59	Nickel

Ordering Information: Order by the piece.

COMPRESSION SEAL CONNECTORS

These single-piece connectors make installation of RG6, RG6-Quad and RG59 cables go quickly and smoothly and create a high quality, permanent 360° connector-to-cable seal. The connectors are made of machined annealed brass with anti-corrosion nickel plated finish for maximum conductivity and reliability.

PART NUMBER	CONN. TYPE	CABLE DIAMETER (Inches)	CABLE TYPES	COMPRESSION TOOL
ECF-59	F	0.240	RG-59, LMR-240	VTCL-4040;4080
ECF-6	F	0.270	RG-6	VTCL-4040;4080
ECBNC-59	BNC	0.240	RG-59, LMR-240	VTCL-4080
ECBNC-6	BNC	0.270	RG-6	VTCL-4080
ECRCA-59	RCA	0.240	RG-59, LMR-240	VTCL-4080
ECRCA-6	RCA	0.270	RG-6	VTCL-4080

Ordering Information: Order by the piece.



ECF-6



ECF-59



ECBNC-59 & ECBNC-6



ECRCA-59 & ECRCA-6

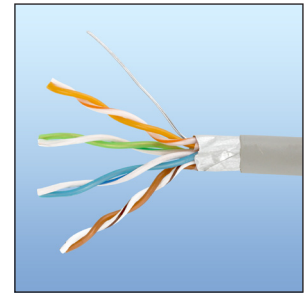
CAT 5E ENHANCED

Category 5 enhanced is a twisted pair cable used for carrying signals used on computer networks such as Ethernet. It is also commonly used to carry telephony and video signals. Cable standard provides performance up to 100 MHz.

PART NUMBER	TYPE	PAIRS	AWG NO.	COLOR	NEC	SIZE	WEIGHT LB/M
M24/4PR-CAT5E	UNSHIELDED	4	24 (SOLID BARE)	GREY	CM	1000 FT	26
M24/4PRS-CAT5E*	UNSHIELDED	4	24 (7/32 TINNED)	GREY	CMR/CMG	1000 FT	26
M24/4PRF-CAT5	O/ALL SHIELD	4	24 (SOLID BARE)	GREY	CMR	1000 FT	26
M26/4PRFS-CAT5E*	O/ALL SHIELD	4	26 (7/32 TINNED)	BEIGE	CMR	1000 FT	26
M26/4PRFS-CAT6	O/ALL SHIELD	4	26 (SOLID BARE)	GREY	CM	1000 FT	26

*ETL verified Category 5E

Ordering Information: Sold by the foot, minimum of 1000 ft.



COMPLIANCES:

- ETL verified for Category 5E

CAT 6 RJ-45 MODULAR PLUG

RJ45 modular plugs support CAT 6 installations, meeting the TIA/EIA-568-B.2 requirements for NEXT (Near End Cross Talk) and Return Loss. Unique 3-piece design includes a conductor liner, allowing conductors to be ordered and held in position for insertion into the plug body. Plugs are crimped using standard RJ45 crimp nests, allowing existing installation tools to be used.

PART NUMBER	DESCRIPTION	PACKAGING
ERJ-45	IDC(Insulation Displacement Conn) 8 POS	25 PER PACK
ERJ-25	IDC(Insulation Displacement Conn) 6 POS	25 PER PACK

Ordering Information: Order by the pack.



FEATURES:

- Robust bayonet style lock
- Superior strain relief
- Easy plug termination
- Simple error-free mating

How to wire a 10BaseT or 100BaseT connector with Category 5 cable and RJ45 connectors using USOC 568B Wiring Standards

EIA/TIA 568B Wiring Standard		568A and 568B are the most widely used standard for ethernet cables. If you wire both ends of your cable using 568B, you'll have a straight-through cable usable for most ethernet applications. Wiring a cable with 568A on one end and 568B on the other will result in a Cross-Over cable for connecting two hubs, or two computers together.	EIA/TIA 568A Wiring Standard	
PIN	Wire Color		PIN	Wire Color
1	White w/ Orange Stripe		1	White w/ Green Stripe
2	Orange w/ White Stripe		2	Green w/ White Stripe
3	White w/ Green Stripe		3	White w/ Orange Stripe
4	Blue w/ White Stripe		4	Blue w/ White Stripe
5	White w/ Blue Stripe		5	White w/ Blue Stripe
6	Green w/ White Stripe		6	Orange w/ White Stripe
7	White w/ Brown Stripe		7	White w/ Brown Stripe
8	Brown w/ White Stripe		8	Brown w/ White Stripe
For Cross Over Cable Wiring Wire ONE end using 568B and one end as 568A (swap Orange and Green pairs)			For Cross over Cable Wiring Wire ONE end using 568B and one end as 568A (swap Orange and Green Pairs)	

STEP 1: Cut the outer jacket of the wire about 1.5" to 2" from the end. This will give you room to work with the wire pairs. Separate the pairs and align them in the order shown above. Begin flattening the wires into a "ribbon" so that it will easily slip into the connector and into the individual channelled areas.

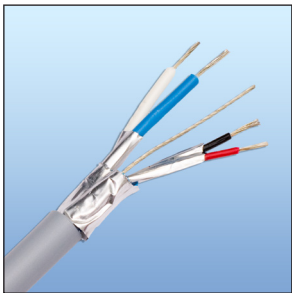
STEP 2: Once you have all the wires aligned and ready to insert, you must trim them to approximately 1/2" in order to have as little "untwisted" wire in the connection as possible. Category 5 specifications require a certain number of twists per inch and even the connector counts!

STEP 3: Insert the wires into the connector making sure that each wire goes into its appropriate "channel" and extends all the way to the end of the connector underneath the gold crimping connectors. Sometimes you can look at the end of the connector to see the copper wires if you are using solid copper cable. If the wires do not extend to the end of the connector, the crimp may not make contact.

STEP 4: Press the cable and the jacket into the connector firmly so that the jacket will be crimped by the plastic wedge near the rear of the connector, insert it into your crimping tool and crimp the cable. RE-CRIMP the cable to make sure all connectors are made.

STEP 5: Repeat steps 1 thru 4 for the other end of the cable for a standard ethernet cable.

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Share data between NMEA 2000 devices
- Up to 4 AMPS
- Vibration resistance
- Ground circuit mates before other contacts
- Superior strain relief

COMPLIANCES:

- IEC IP67 Standard

CHARACTERISTICS:

- Molded Connector: PVC Coupling Ring: Brass, Nickel
- Contacts: Brass Alloy, Gold Plated
- Cable: PVC Grey Jacket

APPLICATIONS:

NMEA 2000 is a low-cost data network operating at 250 Kbps and utilizing the Controller Area Network (CAN) Integrated Circuit (IC). It allows multiple electronic devices to be connected together on a common channel for the purpose of easily sharing information.



N84586-0017



N84586-0019 & N84586-0018



N84584-9317 & N84854-9318



DEVICENET™ MICRO-C

NMEA 2000 DeviceNet Cables and Connectors are a CAN (Controller Area Network) protocol used to create a network of electronic devices. NMEA 2000 was developed primarily for use with electronic components used in marine applications. In essence, the network allows instruments to work together since they share data.

DEVICENET™ MICRO/EURO CABLE (MEETS AND EXCEEDS NMEA 2000 SPECIFICATIONS)

PART NUMBER: **MDN-MICRO**

AWG (Stranding) MAX DCR	NOM. MATERIAL (Color Code)	NOM. O.D. (Inches)	NOM. IMPEDANCE (Ohms)	NOM. VEL OR PROP.	CAPACITANCE	APPROVALS
1 pr - #22 TC Stranded	Power Pair PVC (black/red)	0.280	120.0		12.0 pF/ft	
1 pr - #22 TC Stranded	Data Pair Foam PE (blue/white)			Data Pair 75%		CL2 75°C NMEA 2000®

Ordering Information: Sold per roll, total footage of 328 feet.

MICRO-CHANGE CORDSET

MALE/FEMALE EXTENSION PART NUMBER	FEMALE EXTENSION PIGTAIL PART NUMBER	MALE EXTENSION PIGTAILPART NUMBER	LENGTH OF DROP CABLE m (Inches)
N84854-6034	N84854-7021	N84854-8021	0.5 (1.64)
N84854-6035	N84854-7022	N84854-8022	1.0 (3.28)
N84854-6036	N84854-7023	N84854-8023	2.0 (6.56)
N84854-6037	N84854-7024	N84854-8024	3.0 (9.84)
N84854-6038	N84854-7025	N84854-8025	4.0 (13.12)
N84854-6039	N84854-7026	N84854-8026	5.0 (16.40)
N84854-6055	N84854-7027	N84854-8027	6.0 (19.69)

Ordering Information: Sold per cordset.

MICRO-CHANGE POWER TAP, FEMALE LEFT TO FEMALE RIGHT TEE WITH PIGTAIL DROP

PART NUMBER	LENGTH OF DROP CABLE - m (Inches)
N84863-9001	1 (3.28)
N84863-9002	5 (16.40)
N84863-9003	10 (32.81)

Ordering Information: Order by the set.

ADAPTORS, CONNECTORS, RESISTORS, AND RECEPTACLES

PART NUMBER	DESCRIPTION
N84586-0017	T-ADAPTOR, FEMALE, FEMALE (DROP), MALE
N84587-0005	MICRO CHANGE, 6 PORT
N84586-0018	MALE TERMINATION RESISTOR
N84586-0019	FEMALE TERMINATION RESISTOR
N84854-9300	MICRO-C BULKHEAD FEED THROUGH RECEPTACLE
N84854-9317	MICRO-C FEMALE TRUNK FIELD ATTACHABLE CONNECTOR
N84854-9318	MICRO-C MALE TRUNK FIELD ATTACHABLE CONNECTOR
N84854-9319	MICRO C INLINE TERMINATOR

Ordering Information: Sold by the piece.



DEVICENET™ MINI-C

Mini-cable is capable of carrying up to 8 amps. For use in larger networks and for networks that have components which draw power directly from the bus.

DEVICENET™ MINI-CTM CABLE (MEETS AND EXCEEDS NMEA 2000 SPECIFICATIONS)

PART NUMBER: **MDN-MINI**

AWG (Stranding) MAX DCR	NOM. MATERIAL (Color Code)	NOM. O.D. (Inches)	NOM. IMPEDANCE (Ohms)	NOM. VEL OR PROP.	CAPACITANCE	APPROVALS
1 pr - #15 TC Stranded	Power Pair PVC (black/red)	0.475	120.0		12.0 pF/ft	
1 pr - #18 TC Stranded	Data Pair Foam PE (blue/white)			Data Pair 75%		CL2 75°C NMEA 2000®

Ordering Information: Sold per roll, total footage of 328 feet.

MINI-CHANGE CORDSET

MALE/FEMALE EXTENSION PART NUMBER	LENGTH OF DROP CABLE m (Inches)
N84856-1200	0.5 (1.64)
N84856-1201	1.0 (3.28)
N84856-1202	2.0 (6.56)
N84856-1203	3.0 (9.84)
N84856-1206	6.0 (19.69)

Ordering Information: Sold per cordset.

MINI-C POWER CABLE ASSEMBLY, SINGLE ENDED PIGTAIL, 4 POLES, FEMALE (STRAIGHT)

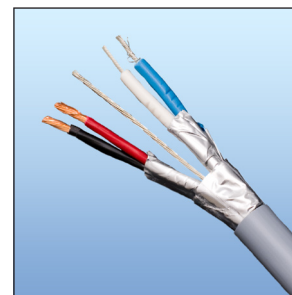
PART NUMBER	LENGTH / DESCRIPTION - m (Inches)
N84856-9113	1 (3.28)
N84856-9114	5 (16.40)
N84856-9115	10 (32.81)

Ordering Information: Order by the set. To be used with Power Tap Tee.

ADAPTORS, CONNECTORS, RESISTORS, AND RECEPTACLES

PART NUMBER	DESCRIPTION
N84856-9112	MINI-C POWER TAP FEMALE, WITH FUSE AND LED (Use with Mini-C Cordset)
N84856-9101	MINI-C FEMALE TRUNK FIELD ATTACHABLE CONNECTOR
N84856-9102	MINI-C MALE TRUNK FIELD ATTACHABLE CONNECTOR
N84856-9104	MINI-C T-ADAPTOR FEMALE, FEMALE (DROP), MALE
N84856-9103	MINI-C BULKHEAD FEED-THROUGH RECEPTACLE
N84856-9108	MINI-C MALE TERMINATOR RESISTOR
N84856-9109	MINI-C FEMALE TERMINATOR RESISTOR

Ordering Information: Sold by the piece.



FEATURES:

- Share data between NMEA 2000 devices
- Up to 8 AMPS
- Vibration resistance
- Ground circuit mates before other contacts
- Superior strain relief

COMPLIANCES:

- IEC IP67 Standard

CHARACTERISTICS:

- Molded Connector: PVC
- Coupling Ring: Brass, Nickel
- Contacts: Brass Alloy, Gold Plated
- Cable: PVC Grey Jacket

APPLICATIONS:

NMEA 2000 is a low-cost data network operating at 250 Kbps and utilizing the Controller Area Network (CAN) Integrated Circuit (IC). It allows multiple electronic devices to be connected together on a common channel for the purpose of easily sharing information.



N84856-9104



N84856-9108



N84856-9109

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
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TERMINALS

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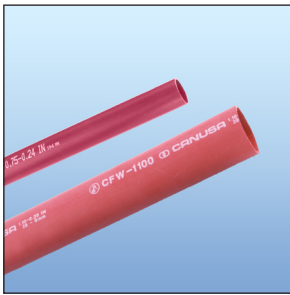
BREAKERS
& FUSES

TERMINAL
BLOCKS &
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ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Shrink ratio 3:1
- Semi-flexible
- Moisture sealing
- Flame retardant (except clear)

COMPLIANCES:

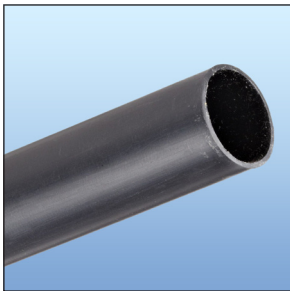
- MIL-I-23053/4 Class 3

CHARACTERISTICS:

Operating Temperature:
-55°C to 110°C

APPLICATIONS:

- Environment/moisture protection
- Sealing electrical connections
- Encapsulate splices
- Sealing cable ends
- Strain relief
- Rugged abrasion/vibration protection
- Clear heat shrink is ideal for labeling



COMPLIANCES:

- MIL-I-23053/15 Class 2

FEATURES:

- Highly abrasion and impact resistant
- Easy installation, shrinks when heated over 120°C
- Thermoplastic liner will adhere to PVC, neoprene and polyolefin, EPR, steel and aluminum

APPLICATIONS:

- Splice sealing
- Primary insulation
- Cable/jacket repair
- Direct burial/submersible
- Strain relief

3-TO-1 ADHESIVE LINED HEAT SHRINK TUBING

Three to one is a semi-flexible, cross linked polyolefin tube which possesses a meltable inner lining of adhesive that flows when heated to ensure complete sealing. In addition to insulation and mechanical protection, this tubing provides a moisture-proof seal for encapsulation of wires, splices, breakouts and components.

PART NUMBER	EXPANDED I.D. (Inches)	RECOVERED I.D. (Inches)	APPLICATION RANGE AWG*	RECOVERED WALL THICKNESS (Inches)	AVAILABLE COLORS
BEHS-1/8	0.125	0.0417	20, 18	0.038	BK, CL, RD
BEHS-3/16	0.188	0.0625	16, 14	0.045	BK, CL, RD, YL
BEHS-1/4	0.250	0.0830	12, 10	0.047	BK, CL, GN, WH, RD, YL
BEHS-3/8	0.375	0.1250	8, 6	0.050	BK, CL, GN, WH, RD, YL
BEHS-1/2	0.500	0.1670	4, 2	0.055	BK, CL, GN, WH, RD, YL
BEHS-3/4	0.750	0.2500	1, 1/0, 2/0	0.065	BK, CL, GN, WH, RD, YL
BEHS-1	1.000	0.400	3/0, 4/0	0.075	BK, CL, GN, WH, RD, YL
BEHS-1.5	1.500	0.600	N/A	0.120	BK, RD
BEHS-2.05	2.050	0.800	N/A	0.150	BK

* Insulation varies with different types of wires; different diameter of tubing may actually be required. When choosing a size, consider any components or connectors that may need to be covered.

Ordering Information:

BK = Black, RD = Red, GN = Green,
CL = Clear, YL = Yellow, WH = White
Green and White available in 48" length only.

Combine part number, length & color for the 12 inch stick.

Example: 3/4" diameter, 12" length, black = BEHS-3/4-12BK

Combine part number & color for the 48 inch stick.

Example: 3/4" diameter, black = BEHS-3/4BK

PRE-CUT ADHESIVE HEAT SHRINK TUBING FOR BATTERY CABLE ASSEMBLIES

PART NUMBER	LENGTH (Inches)	AVAILABLE COLORS	PACKAGE SIZE
BEHS-1/2-1.5-10	1.500	BK, RD, YL	10 PCS
BEHS-3/4-1.5-10	1.500	BK, RD, YL	10 PCS
BEHS-1-1.5-10	1.500	BK, RD, YL	10 PCS

HEAVY WALL TUBING

BHW is coated internally with a dual purpose thermoplastic liner, which flows and encapsulates when heated. When cooled, the tubing offers the mechanical strength of a superior adhesive and the corrosion protection of a high quality mastic. When choosing a size, consider any components or connectors that may need to be covered.

PART NUMBER	EXPANDED ID (Inches)	RECOVERED ID (Inches)	APPLICATION RANGE AWG*	RECOVERED WALL THICKNESS (Inches)
BHW3/4BK	0.750	0.250	6 - 1 (.25 - .65)	0.09
BHW3/4RD	0.750	0.250	6 - 1 (.25 - .65)	0.09
BHW1.1BK	1.100	0.367	1/0 - 4/0 (.40 - .95)	0.12
BHW1.1RD	1.100	0.367	1/0 - 4/0 (.40 - .95)	0.12

* Insulation varies with different types of wires; different diameter of tubing may actually be required. When choosing a size, consider any components or connectors that may need to be covered.

Ordering Information: All sizes sold in 12" lengths. BK = Black RD = Red

2-TO-1 FLEXIBLE HEAT SHRINK TUBING

Two to one heat shrink tubing slides easily over small inline splices and connectors, and shrinks down to 50% of its original diameter to fit snugly over any wire, hose or cable. Also, it is the ideal way to terminate the ends of your braided sleeving and to create a tight professional finish.

PART NUMBER	EXPANDED I.D. (Inches)	RECOVERED I.D. (Inches)	APPLICATION RANGE AWG*	RECOVERED WALL THICKNESS (Inches)	AVAILABLE COLORS
BHS-1/16	0.062	0.031	24, 22, 20	0.018	BK, BL, CL, GN, RD, WH, YL
BHS-1/8	0.125	0.063	20, 18	0.020	BK, BL, CL, GN, RD, WH, YL
BHS-3/16	0.188	0.094	16, 14	0.020	BK, BL, CL, GN, RD, WH, YL
BHS-1/4	0.250	0.125	12, 10	0.025	BK, BL, CL, GN, RD, WH, YL
BHS-3/8	0.375	0.188	8, 6	0.025	BK, BL, CL, GN, GN/YL**, RD, WH, YL
BHS-1/2	0.500	0.250	4, 2	0.025	BK, BL, CL, GN, RD, WH, YL
BHS-3/4	0.750	0.375	1, 1/0, 2/0	0.030	BK, BL, CL, GN, RD, WH, YL
BHS-1	1.000	0.500	3/0, 4/0	0.035	BK, CL, RD
BHS-1.5	1.500	0.750	N/A	0.040	BK, CL, RD, WH, YL
BHS-2	2.000	1.000	N/A	0.045	BK
BHS-3	3.000	1.500	N/A	0.050	BK
BHS-4	4.000	2.000	N/A	0.055	BK

* Insulation varies with different types of wires; different diameter of tubing may actually be required.

When choosing a size, consider any components or connectors that may need to be covered.

** GN/YL is a green tube with yellow tracer. To order, use part number BHS-3/8GN/YL.

Ordering Information: BK = Black, BL = Blue, CL = Clear, GN = Green, RD = Red, WH = White, YL = Yellow

Combine part number with color **Example:** 1/2" black = BHS-1/2BK

All sizes sold in 48" lengths. Spools available upon special request.

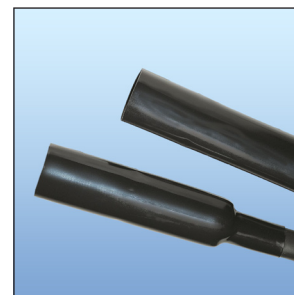
SEMI-RIGID HEAT SHRINK TUBING

BSR is a semi-rigid, dual wall, non-flame retarded polyolefin heat shrinkable tubing. Upon the application of heat, the inner liner melts and flows to encapsulate components or splices contained within. BSR meets or exceeds the requirements of AMS-DTL-23053/4, Class 1. It is also UL recognized 125°C, 600V. BSR provides good strain relief when recovered, but does not adhere to the substrate material; it can be removed for repair of the components.

PART NUMBER	EXPANDED I.D. (Inches)	RECOVERED I.D. (Inches)	APPLICATION RANGE AWG*	RECOVERED WALL THICKNESS (Inches)	AVAILABLE COLORS
BSR-1/8	0.125	0.063	20, 18	0.020	BK
BSR-3/16	0.188	0.094	16, 14	0.020	BK
BSR-1/4	0.250	0.125	12, 10	0.025	BK
BSR-3/8	0.375	0.188	8, 6	0.025	BK
BSR-3/4	0.750	0.375	1, 1/0, 2/0	0.030	BK
BSR-1	1.000	0.500	3/0, 4/0	0.035	BK

* Insulation varies with different types of wires; different diameter of tubing may actually be required. When choosing a size, consider any components or connectors that may need to be covered.

Ordering Information: All sizes sold in black 48" lengths.



FEATURES:

- 2:1 shrink ratio
- Flexible
- High tensile strength
- Flame retardant (except clear)

COMPLIANCES:

- UL 224, 125°C
- CSA 125°C
- AMS-DTL 23053/5

CHARACTERISTICS:

- Oper. Temp.: -55°C to 135°C
- Min. Shrink Temp.: 100°C
- Dielectric Strength: 400V/mil

APPLICATIONS:

- Insulation
- Wire identification
- Wire bundling
- Mechanical protection
- Physical/electrical protection of components

HEAT SHRINK SIZE SELECTOR GUIDE FOR 2-TO-1 or 3-TO-1 TUBING

WIRE AWG	RECOMMENDED TUBING SIZE
24	1/16"
22	1/16"
20	3/32"
18	1/8"
16	3/16"
14	3/16"
12	3/16"
10	1/4"
8	1/4" or 3/8"
6	3/8" or 1/2"
4	1/2" or 3/4"
2	3/4" or 1"

NOTE: The chart above is only a general recommendation. Insulation varies with different types of wires, different diameter or tubing may actually be required. Also, when choosing a size, consider any components or connectors that may need to be covered.

WIRE
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MULTI-
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HEAT
SHRINK

ROUTING &
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MATERIALS

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TIES

TERMINALS

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& BOOTS

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& LABELERS

TOOLS

BREAKERS
& FUSES

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BLOCKS &
BUS BARS

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ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Lightweight & economical
- UV resistant
- Easy to install
- Provides impact and abrasion protection

COMPLIANCES:

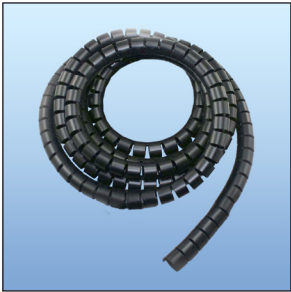
- UL 94, UL flammability standard V-2
- Meets ABYC standards

CHARACTERISTICS:

- Operating Temp: -40°C to 200°C

APPLICATIONS:

- For protecting wires and harnesses from heat, sunlight, salt and friction
- Can be installed on in-service wires



FEATURES:

- Flexible, neat and fast
- Easy wire breakouts
- Tool supplied with each package

CHARACTERISTICS:

- Operating Temp: -40°F to 122°F (-40°C to 50°C)
- Material: Polyethylene

APPLICATIONS:

- Spiral wrap offers abrasion protection for wire, cables, hoses and tubing.

SPLIT CONDUIT

Corrugated, split polyethylene conduit is an excellent general purpose cable and harness protector. Efficient to install and economical, convoluted slit tubing provides an ideal method for binding wire harness assemblies, providing abrasion and impact protection, while reducing wire insulation damage. Creates quality appearance in wiring systems. Ideal product for hose abrasion protection.

PART NUMBER	SIZE (Inches)	INSIDE DIMENSION RANGE (Inches)	OUTSIDE DIMENSION RANGE (Inches)	STANDARD LENGTHS	
				Box	Bulk
BSC1/4	1/4	0.236 - 0.264	0.376 - 0.400	100	3200
BSC3/8	3/8	0.337 - 0.362	0.491 - 0.516	100	1800
BSC1/2	1/2	0.484 - 0.509	0.670 - 0.695	100	1100
BSC5/8	5/8	0.605 - 0.630	0.790 - 0.836	100	750
BSC3/4	3/4	0.730 - 0.755	0.960 - 0.985	100	500
BSC1	1	1.000 - 1.039	1.278 - 1.306	25, 50, 100	300
BSC1.25	1.25	1.250 - 1.276	1.437 - 1.484	25, 50	200
BSC1.5	1.5	1.500 - 1.528	1.858 - 1.925	25, 50	100
BSC2	2	1.980 - 2.035	2.343 - 2.409	25, 50	100

Ordering Information: Order by part number listed for black conduit. White conduit is available for special order, please contact one of Pacer's customer service experts.

Combine part numbers with standard length size.

Example: 1/2" Black split conduit 100 feet = BSC1/2-100

SPIRAL WRAP

Spiral wrap provides abrasion protection for wire and cable insulation as well as hydraulic and pneumatic tubing. Spiral wrap is also handy for kink-proofing all types of tubing. The spiral cut allows for expandability, easy wire breakouts at any point and excellent flexibility. For maximum abrasion resistance, butt the edges together while installing; for flexibility leave a gap between the edges.

PART NUMBER		OUTSIDE DIAMETER (Inches)	BUNDLE DIAMETER (Inches)	PACKAGE Roll	WEIGHT LB/Roll
NATURAL	BLACK				
BSW1/8C	BSW1/8B	0.125	1/16 to 1/2	100	0.61
BSW1/4C	BSW1/4B	0.250	3/16 to 2	100	1.93
BSW3/8C	BSW3/8B	0.350	5/16 to 3	100	4.29
BSW1/2C	BSW1/2B	0.500	3/8 to 4	100	5.45
BSW3/4C	BSW3/4B	0.750	5/8 to 5	100	10.01
BSW1C	BSW1B	1.000	7/8 to 6	100	12.80

Ordering Information: Quantity of 1 = 100 ft roll.

EXPANDABLE SLEEVING

Flexo PET Flame Retardant (FR) sleeving is the perfect choice for electronic and high tech applications where flame retardant and durability are primary concerns. Ease of installation makes Flexo FR an efficient choice for long runs of wire or cable. It is ideal for a limitless number of electronic, automotive and industrial wire management and bundling applications wherever flame spread is a primary safety consideration.

PART NUMBER	NOM. INSIDE DIMENSION (Inches)	EXPANSION RANGE		STANDARD LENGTHS	
		Minimum (Inches)	Maximum (Inches)	Shop	Bulk
B1/8FLEX	1/8	3/32	1/4	225	1000
B1/4FLEX	1/4	1/8	7/16	200	1000
B3/8FLEX	3/8	3/16	1/2	125	500
B1/2FLEX	1/2	1/4	3/4	100	500
B3/4FLEX	3/4	1/2	1 1/4	75	250
B1.25FLEX	1 1/4	5/8	1 5/8	50	250
B1.50FLEX	1 1/2	3/4	1 3/4	40	200
B1.75FLEX	1 3/4	1	2 1/8	30	200

Ordering Information: Order by part number listed for Bulk Standard Length. Combine part number with quantity for "Shop" Standard Length.

Example: 1/2" Black Expandable Sleeving, 100 feet = B1/2FLEX-100

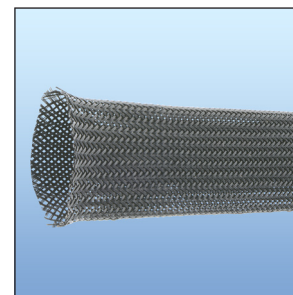
WRAPPABLE BRAIDED TUBE

F6's unique split, semi-rigid braided construction makes it the ideal solution for situations where ease of installation is of primary importance. The lateral split allows the tube to open up to accommodate a wide variety of bundling requirements, and the semi-rigid braid configuration simply closes around the entire installation without the need for any additional fasteners. F6 is more flexible than split conduit or spiral wrap.

PART NUMBER	NOM. SIZE (Inches)	EXPANSION RANGE		STANDARD LENGTH		AVAILABLE COLORS	WEIGHT LB/100
		Minimum (Inches)	Maximum (Inches)	Shop	Bulk		
BF6-1/4	1/4	1/8	7/16	20	100	B, CW	0.24
BF6-3/8	3/8	3/16	1/2	12	75	B, CW	0.57
BF6-1/2	1/2	1/4	3/4	10	75	B, CW	0.72
BF6-3/4	3/4	1/2	1 1/4	8	50	B, CW	0.87
BF6-1	1	5/8	1 5/8	8	50	B, CW	1.34
BF6-1.5	1.5	1	2 1/8	-	25	B, CW	1.96

Ordering Information: Colors: B = Black CW = Clear
Combine part numbers with color abbreviation and standard length.

Example: 3/4" Clear Wrappable Braided Tube, 50 feet = BF6-3/4CW-50



FEATURES:

- Economical and easy to install
- Cut and abrasion resistant
- Expands up to 150%
- Resists gasoline and engine chemicals

COMPLIANCES:

- UL, CSA, RoHS
- VW-1
- ABYC

CHARACTERISTICS:

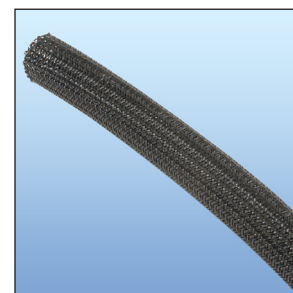
Operating Temperature:

(Min Continuous) -94°F / -70°C
(Max Continuous) 257°F / 125°C
(Melt) 482°F / 250°C

Flammability Rating: UL-94

APPLICATIONS:

- Engine compartment dress-up
- Home theater wire management
- Computer case wiring
- Office wire management
- Automotive harnesses



FEATURES:

- F6 is specifically designed to protect previously installed wires and hose
- Cut & abrasion resistant
- Easily cut with hot knife

APPLICATIONS:

- Engine compartment dress-up
- Home theater wire management
- Customizing computer case wiring
- Office wire management
- Automotive harnesses

WIRE
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CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
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TIES

TERMINALS

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LUGS
& BOOTS

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& LABELERS

TOOLS

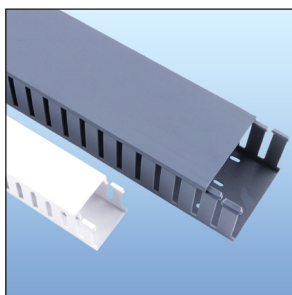
BREAKERS
& FUSES

TERMINAL
BLOCKS &
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SWITCHES &
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WIRE & CABLE
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TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Rigid, non-flammable lead-free PVC
- Available in white or light grey
- Cover mounts flush to sides
- Slotted for easy wire breakouts
- Non-slip cover design
- Provided with mounting holes
- Rounded edges to protect from abrasion

COMPLIANCES:

- UL Recognized continuous use temperature: 122°F (50°C)
- UL94 Flammability Rating of V-0
- Conforms with NFPA 79-2007 section 13.3.1 requirement for flame retardant material
- UL, CSA, RoHS compliant

CHARACTERISTICS:

- Resistant to Acids, Alkali, Fuels and Oils
- Lead-free PVC

APPLICATIONS:

- The preferred product for organizing large numbers of wires.
- Ideal for frequent breakouts or individual wire removal.



TIP:

Cutting wiring duct is easy. Use a fine tooth hand saw for small quantities. For large quantities use a fine tooth band-saw or circular saw.

WIRING DUCT

Wiring Duct is unique in that wires can easily be added and removed at any time. The cover is flush with the base for mounting in tight areas. Our wide finger, slotted wiring duct is made from lead-free PVC. Bases and covers are sold separately. Cutting wiring duct is easily achieved by using a fine tooth hand saw for small quantities.

PART NUMBER	NOM. DUCT SIZES		SLOT WIDTH (Inches)	MAX NUMBER OF 14 AWG WIRES	*COVER PART NUMBER
	WIDTH (Inches)	HEIGHT (Inches)			
WHITE DUCT					
BG1X1WH6	1.00	1.00	0.31	26	BDC1WH
BG1X2WH6	1.00	2.00	0.31	52	BDC1WH
BG1X3WH6	1.00	3.00	0.31	52	BDC1WH
BG2X1WH6	2.00	1.00	0.31	76	BDC2WH
BG2X2WH6	2.00	2.00	0.31	104	BDC2WH
BG2X3WH6	2.00	3.00	0.31	147	BDC2WH
BG3X2WH6	3.00	2.00	0.31	147	BDC3WH
BG3X3WH6	3.00	3.00	0.31	233	BDC3WH
BG4X2WH6	4.00	2.00	0.31	201	BDC4WH
BG4X3WH6	4.00	3.00	0.31	310	BDC4WH
BG4X4WH6	4.00	4.00	0.31	414	BDC4WH

LIGHT GREY DUCT					
BG1X1LG6	1.00	1.00	0.31	26	BDC1LG
BG1X2LG6	1.00	2.00	0.31	52	BDC1LG
BG1X3LG6	1.00	3.00	0.31	52	BDC1LG
BG2X1LG6	2.00	1.00	0.31	76	BDC2LG
BG2X2LG6	2.00	2.00	0.31	104	BDC2LG
BG2X3LG6	2.00	3.00	0.31	147	BDC2LG
BG3X2LG6	3.00	2.00	0.31	147	BDC3LG
BG3X3LG6	3.00	3.00	0.31	233	BDC3LG
BG4X2LG6	4.00	2.00	0.31	201	BDC4LG
BG4X3LG6	4.00	3.00	0.31	310	BDC4LG
BG4X4LG6	4.00	4.00	0.31	414	BDC4LG

Ordering Information:

Order in multiples of 6 ft. *Duct and Cover are sold separately. Due to the 6 ft. length, additional shipping charges may apply. Other sizes are available, please call our Pacer Customer Service Experts for pricing.

Duct Example: 2" by 2" white duct, 6 ft. = BG2X2WH6

Cover Example: 2" white cover, 6ft. = BDC2WH

For Optimal Use:

Follow the formula below to determine the maximum number of wires used in various sizes of wiring duct. Formula based upon a 50 % fill capacity.

$$\text{Number of wires} = \frac{\text{Duct Width} \times \text{Height}}{2 \times (\text{Wire O.D.})^2}$$

STAINLESS STEEL CUSHION CLAMPS

BSSC are composed of 321 stainless steel with black neoprene cushions for protection of wire or hoses. The neoprene cushions also serve to dampen vibrations. The strength and corrosion resistance of stainless steel combined with the protection of neoprene provide a long term, reliable mounting solution.

PART NUMBER	SIZE	A (Inches)	B (Inches)	C (Inches)	D (Inches)	E (Inches)	WIDTH (Inches)	PACKAGE SIZE
BSSC04	1/4"	0.250	0.529	0.032	0.062	0.062	0.500	10, 25, 100, 2500
BSSC06	3/8"	0.375	0.592	0.032	0.062	0.062	0.500	10, 25, 100, 1700
BSSC08	1/2"	0.500	0.654	0.032	0.062	0.062	0.500	10, 25, 100, 1200
BSSC10	5/8"	0.625	0.780	0.032	0.062	0.109	0.500	10, 25, 100, 1000
BSSC12	3/4"	0.750	0.842	0.032	0.062	0.109	0.500	10, 25, 100, 1500
BSSC14	7/8"	0.875	0.889	0.032	0.062	0.109	0.500	10, 25, 100, 1200
BSSC16	1"	1.000	0.951	0.032	0.062	0.109	0.500	10, 25, 100, 1000
BSSC18	1 1/8"	1.125	1.062	0.032	0.062	0.125	0.500	10, 25, 100, 500
BSSC20	1 1/4"	1.250	1.093	0.032	0.094	0.125	0.500	10, 25, 100, 700
BSSC22	1 3/8"	1.375	1.187	0.032	0.094	0.125	0.500	10, 25, 100, 600
BSSC24	1 1/2"	1.500	1.217	0.032	0.094	0.125	0.500	10, 25, 100, 500
BSSC28	1 3/4"	1.750	1.342	0.032	0.094	0.125	0.500	10, 25, 100, 450
BSSC32	2"	2.000	1.475	0.040	0.125	0.125	0.500	10, 25, 100, 350
BSSC36	2 1/4"	2.250	1.598	0.040	0.125	0.125	0.500	5, 10, 25, 300
BSSC40	2 1/2"	2.500	1.728	0.040	0.125	0.125	0.500	5, 10, 250
BSSC44	2 3/4"	2.750	1.851	0.040	0.125	0.125	0.500	5, 10, 200
BSSC48	3"	3.000	1.976	0.040	0.125	0.125	0.500	5, 10, 175
BSSC56	3 1/2"	3.500	2.226	0.040	0.125	0.125	0.500	5, 10, 300
BSSC64	4"	4.000	2.476	0.040	0.125	0.125	0.500	5, 10, 250

Ordering Information: Combine part number and package size. **Example:** 1/4" diameter, 100 pieces = BSSC04-100.

NYLON CLAMPS

NATURAL	SIZE (Inches)	A (Inches)	B (Inches)	C (Inches)	D (Inches)	E (Inches)	PACKAGE SIZE
BCCH02	1/8	0.120	0.500	0.360	0.203	0.100	100 1000
BCCH03	3/16	0.190	0.500	0.420	0.203	0.100	100 1000
BCCH04	1/4	0.250	0.500	0.460	0.203	0.100	100 1000
BCCH05	5/16	0.310	0.500	0.500	0.203	0.100	100 1000
BCCH06	3/8	0.380	0.500	0.530	0.203	0.100	100 1000
BCCH07	7/16	0.440	0.500	0.560	0.203	0.100	100 1000
BCCH08	1/2	0.500	0.500	0.590	0.203	0.100	100 1000
BCCH09	9/16	0.560	0.500	0.610	0.203	0.100	100 1000
BCCH10	5/8	0.620	0.500	0.650	0.203	0.100	100 1000
BCCH11	11/16	0.690	0.500	0.750	0.203	0.100	100 -
BCCH12	3/4	0.750	0.500	0.780	0.203	0.100	100 500
BCCH13	13/16	0.810	0.500	0.810	0.203	0.100	100 -
BCCH14	7/8	0.870	0.500	0.840	0.203	0.100	100 500
BCCH16	1	1.000	0.500	0.910	0.203	0.100	100 500
BCCH20	1 1/4	1.250	0.500	1.060	0.203	0.100	100 -
BCCH24	1 1/2	1.500	0.500	1.190	0.203	0.100	100 -

Ordering Information: Order by package size. For Black nylon clamps, add BK to the end of the part number. Combine part numbers with package size. **Example:** 1/8" Black Nylon Clamp, 1000 pieces = BCCH02-1000BK

Pacer Group - Sarasota
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FEATURES:

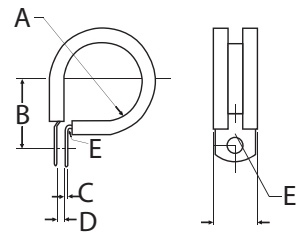
- 1/4" mounting hole
- 1/2" width for strength
- Sizes from 1/4" to 4"

COMPLIANCES:

- 304/321 Stainless steel meets MIL-S-5059 AMS5510
- General purpose EPDM per SAE J200BC715

APPLICATIONS:

Stainless steel clamps are used for mounting wire, cable or hoses where weight and vibration are a factor.

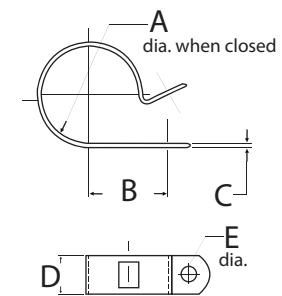


FEATURES:

- Stocked in natural and black heat/UV stabilized 6/6 nylon
- 1/2" width for strength
- Sizes from 1/8" to 1 1/2"
- Mounts with a #10 screw

APPLICATIONS:

BCCH (Battery Cable Clamp Hulls) are an economical, fast and efficient mounting system for a wide variety of materials including cables, hoses and harnesses.



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TIES

TERMINALS

DEUTSCH &
DELPHI

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& BOOTS

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BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
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HEAT SHRINK
ROUTING & BUNDLING MATERIALS
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TERMINALS
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LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- For indoor use
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

COMPLIANCES:

- UL Compliant
- Flammability UL 94V-2
- RoHS & CE compliant

CHARACTERISTICS:

- 6/6 Nylon (Nat. & UV res. Blk)
- Max. Cont. Temp. 185°F (85°C)
- Min. Cont. Temp. -20°F (85°C)

APPLICATIONS:

- Cable ties are the most widely used and versatile bundling and harnessing material available
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling



FEATURES:

- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through the entire bundle.
- High strength low tread force
- Dome-top head features unique patented design with round smooth edges.
- Maintains the same compliances and characteristics as standard cable ties.



Cable Tie Cutting Tools can be found on page 56.

CABLE TIES

PART NUMBER SYSTEM

CTMR

CABLE TIE TYPE
CT=Standard
CTB=Barb Ty
CTMR=Mounting Ring
CMLT=Stainless Steel

2

APPROX. BUNDLE DIA.
1 = 1"
1.5 = 1.5"
2 = 2"
3 = 3"
4 = 4"

S

LOOP TENSILE STR.
M =Mini (18 Lbs.)
I =Intermediate (40 Lbs.)
S =Standard (50 Lbs.)
LH=Heavy Duty (120 Lbs.)

0

Designates Black
UV Resistant Cable Ties

STANDARD PKG PART NUMBER		PKG SIZE	BULK PKG PART NUMBER		PKG SIZE	LENGTH (IN.)	BUNDLE DIA (IN.)	MAX TENSILE STRENGTH LB(TYPE)
NATURAL	BLACK		NATURAL	BLACK				

STANDARD CABLE TIES

CT1M-C	CT1M-C0	100	CT1M-M	CT1M-M0	1000	3.9	0.87	18 (M)
CT1.5I-C	CT1.5I-C0	100	CT1.5I-M	CT1.5I-M0	1000	5.6	1.38	40 (I)
CT2S-C	CT2S-C0	100	CT2S-M	CT2S-M0	1000	7.4	1.88	50 (S)
CT3S-C	CT3S-C0	100	CT3S-M	CT3S-M0	1000	11.5	3.00	50 (S)
CT3H-L	CT3H-L0	50	CT3H-TL	CT3H-TL0	250	11.4	3.00	120 (LH)
CT4S-C	CT4S-C0	100	CT4S-M	CT4S-M0	1000	14.5	4.00	50 (S)
CT4H-L	CT4H-L0	50	CT4H-TL	CT4H-TL0	250	14.5	4.00	120 (LH)
CT7LH-L	CT7LH-L0	50	-	-	-	24.7	7.00	120 (LH)
CT9LH-L	CT9LH-L0	50	-	-	-	30.5	9.00	120 (LH)

CABLE TIES WITH MOUNTING RING

CTMR1M-C	CTMR1M-C0	100	CTMR1M-M	CTMR1M-M0	1000	4.3	0.75	18 (M)
CTMR1.5I-C	CTMR1.5I-C0	100	CTMR1.5I-M	CTMR1.5I-M0	1000	6.1	1.25	40 (I)
CTMR2S-C	CTMR2S-C0	100	-	CTMR2S-M0	1000	7.9	1.84	50 (S)
CTMR4S-C	CTMR4S-C0	100	CTMR4S-M	CTMR4S-M0	1000	15.0	4.00	50 (S)
CTMR4H-L	CTMR4H-L0	50	CTMR4H-TL	CTMR4H-TL0	250	15.1	4.00	120 (LH)

Ordering Information: Order by standard or bulk packages.

Dome-Top[®] Barb Ty - CABLE TIES

STANDARD PKG PART NUMBER		PKG SIZE	BULK PKG PART NUMBER		PKG SIZE	LENGTH (IN.)	BUNDLE DIA (IN.)	MAX TENSILE STRENGTH LB(TYPE)
NATURAL	BLACK		NATURAL	BLACK				

DOME TOP CABLE TIES

CTB1M-C	CTB1M-C0	100	CTB1M-M	CTB1M-M0	1000	4.0	0.90	18 (M)
CTB1.5I-C	CTB1.5I-C0	100	CTB1.5I-M	CTB1.5I-M0	1000	6.1	1.50	40 (I)
CTB2S-C	CTB2S-C0	100	CTB2S-M	CTB2S-M0	1000	8.0	2.00	50 (S)
CTB3S-C	CTB3S-C0	100	CTB3S-M	CTB3S-M0	1000	12.0	3.00	50 (S)
CTB4S-C	CTB4S-C0	100	CTB4S-M	CTB4S-M0	1000	15.1	4.00	50 (S)
CTB4LH-L	CTB4LH-L0	50	CTB4LH-TL	CTB4LH-TL0	250	14.9	4.00	120 (LH)
CTB7LH-L	CTB7LH-L0	50	-	-	-	24.4	7.00	120 (LH)
CTB9LH-L	CTB9LH-L0	50	-	-	-	30.7	9.00	120 (LH)

DOME TOP CABLE TIES WITH MOUNTING RING

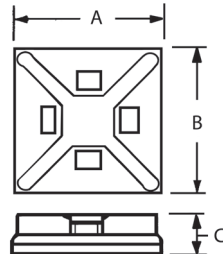
-	-	-	-	CTBMR1M-M0	1000	4.0	0.90	18 (M)
-	-	-	-	CTBMR1.5I-M0	1000	6.1	1.50	40 (I)
-	CTBMR2S-C0	100	CTBMR2S-D	-	500	8.0	2.00	50 (S)
-	CTBMR4S-C0	100	CTBMR4S-D	-	500	15.1	4.00	50 (S)
-	CTBMR4LH-L0	50	-	CTBMR4LH-TL0	250	15.1	4.00	120 (LH)

Ordering Information: Order by standard or bulk packages.

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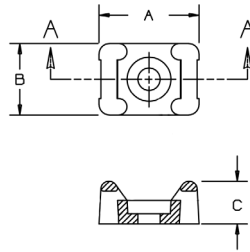
CABLE TIE MOUNTS



ADHESIVE BACKED MOUNTS

PART NUMBER NATURAL	PART NUMBER BLACK	A (IN.)	B (IN.)	C (IN.)	USE WITH CABLE TIE TYPE	MAX STATIC LOAD LB	PACKAGE SIZE
CABM.5	-	0.50	0.50	0.16	M	0.13	100
CABM.75	CABM.75BK	0.75	0.75	0.18	M, I	0.30	100
CABM1	CABM1BK	1.00	1.00	0.16	M, I, S	0.50	100

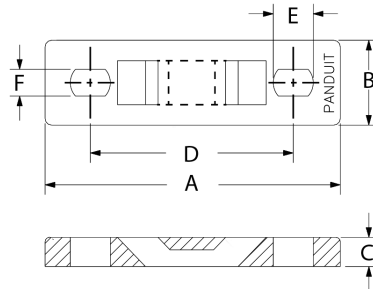
Ordering Information: Order by package.



SCREW DOWN MOUNTS

PART NUMBER NATURAL	PART NUMBER BLACK	A (IN.)	B (IN.)	C (IN.)	USE WITH CABLE TIE TYPE	MOUNT METHOD	PACKAGE SIZE
CTM1S6	CTM1S6BK	0.51	0.32	0.23	M	#6 Screw	100
CTM2S8	CTM2S8BK	0.63	0.43	0.28	M, I, S	#8 Screw	100
CTM3S10	CTM3S10BK	0.86	0.61	0.37	M, I, S, LH	#10 Screw	100
-	CTMEH25BK	1.62	0.72	0.61	I, S, LH	1/4" Screw	25

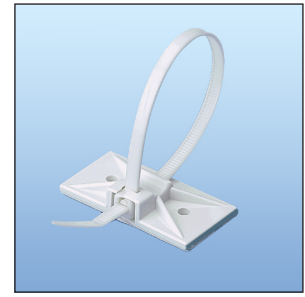
Ordering Information: Order by package.



MULTIPLE TIE MOUNTING PLATES

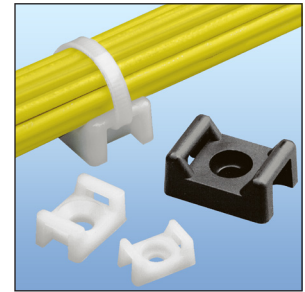
PART NUMBER	A (IN.)	B (IN.)	C (IN.)	D (IN.)	E (IN.)	F (IN.)	USE WITH CABLE TIE TYPE	MOUNT METHOD	PACKAGE SIZE
CTMTP3-10	4.25	0.50	0.13	1.25	0.30	0.20	M, I, S	#10 Screw	PC
CTMTP6-10	9.59	0.63	0.20	1.50	0.30	0.20	M, I, S, LH	#10 Screw	PC

Ordering Information: Order by the piece. CTMTP3-10 holds 3 cable ties. CTMTP6-10 holds 6 cable ties.



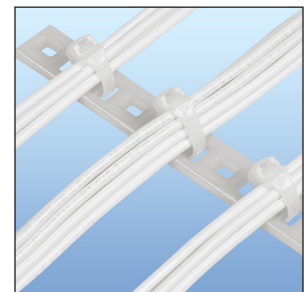
FEATURES:

- Superior adhesive for long term reliability
- 4-way cable tie entry
- Available in multiple sizes to match application load
- Fast and easy to use, applies to any clean, dry, smooth, grease-free surface
- Available in white or UV resistant black



FEATURES:

- Screw fastened nylon cradles
- Low profile
- Excellent stability and rigidity
- Available in natural or UV resistant black



FEATURES:

- Uniformly anchors parallel wire bundles, cables and tubing
- Reduces the number of fasteners

WIRE
& CABLE

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CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

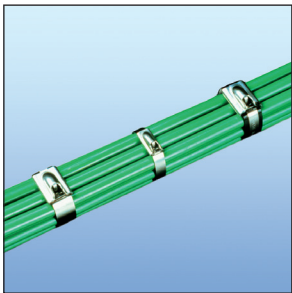
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
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LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Self-locking head design speeds installation
- Provides a strong and durable method of cable bundling
- Smooth surface and rounded edges assures cable protection and worker safety
- AISI 316 stainless steel for the most corrosive environments

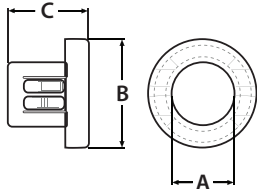
COMPLIANCES:

- AISI 316 stainless steel



FEATURES:

- Converts raw edge holes into smooth, neat insulated holes
- Locking fingers snap into holes with fingertip pressure
- Withstands a push back force of 35 lb



Snap Bushings

STAINLESS STEEL CABLE TIES

PART NUMBER	LENGTH (Inches)	WIDTH (Inches)	MAX BUNDLE	MIN. LOOP TENSILE STRENGTH	PACKAGE SIZE
CMLT1S-CP316	5.00	0.18	1.00	200	100
CMLT2S-CP316	7.90	0.18	2.00	200	100
CMLT2.7S-CP316	10.2	0.18	2.70	200	100
CMLT4S-CP316	14.3	0.18	4.00	200	100
CMLT4H-LP316	14.3	0.31	4.00	450	50
CMLT6S-CP316	20.5	0.18	6.00	200	100

Ordering Information: Order by standard package.

STAINLESS STEEL CABLE TIE CUSHION SLEEVES

High quality, black cushion sleeve series is used with stainless steel cable ties. It is used in applications requiring improved gripping, separation of dissimilar metals and added bundle protection. It has excellent ultraviolet resistance.

PART NUMBER	FOR USE WITH TIE WIDTH (Inches)	SLEEVE WIDTH (Inches)	PACKAGE SIZE
CM-PCSS	0.18	0.33	100 FT REEL
CM-PCSH	0.31	0.47	100 FT REEL

Ordering Information: Order by standard package.

SNAP BUSHINGS

Snap bushings are used to eliminate sharp edges and to protect wires when passing through holes. Designed to accommodate a variety of panel or box thickness, snap bushings will easily snap into place and resist up to 35 pounds of pull.

PART NUMBER	MOUNTING HOLE DIA. (Inches)	(A) INSIDE DIAMETER (Inches)	(B) HEAD DIAMETER (Inches)	(C) OVERALL HEIGHT (Inches)	MAX. PANEL THICKNESS (Inches)	PACKAGE SIZE
BSB-1/4	1/4	0.125	0.312	0.312	0.062	10, 25, 100
BSB-3/8	3/8	0.250	0.468	0.406	0.125	10, 25, 100
BSB-1/2	1/2	0.391	0.570	0.406	0.125	10, 25, 100
BSB-5/8	5/8	0.500	0.718	0.406	0.125	10, 25, 100
BSB-3/4	3/4	0.609	0.850	0.406	0.125	10, 25, 100
BSB-7/8	7/8	0.687	0.953	0.453	0.125	10, 25, 100
BSB-1	1	0.766	1.125	0.453	0.125	10, 25, 100
BSB-1.125	1 1/8	0.875	1.218	0.453	0.125	10, 25, 100
BSB-1.25	1 1/4	0.937	1.359	0.453	0.125	10, 25, 100
BSB-1.375	1 3/8	1.000	1.490	0.453	0.125	10, 25, 100
BSB-1.5	1 1/2	1.125	1.609	0.453	0.125	10, 25, 100
BSB-1.75	1 3/4	1.375	1.875	0.453	0.125	10, 25, 100
BSB-2	2	1.640	2.125	0.453	0.125	10, 25, 100
BSB-2.5	2 1/2	1.970	2.660	0.720	0.250	10, 25, 100

Ordering Information: Combine part number and package size.

Example: 3/8" diameter, 25 pieces = BSB-3/8-25.

CABLE GLANDS - LIQUID TIGHT CONNECTORS



NPT THREAD (*LOCKING NUTS SOLD SEPARATELY)

PART NUMBER	DIAMETER RANGE (Inches)	MOUNTING HOLE (Inches)	MAX LENGTH (Inches)	THREAD LENGTH (Inches)	*NPT LOCKING NUTS	
					PART NUMBER	THREAD SIZE (Inches)
BSLC-3/8	0.157 - 0.313	0.657	1.692	0.563	BSLN-3/8	3/8
BSLC-1/2	0.236 - 0.476	0.825	1.734	0.465	BSLN-1/2	1/2
BSLC-3/4	0.545 - 0.709	1.050	1.969	0.563	BSLN-3/4	3/4
BSLC-1	0.708 - 0.984	1.303	2.283	0.563	BSLN-1	1

Ordering Information: Order by the package. 5, 10 or 25 pieces.

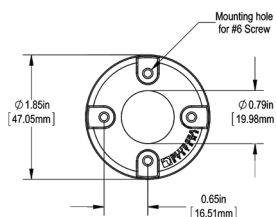
PG THREAD (*LOCKING NUTS SOLD SEPARATELY)

PART NUMBER	DIAMETER RANGE (Inches)	MOUNTING HOLE (Inches)	MAX LENGTH (Inches)	THREAD LENGTH (Inches)	*PG LOCKING NUTS	
					PART NUMBER	THREAD SIZE (mm)
BSLC-36	0.866 - 1.259	1.850	2.519	0.512	BSLN-36	36
BSLC-42	1.259 - 1.496	2.126	2.638	0.512	BSLN-42	42
BSLC-48	1.456 - 1.172	2.335	2.717	0.512	BSLN-48	48

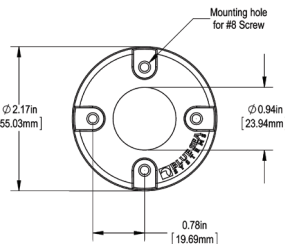
Ordering Information: Order by the piece.



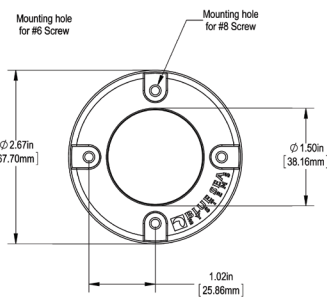
CABLE CLAMS



BCLM-1001



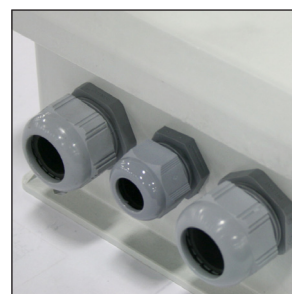
BCLM-1002



BCLM-1003

PART NUMBER	DESCRIPTION
BCLM-1001	Cable Clam 0.68" Connector Opening
BCLM-1002	Cable Clam 0.83" Connector Opening
BCLM-1003	Cable Clam 1.40" Connector Opening

Ordering Information: Order by the piece.



FEATURES:

- For use in areas where cables and wires need to be safely inserted into housings through bulkheads
- Protection up to 70 PSI
- Seal: IP 68 (International protection highest rating, comparable to NEMA 6)

COMPLIANCES:

- International Approvals: UL, CSA, VDE, SEV
- Seal IP 68
- UL Flammability 94 V-2

CHARACTERISTICS:

- Material: Polyamide - flame retardant and self-extinguishing nylon with neoprene bushing
- Operating Temperature: -20°C to 80°C
- Max. Temp Rating: 125°C
- Resistant to common fluids and solvents



FEATURES:

- Waterproof co-axial installation without removing connectors
- Save the expense of removing and replacing
- Avoid poor connections from removing factory connectors

CHARACTERISTICS:

- Body Material: Acetate
- Seal Material: UV Stabilized Buna-N rubber
- Screws: Stainless steel

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

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ELECTRICAL TAPE

3M Dual Lock

This product is a 1" wide, self-adhering, reclosable fastening system. 3M Stem Type 400/170 locking system is five times stronger than conventional hook and loop fasteners. The adhesive backing will adhere instantly to many surfaces.

Part Number: **BDLOCK-BK**

2 - 1" wide rolls, 1 @ 170 stems, 1@ 400 stems. 4.9 yards each

Ordering Information: Order in mini packs of 4.9 yards.

Super 33+

Scotch Brand Super 33+ is a premium grade, 7-mil tape that applies well at temperatures as low as -18°C/0°F and has an operating temperature range up to 105°C/220°F. Use Super 33+ as a primary insulation for wire and cable splices up to 600V and for fixture and wire splices up to 1kV.

Part Number: **ETBLK105**

Ordering Information: Order by the roll.

Scotch 35

3M Scotch 35 are color coded, American made electrical tapes that are general purpose insulating tapes. They are economical and durable with excellent resistance to a wide range of contaminants and weather conditions.

Features:

- UL Listed 80°C 600V, CSA Certified 105°C
- 3/4" x 66 feet
- Resists: abrasion, UV rays, moisture, alkalis and solvents

Ordering Information: Order by the roll.

PART NUMBER	COLOR
ETBRN80	BROWN
ETRED80	RED
ETORG80	ORANGE
ETYEL80	YELLOW
ETGRN80	GREEN
ETBLU80	BLUE
ETVIO80	VIOLET
ETGRY80	GREY
ETWHT80	WHITE

Temflex

3M Temflex is an economical, general purpose tape for indoor or outdoor use.

Part Number: **ETBLK80**

Ordering Information: Order by the roll.

130C Linerless Rubber Splicing Tape

3M 130C is a highly conformable linerless rubber (EPR), high-voltage insulating tape formulated to provide excellent thermal dissipation of splice heat. It is designed for use in splicing and terminating wires and cables, moisture sealing electrical connections, bus bar insulating and end-sealing cables.

Features:

- Indoor/Outdoor Use
- Flame Retardant
- Rated for use up to 90°C continuous, short term overload service to 130°C

Ordering Information: Order by the roll.

PART NUMBER	DESCRIPTION
ET130C-1	1.0" X 30'
ET130C-1.5	1.5" X 30'

ELECTRICAL SEALANTS AND COATINGS



PART NUMBER	DESCRIPTION	SIZE
3M™ SCOTCHKOTE		
ESCOTCHKOTE	3M Scotchkote™ electrical fast dry coating provides a tough, oil-resistant outer seal on electrical insulation subjected to abnormal weathering, oil or moisture conditions. The brush applied coating provides additional oil and moisture protection when used over an application of Scotch™ Vinyl electrical tapes.	15 fl oz. (443 ml)
3M™ INSULATING SEALERS		
E1601CLR (Clear)	3M™ 1601 and 1602 Sealers insulate, refinish and protect. They are used to overcoat outdoor electrical splices and cases to impede the effects of weather, moisture, acids, alkalis and oils.	15.13 fl oz. (447 ml)
E1602RD (Red)		
CORROSION X™ MARINE		
VCX-6	The new generation in corrosion control. Corrosion X™ Marine takes corrosion protection to a higher level. It keeps corrosion from starting, and kills it where it already has a foothold by displacing moisture to provide long-lasting protection. Use on metal fixtures and electrical components.	6 fl oz
VCX-16		16 fl oz.
CORROSION X™ HEAVY DUTY		
VCX-12	For super long-term protection against serious rust and corrosion assault. It is a high performance, thick, film version of Corrosion X. It slowly penetrates existing rust and corrosion; removes moisture, stops electrolysis and seals moisture out. Unlike wax coatings, it will not dry out, stiffen or crack under stress. It will remain for hours on out drives, even while underway.	12 fl oz.

Ordering Information: Order by the piece.

TERMINAL KITS



PART NUMBER	DESCRIPTION	CASE SIZE
HEAT SHRINK TERMINAL KIT		
TE-KIT	A durable, portable plastic case filled with 180 heat shrink terminals. Each compartment contains 10 butt splices or ring terminals. Ring terminals come with stud sizes: #8, #10, 1/4", 5/16" and 3/8".	Outside: L=10 7/8" W=6 3/4" H=1 3/4"
	Kit Contains: (60) Red terminals for 22-18 AWG wire (10) butt splices and (50) rings (60) Blue terminals for 16-14 AWG wire (10) butt splices and (50) rings (60) Yellow terminals for 12-10 AWG wire (10) butt splices and (50) rings	Compartments: L=1 11/16" W=2" H=1 1/2"
NYLON TERMINAL KIT		
TNF-KIT	A durable, portable plastic case filled with 450 nylon insulated terminals. Each compartment contains 25 butt splices or ring terminals. Ring terminals come with stud sizes: #8, #10, 1/4", 5/16" and 3/8".	Outside: L=10 7/8" W=6 3/4" H=1 3/4"
	Kit Contains: (150) Red terminals for 22-18 AWG wire (25) butt splices and (125) rings (150) Blue terminals for 16-14 AWG wire (25) butt splices and (125) rings (150) Yellow terminals for 12-10 AWG wire (25) butt splices and (125) rings	Compartments: L=1 11/16" W=2" H=1 1/2"

For terminal details and compliances see pages 34-36.

Ordering Information: Order by the kit. For empty cases see page 50.

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



Heat Shrink Butt Splices



Step Down Butt Splices



Step Down Butt Splices



Fully Insulated (Female)



Partially Insulated (Male)



Bullet Terminals (Recp.)



Closed-End Connectors

HEAT SHRINK SPLICES & DISCONNECTS

Heat shrink terminals and splices provide a rugged, environmentally sealed connection for wire sizes 22 to 8 AWG. They insulate, seal and protect joints from physical abuse and abrasion, water, salt and other corrosive compounds. The NiAc insulation material shrinks up to 40% faster than comparable nylon or polyolefin products, saving time in new wiring or for repairs. Shrinking at 90°C, half that of nylon, polyolefin prevents wire insulation damage or degradation due to overheating.

PART NUMBER	WIRE RANGE	INSULATION COLOR	MAX WIRE INSULATION O.D. (IN.)	PACKAGE SIZE
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BUTT SPLICES

TBSE18	#22-18 AWG	RED	0.19	10, 25, 100, 500
TBSE14	#16-14 AWG	BLUE	0.21	10, 25, 100, 500
TBSE10	#12-10 AWG	YELLOW	0.28	10, 25, 100, 500
TBSE8	#8 AWG	PINK	0.35	4, 10, 50, 500

STEP DOWN BUTT SPLICES - COLORED HEAT SHRINK

TBSDE14-18	#18-14 AWG	BLUE	0.21	10, 25, 100, 500
TBSDE10-14	#14-10 AWG	YELLOW	0.28	10, 25, 100, 250

PART NUMBER	SIDE ONE COLOR STRIPE / WIRE (AWG)	SIDE TWO COLOR STRIPE / WIRE (AWG)	INSULATION COLOR	PACKAGE SIZE
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STEP DOWN BUTT SPLICES - CLEAR HEAT SHRINK

TSDE118-218	RED/1@20-18	BLUE/2@20-18	CLEAR/RED DASHES	5
TSDE114-214	BLUE/1@16-14	YELLOW/2@16-14	CLEAR/BLUE DASHES	5
TSDE110-210	YELLOW/1@12-10	RED/2@12-10	CLEAR/YELLOW DASHES	5

Step down butt connectors join two wires to one. Color dash on the tubing indicates the wire AWG for the connector. Color strips on the terminal indicate which crimp die to use.

PART NUMBER FEMALE	PART NUMBER MALE	INSULATION COLOR	DISC./BULLET SIZE (IN.)	PACKAGE SIZE
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FULLY INSULATED DISCONNECT TERMINALS

TDE18-250FI	TDE18-250FIM	RED	0.250	10, 25, 100, 500
TDE14-250FI	TDE14-250FIM	BLUE	0.250	10, 25, 100, 500
TDE10-250FI	TDE10-250FIM	YELLOW	0.250	10, 25, 100, 500

PARTIALLY INSULATED DISCONNECT TERMINALS

TDE18-250	TDE18-250M	RED	0.250	10, 25, 100, 500
TDE14-250	TDE14-250M	BLUE	0.250	10, 25, 100, 500
TDE10-250	TDE10-250M	YELLOW	0.250	10, 25, 100, 500

BULLET TERMINALS

TBRE18-156	TBPE18-156	RED	0.156	10, 25, 100, 500
TBRE14-156	TBPE14-156	BLUE	0.156	10, 25, 100, 500

PART NUMBER	WIRE RANGE (MIN/MAX)	INSULATION COLOR	PACKAGE SIZE
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CLOSED-END CONNECTORS (WIRE JOINTS) WITH HEAT SHRINK

TJE422-216	4@22/2@16	CLEAR/BLUE DASH	5
TJE418-212	4@18/2@12	CLEAR/YELLOW DASH	5

Closed-end connectors (wire-joints), join two to four wires. In an environment where corrosion and/or vibration are a problem, closed-end connectors can be used to replace wire nuts.

Ordering Information: Combine part number and package size.

Example: Step down butt splices, 10 AWG to 14 AWG, 25 pieces = TBSDE10-14-25.

HEAT SHRINK RINGS & FORKS

PART NUMBER	STUD SIZE	TERMINAL PAD WIDTH (Inches)	PACKAGE SIZE
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22 AWG - 18 AWG HEAT SHRINK RING TERMINALS - RED

TE18-6R	#6	0.32	10, 25, 100, 500
TE18-8R	#8	0.32	10, 25, 100, 500
TE18-10R	#10	0.32	10, 25, 100, 500
TE18-14R	1/4"	0.48	10, 25, 100, 500
TE18-56R	5/16"	0.48	10, 25, 100, 500
TE18-38R	3/8"	0.54	10, 25, 100, 500

16 AWG - 14 AWG HEAT SHRINK RING TERMINALS - BLUE

TE14-6R	#6	0.32	10, 25, 100, 500
TE14-8R	#8	0.32	10, 25, 100, 500
TE14-10R	#10	0.32	10, 25, 100, 500
TE14-14R	1/4"	0.48	10, 25, 100, 500
TE14-56R	5/16"	0.48	10, 25, 100, 500
TE14-38R	3/8"	0.55	10, 25, 100, 500
TE14-12R	1/2"	0.75	10, 25, 100, 500

12 AWG - 10 AWG HEAT SHRINK RING TERMINALS - YELLOW

TE10-6R	#6	0.39	10, 25, 100, 500
TE10-8R	#8	0.39	10, 25, 100, 500
TE10-10R	#10	0.39	10, 25, 100, 500
TE10-14R	1/4"	0.54	10, 25, 100, 500
TE10-56R	5/16"	0.54	10, 25, 100, 500
TE10-38R	3/8"	0.60	10, 25, 100, 500
TE10-12R	1/2"	0.76	10, 25, 100, 500

8 AWG HEAT SHRINK RING TERMINALS - PINK

TE8-10R	#10	0.39	4, 10, 50, 250
TE8-14R	1/4"	0.60	4, 10, 50, 100
TE8-56R	5/16"	0.60	4, 10, 50, 250
TE8-38R	3/8"	0.82	4, 10, 50, 250
TE8-12R	1/2"	0.82	4, 10, 50, 250

PART NUMBER	STUD SIZE	TERMINAL PAD WIDTH (Inches)	PACKAGE SIZE
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22 AWG - 18 AWG LOCKING FORK TERMINALS - RED

TE18-6SLF	#6	0.32	10, 25, 100, 500
TE18-8SLF	#8	0.32	10, 25, 100, 500
TE18-10SLF	#10	0.32	10, 25, 100, 500

16 AWG - 14 AWG LOCKING FORK TERMINALS - BLUE

TE14-6SLF	#6	0.32	10, 25, 100, 500
TE14-8SLF	#8	0.32	10, 25, 100, 500
TE14-10SLF	#10	0.32	10, 25, 100, 500
TE14-14SLF	1/4"	0.48	10, 25, 100, 500

12 AWG - 10 AWG LOCKING FORK TERMINALS - YELLOW

TE10-6SLF	#6	0.39	10, 25, 100, 500
TE10-8SLF	#8	0.39	10, 25, 100, 500
TE10-10SLF	#10	0.39	10, 25, 100, 500

Ordering Information: Combine part number and package size.

Example: Heat shrink ring terminals, 8 AWG, 1/4" stud size, 50 pieces = TE8-14R-50.



FEATURES:

- Protects terminations from water, condensation, salt spray and corrosion
- Vibration protection in rugged environments
- Provides strain relief

COMPLIANCES:

- UL, CSA, RoHS

CHARACTERISTICS:

- Shrink Ratio: Approx. 3:1 at 135°C
- Operating Temp.: -55°C/110°C
- Vol. Resistivity: 10¹⁵ Ohm-cm
- Dielectric Strength: 900V/mil
- Voltage Rating: 600V

APPLICATIONS:

For use in wire connection where moisture, salt spray, or other corrosive compounds are a concern.



Heat Shrink Ring Terminals
12 AWG - 10 AWG



Heat Shrink Ring Terminals
8 AWG



Heat Shrink Fork Terminals
22 AWG - 18 AWG



Heat Shrink Fork Terminals
16 AWG - 14 AWG



Heat Shrink Fork Terminals
12 AWG - 10 AWG

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

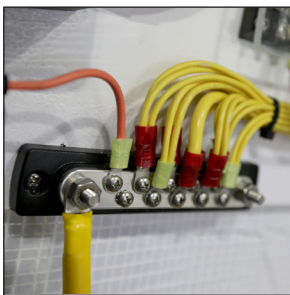
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
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BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

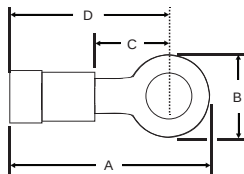
- Available in nylon insulated, vinyl insulated or non-insulated
- Tin plated ETP copper for corrosion resistance

COMPLIANCES:

- UL, CSA
- ELV, RoHS compliant

CHARACTERISTICS:

- Base Material: C11000 electrolytic tough pitch (ETP) copper
- Plating: Electrodeposited tin



Ring Terminals

BUTT SPLICES



Nylon Butt Splice



Vinyl Butt Splice



Non-Insulated Butt Splice

WIRE RANGE	NYLON INSUL. P/N	VINYL INSUL. P/N	NON INSUL. P/N	INSULATION COLOR	SEAMLESS BARREL I.D. (IN.)	PACKAGE SIZE
SEAMLESS BARREL BUTT SPLICES						
22 - 18	TBSN18	TBSV18	TBS18	RED	0.059	25, 100, 1000
16 - 14	TBSN14	TBSV14	TBS14	BLUE	0.091	25, 100, 1000
12 - 10	TBSN10	TBSV10	TBS10	YELLOW	0.138	25, 100, 500

Ordering Information: Combine part number and package size.

Example: 16 AWG, nylon insulated, 100 pieces = TBSN14-100

RING TERMINALS



Nylon Ring Terminal



Vinyl Ring Terminal



Non-Insulated Ring Terminal

STUD SIZE	NYLON INSUL. P/N	VINYL INSUL. P/N	NON INSUL. P/N	A* (IN.)	B (IN.)	C (IN.)	D* (IN.)	PACKAGE SIZE
22 AWG - 18 AWG RING TERMINALS - RED								
#6	TNF18-6R	TV18-6R	T18-6R	0.81	0.25	0.24	0.65	25, 100, 1000
#8	TNF18-8R	TV18-8R	T18-8R	0.88	0.31	0.27	0.67	25, 100, 1000
#10	TNF18-10R	TV18-10R	T18-10R	0.87	0.31	0.27	0.67	25, 100, 1000
1/4"	TNF18-14R	TV18-14R	T18-14R	1.06	0.47	0.39	0.79	25, 100, 1000
5/16"	TNF18-56R	TV18-56R	T18-56R	1.06	0.47	0.39	0.79	25, 100, 1000
3/8"	TNF18-38R	TV18-38R	T18-38R	1.26	0.54	0.55	0.95	25, 100, 1000
16 AWG - 14 AWG RING TERMINALS - BLUE								
#6	TNF14-6R	TV14-6R	T14-6R	0.89	0.32	0.29	0.70	25, 100, 1000
#8	TNF14-8R	TV14-8R	T14-8R	0.89	0.32	0.29	0.70	25, 100, 1000
#10	TNF14-10R	TV14-10R	T14-10R	0.89	0.32	0.29	0.70	25, 100, 1000
1/4"	TNF14-14R	TV14-14R	T14-14R	1.08	0.48	0.39	0.97	25, 100, 1000
5/16"	TNF14-56R	TV14-56R	T14-56R	1.08	0.48	0.39	0.97	25, 100, 1000
3/8"	TNF14-38R	TV14-38R	T14-38R	1.23	0.54	0.55	0.97	25, 100, 1000
1/2"	TNF14-12R	TV14-12R	T14-12R	1.59	0.75	0.61	1.18	25, 100, 1000
12 AWG - 10 AWG RING TERMINALS - YELLOW								
#6	TNF10-6R	TV10-6R	T10-6R	1.09	0.39	0.30	0.87	25, 100, 500
#8	TNF10-8R	TV10-8R	T10-8R	1.09	0.39	0.30	0.87	25, 100, 500
#10	TNF10-10R	TV10-10R	T10-10R	1.09	0.39	0.30	0.87	25, 100, 500
1/4"	TNF10-14R	TV10-14R	T10-14R	1.26	0.54	0.40	1.03	25, 100, 500
5/16"	TNF10-56R	TV10-56R	T10-56R	1.26	0.54	0.40	1.03	25, 100, 500
3/8"	TNF10-38R	TV10-38R	T10-38R	1.36	0.60	0.47	1.03	25, 100, 500
1/2"	TNF10-12R	TV10-12R	T10-12R	1.58	0.76	0.61	1.18	25, 100, 500

*A and D dimensions apply to insulated terminals only.

Ordering Information: Combine part number and package size.

Example: 22 AWG, #8 stud size, vinyl insulated, 1000 pieces = TV18-8R-1000.



TIP: See some of our storage solutions. Storage Boxes are on page 50.

FORK TERMINALS



Nylon Locking Fork



Vinyl Locking Fork



Non-Insulated Locking Fork

STUD SIZE (IN.)	NYLON INSUL. P/N	VINYL INSUL. P/N	NON INSUL. P/N	A* (IN.)	B (IN.)	C (IN.)	D* (IN.)	PACKAGE SIZE
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22 AWG - 18 AWG LOCKING FORK TERMINALS - RED

#6	TNF18-6SLF	TV18-6SLF	T18-6SLF	0.81	0.26	0.23	0.64	25, 100, 1000
#8	TNF18-8SLF	TV18-8SLF	T18-8SLF	0.88	0.31	0.26	0.67	25, 100, 1000
#10	TNF18-10SLF	TV18-10SLF	T18-10SLF	0.92	0.33	0.26	0.67	25, 100, 1000

16 AWG - 14 AWG LOCKING FORK TERMINALS - BLUE

#6	TNF14-6SLF	TV14-6SLF	T14-6SLF	0.83	0.25	0.23	1.32	25, 100, 1000
#8	TNF14-8SLF	TV14-8SLF	T14-8SLF	0.89	0.31	0.26	0.68	25, 100, 1000
#10	TNF14-10SLF	TV14-10SLF	T14-10SLF	0.94	0.33	0.26	1.35	25, 100, 1000
1/4"	TNF14-14SLF	-	-	1.05	0.44	0.35	0.80	25

12 AWG - 10 AWG LOCKING FORK TERMINALS - YELLOW

#6	TNF10-6SLF	TV10-6SLF	T10-6SLF	0.97	0.25	0.23	0.79	25, 100, 500
#8	TNF10-8SLF	TV10-8SLF	T10-8SLF	1.04	0.31	0.27	0.83	25, 100, 500
#10	TNF10-10SLF	TV10-10SLF	T10-10SLF	1.08	0.33	0.27	0.83	25, 100, 500
1/4"	TNF10-14SLF	-	T10-14SLF	1.04	0.49	0.32	0.89	25, 100, 500

*A and D dimensions apply to insulated terminals only

Ordering Information: Combine part number and package size.

Example: 12 AWG, #10 stud size, non insulated, 500 pieces = T10-10SLF-500



Nylon Flanged Fork

STUD SIZE	NYLON INSUL. P/N	A (IN.)	B (IN.)	C (IN.)	D (IN.)	PACKAGE SIZE
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22 AWG - 18 AWG FLANGED FORK TERMINALS - RED

#6	TN18-6FF	0.93	0.31	0.21	0.75	25, 100, 1000
#8	TN18-8FF	0.93	0.31	0.21	0.75	25, 100, 1000
#10	TN18-10FF	0.93	0.31	0.21	0.75	25, 100, 1000

16 AWG - 14 AWG FLANGED FORK TERMINALS - BLUE

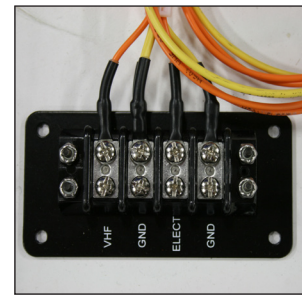
#6	TN14-6FF	0.81	0.31	0.21	0.61	25, 100, 1000
#8	TN14-8FF	0.81	0.31	0.21	0.61	25, 100, 1000
#10	TN14-10FF	0.81	0.31	0.21	0.61	25, 100, 1000

12 AWG - 10 AWG FLANGED FORK TERMINALS - YELLOW

#8	TN10-8FF	1.03	0.39	0.27	0.83	25, 100, 500
#10	TN10-10FF	1.03	0.39	0.27	0.83	25, 100, 500

Ordering Information: Combine part number and package size.

Example: 14 AWG, #8 stud size, nylon insulated, 500 pieces = TN14-8FF-500



FEATURES:

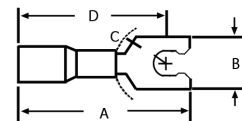
- Available in nylon insulated, vinyl insulated or non-insulated
- Tin plated ETP copper for corrosion resistance

COMPLIANCES:

- UL, CSA
- ELV, RoHS Compliant

CHARACTERISTICS:

- Base Material: C11000 electrolytic-tough pitch (ETP) copper
- Plating: Electrodeposited tin



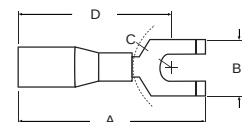
Locking Forks

FEATURES:

- Nylon insulated

COMPLIANCES:

- UL, CSA
- ELV, RoHS compliant



Flanged Forks

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

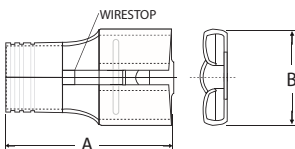
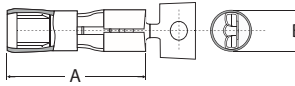
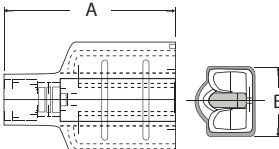
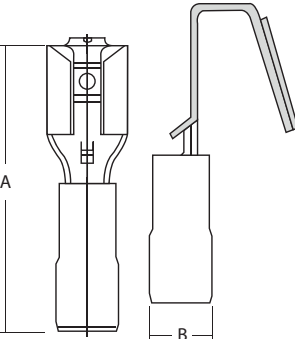
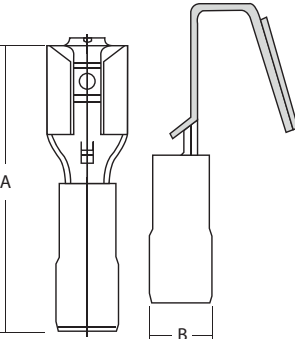
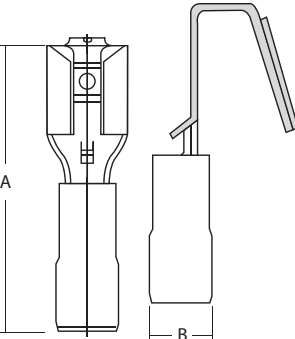
TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE	
MULTI-CONDUCTOR	
COAX CABLES	
NETWORK CABLES	
HEAT SHRINK	
ROUTING & BUNDLING MATERIALS	
CABLE TIES	
TERMINALS	
DEUTSCH & DELPHI	
LUGS & BOOTS	
ID PRODUCTS & LABELERS	
TOOLS	
BREAKERS & FUSES	
TERMINAL BLOCKS & BUS BARS	
SWITCHES & ACTUATORS	
LIGHTS & METERS	

Non-Insulated Disconnect

Nylon Partially Insulated Disconnect

Nylon Fully-Insulated Disconnect

Vinyl Insulated Piggyback Disconnect

Bullet Connectors

DISCONNECTS

Non-Insulated Disconnect

Nylon Partially Insulated Disconnect

Nylon Fully-Insulated Disconnect

WIRE RANGE	TAB SIZE (IN.)	FEMALE P/N	MALE P/N	INSUL. COLOR	A* (IN.)	B* (IN.)	PACKAGE SIZE
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NON-INSULATED FEMALE/MALE DISCONNECTS

# 22 - 18 AWG	0.187 X 0.032	TD18-187	-	N/A	0.59	0.23	25, 100, 1000
	0.250 X 0.032	TD18-250	TD18-250M	N/A	0.66	0.30	25, 100, 1000
# 16 - 14 AWG	0.187 X 0.032	TD14-187	-	N/A	0.59	0.23	25, 100, 1000
	0.250 X 0.032	TD14-250	TD14-250M	N/A	0.66	0.30	25, 100, 1000
# 12 - 10 AWG	0.250 X 0.032	TD10-250	TD10-250M	N/A	0.76	0.30	25, 100, 500

NYLON PARTIALLY INSULATED DISCONNECTS

# 22 - 18 AWG	0.250 X 0.032	TDNF18-250	TDNF18-250M	RED	0.87	0.30	25, 100, 1000
# 16 - 14 AWG	0.250 X 0.032	TDNF14-250	TDNF14-250M	BLUE	0.87	0.30	25, 100, 1000
# 12 - 10 AWG	0.250 X 0.032	TDNF10-250	TDNF10-250M	YELLOW	1.01	0.30	25, 100, 500

NYLON FULLY INSULATED DISCONNECTS

# 22 - 18 AWG	0.250 X 0.032	TDNF18-250FI	TDNF18-250FIM	RED	0.89	0.38	25, 100, 1000
# 16 - 14 AWG	0.250 X 0.032	TDNF14-250FI	TDNF14-250FIM	BLUE	0.89	0.38	25, 100, 1000
# 12 - 10 AWG	0.250 X 0.032	TDNF10-250FI	TDNF10-250FIM	YELLOW	1.04	0.38	25, 100, 500

*Dimensions A and B refer to female disconnects only.

Ordering Information: Combine part number and package size.

Example: Nylon disconnect, 14 AWG, female, 100 pieces = TDNF14-250FI-100



Vinyl Insulated Piggyback



Adaptor TD250FMF



Adaptor TD250A

WIRE RANGE	TAB SIZE (IN.)	VINYL INSUL P/N	NYLON INSUL P/N	INSULATION COLOR	A (IN.)	B (IN.)	PACKAGE SIZE
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PIGGYBACK DISCONNECTS AND DISCONNECT ADAPTORS

# 22 - 18 AWG	0.250 X 0.032	TDV18-250PB	-	RED	0.87	0.30	25, 100, 1000
# 16 - 14 AWG	0.250 X 0.032	TDV14-250PB	TDNF14-250PB	BLUE	0.87	0.30	25, 100, 1000
# 12 - 10 AWG	0.250 X 0.032	TDV10-250PB	TDNF10-250PB	YELLOW	0.30	0.25	25, 100, 500
N/A	0.250 X 0.032	TD250FMF	-	N/A	N/A	N/A	25, 100, 1000
N/A	0.250 X 0.032	TD250A	-	N/A	N/A	N/A	25, 100, 500

Ordering Information: Combine part number and package size.

Example: Vinyl piggyback disconnect, 12 AWG, 500 pieces = TDV10-250PB-500

WIRE RANGE	BULLET SIZE (IN.)	PLUG PART NUMBER	RECEPTACLE PART NUMBER	INSULATION COLOR	PACKAGE SIZE
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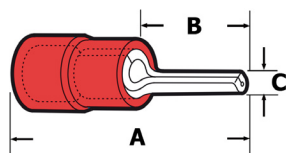
BULLET CONNECTORS

# 22 - 18 AWG	0.156	TBPV18-156	TBRV18-156	RED	25, 100, 1000
	0.180	TBPV18-180	TBRV18-180	RED	25, 100, 1000
# 16 - 14 AWG	0.156	TBPV14-156	TBRV14-156	BLUE	25, 100, 1000
	0.180	TBPV14-180	TBRV14-180	BLUE	25, 100, 1000

Ordering Information: Combine part number and package size.

Example: 0.156 bullet connector, 16 AWG, receptacle, 100 pieces = TBRV14-156-100

TERMINALS CONT.



Vinyl Insulated Pin Terminals

WIRE RANGE	PART NUMBER	INSULATION COLOR	A (IN.)	B (IN.)	C (IN.)	PACKAGE SIZE
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PIN TERMINALS

22 - 18 AWG	TV18-47P	RED	0.93	0.52	0.08	25, 100, 1000
16 - 14 AWG	TV14-47P	BLUE	0.93	0.52	0.08	25, 100, 1000
12 - 10 AWG	TV10-55P	YELLOW	1.12	0.56	0.11	25, 100, 500

WIRE RANGE	3-WAY PART NUMBER	4-WAY PART NUMBER	INSULATION COLOR	PACKAGE SIZE
------------	-------------------	-------------------	------------------	--------------

3-WAY and 4-WAY CONNECTORS

# 22 - 18 AWG	TV18-3W	TV18-4W	RED	10
# 16 - 14 AWG	TV14-3W	TV14-4W	BLUE	10
# 12 - 10 AWG	TV10-3W	TV10-4W	YELLOW	10

MIN/MAX WIRE RANGE	PART NUMBER	INSULATION COLOR	PACKAGE SIZE
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CRIMPABLE CLOSED END CONNECTORS (WIRE JOINTS)

2@24 - 3@18 AWG	TJN224-318	CLEAR	25, 100, 1000
2@18 - 2@16 AWG	TJN218-216	CLEAR	25, 100, 1000
4@18 - 2@12 AWG	TJN418-212	CLEAR	25, 100, 500
3@14 - 4@12 AWG	TJN314-412	CLEAR	25, 100, 500

PART NUMBER	WIRE AWG (mm ²)	FERRULE LENGTH mm (Inches)	STRIPPING LENGTH mm (Inches)	INSULATION COLOR	PACKAGE SIZE
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WIRE FERRULES

TFRL24-6MM	24-22 (0.34)	6 (0.24)	8 (0.31)	TURQUOISE	25, 100, 500
TFRL22-6MM	22-20 (0.50)	6 (0.24)	8 (0.31)	ORANGE	25, 100, 500
TFRL20-6MM	20-18 (0.75)	6 (0.24)	8 (0.31)	WHITE	25, 100, 500
TFRL18-6MM	18 (1.0)	6 (0.24)	8 (0.31)	YELLOW	25, 100, 500
TFRL16-8MM	16 (1.5)	8 (0.31)	10 (0.39)	RED	25, 100, 500
TFRL14-8MM	14 (2.5)	8 (0.31)	10 (0.39)	BLUE	25, 100, 500
TFRL12-10MM	12 (4.0)	10 (0.39)	12 (0.47)	GREY	25, 100, 500
TFRL10-12MM	10 (6.0)	12 (0.47)	14 (0.59)	BLACK	25, 50, 100
TFRL8-12MM	8 (10.0)	12 (0.47)	14 (0.59)	IVORY	10, 25, 100
TFRL6-12MM	6 (16.0)	12 (0.47)	14 (0.59)	GREEN	10, 25, 100
TFRL4-16MM	4 (25.0)	16 (0.63)	18 (0.75)	BROWN	4, 10, 50
TFRL2-16MM	2 (35.0)	16 (0.63)	18 (0.75)	BEIGE	4, 10, 50

WIRE FERRULES KITS

TFRL-CC1	(50)20 AWG WHITE, (100)18 AWG GREY, (100)18 AWG RED, (100)16 AWG BLACK, (50)14 AWG BLUE
TFRL-CC2	(50) 12 AWG GREY, (20) 10 AWG BLACK, (20) 8 AWG IVORY, (10) 6 AWG GREEN

Wire ferrules are typically used on wires being inserted into IEC (European) style terminal blocks. They prevent fraying when compressed. Ferrules add additional electrical insulation.

Ordering Information: Combine part number and package size.

Example: 3-way connectors, 18 AWG, 10 pieces = TV18-3W-10



- Pin terminals are primarily designed for compression type terminal blocks and are available in vinyl insulation only.



- 3-Way and 4-Way connectors have a center hole diameter of 0.160" and are available in vinyl insulation only.



- Closed end connectors can be used as a splice, wire butt, parallel or dead-end cap. Each size has a minimum and maximum range of wires it will accept. These are available in nylon insulation only.



FEATURES (FERRULES):

- Prevent strand separation while minimizing strand breakage
- Insulated ferrules provide additional electrical insulation
- Increases connection reliability when terminating stranded wire in terminal blocks

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Packs include all parts needed to assemble a connector
- One to two extra terminals
- Cavity plugs to seal open circuits

APPLICATIONS:

Deutsch environmentally sealed connectors are designed for cable to cable applications, where signal-level or power circuits must withstand harsh conditions.

Deutsch DTM, DT and DTP Series of environmentally-sealed connectors are designed for cable to cable applications, where signal-level circuits must withstand harsh conditions. DTM and DT series connectors will provide reliability and performance at low cost. DTP Series connectors deliver environmentally sealed performance for power applications.



DTM



DT



DTP

DEUTSCH REPAIR PACKS

Pacer-assembled repair packs have all the parts you require to fix a connection to an existing device or by combining a receptacle and plug to create an environmentally sealed point of disconnect. Packs contain a housing, secondary wedge lock, contacts with one or two extra contacts and a few cavity plugs.



DTM Series connectors are designed for smaller wire gauge applications. The DTM series offers electrical designers the ability to use multiple size 20 contacts (24-20 AWG), each with 7.5 amp continuous capacity, within a single shell.

DTM RECEPTACLE REPAIR PACKS (24-20 AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER RECEPTACLES	CONTENTS
2	TDTM04-2RP	(1) 2 POS. RECEPTACLE, (1) 2 POS. WEDGE LOCK, (3) PINS
3	TDTM04-3RP	(1) 3 POS. RECEPTACLE, (1) 3 POS. WEDGE LOCK, (4) PINS, (1) RED CAVITY PLUG
4	TDTM04-4RP	(1) 4 POS. RECEPTACLE, (1) 4 POS. WEDGE LOCK, (5) PINS, (2) RED CAVITY PLUGS
6	TDTM04-6RP	(1) 6 POS. RECEPTACLE, (1) 6 POS. WEDGE LOCK, (8) PINS, (3) RED CAVITY PLUGS
8	TDTM04-8RP	(1) 8 POS. RECEPTACLE, (1) 8 POS. WEDGE LOCK, (10) PINS, (4) RED CAVITY PLUGS
12	TDTM04-12RP	(1) 12 POS. RECEPTACLE, (1) 12 POS. WEDGE LOCK, (14) PINS, (6) RED CAVITY PLUGS

Ordering Information: Order by the pack. For individual item details, See page 42.

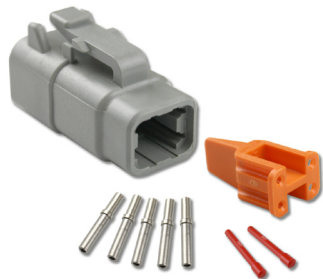
DTM PLUG REPAIR PACKS (24-20 AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER PLUGS	CONTENTS
2	TDTM06-2RS	(1) 2 POS. PLUG, (1) 2 POS. WEDGE LOCK, (3) SOCKETS
3	TDTM06-3RS	(1) 3 POS. PLUG, (1) 3 POS. WEDGE LOCK, (4) SOCKETS, (1) RED CAVITY PLUG
4	TDTM06-4RS	(1) 4 POS. PLUG, (1) 4 POS. WEDGE LOCK, (5) SOCKETS, (2) RED CAVITY PLUGS
6	TDTM06-6RS	(1) 6 POS. PLUG, (1) 6 POS. WEDGE LOCK, (8) SOCKETS, (3) RED CAVITY PLUGS
8	TDTM06-8RS	(1) 8 POS. PLUG, (1) 8 POS. WEDGE LOCK, (10) SOCKETS, (4) RED CAVITY PLUGS
12	TDTM06-12RS	(1) 12 POS. PLUG, (1) 12 POS. WEDGE LOCK, (14) SOCKETS, (6) RED CAVITY PLUGS

Ordering Information: Order by the pack. For individual item details, See page 42.



TDTM04-4RP



TDTM06-4RS



Deutsch Contact Crimp Tool part numbers are listed on pg. 42 within the Machined Contact chart.

DEUTSCH CONNECTORS CONT.

DT Series connectors are designed for 20-14 wire gauge applications. The DT series offers electrical designers the ability to use multiple size 16 contacts (20-14 AWG), each with 13 amp continuous capacity, within a single shell. Pacer's DT repair kits use the larger size 16 contacts (Deutsch Pin P/N 0460-215-16141, Socket P/N 0462-209-16141) for applications using 14 AWG wire.

DT RECEPTACLE REPAIR PACKS (20-14 AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER RECEPTACLES	CONTENTS
2	TDT04-2RP	(1) 2 POS. RECEPTACLE, (1) 2 POS. WEDGE LOCK, (3) PINS
3	TDT04-3RP	(1) 3 POS. RECEPTACLE, (1) 3 POS. WEDGE LOCK, (4) PINS, (1) CAVITY PLUG
4	TDT04-4RP	(1) 4 POS. RECEPTACLE, (1) 4 POS. WEDGE LOCK, (5) PINS, (2) CAVITY PLUGS
6	TDT04-6RP	(1) 6 POS. RECEPTACLE, (1) 6 POS. WEDGE LOCK, (8) PINS, (3) CAVITY PLUGS
8	TDT04-8RP	(1) 8 POS. RECEPTACLE, (1) 8 POS. WEDGE LOCK, (10) PINS, (4) CAVITY PLUGS
12	TDT04-12RP	(1) 12 POS. RECEPTACLE, (1) 12 POS. WEDGE LOCK, (14) PINS, (6) CAVITY PLUGS

DT PLUG REPAIR PACKS (20-14 AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER PLUGS	CONTENTS
2	TDT06-2RS	(1) 2 POS. PLUG, (1) 2 POS. WEDGE LOCK, (3) SOCKETS
3	TDT06-3RS	(1) 3 POS. PLUG, (1) 3 POS. WEDGE LOCK, (4) SOCKETS, (1) CAVITY PLUG
4	TDT06-4RS	(1) 4 POS. PLUG, (1) 4 POS. WEDGE LOCK, (5) SOCKETS, (2) CAVITY PLUGS
6	TDT06-6RS	(1) 6 POS. PLUG, (1) 6 POS. WEDGE LOCK, (8) SOCKETS, (3) CAVITY PLUGS
8	TDT06-8RS	(1) 8 POS. PLUG, (1) 8 POS. WEDGE LOCK, (10) SOCKETS, (4) CAVITY PLUGS
12	TDT06-12RS	(1) 12 POS. PLUG, (1) 12 POS. WEDGE LOCK, (14) SOCKETS, (6) CAVITY PLUGS

Ordering Information: Order by the pack. For individual item details, See page 42.

DTP Series connectors are the solution for your power application requirements. The DTP line was developed to fill the need for higher amperage, multi-pin economical connectors. Each circuit is capable of continuous 25 amp service. Both Deutsch solid contacts (14-12 AWG) and Deutsch stamp and formed contacts (12-10 AWG) are included in the packs.

DTP RECEPTACLE REPAIR PACKS (14-10* AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER RECEPTACLES	CONTENTS
2	TDTP04-2RP	(1) 2 POS. RECEPTACLE, (1) 2 POS. WEDGE LOCK, (3) SOLID CONTACT PINS, (3) STAMPED AND FORMED PINS*
4	TDTP04-4RP	(1) 4 POS. RECEPTACLE, (1) 4 POS. WEDGE LOCK, (5) SOLID CONTACT PINS, (5) STAMPED AND FORMED PINS*, (2) CAVITY PLUGS

DTP PLUG REPAIR PACKS (14-10* AWG APPLICATIONS)

# OF CAVITIES	PART NUMBER PLUGS	CONTENTS
2	TDTP06-2RS	(1) 2 POS. PLUG, (1) 2 POS. WEDGE LOCK, (3) SOLID CONTACT SOCKETS, (3) STAMPED AND FORMED CONTACTS*
4	TDTP06-4RS	(1) 4 POS. PLUG, (1) 4 POS. WEDGE LOCK, (5) SOLID CONTACT SOCKETS, (5) STAMPED AND FORMED CONTACTS*, (2) CAVITY PLUGS

*Deutsch #12 solid contact supports 14-12 AWG (Deutsch Pin P/N 0460-204-12141, Socket P/N 0462-203-12141), 10 AWG can only be used with Deutsch stamped and formed contact (Deutsch Pin P/N 1060-12-0222, Socket P/N 1062-12-0222). Both solid contacts and stamped and formed contacts have been provided in the pack. Stamped and formed contacts require a crimping tool that supports open barrel terminals.

Ordering Information: Order by the pack. For individual item details, See page 42.



FEATURES:

- All parts needed to assemble a connector
- One to two extra terminals
- Cavity plugs to seal off open circuits

CHARACTERISTICS:

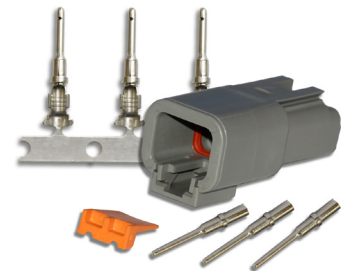
- See page 42 for complete performance characteristics



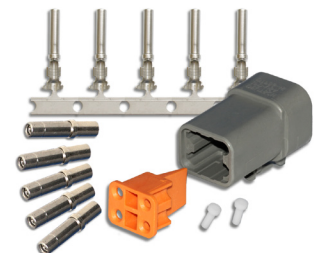
TDT04-4RP



TDT06-6RS



TDTP04-2RP



TDTP06-4RS

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

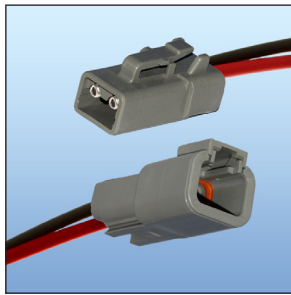
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

DEUTSCH PARTS



FEATURES:

- Economical harsh environment protection
- Protects against corrosion and lengthens the serviceable life of wire
- Common contact system
- Increased socket-terminal performance
- Hand insertable/removable contacts
- Redundant silicone seals
- High-performance molded shells

COMPLIANCES:

- UL recognized
- RoHS
- IP 6K9K (DT, DTM)
- J1939/11, J1939/13 and J1939/15

CHARACTERISTICS:

- Oper. Temp.: -55°C to 125°C
- Durability: no defects after 100 cycles of engagement/disengagement



Cavity Plugs
T114017



Boots
TDT12P-BT



Note: Receptacles require pins. Plugs require sockets.

DTM KIT (22-16AWG)			DT KIT (20-14AWG)			DTP KIT (14-10AWG)		
NO. OF CAVITIES	RECP. (PIN)	PLUG (SOCKET)	RECP. (PIN)	PLUG (SOCKET)	PKG	RECP. (PIN)	PLUG (SOCKET)	PKG
2	TDTM04-2P-10	TDTM06-2S-10	TDT04-2P-10	TDT06-2S-10	10	TDTP04-2P-5	TDTP06-2S-5	5
3	TDTM04-3P-10	TDTM06-3S-10	TDT04-3P-10	TDT06-3S-10	10	-	-	-
4	TDTM04-4P-10	TDTM06-4S-10	TDT04-4P-10	TDT06-4S-10	10	TDTP04-4P-5	TDTP06-4S-5	5
6	TDTM04-6P-5	TDTM06-6S-5	TDT04-6P-5	TDT06-6S-5	5	-	-	-
8	TDTM04-8P-5	TDTM06-8S-5	TDT04-8P-5	TDT06-8S-5	5	-	-	-
12	TDTM04-12P-5	TDTM06-12S-5	TDT04-12P-5	TDT06-12S-5	5	-	-	-

Kits contain housing and wedgelock only. Pins and sockets sold separately. See table below.

Ordering Information: Order by standard package.



Machined Contact
T14DT-S

MACHINED CONTACTS - PINS & SOCKETS

WIRE AWG	CONNECTOR TYPE	PINS	SOCKETS	CURRENT RATING	PKG	PRODUCTION TOOL p.55	FIELD SERVICE TOOL p.55
24 - 20	DTM	T20DTM-P	T20DTM-S	7.5	25, 100	VT-HDT-48	VT-HDT-1561
20 - 16	DT	T16DT-P	T16DT-S	7.5	25, 100	VT-HDT-48	VT-HDT-1561
16 - 14	DT	T14DT-P	T14DT-S	13	25, 100	VT-HDT-48	VT-HDT-1561
14 - 12	DTP	T12DTP-P	T12DTP-S	25	10, 25	VT-HDT-48	VT-HDT-1561
10	DTP	T10DTP-P*	T10DTP-S*	25	10, 25	-	-

* T10DTP-S and T10DTP-P are open barrel, stamped and formed terminals. Crimp Tools for this contact are readily available. Receptacles require pins. Plugs require sockets.

Ordering Information: Combine part number and package size.

Example: 20 AWG, DTM, pins, 100 pieces = T20DTM-P-100

CAVITY PLUGS

CONTACT SIZE	PART NUMBER	CONNECTOR SERIES	PKG SIZE
20	T041320	DTM	25, 100
16 & 12	T114017	DT, DTP	25, 100

Ordering Information: Combine part number and package size.

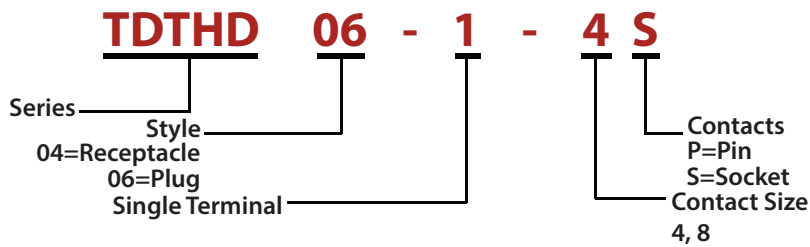
Example: Contact size 16, 25 pieces = T114017-25

DEUTSCH BOOTS - DT SERIES

PART NUMBER	DESCRIPTION	COLOR
TDT2P-BT	2 WAY RECEPTACLE	GREY
TDT2S-BT	2 WAY PLUG	GREY
TDT3P-BT	3 WAY RECEPTACLE	GREY
TDT3S-BT	3 WAY PLUG	GREY
TDT4P-BT	4 WAY RECEPTACLE	GREY
TDT4S-BT	4 WAY PLUG	GREY
TDT6P-BT	6 WAY RECEPTACLE	GREY
TDT6S-BT	6 WAY PLUG	GREY
TDT8P-BT	8 WAY RECEPTACLE	GREY
TDT8S-BT	8 WAY PLUG	GREY
TDT12P-BT	12 WAY RECEPTACLE	GREY
TDT12S-BT	12 WAY PLUG	GREY

Ordering Information: Order by the piece.

DEUTSCH DTHD POWER PLUGS



FEATURES:

- Environmentally sealed disconnectable power wire splicing
- 10-6 AWG wires
- 60-100 Amps at 125 °C
- Easy to install
- Field serviceable

DTHD connectors are single terminal connectors for heavy duty applications. Easy to install, environmentally sealed and compact in size they are a simple, field serviceable alternative to a splice. Pacer assembled power connector kits that contain a plug & socket with a receptacle & pin to create a sealed disconnectable power connection for wire gauges 10 through 6 AWG.

DEUTSCH POWER PLUG CONNECTION KITS (RECP., PLUG & CONTACTS INCL.)

WIRE AWG	KIT PART NUMBER	CONTENTS
10 - 8	TDTHD-1-8KT	(1) DTHD PLUG, (1) SIZE 8 SOCKET, (1) DTHD RECEPTACLE, (1) SIZE 8 PIN
6	TDTHD-1-4KT	(1) DTHD PLUG, (1) SIZE 4 SOCKET, (1) DTHD RECEPTACLE, (1) SIZE 4 PIN, (2) REDUCER CRIMP SLEEVES FOR 10 OR 8 AWG

Ordering Information: Order by the kit.

DEUTSCH POWER PLUGS & RECEPTACLES

WIRE AWG	PLUG PART NUMBER	RECEPTACLE PART NUMBER	MAX RATED AMPS @ 125 °C	PKG SIZE
10 - 8	TDTHD06-1-8S	TDTHD04-1-8P	60	1
6	TDTHD06-1-4S	TDTHD04-1-4P	100	1

Ordering Information: Order by the piece.

DEUTSCH DTHD MACHINED CONTACTS

WIRE AWG	CONNECTOR TYPE	SOCKETS	PINS	CURRENT RATING	PKG SIZE	PRODUCTION TOOL pg. 55
10 - 8	DTHD	T8DTHD-S	T8DTHD-P	60	1, 5	VT-HDT-04-08
6	DTHD	T6DTHD-S	T6DTHD-P	100	1, 5	VT-HDT-04-08

Ordering Information: Combine part number and package size.

Example: Wire AWG 6, pins, 5 pieces = T6DTHD-P-5

Deutsch industrial removal tools are designed to simplify contact removal and field service repair for the DTHD series. Also used for HD10, HDP20, HD30, DRC, AEC, and WT series.

DEUTSCH INDUSTRIAL CONTACT REMOVAL TOOLS

PART NUMBER	CONTACT SIZE	WIRE AWG RANGE	COLOR
VT20-24RT	20	22-20	RED
VT16-18RT	16	18-16	LIGHT BLUE
VT14-16RT	16	16-14	GREEN
VT12RT	12	12	YELLOW
VT8-10RT	8	10-8	DARK GREEN
VT6RT	4	6	WHITE
VT4RT	4	4	BLACK

Ordering Information: Order by the piece.



Note: Contact removal tools are optional for DTM, DT or DTP connector series. Additional contact/wedgelock removal tools can be found on page 55.

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

WIRE & CABLE
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TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Sealed system specifically designed to withstand exposure to extreme temperatures, chemicals and fluids
- Pin and sleeve configuration to alleviate stress relaxation
- Secondary lock and Connector Position Assurance (CPA) for improved system design
- Dual-locking tangs on terminals help prevent backing out
- Terminal plugging requires no orientation
- Positive locking indexing prevents mismatching of connectors
- Low energy, low voltage capability for vehicle electronics



T1201996



T12015791



MALE TERMINAL



FEMALE TERMINAL



CABLE SEALS



CAVITY PLUG

DELPHI WEATHER PACK



SHROUD ASSEMBLY



TOWER ASSEMBLY

Pacer's assembled weather pack connection kits have all the parts required to create an environmentally sealed, disconnectable, in-line connection. Kits contain a Tower and Shroud housing, male terminals and female terminals with one or two extras and wire seals for 16-14 AWG wire (Light Grey).

WEATHER PACK CONNECTION KITS (16-14 AWG APPLICATIONS)

CAVITIES	PART NUMBER	CONTENTS
2	TWP-2POS	(1) 2 POS. TOWER, (1) 2 POS. SHROUD, (3) MALE TERMINALS, (3) FEMALE TERMINALS, (6) LT. GREY 16-14 SEALS
3	TWP-3POS	(1) 3 POS. TOWER, (1) 3 POS. SHROUD, (4) MALE TERMINALS, (4) FEMALE TERMINALS, (8) LT. GREY 16-14 SEALS
4	TWP-4POS	(1) 4 POS. TOWER, (1) 4 POS. SHROUD, (5) MALE TERMINALS, (5) FEMALE TERMINALS, (10) LT. GREY 16-14 SEALS
6	TWP-6POS	(1) 6 POS. TOWER, (1) 6 POS. SHROUD, (8) MALE TERMINALS, (8) FEMALE TERMINALS, (14) LT. GREY 16-14 SEALS, (2) LT. GREEN CAVITY PLUGS

Ordering Information: Order by the kit.

WEATHER PACK HOUSING

NO. OF CAVITIES	SHROUD HOUSING CONNECTOR	TOWER HOUSING CONNECTOR	COLOR	PACKAGE SIZE
1	T12010996	T12015791	BLACK	5
2	T12010973	T12015792	BLACK	5
3	T12010717	T12015793	BLACK	5
4	T12020830	T12020832	BLACK	5
6	T12010975	T12015799	BLACK	5

WEATHER PACK TERMINALS

MALE TERMINALS (Shroud Housing)	FEMALE TERMINALS (Tower Housing)	WIRE AWG	PACKAGE SIZE	FIELD SERVICE CRIMP TOOL
T12089040	T12089188	20 - 18	25	VT12014254
T12124582	T12124580	16 - 14	25	VT12155975
T12124587	T12124581	12	25	VT12155975

WEATHER PACK CABLE SEALS & CAVITY PLUG

SEAL PART NUMBER	WIRE RANGE	WIRE O.D. RANGE mm (inches)	COLOR	PACKAGE SIZE
T15324983	22-20	1.70-1.29 (.066-.050)	RED	25
T15324985	22-18	2.15-1.60 (.084-.063)	PURPLE	25
T15324984	20-18	2.42-2.03 (.095-.079)	TAN	25
T15324982	18-16	2.85-2.03 (.112-.080)	GREEN	25
T15324980	16-14	3.49-2.81 (.137-.111)	LT. GREY	25
T15324981	14-12	4.30-3.45 (.169-.136)	BLUE	25

CAVITY PLUG PART NUMBER

T12010300	LT. GREEN	25
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Ordering Information: Order by package.

Weather pack crimp tools and terminal removal tools can be found on page 55.

CLOSED END LUGS, TINNED



TAE6-10R



TAE2-38R



TAE1-12R



TAE2/0-14R



TAE4/0-56R



FEATURES:

- Tin plated
- No exposed seams

COMPLIANCES:

- E.T.P. (Electrolytic Tough Pitch) CDA-110
- ASTM-B-152 copper rated at 100% conductivity
- UL & CSA approved
- RoHS compliant

WIRE AWG	STUD SIZE	PART NUMBER	LENGTH (Inches)	WIDTH (Inches)	CLEARANCE (Inches)	PACKAGE SIZE
8 AWG	#10	TAE8-10R	1.187	0.438	0.344	4, 25, 100, 250
	1/4"	TAE8-14R	1.187	0.438	0.344	4, 25, 100, 250
	5/16"	TAE8-56R	1.187	0.438	0.344	4, 25, 100, 250
	3/8"	TAE8-38R	1.344	0.609	0.406	4, 25, 100, 250
	1/2"	TAE8-12R	1.484	0.766	0.469	4, 25, 100, 200
6 AWG	#10	TAE6-10R	1.266	0.438	0.344	4, 25, 100, 250
	1/4"	TAE6-14R	1.266	0.438	0.344	4, 25, 100, 250
	5/16"	TAE6-56R	1.266	0.438	0.344	4, 25, 100, 250
	3/8"	TAE6-38R	1.406	0.609	0.406	4, 25, 100, 250
	1/2"	TAE6-12R	1.688	0.766	0.469	4, 25, 100, 200
4 AWG	#10	TAE4-10R	1.500	0.531	0.406	4, 10, 50, 200
	1/4"	TAE4-14R	1.500	0.531	0.406	4, 10, 50, 200
	5/16"	TAE4-56R	1.500	0.531	0.406	4, 10, 50, 200
	3/8"	TAE4-38R	1.688	0.531	0.406	4, 10, 50, 200
	1/2"	TAE4-12R	1.625	0.766	0.469	4, 10, 25, 100
2 AWG	1/4"	TAE2-14R	1.625	0.609	0.406	4, 10, 25, 100
	5/16"	TAE2-56R	1.625	0.609	0.406	4, 10, 25, 100
	3/8"	TAE2-38R	1.625	0.609	0.406	4, 10, 25, 100
	1/2"	TAE2-12R	1.750	0.766	0.406	4, 10, 25, 100
1 AWG	1/4"	TAE1-14R	1.719	0.692	0.406	4, 10, 25, 100
	5/16"	TAE1-56R	1.719	0.692	0.406	4, 10, 25, 100
	3/8"	TAE1-38R	1.719	0.692	0.406	4, 10, 25, 100
	1/2"	TAE1-12R	1.719	0.692	0.469	4, 10, 25, 100
1/0 AWG	1/4"	TAE1/0-14R	1.844	0.734	0.406	4, 10, 25, 100
	5/16"	TAE1/0-56R	1.844	0.734	0.406	4, 10, 25, 100
	3/8"	TAE1/0-38R	1.844	0.734	0.406	4, 10, 25, 100
	1/2"	TAE1/0-12R	1.844	0.734	0.469	4, 10, 25, 100
2/0 AWG	1/4"	TAE2/0-14R	2.063	0.813	0.500	4, 10, 25, 50
	5/16"	TAE2/0-56R	2.063	0.813	0.500	4, 10, 25, 50
	3/8"	TAE2/0-38R	2.063	0.813	0.500	4, 10, 25, 50
	1/2"	TAE2/0-12R	2.063	0.813	0.500	4, 10, 25, 50
3/0 AWG	1/4"	TAE3/0-14R	2.172	0.906	0.500	4, 10, 25
	5/16"	TAE3/0-56R	2.172	0.906	0.500	4, 10, 25, 50
	3/8"	TAE3/0-38R	2.172	0.906	0.500	4, 10, 25, 50
	1/2"	TAE3/0-12R	2.172	0.906	0.500	4, 10, 50
4/0 AWG	1/4"	TAE4/0-14R	2.344	0.984	0.547	4, 10, 25
	5/16"	TAE4/0-56R	2.344	0.984	0.547	4, 10, 25
	3/8"	TAE4/0-38R	2.344	0.984	0.547	4, 10, 25
	1/2"	TAE4/0-12R	2.344	0.984	0.547	4, 10, 25

Ordering Information: Combine part number and package size.

Example: 6 AWG, 1/2" stud, 4 pieces = TAE6-12R-4

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

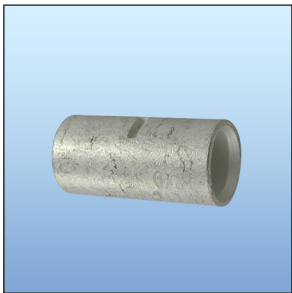
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
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TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS

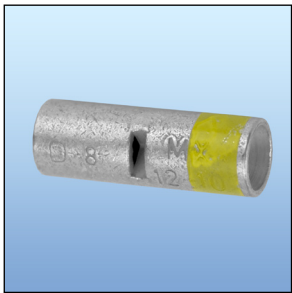


FEATURES:

- Tin plated
- Seamless

COMPLIANCES:

- E.T.P. (Electrolytic Tough Pitch) CDA-110
- ASTM-B-152 copper rated at 100% conductivity
- UL & CSA approved
- RoHS compliant

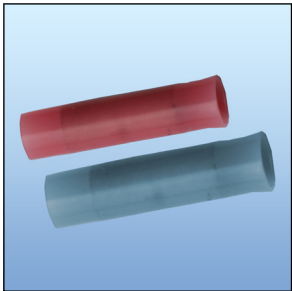


FEATURES:

- Tin plated
- Barrel Type: Closed

COMPLIANCES:

- E.T.P. (Electrolytic Tough Pitch) CDA-110
- ASTM-B-152 copper rated at 100% conductivity
- UL & CSA approved
- RoHS compliant



FEATURES:

- Tin plated
- Insulation: Nylon
- Barrel Type: Closed - Brazed
- Seamless

COMPLIANCES:

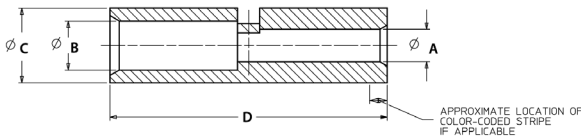
- E.T.P. (Electrolytic Tough Pitch) CDA-110
- ASTM-B-152 copper rated at 100% conductivity
- UL & CSA approved
- RoHS compliant

SEAMLESS TINNED BUTT SPLICES

WIRE AWG	PART NUMBER	I.D. MAX (Inches)	O.D. MAX (Inches)	LENGTH (Inches)	PACKAGE SIZE
8	TBS8	0.165	0.295	0.864	4, 25, 250
6	TBS6	0.230	0.374	1.045	4, 25, 250
4	TBS4	0.277	0.457	1.155	4, 10, 100
2	TBS2	0.357	0.538	1.280	100
1/0	TBS1/0	0.439	0.620	1.440	50
2/0	TBS2/0	0.496	0.697	1.440	50
4/0	TBS4/0	0.621	0.860	1.540	50

Ordering Information: Combine part number and package size.
Example: 4/0 AWG splices, 50 pieces = TBS4/0-50

STEP DOWN TINNED BUTT SPLICES



WIRE AWG	PART NUMBER	(A) SM I.D. MAX (Inches)	(B) LG I.D. MAX (Inches)	(C) O.D. MAX (Inches)	(D) LENGTH (Inches)	PACKAGE SIZE
22-18 to 16-14	TBSD14-18	0.071	0.088	0.160	0.675	10, 25, 100, 1000
16-14 to 12-10	TBSD10-14	0.097	0.137	0.223	0.827	10, 25, 100, 500
12-10 to 8	TBSD8-10	0.139	0.172	0.291	0.854	250
8-6	TBSD6-8	0.182	0.237	0.375	1.045	250

Ordering Information: Combine part number and package size.
Example: 8 AWG to 6 AWG wire splice, 250 pieces = TBSD6-8-250

NYLON BUTT SPLICES

WIRE AWG	PART NUMBER	COLOR	MAX WIRE INSUL. DIA. (Inches)	O.D. MAX (Inches)	LENGTH (Inches)	PACKAGE SIZE
8	TBSN8	RED	0.265	0.395	1.473	4, 25, 250
6	TBSN6	BLUE	0.342	0.480	1.785	4, 25, 100
4	TBSN4	YELLOW	0.429	0.579	2.035	4, 10, 25, 100

Ordering Information: Combine part number and package size.
Example: 4 AWG splice, 25 pieces = TBSN4-25



BRAZED SEAM TINNED LUGS



FEATURES:

- Tin plated
- Silver alloy brazed seams

COMPLIANCES:

- E.T.P. (Electrolytic Tough Pitch) CDA-110
- ASTM-B-152 copper rated at 100% conductivity
- UL & CSA approved
- RoHS compliant

WIRE AWG	STUD SIZE	NON-INSUL. P/N	NYLON INSUL. P/N	COLOR	LENGTH (Inches)	PAD WIDTH (Inches)	PACKAGE SIZE
8 AWG	#10	TL8-10R	TLNF8-10R	RED	0.960	0.374	4, 25, 100, 250
	1/4"	TL8-14R	TLNF8-14R	RED	0.960	0.374	4, 25, 100, 250
	5/16"	TL8-56R	TLNF8-56R	RED	1.007	0.374	4, 25, 100, 250
	3/8"	TL8-38R	TLNF8-38R	RED	1.136	0.583	4, 25, 100, 250
	1/2"	TL8-12R	TLNF8-12R	RED	1.432	0.810	4, 25, 100, 250
6 AWG	#10	TL6-10R	TLNF6-10R	BLUE	1.215	0.480	4, 25, 100, 250
	1/4"	TL6-14R	TLNF6-14R	BLUE	1.215	0.480	4, 25, 100, 250
	5/16"	TL6-56R	TLNF6-56R	BLUE	1.215	0.480	4, 25, 100, 250
	3/8"	TL6-38R	TLNF6-38R	BLUE	1.296	0.643	4, 25, 100, 250
	1/2"	TL6-12R	TLNF6-12R	BLUE	1.479	0.825	4, 25, 100, 250
4 AWG	#10	TL4-10R	TLNF4-10R	YELLOW	1.288	0.475	4, 10, 50, 100
	1/4"	TL4-14R	TLNF4-14R	YELLOW	1.288	0.475	4, 10, 50, 100
	5/16"	TL4-56R	TLNF4-56R	YELLOW	1.288	0.475	4, 10, 50, 100
	3/8"	TL4-38R	TLNF4-38R	YELLOW	1.385	0.665	4, 10, 50, 100
	1/2"	TL4-12R	TLNF4-12R	YELLOW	1.385	0.665	4, 10, 50, 100
2 AWG	1/4"	TL2-14R	-	-	1.578	0.630	4, 10, 25, 100
	5/16"	TL2-56R	-	-	1.578	0.630	4, 10, 25, 100
	3/8"	TL2-38R	-	-	1.578	0.630	4, 10, 25, 100
	1/2"	TL2-12R	-	-	1.695	0.864	4, 10, 25, 100
1/0 AWG	1/4"	TL1/0-14R	-	-	1.949	0.820	4, 10, 25, 50
	5/16"	TL1/0-56R	-	-	1.949	0.820	4, 10, 25, 50
	3/8"	TL1/0-38R	-	-	1.949	0.820	4, 10, 25, 50
	1/2"	TL1/0-12R	-	-	1.980	0.864	4, 10, 50
2/0 AWG	1/4"	TL2/0-14R	-	-	2.180	0.928	4, 10, 50
	5/16"	TL2/0-56R	-	-	2.180	0.928	4, 10, 25, 50
	3/8"	TL2/0-38R	-	-	2.180	0.928	4, 10, 25, 50
	1/2"	TL2/0-12R	-	-	2.180	0.928	4, 10, 50
3/0 AWG	1/4"	TL3/0-14R	-	-	2.180	1.047	4, 10, 25
	5/16"	TL3/0-56R	-	-	2.180	1.047	4, 10, 25
	3/8"	TL3/0-38R	-	-	2.180	1.047	4, 10, 25
	1/2"	TL3/0-12R	-	-	2.180	1.047	4, 10, 25
4/0 AWG	1/4"	TL4/0-14R	-	-	2.242	1.115	4, 10, 25
	5/16"	TL4/0-56R	-	-	2.242	1.115	4, 10, 25
	3/8"	TL4/0-38R	-	-	2.242	1.115	4, 10, 25
	1/2"	TL4/0-12R	-	-	2.242	1.115	4, 10, 25

Ordering Information: Combine part number and package size.

Example: Nylon insulated lug, 8 AWG, 1/4" stud, 25 pieces = TLNF8-14R-25

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
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LUGS
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& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
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ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



- FEATURES:**
 - Tin plated, 131 contact copper
 - 3.6 times more conductive than lead lugs
 - High corrosion resistant ultra plating
 - Chamfered entry
 - Anti-corrosion applied on all nuts and bolts
- COMPLIANCES:**
 - RoHS Compliant



- FEATURES:**
 - Tin plated, 131 contact brass
 - High corrosion resistant ultra plating
 - Converts top terminal battery post to accept ring lugs.
- COMPLIANCES:**
 - RoHS compliant

BATTERY POST TERMINALS

All battery terminals are cast with 131 contact copper which is 93% to 95% copper. They are electro-plated with a bright tin finish. Each terminal has raised letters indicating wire size and post type. A deep chamber entry promotes ease of cable installation. For corrosion protection, a thin layer of epoxy is applied to the surface of the nuts and bolts. This thin layer does not affect the ease of assembly and will maintain consistent torque and galvanic protection.



BATTERY POST TERMINALS					
WIRE AWG	PART NUMBER				DESCRIPTION
	STRAIGHT	LEFT ELBOW	RIGHT ELBOW	FLAG	
6	TC-6-U	-	-	-	UNIVERSAL
4	TC-4-P	-	-	-	POSITIVE
	TC-4-N	-	-	-	NEGATIVE
1-2	-	TL-2-U	TR-2-U	-	UNIVERSAL
	TC-1-P	-	-	TF-2-P	POSITIVE
	TC-1-N	-	-	TF-2-N	NEGATIVE
1/0	TC-10-P	TL-10-P	TR-10-P	TF-10-P	POSITIVE
	TC-10-N	TL-10-N	TR-10-N	TF-10-N	NEGATIVE
2/0	TC-20-P	TL-20-P	TR-20-P	TF-20-P	POSITIVE
	TC-20-N	TL-20-N	TR-20-N	TF-20-N	NEGATIVE
4/0	TC-40-P	TL-40-P	TR-40-P	TF-40-P	POSITIVE
	TC-40-N	TL-40-N	TR-40-N	TF-40-N	NEGATIVE

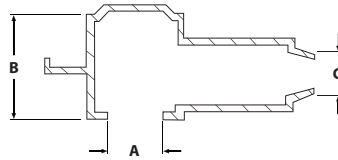
Ordering Information: Order by the piece.

MARINE TYPE TOP POST TERMINALS		
PART NUMBER	DESCRIPTION	STUD SIZE (Inches)
TC-200-P	POSITIVE	3/8
TC-200-N	NEGATIVE	5/16
TC-210-U	UNIVERSAL	-

Ordering Information: Order by the piece.

INSULATOR BOOTS

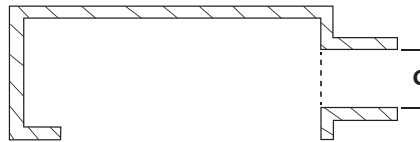
Battery terminal insulator boots increase product safety by preventing electrical shorts and shock, avoiding injury and potential liability. Protective boots and caps extend battery life by protecting against corrosion. It is constructed from durable, heavy-duty PVC and is available in straight, alternator and marine types.



ALTERNATOR TYPE

WIRE RANGE	PART NUMBER	(A) TERMINAL O.D. (Inches)	(B) POST HEIGHT (Inches)	(C) CABLE ENTRY MIN/MAX (Inches)	COLOR
10-6 AWG	TBCA6-R	0.48	0.75	0.30/0.50	RED
	TBCA6-B	0.48	0.75	0.30/0.50	BLACK
6-2 AWG	TBCA2-R	0.87	1.05	0.30/0.50	RED
	TBCA2-B	0.87	1.05	0.30/0.50	BLACK
1-2/0 AWG	TBCA20-R	0.87	1.05	0.50/0.70	RED
	TBCA20-B	0.87	1.05	0.50/0.70	BLACK
3/0-4/0 AWG	TBCA40-R	1.37	1.60	0.70/0.90	RED
	TBCA40-B	1.37	1.60	0.70/0.90	BLACK

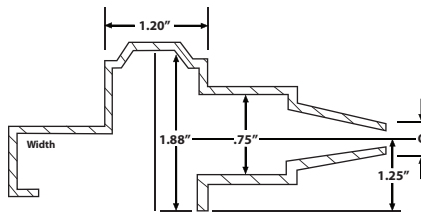
Ordering Information: Order by the piece.



STRAIGHT TYPE

WIRE RANGE	PART NUMBER	(C) CABLE ENTRY (Inches)	COLOR
6-4 AWG	TBCS2-R	0.500	RED
	TBCS2-B	0.500	BLACK
1-2/0 AWG	TBCS20-R	0.625	RED
	TBCS20-B	0.625	BLACK
3/0-4/0 AWG	TBCS40-R	0.700	RED
	TBCS40-B	0.700	BLACK

Ordering Information: Order by the piece.



MARINE TYPE

WIRE RANGE	PART NUMBER	(C) CABLE ENTRY MIN/MAX (Inches)	COLOR
6-2 AWG	TBCM2-R	0.30/0.50	RED
	TBCM2-B	0.30/0.50	BLACK
1-2/0 AWG	TBCM20-R	0.50/0.70	RED
	TBCM20-B	0.50/0.70	BLACK

Ordering Information: Order by the piece.



FEATURES:

- Helps prevent electrical shorts and shock
- Recommended per ABYC E-10.6(1)
- PVC 105°C

COMPLIANCES:

- Meets Coast Guard 33 CFR Part 183 Subpart 1
- Meets S.A.E. J378 and J1128 (low voltage caps)
- Meets UL 94 V2 Rated 105°C

APPLICATIONS:

- Used for the protection of continuously energized parts, such as positive battery terminals and both ends of wires connected to continuously energized sources.
- **ALTERNATOR TYPE:** Can be used to cover a power or ground on an alternator or starter.
 - **STRAIGHT TYPE:** Commonly used to connect to a post on a battery.
 - **MARINE TYPE:** Can be used with secondary power or ground.

WIRE & CABLE

MULTI-CONDUCTOR

COAX CABLES

NETWORK CABLES

HEAT SHRINK

ROUTING & BUNDLING MATERIALS

CABLE TIES

TERMINALS

DEUTSCH & DELPHI

LUGS & BOOTS

ID PRODUCTS & LABELERS

TOOLS

BREAKERS & FUSES

TERMINAL BLOCKS & BUS BARS

SWITCHES & ACTUATORS

LIGHTS & METERS

STORAGE SOLUTIONS

WIRE
& CABLE

MULTI-
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CABLES

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BUS BARS

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ACTUATORS

LIGHTS &
METERS



STORAGE BOXES

PART NUMBER	DESCRIPTION
VBOX-MS	Small metal box. Ideal for holding small pieces such as terminals. Box outside dimensions: Height=2", Width=13 3/8", Depth=9 1/4" Number of compartments=21, Overall Weight=4 lbs.
VBOX-ML	Large metal box. Efficient storage and organization for a variety of parts and components. Box outside dimensions: Height=3", Width=18", Depth=12" Number of compartments=21, Overall Weight=8 lbs.
VBOX-PL	Small plastic box. Ideal for holding small pieces such as terminals. Lightweight and easy to use. Box outside dimensions: Height=1 3/4", Width=11", Depth=6 3/4" Number of compartments=18, Overall Weight=0.7 lbs.

Ordering Information: Order by the piece. Terminals and/or wire NOT included.

RACKS & CABINETS

PART NUMBER	DESCRIPTION
VBOXRK-SM	This cabinet is designed for use with VBOX-MS (see above). Rugged steel, all-welded cabinets are reinforced for rigidity. Easy glide slide racks hold up to 40 lbs. per cradle. Dimensions: Height=11 1/4", Width=15 1/4", Depth=11 3/4", Overall Weight=22 lbs.
VBOXRK-L	This larger cabinet is designed specifically for use with VBOX-ML (see above). Use on the workbench, counter, or the job site with convenient access to storage boxes. Dimensions: Height=15", Width=20 1/4", Depth=12 1/2", Overall Weight=30 lbs.
VWIRE-RK4	Simplify wire access by utilizing four separate rods to hold spools. This wire rack can support multiple spools per rod. Durable, yet small enough for transport, this wire rack is ideal for workshops or job sites. Dimensions: Height=37", Width=26 1/8", Depth=6", Overall Weight=16 lbs.

Ordering Information: Order by the piece. Terminals and/or wire NOT included.

ID PRODUCTS - RHINO® by DYMO



VT-4200

KIT INCLUDES:

- Soft Carrying Case
- Rhino 4200 Printer
- One White Vinyl Tape
- Lithium-Ion Battery/Charger
- Quick Reference Guide



VT-5200

KIT INCLUDES:

- Durable Hard Carry Case
- Rhino 5200 Printer
- One White Nylon Tape
- One White Vinyl Tape
- Lithium-Ion Battery/Charger
- User Manual/CD Rom



VT-6000

KIT INCLUDES:

- Durable Hard Carry Case
- Rhino 6000 Printer
- One White Nylon Tape
- One White Vinyl Tape
- Lithium-Ion Battery/Charger
- Rhino Connect Software CD

RHINO LABEL CARTRIDGES

PART NUMBER	WIDTH (IN.)	LENGTH (FT)	DESCRIPTION	4200	5200	6000
VTM18443	3/8	18	White Vinyl	X	X	X
VTM1805437	3/8	18	Black Vinyl	X	X	X
VTM18444	1/2	18	White Vinyl	X	X	X
VTM1805435	1/2	18	Black Vinyl	X	X	X
VTM18445	3/4	18	White Vinyl	X	X	X
VTM1734821	1	18	White Vinyl Self-Laminating	X		X
VTM18488	1/2	11.5	White Flexible Nylon Tape	X	X	X
VTM18490	1/2	11.5	Yellow Flexible Nylon Tape	X	X	X
VTM18489	3/4	11.5	White Flexible Nylon Tape	X	X	X
VTM18491	3/4	11.5	Yellow Flexible Nylon Tape	X	X	X
VTM1734524	1	11.5	White Flexible Nylon Tape			X
VTM1734525	1	11.5	Yellow Flexible Nylon Tape			X
VTM18051	1/4	5	White Heat Shrink Tubing	X	X	X
VTM18052	1/4	5	Yellow Heat Shrink Tubing	X	X	X
VTM18053	3/8	5	White Heat Shrink Tubing	X	X	X
VTM18054	3/8	5	Yellow Heat Shrink Tubing	X	X	X
VTM18055	1/2	5	White Heat Shrink Tubing	X	X	X
VTM18056	1/2	5	Yellow Heat Shrink Tubing	X	X	X
VTM18057	3/4	5	White Heat Shrink Tubing	X	X	X
VTM18058	3/4	5	Yellow Heat Shrink Tubing	X	X	X
VTM1805443	1	5	White Heat Shrink Tubing			X
VTM1805444	1	5	Yellow Heat Shrink Tubing			X
VT-4200P	-	-	Printer Only			
VT-6000P	-	-	Printer Only			

Ordering Information: Order by the piece.

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www.pacerwire.com



FEATURES:

RHINO 4200

- QWERTY keyboard
- One-Touch "Hot Keys"
- Code 39 and Code 128 bar codes
- Can print directly on heat shrink tubing

RHINO 5200

- One-Touch "Hot Keys"
- Code 39 and Code 128 bar codes
- Ideal for asset management
- Meets all ANSI and TIA/EIA-606-B industry labeling standards

RHINO 6000

- One-Touch "Hot Keys"
- Connects to PC via USB cable
- Code 39 and Code 128 bar codes
- Ideal for asset management
- Meets all ANSI and TIA/EIA-606-B industry labeling standards



White Flexible Vinyl Tape



White Heat Shrink Tubing



Yellow Heat Shrink Tubing

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

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LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Convenient, pocket-sized books
- Pre-printed black on white vinyl-cloth, adhesive back markers
- Temp. Range -50° to 170°F
- Indoor/Outdoor rated
- Durable, temperature resistant and stable for rough surfaces
- Resists oil and abrasion

COMPLIANCES:

- RoHS compliant



FEATURES:

- Quick drying & non-smearing
- Great for nylon & other glossy surfaces



FEATURES:

- Vinyl cloth
- White background, black legend
- Temp. Range -50°F to 170°F

COMPLIANCES:

- RoHS compliant



ID PRODUCTS

MARKER BOOKS

PART NUMBER	LEGEND				NO. OF LEGENDS
	ALPHA	NUMERIC	SYMBOLS	CODES	
VPCMB-1		0 - 9			45 each
VPCMB-2	A - Z	0 - 15	+ - /		10 each
VPCMB-3		1 - 45			10 each
VPCMB-4		1 - 3			150 each
VPCMB-5	A - C				150 each
VPCMB-6				T1, T2, T3	10 each
VPCMB-8	A - Z	1 - 15, 16 - 90	+ - /		2, 6, 4
VPCMB-9	A - C	1 - 3		L1 -3, T1-3	45, 45, 30
VPCMB-11		1 - 30			15 each
VPCMB-12	A - Z		+ -	Blanks	15, 8, 7, 21
VPCMB-13			+ -	AC, DC, POS, NEG, GND, NEUT, SPARE	45, 33, 27, 21
VPCMB-14		46 - 90			10 each
VPCMB-16	A - C	0 - 33	+ -	L1 -3, T1-3	10 each

Ordering Information: Order by the book.

DISPENSER KITS

PART NUMBER	DESCRIPTION	MARKERS PER ROLL	WRITE-ON AREA (Inches)	TOTAL AREA (Inches)	PACKAGE SIZE
VPLD-1	Kit (Disp, Tape, Pen)	200	0.375 X 1	1.25 X 1	1
VPLD-2	Kit (Disp, Tape, Pen)	100	0.75 X 1	3.00 X 1	1

Ordering Information: Order by standard package.

WRITE ON MARKERS & MARKER CARDS

PART NUMBER	DESCRIPTION	LEGEND OR COLOR	PACKAGE SIZE
VPX-0	Regular Tip	Black	1
VPX-2	Regular Tip	Red	1
VPX-10	Regular Tip	White	1
VPFX-0	Fine Tip	Black	1
VPFX-2	Fine Tip	Red	1
VPCM- 'enter #'	Cloth	Choose: 0,1,2,3,4,5,6,7,8,9	5, 25 Cards
VPCM-1-9	Markers	1 - 9	5, 25 Cards
VPMD	Empty Dispenser		1
VPMD-0-9	Filled Dispenser	0 - 9	1
VPMDR-'enter #'	Flexible Polyester	Choose: 0,1,2,3,4,5,6,7,8,9	1

Ordering Information: Order by standard package.

MULTI-PURPOSE & CRIMP TOOLS

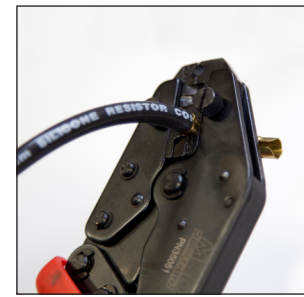
MULTI-PURPOSE TOOLS

PART NUMBER	DESCRIPTION
VT1000	KLEIN® MULTI-PURPOSE 6-IN-1 TOOL. Cleanly shears bolts, cuts and strips wire from 22-10 AWG, measures stud sizes and crimps insulated terminals. Bolt sizes: 4-40, 6-32, 8-32, 10-24, 10-32. Overall length 7 3/4".
VT1001	KLEIN® MULTI-PURPOSE ELECTRICIAN'S TOOL. Cleanly shears bolts and cuts and strips stranded wire from 26-10 AWG. The wire cutter located in nose pivot crimps 7-8 mm insulated and non-insulated terminals, lugs and splices; Crimping dies are color coded for easy identification. Bolt sizes: 4-40, 6-32, 8-32, 10-24, 10-32. Overall length 8 1/2".
VT1010	KLEIN® LONG NOSE MULTI-PURPOSE TOOL. Cuts and strips stranded wire from 26-10 AWG cutters and strippers are in front of the pivot for maximum ease of use. It has a narrow, serrated plier nose to pull, loop, and bend wire, crimps 7-8 mm insulated and non-insulated ignition terminals. Bolt sizes: 4-40, 6-32, 8-32, 10-24, 10-32. Overall length 8 1/4".

CRIMP TOOLS

VT1005	KLEIN® CRIMPING/CUTTING TOOL (FOR NON-INSULATED/INSULATED TERMINALS). Accommodates wire from 22-10 AWG. There is a specially hardened wire cutter in the nose and crimp die marked for insulated and non-insulated solder-less terminals and connectors. Overall Length: 9-3/4". TIP: The indent in the crimp die should be opposite of the seam of the non-insulated terminal when crimping.
VT1006	KLEIN® CRIMPING/CUTTING TOOL (FOR NON-INSULATED TERMINALS). Designed for crimping non-insulated, solder-less terminals and connectors with a specially hardened wire cutter in the nose. TIP: The indent in the crimp die should be opposite of the seam of the non-insulated terminal when crimping.
VT3120CT	SARGENT CONTROLLED CYCLE CRIMP TOOL. Simple, trouble-free cycle mechanism assures consistent terminations. All cavities are fully machined in high carbon steel then heat treated. The VT3120CT crimps the conductor portion of insulated terminals, crimp cavities are color coded: Red 22-18 AWG, Blue 16-14 AWG, Yellow 12-10 AWG. Excellent for use with crimping heat shrink terminals.
VTR-490	3M RATCHET CRIMP TOOL. Ruggedly built, this tool crimps the barrel and the insulation grip independently for 22-10 AWG insulated and non-insulated terminals and connectors.
VTTR50	RATCHET CRIMP TOOL. Ensures uniform crimp termination regardless of user. Release switch if terminal or wire is inserted improperly. High quality, economical tool. Alignment guide dies won't slip during crimping. Four (4) crimp nests - 22-18, 16-14, 12-10, 8
VT30-500	IDEAL® CRIMPMASTER CRIMP TOOL - FRAME ONLY. Frame is constructed from high grade, stamp-hardened steel and put together with steel pins that will not stretch with use. The tool is full cycle, compound leverage, and triple ratcheted to give exact precision to every crimp.
VT30-506	IDEAL® CRIMPMASTER CRIMP TOOL. High quality ratchet-type crimp tool for electricians, contractors and installers. The ratcheted crimp action provides repeatability and reliability. Interchangeable dies provide versatility. Cushioned comfort grip handles. Crimps 22-10 AWG (.324 mm ² - 5.261 mm ²) insulated ring tongue terminals and splices.
VT30-577	IDEAL® CRIMPMASTER DIE SET ONLY for RG-8/11, RG-213, RG-216 Ethernet thick-wire, N-series plugs and jacks
VT30-579	IDEAL® CRIMPMASTER DIE SET ONLY. For 22-10 AWG insulated ring & fork terminals and splices
VT30-580	IDEAL® CRIMPMASTER DIE SET ONLY. For 22-8 AWG non-insulated terminals and splices
VT30-581	IDEAL® CRIMPMASTER DIE SET ONLY. For RG-58, RG-59/62AU, BNC/TNC 3-piece hex connectors
VT30-582	IDEAL® CRIMPMASTER DIE SET ONLY. For CATV RG-59 and RG-6 captive ring F-connectors
VT30-586	IDEAL® CRIMPMASTER DIE SET ONLY. For 22-12 AWG Non-insulated open barrel crimp style conn.
VT30-594	IDEAL® CRIMPMASTER DIE SET ONLY. For 22-10 AWG fully insulated slide-on connectors

Ordering Information: Order by the tool.



VT1000



VT1010



VT1005



VT1006



VTR-490



VTTR50



VT30-500



VT30-506



VT30-580

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

CABLE CUTTERS & WIRE STRIPPERS

CABLE CUTTERS

PART NUMBER	DESCRIPTION
VT63055	KLEIN® COMPACT CABLE CUTTER. Precise, one-hand shearing action cuts 24 AWG copper, aluminum multi-strand cable and wire, and 100-pair telephone cable. Heat treated, high-carbon steel shearing edges for long life. Not designed for cutting steel or ACSR. Length: 8".
VT63050	KLEIN® HIGH-LEVERAGE CABLE CUTTER. High-leverage design for exceptional cutting capability. Through hardened for longer-lasting cutting surfaces. Maximum cable cutting capacity: 4/0 aluminum, 100-pair 24 AWG cable, 2/0 soft copper. This item is not designed for cutting steel or ACSR. Length: 9 1/2".

RATCHET CABLE CUTTER

VT63060	KLEIN® RATCHETING CABLE CUTTER. Patented two-step ratchet mechanism requires fewer strokes per cut. Quick release lever opens blades easily in every cutting position (allows removal of the cable before completion of the cut.) Maximum cable cutting capacity: 750 MCM copper and aluminum (Max. jaw opening 1 1/8"). This item is not designed for cutting steel or ACSR. Length: 10-1/4".
VT35-053	IDEAL® RATCHETING CABLE CUTTER. Designed to cut 750 KCMIL (MCM) and smaller hard-drawn copper and aluminum cables. Hardened steel blades ensure long term durability. Quick release mechanism simplifies blade back-out. Max. jaw opening 2". Not designed for cutting steel or ACSR. Length: 14 1/2".

CABLE SWIVEL/SLIT BLADE STRIPPERS

VT45-128	IDEAL® SWIVEL BLADE STRIPPER. For 3/4" and smaller outside diameter cables. Single or Multi-Conductor Cables, blade adjusts for jacket thicknesses up to 1/8 inch. Replacement Blades: VTL-7486
VT45-605	IDEAL® Multi-Strip Coax/UTP Cable Stripper. Strips UTP, RG-59 and RG-6 coax cable. Provides a 1/4 in (minimum) x 1/4 in. strip on coax. Spare cartridge compartment provided. Push-on ring for easy connector termination. Features a primary and secondary strip cartridge.
VT45-514	IDEAL® Stripper for Unshielded and Shielded Twisted Pair. Fast, easy removal of outer insulation from all unshielded twisted pair, shielded twisted pair and multi-core cables, also works on PVC and plenum type insulation.
VT45-144	IDEAL® SWIVEL BLADE/ROUND CABLE SLITTING TOOL Single or Multi-Conductor Cables up to 1.75" O.D. Blade adjusts for jacket thickness up to 1/8". Spare blade in handle base. Replacement Blades: VTLB-1748

WIRE & CABLE STRIPPERS & CUTTERS

VT45-121	IDEAL® T®6 STRIPPER - WIRE STRIPPER/CUTTER. Form-ground, hardened, knife-type blades for accurate stripping, tough steel construction. Built-in wire cutter and plier nose for extra gripping strength. Laser-etched wire gauge markings. Spring loaded, for automatic opening. Corrosion-resistant, black oxide finish. Wire range: Solid 24-14 AWG, Stranded 26-16 AWG.
VT45-124	IDEAL® T®8 STRIPPER - WIRE STRIPPER/CUTTER. Form-ground, hardened, knife-type blades for accurate stripping, tough steel construction. Built-in wire cutter and plier nose for extra gripping strength. Laser-etched wire gauge markings. Spring loaded, for automatic opening. Corrosion-resistant, black oxide finish. Wire range: Solid 14-6 AWG, Stranded 16-8 AWG.

WIRE STRIPPERS

VT45-292	IDEAL® STRIPMASTER. Wire stripper for 22-10 AWG stranded wire. Cleanly strips wire up to 7/8" removal of insulation. Eliminates nicking, cutting and fraying of commercial wire. Wire gripper will hold wire centered in stripping hole. Replacement Blades: VTL-4421
VT45-671	IDEAL® STRIPMASTER LITE. Wire stripper for 22-16 AWG stranded wire. Cleanly strips wire up to 7/8" removal of insulation. Eliminates nicking, cutting and fraying of commercial wire. Wire gripper will hold wire centered in stripping hole. Replacement Blades: VTLB-1001
VT45-265	IDEAL® COAX STRIPMASTER. Stripper for RG-59. One-step stripping enhances productivity. Spring-action motion increases leverage and reduces operator fatigue. Wire gripper will hold wire centered in stripping hole. Replacement Blades: VTLB-743
VT45-262	IDEAL® COAX STRIPMASTER. Stripper for RG-6. One-step stripping enhances productivity. Spring-action motion increases leverage and reduces operator fatigue. Wire gripper will hold wire centered in stripping hole. Replacement Blades: VTLB-740

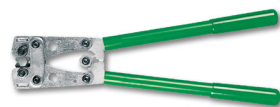
Ordering Information: Order by the tool.

WIRE & CABLE	
MULTI-CONDUCTOR	
COAX CABLES	
NETWORK CABLES	
HEAT SHRINK	
ROUTING & BUNDLING MATERIALS	
CABLE TIES	
TERMINALS	
DEUTSCH & DELPHI	
LUGS & BOOTS	
ID PRODUCTS & LABELERS	
TOOLS	VT45-121
BREAKERS & FUSES	
TERMINAL BLOCKS & BUS BARS	
SWITCHES & ACTUATORS	
LIGHTS & METERS	VT45-262 & VT45-265

SPECIALTY TOOLS

LARGE GAUGE CRIMPING TOOLS

PART NUMBER	DESCRIPTION
VT0280C	CRIMP-MASTER COMPACT BATTERY LUG CRIMPER. Universal, adjustable crimping tool 8 - 1/0 AWG. Characteristics: High-Leverage Handles, Compound-Action Mechanism, Adjustment Screw Allows User To Control Crimp Depth, Application For Crimping Lugs and Terminals, Function Crimps 8 - 1/0 AWG Battery Lugs And Terminals. Length: 16".
VT0280	CRIMP-MASTER BATTERY LUG CRIMPER. Universal, adjustable crimping tool 6 - 4/0 AWG. Characteristics: High-Leverage Handles, Compound-Action Mechanism, Adjustment Screw Allows User To Control Crimp Depth, Application For Crimping Lugs and Terminals, Function Crimps #4/0 - 6 AWG Battery Lugs And Terminals. Length: 25".
VTK051GL	GREENLEE® ROTATING DIE CABLE CRIMPER. 8 - 1/0 AWG crimps smaller copper connectors. Small, lightweight and easy to handle. Color-coded, hexagonal rotating dies, full cycle mechanism releases only after full crimp cycle is completed. Length: 15.4".
VTK092SPGL	GREENLEE® ROTATING DIE CABLE CRIMPER. Long length results in low handle efforts. For 8-4/0 AWG cable. Color-coded, hexagonal rotating dies, the full cycle mechanism releases only after full crimp cycle is completed. Length: 25.5".



DEUTSCH TOOLS

Additional Deutsch Removal Tools on page 43.

VT-HDT-48	DEUTSCH PRODUCTION CRIMP TOOL. Crimps solid style pins and sockets only. Provides eight-indent, mil-spec type crimp. For use with 22-12 AWG wire, size 20-12 Solid Pins and Sockets in DT, DTM, DTP and size 12 DTHD Series connectors.
VT-HDT-1561	DEUTSCH FIELD SERVICE CRIMP TOOL. Crimps solid style pins and sockets. Two-indent crimp. For use with 24-12 AWG wire, size 20-12 Solid Pins and Sockets in DT, DTM, DTP and size 12 DTHD Series connectors.
VT-HDT-04-08	DEUTSCH LARGE CONTACT CRIMPER. Tool crimps size 8 and size 4 solid style pins and sockets (8 - 6 AWG) in DTHD Series. Two-indent crimp.
VT-DT/RT	DEUTSCH CONTACT/WEDGELOCK REMOVAL TOOL. A multi-use tool with a small hook on one end to remove the wedgelock, and a small screwdriver on the other end to push back the locking fingers and release the contact. The VT-DT/RT is a helpful tool for the DT, DTM, and DTP series connectors.



DELPHI WEATHER PACK TOOLS

VT12014254	DELPHI WEATHER PACK CRIMPING TOOL Crimp terminals and seals in a single motion with this ratchet style crimper. Works with: Weather-Pack Series, 20-14 gauge. Metri-Pack 280 Series, sealed, 20-14 gauge (must remove terminal locator). Length: 11.5" Made in the USA.
VT12155975	Designed to crimp the core and insulation wings in a separate motion. 22-14 AWG for metri-pack 150 & 280 series terminals. Length: 9". Made in the USA.
VT12014012	DELPHI WEATHER PACK TERMINAL REMOVAL TOOL Weather Pack terminal release tool. This tool depresses the terminal retention barbs so the terminals can be removed from the housing connector. Works with all three sizes of Weather Pack Terminals 22-18, 16-14 & 12-10 AWG.



Ordering Information: Order by the tool.

WIRE
& CABLE

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CABLES

HEAT
SHRINK

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BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

SPECIALTY TOOLS CONT.

WIRE & CABLE
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ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



VT-PZUS

CONTA-CLIP SIDE WIRE ENTRY FERRULE CRIMPING TOOL. For 26 - 10 AWG wire. Ratcheted controlled crimp action provides repeatability and reliability. Multiple cavity die crimps wires from 26-10 AWG (mm² ferrule size 0.14 - 6.0).



VT-PZU16E

CONTA-CLIP SIDE WIRE ENTRY FERRULE CRIMPING TOOL. For 20 - 6 AWG wire. Ratcheted controlled crimp action provides repeatability and reliability. Multiple cavity die crimps wires from 20 - 6 AWG (mm² ferrule size 0.5 - 16.0).



VT-PZU35

CONTA-CLIP SIDE WIRE ENTRY FERRULE CRIMPING TOOL. For 4 - 2 AWG wire. The ratcheted controlled crimp action provides repeatability and reliability. Multiple cavity die crimps wires 4 - 2 AWG (mm² ferrule size 25 & 35).



VT30-496

IDEAL® TELEMMASTER CRIMP TOOL. For RJ-11/12/14 (6 position-1,2,3 pair) and RJ-45 (8 position-4 pair) modular plugs. Multi-function tool for round voice/data cables. Cuts, strips and crimps for easy on-the-job, one-tool application. Round cable stripping chamber for CAT5E/6 cables. Length: 13"



VT33-750

IDEAL® ECONOMY 10BASE-T TELEMMASTER KIT. Basic termination kit for 10Base-T. Kit includes, UTP/Coax Stripper Telemaster RJ-11/RJ-45 Tool, 50 8-Position RJ-45, Non-Keyed, Solid Plugs. Durable hard case.



VTCL-4040

F-TYPE COMPRESSION TOOL. Ratchet controlled, F-compression tool RG 59/6/6 Quad. This tool is used to crimp standard F Connectors onto RG-59 and RG-6 cables. The stripper features a double blade to remove insulation and/or shielding.



VTCL-4080

PROFESSIONAL COMPRESSION TOOL. Ratchet controlled, adjustments for crimping R/A, F and RCA length connectors.



VTGTS

PANDUIT CABLE TIE INSTALLATION TOOL. Body Width Range 0.070 to 0.225 inch, Tool Code E, For 18 to 50 lb Tensile Strength Cable Ties, Impact Resistant Resin Housing, Narrow Nose and Cushion Handle, Installs Cable Ties To Correct Tension and Trim Tails Flush, Tension Locking Mechanism, Easy Tension Knob Adjustment Wheel. Use with subminiature, miniature, intermediate, and standard ties.



VT-HTMT

PANDUIT STAINLESS STEEL TENSIONING AND COILING TOOL. Installation tool for use with the following stainless steel cross section ties: Type MLT (Pacer CMLT): Standard, light-heavy, and heavy. Coil tie end remaining after tensioning for safe end. Installs parallel to the bundle.



VT-ST2MT

PANDUIT STAINLESS STEEL INSTALLATION TOOL. Cable tie side entry for immediate positioning of tie, one hand operation, lightweight, easy removal of excess tie, tool tension is controlled by installer, twist action cut-off, rugged, lightweight, easy-to-operate pliers-type tool that provides mechanical advantage over standard installation tools. Dimensions: 7.8" x 5.8"

Ordering Information: Order by the tool.

SPECIALTY TOOLS CONT.

STAINLESS STEEL FISH TAPES

PART NUMBER	LENGTH(ft)	WIDTH & THICKNESS (IN.)	CASE DIA. (IN.)	END TYPE	REPL. TAPE
VT31-066	120	1/8 x 0.060	12	Formed hook	VT31-073
VT31-067	240	1/8 x 0.060	12	Formed hook	VT31-074
PART NUMBER	DESCRIPTION				

VT31-388

IDEAL CLEAR GUIDE™. Wire Pulling Lubricant. Clear and colorless for quick and easy clean up. Exceptional lubricity for super-fast pulls. Polymer based formula perfect for all electrical and data-com applications. Safe to use with all cable types. 1 Qt. Squeeze bottle.

CIRCUIT AND VOLTAGE TESTERS

VT61-051

E-Z CHECK PLUS CIRCUIT TESTER. No-slip ergonomic design maximizes comfort and premium neon lamps prevents false readings. Constructed with a tough, impact-resistant case; tests GFI receptacles for proper operation, correct wiring; open ground; reverse polarity; open hot, open neutral, hot on neutral, hot and ground reversed with open hot and ground fault interruption in 3-wire 125 VAC circuits and covered by a 2-year warranty.

VT61-063

VOLT SENSOR POCKET TESTER. Checks non-contact voltage from 40 - 600 VAC, CAT III - 600V, audible and visual indication, tests for energized circuits, over-molded rubber cushion grip, compact rugged housing and covered by a manufacturer 1-year warranty.

MULTIMETERS

VT61-484

480 SERIES COMMERCIAL-GRADE MULTIMETER. True RMS, auto AC/DC voltage. Has the Ability to detect with low impedance (Auto - VLoZ). Efficient for capacitance, frequency, with an analog bar graph, smart data hold, min/max, non-contact voltage detect. Peak hold (61-486), temperature (61-486), low battery indication, auto power off, back lit display. Covered by a manufacturer 2-year warranty. INCLUDES: test leads (TL-484) and carrying case(C-290).

Case included

CLAMP METERS

VT61-746

CLAMP-PRO™ CLAMP METER 600 AMP WITH TRUE RMS. Measures up to 60A AC, non-contact voltage indicator (70 - 600V AC), tapered jaws with hook tip, auto/manual ranging, data hold, auto power off, low battery indicator, CAT III - 600V. Covered by a 2-year warranty. INCLUDES: test leads(TL-103) and carrying case(C-90)

Case included

VT61-775

1000 AMPS AC/DC TIGHTSIGHT® CLAMP METER. TRMS, capacitance, frequency. 1000 A True RMS clamps for a variety of industrial and commercial environments, unique TightSight® bottom display makes hard-to-reach measurements convenient, easy-to-read displays feature large numbers and green glowing backlight, CAT IV rating for maximum safety, frequency, capacitance, peak, data hold, max/min INCLUDES: test leads, alligator clips and case (C-770).

Case included

VT-8110

Mini Clamp Multimeter - AC/DC. Clamp allows measurement of AC and DC current in wires without disturbing the circuits or contacting live terminals. Auto range simplifies operation: 0.01-400A, 0.01-600V. True RMS - required for accurate measurement of inverter output. Test leads included with meter.

Case included

Micro Torch

VMT-4F

This small, lightweight, self igniting micro torch heat tool is perfect for heat shrink terminals, tubing and soldering. This product requires butane to operate. (Not included) Outer body measurement: 71(H) x 20(W) x 35(L) mm



WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

Ordering Information: Order by the tool.

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SPECIFICATIONS:

- Dimensions: 10.3" L (260 mm)
- Equivalent to Electric Iron: 20 to 80 Watt
- Recommended Fuel: Master Ultratane® Butane
- Gas Tank Capacity: 1 fl. oz. (28 cc)
- Approx. Operating Time: 2hr.
- Net Weight: 5.5 oz. (100 g)
- Approx. Heat Tip Temp.: 1202°F (650°C)
- Approx. Solder Tip Temp.: 482°F to 932°F (250°C to 500°C)
- Shipping Weight: 1 lb.
- Shipped empty



VUT100SI

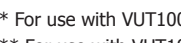


VUT100SIK (KIT)

SELF-IGNITING, BUTANE-POWERED SOLDERING IRON AND HEAT TOOL

- Light weight for easy handling & extended use
- Built-in fuel filter for consistent fuel ignition
- Adjustable temperature up to 1200°F
- Built-in window indicates fuel level
- UL & GS/TUV Listed for user safety
- Use to pinpoint heat, remove surface mount components, repair vinyl, shrink heat shrink tubing, solder and repair solders and spot dry.
- Kit contains unit, solder tip, heat tip, shrink attachment, spanner and open end wrench, sponge and stand packed in a metal storage/carrying case

MASTER® ULTRATORCH UT100SI ACCESSORIES

	PART NUMBER	DESCRIPTION		PART NUMBER	DESCRIPTION
	V70-01-01	1 mm Tapered Needle Soldering Tip		V70-01-16	5.7 O.D. Hot Knife Tip
	V70-01-02	3.3 mm Chisel Soldering Tip (Standard)		V70-01-52	Heat Tip
	V70-01-03	2 mm Spade Soldering Tip		V70-01-55	Heat Shrink Attachment
	V70-01-04	3 mm Spade Soldering Tip		V70-40U	Metal Storage Box
	V70-01-05	0.5 mm Tapered Needle Soldering Tip		V90-02	Protective Cap for VUT-100SI
	V70-01-06	2 mm Micro Spade Soldering Tip		V80-04U*	Replacement Burner
	V70-01-08	2 mm Spade Soldering Tip 35 degree		V90-07UN**	Ejector and Burner Assembly
	V70-01-10	Offset tapered needle, 1 mm diameter		VBUTANE	Butane 145 gm Canister
	V70-01-11	8 mm High Powered Chisel Soldering Tip		V20261*	Repair Kit (1 each): Burner, Ejector, Knurled Cap, Tip Housing
	V70-01-12	Round head, High Powered 3 mm diameter			
	V70-01-14	Adaptor, 8.4 (4mm diameter x 0.7 mm pitch)			

* For use with VUT100SI with serial number 2491709 and lower. Serial number located on unit housing.

** For use with VUT100SI with serial number 2491710 and higher. Serial number located on unit housing.

Ordering Information: Order by the piece.

MASTER® ELECTRIC HEAT TOOLS

Common applications for MASTER® versatile heat tools include activating adhesives, bending & forming plastics, defrosting, drying, curing, heating, shrinking packaging & tubing, soldering, gluing, softening tile, stripping paint and welding plastics.

PART NUMBER	DESCRIPTION
VPROHEAT	MASTER® PROHEAT® QUICK TOUCH HEAT GUN WITH MOMENTARY CONTACT SWITCH 1000°F /540°C, 120V, 60 Hz, 11 AMP, and 1300 WATTS • Compact, lightweight, easy-to-use • Balanced ergonomic design prevents operator fatigue • Protective hand/switch guard and hanging loop • Momentary Contact Switch – if not held, unit is off • Use to activate adhesives, bend plastics, shrink tubing and more
V35216	PROHEAT® BENCH STAND
V35017	PROHEAT® ATTACHMENT 1-3/8" Shrink Tubing
VHG-301A	MASTER® PROFESSIONAL QUALITY, HEAVY-DUTY INDUSTRIAL, MULTIPLE USE HEAT GUN 300 - 500°F, 150 - 260°C, 120-V 60 Hz, 12 AMPS, 1440 WATTS • Powerful high speed universal motor • Sturdy die cast housing • Adjustable non-slip stand • Use to bend plastics, cure adhesives, dry parts, heat parts, shrink tubing and packaging, strip paint and more

Ordering Information: Order by the piece.



V35216



V35017



VHG-301A

MASTER® BUTANE HEAT TOOLS

PART NUMBER	DESCRIPTION
VMICROTORCH	MASTER® MICROTORCH® A PORTABLE, BUTANE POWERED HEAT TOOL • Quick starting self-igniting piezo electric ignition eliminates the need for lighters and matches • Wind resistant flame resists moisture and is perfect for outdoor use, such as camping and biking • Adjustable flame height allows for low and high temperatures up to 2500°F/1300°C blue flame • Safety lock and attached safety cap prevent unintentional ignition • VMICROTORCH Meets Consumer Products Safety Commission (CPSC) requirements
VMT-76	MASTER® TRIGGER® A PROFESSIONAL QUALITY, HAND HELD OR TABLE TOP, BUTANE POWERED, SELF IGNITING TORCH, SOLDERING IRON AND FLAMELESS HEAT TOOL • MT-76 includes soldering iron and heat tip for soldering up to 752°F/400°C and heating up to 932°F/500°C • Kit includes trigger torch, removable stand, solder tip and heat tip • Gas adjustment wheel provides adjustable long blue torch flame with temperatures up to 2,500°F/1300°C • Incorporates trigger switch with pulldown lock to meet Consumer Products Safety Commission (CPSC) requirements • Incorporates a hands free slide lock for continuous use and instant off operation

Ordering Information: Order by the piece.



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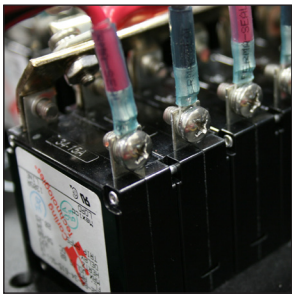
BREAKERS
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SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Series = trip
- "Trip Free"
- Magnetic operation, operates as a function of current only
- Panel mounted
- Power switching
- Round cutout 0.50 dia.



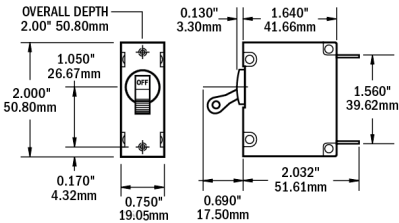
EAA1-20WH EAB2-20WH

TECHNICAL INFORMATION

- **Series Trip:** Long delay
- **Inrush Pulse Tolerance:** 10 times rated current
- **Oper. Temp:** -40°C to 85°C
- **Shock:** Withstands 100 g or more without tripping, while carrying full rated current per Mil-Std-202, Method 213, cond. 1
- **Vibration:** Withstands 10 g without tripping, while carrying full rated current per Mil-Std-202, Method 204, cond. A
- **Endurance:** Withstands 10,000 operations at rated voltage and current or withstands 50 operations at 600% AC or 1000% DC at rated voltage and current, in accordance with UL 1077
- **Moisture Resistance:** Meets requirements of Mil-C-55629, tested in accordance with Mil-Std-202, Method 106
- **Salt Spray:** Meets requirements of Mil-C-55629, tested in accordance with Mil-Std-202, Method 101
- **Trip Free:** Trips on overload, cannot be forcibly held on

MAGNETIC CIRCUIT BREAKERS “A” SERIES

Magnetic circuit breakers offer a low cost answer to power switching and reliable circuit protection. Temperature will not affect the operation of magnetic circuit breakers, as the case with fuses or thermal breakers. The opening of the circuit is accomplished by the amount of current passing through an electromagnetic coil. As the current exceeds the amount specified by the breaker, the circuit will open (See chart *"Percentage overload vs. trip time"*). "A" series breakers are designed to have long trip delays to avoid nuisance tripping.



Series A Dimensions

PERCENTAGE OVERLOAD VS. TRIP TIME IN SECONDS AT +25C (VERTICAL MOUNT)

DELAY	100%	135%	150%	200%	400%	600%	800%	1000%
DC 50/60-Hz MEDIUM	NO TRIP	7-130	3-60	1.3-20	.085-3	.02-2	.015-.8	.01-.26

“A” SERIES INTERRUPTING CAPACITY (AMPS)

MAX RATING	VOLTAGE FREQUENCY	PHASE	CURRENT RATING FULL LOAD AMPS	INTERRUPTING CAPACITY UL/CSA WITHOUT BACKUP FUSE
80	DC	-	0.02 - 30	3000
65	DC	-	31 - 50	3000
125/250	50/60 Hz	1Ø	0.02 - 30	3000
125/250	50/60 Hz	1Ø	31 - 50	2000

“A” SERIES HYDRAULIC/MAGNETIC CIRCUIT BREAKERS

RATED AMPS	SINGLE POLE P/N	DOUBLE POLE SINGLE THROW P/N	DOUBLE POLE DOUBLE THROW P/N	*TOGGLE COLOR ABBREVIATION
5	EAA1-5	-	-	BK, WH
10	EAA1-10	EAB2-10	EAA2-10	BK, WH
15	EAA1-15	EAB2-15	EAA2-15	BK, WH
20	EAA1-20	EAB2-20	EAA2-20	BK, WH
25	EAA1-25	EAB2-25	EAA2-25	BK, WH
30	EAA1-30	EAB2-30	EAA2-30	BK, WH
40	EAA1-40	EAB2-40	EAA2-40	BK, WH
50	EAA1-50	EAB2-50	EAA2-50	BK, WH

* Red (RD) Available upon request.
Ordering Information: Combine the part number and the color abbreviation.
Example: Single Pole, 30 AMP, White toggle = EAA1-30WH. All breakers are available by the piece.

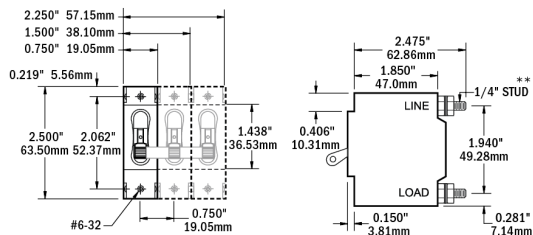
SERIES “A” BREAKER ACCESSORIES

PART NUMBER	DESCRIPTION	
EG6-GUARD	Fits all “A” Frame Breakers. Mounts on the surface of the panel with two (2) 6-32 x 3/8” screws, which are included. Protects critical function circuits from being accidentally switched off at the breaker.	
EG-SLIDE	Fits all Double Pole “A” Frame circuit breakers. AC Lockout slides allow only one breaker to be activated at a time. EG-SLIDE uses circuit breaker mounting screw holes, no special modifications required.	
EG-EL	“A” frame to “C” frame adapter plates fit exactly over our EA breakers, converting its face design to an EC rectangular type. With this adapter, an EA breaker can easily be used in a pre-cut EL1 slot.	

Ordering Information: Order by the piece.



MAGNETIC CIRCUIT BREAKERS "C" SERIES



Series C Dimensions

Designed for use in industrial, military and marine applications, "C" series breakers are suitable for use in any situation where precision operation is required. Magnetic circuit breakers are a low cost answer to power switching and reliable circuit protection.

Temperature will not affect the operation of magnetic circuit breakers, as it does with thermal breakers or fuses. Boots are available on page 63.

PERCENTAGE OVERLOAD VS. TRIP TIME IN SECONDS AT +25C (VERTICAL MOUNT)

DELAY	100%	135%	150%	200%	400%	600%	800%	1000%
DC 50/60-Hz MEDIUM	NO TRIP	6.5-115	3-65	1.2-20	.08-3	.018-2.5	.015-.8	.009-.25

"C" SERIES INTERRUPTING CAPACITY (AMPS)

MAX RATING	VOLTAGE FREQUENCY	PHASE	CURRENT RATING FULL LOAD AMPS	INTERRUPTING CAPACITY UL/CSA WITHOUT BACKUP FUSE
80	DC	-	0.02 - 70	7500
65	DC	-	71 - 100	5000
125/250	50/60 Hz	1Ø	0.02 - 50	3000
125/250	50/60 Hz	1Ø	31 - 50	2000

"C" SERIES HYDRAULIC/MAGNETIC CIRCUIT BREAKERS

RATED AMPS	SINGLE POLE P/N	DOUBLE POLE DOUBLE THROW P/N	TRIPLE POLE TRIPLE THROW P/N
15	ECA1-15BK	-	-
20	ECA1-20BK	-	-
25	ECA1-25BK	-	-
30	ECA1-30BK	ECA2-30BK	-
40	ECA1-40BK	-	-
50	ECA1-50BK	ECA2-50BK	ECA3-50BK
60	ECA1-60BK	ECA2-60BK	-
70	ECA1-70BK	-	-
80	ECA1-80BK	ECA2-80BK	-
90	ECA1-90BK	-	-
100	ECA1-100BK	ECA2-100BK	-

Ordering Information: Order by the piece. White (WH) "C" series breakers are available upon request.

BREAKER ACCESSORIES

PART NUMBER	DESCRIPTION
EL-SLIDE	Fits all Double Pole "C" Frame circuit breakers. AC Lockout slides allow only one breaker to be activated at a time. EL-SLIDE uses circuit breaker mounting screw holes, no special modifications are required.



Ordering Information: Order by the piece.

Boots are available for circuit breakers on page 63.



FEATURES:

- Series trip
- "Trip Free"
- Magnetic operation, operates as a function of current only
- Panel mounted
- Power switching
- Rectangular panel cutout



ECA2-80BK

ECA1-50BK

TECHNICAL INFORMATION

- **Series Trip:** Long delay
- **Inrush Pulse Tolerance:** 12 times rated current
- **Oper. Temp:** -40°C to 85°C
- **Shock:** Withstands 100 g or more without tripping, while carrying full rated current per Mil-Std-202, method 213
- **Vibration:** Withstands 10 g without tripping, while carrying full rated current per Mil-Std-202, method 204
- **Endurance:** Per UL 1077 (6000 operations at rated load plus 4000 operations with no load) Tested at maximum rate of 6 times per minute
- **Moisture Resistance:** Designed to meet requirements of Mil-C-55629, when tested in accordance with Mil-Std-202, method 106
- **Salt Spray:** Designed to meet requirements of Mil-C-55629, when tested in accordance with Mil-Std-202, method 101
- **Trip Free:** Trips on overload, cannot be forcibly held on or restrained

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SWITCHES & ACTUATORS
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FEATURES:

ETS658

TYPE: 1658

- Very cost effective design to meet international requirements
- No potential current carrying exposed metal parts, except for terminals.
- Manual reset
- Cycling trip free mechanism
- Extremely small and lightweight
- UL, CSA, VDE and EN 60934 (IEC 60934) approved



ETS45

FEATURES:

TYPE: 2-5700 (Series 45)

- Single pole thermal circuit breaker with press-to-reset, tease-free, trip-free, snap action mechanism
- Push-push switch/circuit breaker
- Threadneck panel mounting
- Approved to CBE standard EN 60934 (IEC 60934)



ETS41

FEATURES:

TYPE: 412 & 413

- Single pole high performance thermal circuit breaker with tease-free, trip-free, snap action mechanism and push/pull on/off manual actuation
- An indicator band on the push button clearly shows the tripped/off position.
- Threadneck panel mounted

PANEL MOUNT THERMAL BREAKERS

SERIES	658	45	41	41
TYPE	1658	2-5700	(<30 AMPS)	(30 AMPS - 70 AMPS)
DESCRIPTION	Series Trip	Series Trip, Push-ON, push OFF switching, B&W reset button for trip indication	Series Trip, Push-pull ON-OFF switching	Series Trip, Push-pull, ON-OFF switching
CURRENT RATINGS	5 - 30 AMPS	5 - 30 AMPS	15 - 25 AMPS	30 - 70 AMPS
MAXIMUM VOLTAGE RATINGS	AC 240V or DC 28V	AC 240V or DC 28V	AC 115V or DC 28V	AC 115V or DC 28V
INTERRUPTING CAPACITY	2000 AMPS @ 120V AC, 2500 AMPS @ 32V DC, 2000 AMPS @ 28V DC	2000 AMPS @ 250 VAC, 2500 AMPS @ 50 VDC	6000 AMPS	6000 AMPS
LIFE	1000 Operations	5000 Operations	4000 cycles at 200% rated current	2000 cycles at rated current
TERMINALS	.250 quick connect	Screw Terminals	Screw Terminals	Screw Terminals
APPROVALS	UL 1077 up to 15 AMPS CSA up to 16 AMPS VDE	UL 1077 up to 20A CSA up to 20 AMPS VDE	MIL-E-5272C	MIL-E-5272C
DESIGN NOTES	N/A	N/A	Melamine housing, corrosion, humidity and fungus resistant	Melamine housing, corrosion, humidity and fungus resistant
TRIPPING TIMES IN SECONDS AT 70 °F (21 °C)				
100%	No Trip	No Trip	No Trip	No Trip
200%	1.5 - 8.0	10 - 40	10 - 65	12 - 80
300%	1.0 - 5.0	3.0 - 8.0	3.0 - 20	3.0 - 25
400%	-	2.0 - 9.0	1.5 - 12	1.2 - 12
500%	-	1.0 - 6.0	1.0 - 8.0	1.0 - 7.0
600%	-	0.6 - 5.0	0.6 - 6.0	0.5 - 5.0
1000%	-	0.2 - 2.5	0.2 - 3.5	0.1 - 0.2
RATED AMPS	PART NUMBER	PART NUMBER	PART NUMBER	PART NUMBER
5	ETS658-5	ETS45-5	-	-
10	ETS658-10	ETS45-10	-	-
15	ETS658-15	ETS45-15	ETS41-15	-
20	ETS658-20	ETS45-20	ETS41-20	-
25	ETS658-25*	ETS45-25	ETS41-25	-
30	ETS658-30*	ETS45-30	-	ETS41-30
40	-	-	-	ETS41-40
50	-	-	-	ETS41-50
60	-	-	-	ETS41-60
70	-	-	-	ETS41-70
CAP P / N				
	ES-PBCAP ES-PBCVR or ES-PBCVR-BK	ES-PBLCAP	ES-PB41CAP	

Ordering Information: Order by the piece.

For Series 1658 Breakers add WH= WHITE or BK=BLACK to the end of the part number. *Not available in black.

Example: ETS658-10WH = Series #1685 with white actuator.

BREAKER ACCESSORIES & COMPONENTS



Breaker Boots & Covers



Breaker Mounting Screws

PART NUMBER	DESCRIPTION	FOR USE WITH
BREAKER BOOTS AND COVERS		
ES-PBCAP	Clear, 9/16" high, 3/8" thread	ETS658 Series
ES-PBLCAP	Clear, 15/16" high, 3/8" thread	ETS45 Series
ES-PB41CAP	Clear, Variable height, 15/32" thread	EST41 Series
ES-PBCVR	Clear, 9/16" high, 3/8" thread	ETS658 Series
ES-PBCVR-BK	Black, 9/16" high, 3/8" thread	ETS658 Series
BOOTS FOR MAGNETIC CIRCUIT BREAKERS		
EG-SGLBOOT	Clear, Mounts Behind Panel, "ON"	"A" Series Sgl. Pole
EG-DBLBOOT	Clear, Mounts Behind Panel, "ON"	"A" Series Dbl. Pole
EL-SGLBOOT	Clear, Mounts Front Panel, "ON/OFF"	"C" Series Sgl. Pole
EL-DBLBOOT	Clear, Mounts Front Panel, "ON/OFF"	"C" Series Dbl. Pole

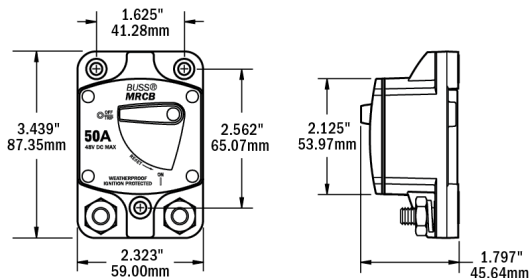
Ordering Information: Order by the piece.

BREAKER MOUNTING SCREWS

EGF-6-32-375	Black, Pan/Phillips-head, 3/8" long	"A" or "C" Series Breakers
EGF-6-32-3125	Black, Pan/Phillips-head, 5/16" long	"A" or "C" Series Breakers

Ordering Information: Sold in 50 pc packages.

MARINE RATED CIRCUIT BREAKERS SERIES 187



Surface Mount Dimensions

Rating: 25-150 AMPS, 48V DC

Interrupt Rating: Main Breaker Protection Interrupt Rating (5,000 AMPS @ 12V DC, 3,000 AMPS @ 24V DC and 1,500 AMPS @ 42V DC)

Operating Temperature Rating: -40°F (-40°C) to 185°F (85°C)

Storage Temperature Rating: -40°F (-40°C) to 260°F (125°C)

Materials: Black UL-rated 94V-0 thermo-set plastic body. Cover and lever are UL-rated 94V-0 thermoplastic

Marking: Standard marking includes amp/volt ratings

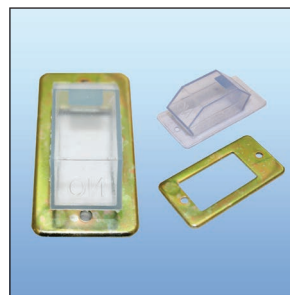
Terminal Stud Size: 5/16" - 18

Ingress Protection Rating: IP66

BUSSMANN SERIES 187 MANUAL RESET CIRCUIT BREAKERS WITH SWITCH FUNCTION

RATED AMPS	PART NUMBER	STUD SIZE
25	EMRCB-25	5/16" - 18
30	EMRCB-30	5/16" - 18
50	EMRCB-50	5/16" - 18
60	EMRCB-60	5/16" - 18
80	EMRCB-80	5/16" - 18
100	EMRCB-100	5/16" - 18
120	EMRCB-120	5/16" - 18
150	EMRCB-150	5/16" - 18

Ordering Information: Order by the piece.



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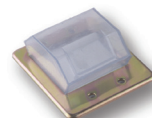
SWITCHES &
ACTUATORS

LIGHTS &
METERS



EG-SGLBOOT

EL-SGLBOOT



EL-DBLBOOT



FEATURES:

- A manual reset circuit breaker with On-Off switch capability
- "Trip-Free" design cannot be held on during fault current conditions
- Ignition protected, all components meet SAE 1171 external circuit protection requirements
- Large clearance around terminals accepts heavy gauge wire lugs

COMPLIANCES:

- ABYC E-11; CE; SAE J1171 (ignition protected)

APPLICATIONS:

These breakers are typically used in DC power systems in marine applications.

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SWITCHES & ACTUATORS
LIGHTS & METERS



MARINE RATED CIRCUIT BREAKERS

SERIES 185

BUSSMANN SERIES 185 MANUAL & SWITCHABLE RESET CIRCUIT BREAKERS

Rating: 25-150 AMPS, 48V DC
Interrupt Rating: 3000 AMPS
Operating Temperature Rating: -25°F (-32°C) to 180°F (82°C)
Termination: 1/4-28 threaded studs
Ingress Protection Rating: IP67

FEATURES:

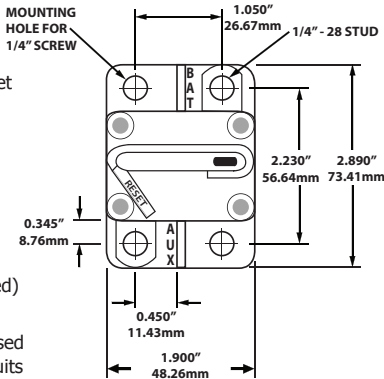
- Single pole thermal surface mount breaker
- Manual & switchable reset circuit breakers
- Series 185 has a unique reset mechanism which provides visual indication of tripped condition.
- Series 185 features a push-to-trip option
- Ignition protection

COMPLIANCES:

- SAE J1171 (ignition protected)

APPLICATIONS:

These breakers are typically used in auxiliary and accessory circuits in truck, bus, RV and marine systems. Other uses include battery chargers and DC audio systems. Series 185 are sealed for engine compartment and bilge area applications.



RATED AMPS	PART NUMBER
30	ESM-30
40	ESM-40
50	ESM-50
60	ESM-60
70	ESM-70
80	ESM-80
100	ESM-100
150	ESM-150

Ordering Information: Order by the piece.

THERMAL PUSH-to-RESET

CIRCUIT BREAKERS

FEATURES:

Current: AC/DC

Interrupt Capacity:

Style 1: Per SAE J553 & ABYC E-11

Style 2: Per SAE J553 & ABYC E-11

Style 3: Per SAE J1625 & ABYC E-11

TERMINALS:

Style 1: #8-32x1/4" Screw Terminals

Style 2: #10-32x5/8" Threaded Posts

Style 3: 1/4-28x9/16" Threaded Posts

MOUNTING METHOD: Panel

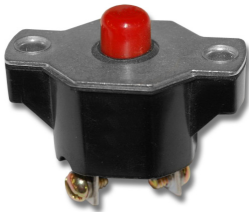
with eyelet #10 screw

SHOCK RESISTANCE: In excess

of 10 g

APPLICATIONS:

- Wire harness protection for heavy trucks, buses, construction equipment, off-road vehicles and RVs.
- Marine applications requiring ignition protected devices
- Battery protection in electric vehicles



Style 1



Style 2



Style 3

KLIXON® THERMAL CIRCUIT PROTECTORS

RATED AMPS	PART NUMBER Style 1	PART NUMBER Style 2	PART NUMBER Style 3
5	EPTR-5	-	-
10	EPTR-10	-	-
15	EPTR-15	-	-
20	EPTR-20	-	-
25	EPTR-25	-	-
30	EPTR-30	-	-
40	EPTR-40	-	-
50	-	EPTR-50	-
60	-	-	EPTR-60
70	-	-	EPTR-70
80	-	-	EPTR-80
90	-	-	EPTR-90
105	-	-	EPTR-105
120	-	-	EPTR-120
150	-	-	EPTR-150

Ordering Information: Order by the piece.

AGC FUSES, FUSE BLOCKS & HOLDERS

AGC originally stood for "all glass." The automotive industry uses the "AG" prefix (AGC, AGW) for most glass fuses.

AGC GLASS FUSES

- 1/4" Diameter x 1 1/4" Long
- Glass tube with Nickel plated brass end caps
- Fast-acting for maximum protection
- Wide amp/volt ratings allow versatility of protecting electronic circuits

PART NUMBER	VOLTAGE RATING AC	AMPERAGE RATING	PART NUMBER	VOLTAGE RATING AC	AMPERAGE RATING
EAGC.5	250	.5	EAGC7.5	250	7.5
EAGC1	250	1	EAGC10	250	10
EAGC1.5	250	1.5	EAGC15	32	15
EAGC2.5	250	2.5	EAGC20	32	20
EAGC3	250	3	EAGC25	32	25
EAGC5	250	5	EAGC30	32	30

Ordering Information: Order by the package (5 pieces).

BLUE SEA ST GLASS 6 CIRCUIT FUSE BLOCK WITH NEGATIVE BUS AND COVER

- Clear insulating cover with label recesses to accept Large Format Labels
- Cover insulates all conductive parts, satisfying ABYC/USCG requirements and provides spare fuse storage
- Tin-plated copper buses and Phosphor Bronze fuse clips give 30 Ampere rating per circuit
- Accepts AGC (Fast Acting), MDL (Time-Delay) and all other 3AG Glass Fuses

PART NUMBER	NO. OF CIRCUITS	MAX VOLTAGE	MAX AMPS PER CIRCUIT
EFB30-6IBC	6	32V DC	30 AMPS (100 AMP Per Block)

Ordering Information: Order by the piece.

BRASS FUSE BLOCKS WITH INDEPENDENT BUS

- Made with brass clips and screws with a common bus bar connected to the fuse clips
- Additional independent buses integral to the fuse block
- 8-32 Screw terminals

PART NUMBER	NO. OF CIRCUITS	MAX VOLTAGE	MAX AMPS PER CIRCUIT
EFB20-4IB	4	32V DC	25 AMPS (150 AMP Per Block)
EFB20-6IB	6	32V DC	25 AMPS (150 AMP Per Block)
EFB20-8IB	8	32V DC	25 AMPS (150 AMP Per Block)

Ordering Information: Order by the piece.

AGC FUSE HOLDERS



P/N: EFH-WP

Water-resistant, accepts 18 through 12 AWG, 30 AMP maximum, one piece construction.



P/N: EFH-MWP30

10 AWG wire, 30 AMP fuse

P/N EFH-MWP15

14 AWG wire, 15 AMP fuse molded, water-resistant, inline, fuse holder with 8" 14 or 10 AWG wire loop molded into the assembly. AGC fuse included.



P/N: EFH-PMKT

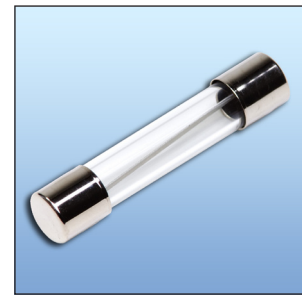
Panel mount "knob-type". Recommended panel cutout 0.505 diameter, terminals 0.250 quick connects.



P/N: EFH-KT

In-line, spring loaded, "knob-type" with wire included.

Ordering Information: Order by the piece.

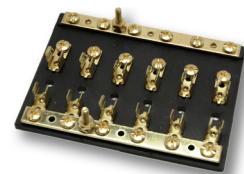


COMPLIANCES:

- UL listed product meets standard 248-14, CSA



EFB30-6IBC



EFB20-6IB

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

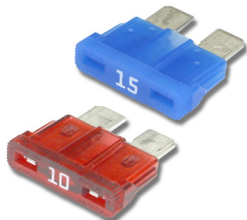
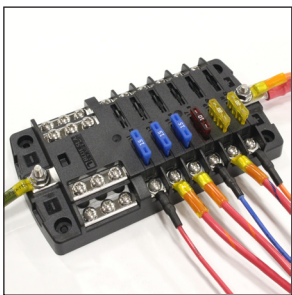
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS

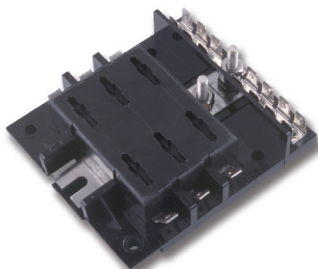


COMPLIANCES:

- Meets or exceeds OEM and SAE standards



EFB30-5025 (left)
EFB30-5026 (right)



EFB30-6ATC



ATO/ATC FUSES, BLOCKS, & HOLDERS

Introduced in the late '70s, ATC blade fuses are widely used by automotive OEMs. Clear, easy to read amp legend and color coding make for easy identification.

ATO/ATC TYPE FUSES

- Delivers fast-acting protection for electronics and other small loads
- Standard 1/4" blade-type automotive fuses
- Tin-plated connector blades for corrosion resistance

PART NUMBER	RATED AMPS	COLOR	PART NUMBER	RATED AMPS	COLOR
EATC1	1	BLACK	EATC10	10	RED
EATC2	2	GREY	EATC15	15	LT. BLUE
EATC3	3	VIOLET	EATC20	20	YELLOW
EATC4	4	PINK	EATC25	25	NATURAL
EATC5	5	TAN	EATC30	30	LT. GREEN
EATC7.5	7.5	BROWN	EATC40	40	AMBER

Ordering Information: Order in multiples of 5.

BLUE SEA ST BLADE FUSE BLOCK - 6 or 12 CIRCUITS WITH NEGATIVE BUS AND COVER

- Positive distribution bus with #10-32 stud
- Cover satisfies ABYC/USCG requirements for insulation, incorporates an easy to open push button latch providing easy access to fuses, storage for two spare fuses, and label recesses
- Fuse blocks with covers include 20 write-on circuit labels
- Tin-plated copper buses and fuse clips
- Accepts ATO® and ATC® fast acting blade fuses

PART NUMBER	CIRCUITS	SPARE STORAGE	MAX VOLTS	MAX AMPS PER CIRCUIT
EFB30-5025	6	2	32V DC	30 AMPS (100 AMP Max per Block)
EFB30-5026	12	2	32V DC	30 AMPS (100 AMP Max per Block)

Ordering Information: Order by the piece.

ATO/ATC FUSE BLOCK WITH COMMON HOT FEED AND INDEPENDENT NEGATIVE BUS

- For ATC and ATO fuses and circuit breakers, various sizes will snap together.
- Fuse/breaker contacts are tin plated and recessed for safety. Recessed area in the center accepts a label.
- Electrical ratings: 30 AMPS maximum per circuit at 12V to 24V DC 160 AMPS maximum total for the block at 12V DC.
- Black thermoplastic block. Blade terminals are .25" wide (6.4 mm). Stud terminal is 10-32.

PART NUMBER	CIRCUITS	MAX VOLTS	MAX AMPS PER CIRCUIT
EFB30-4ATC	4	24V	30 AMPS (160 AMP Max)
EFB30-6ATC	6	24V	30 AMPS (160 AMP Max)
EFB30-10ATC	10	24V	30 AMPS (160 AMP Max)
EFB30-14ATC	14	24V	30 AMPS (160 AMP Max)

Ordering Information: Order by the piece.

P/N: EFH-ATC-PKRD

Made from durable, glass reinforced, impact modified plastic, 6" of 10 AWG red wire, holds up to a 40 AMP ATC/ATO fuse, mounting tab integrated to cover. Fuse not included.

P/N: EFH-ATC-WP

Molded, side mount ATC/ATO fuse holder. Made with black high-temp thermoplastic construction, 12 AWG leads. Rated at 30 AMPS. Fuse not included.

Ordering Information: Order by the piece.

MAXI FUSE

Maxi blade fuses are used when a high amperage circuit is required from 20-80 AMPS. All blade fuses are color-coded to indicate their amps.

MAXI BLADE-TYPE FUSES

- Interrupting Ratings: 1000 AMPS @ 32V DC
- Operating Temperature: 40°F to 257°F (40°C to 125°C)
- Specifications: SAE J888, ISO 8820, DIN 72581 3E

PART NUMBER	RATED AMPS	COLOR	PART NUMBER	RATED AMPS	COLOR
EMF30	30	GREEN	EMF60	60	BLUE
EMF40	40	ORANGE	EMF70	70	TAN
EMF50	50	RED	EMF80	80	CLEAR

Ordering Information: Order by the piece.

BLUE SEA MAXI FUSE HOLDER - 30 AMPS to 80 AMPS

- The most economical fuse block for 30-80 Ampere fusing Maxi fuse holder and cover included
- Snap-on terminal cover insulates all conductive parts, satisfying ABYC/USCG requirements
- Accepts wire sizes 18-4 AWG from sides or bottom
- Ring terminal screws compress fuse blades within blocks for extremely low resistance connections

PART NUMBER	CIRCUITS	MAX VOLTS	MAX AMPS
EFH-5006	1	32V DC	80 AMPS

Ordering Information: Order by the piece.

MAXI FUSE HOLDER

- Maxi fuse holder & cover provides an efficient installation method for MAXI fuses

PART NUMBER	CIRCUITS	MAX VOLTS	MAX AMPS
EFH-MFH	1	32V	60 AMPS

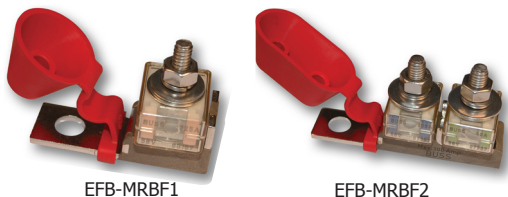
Ordering Information: Order by the piece.

MARINE RATED BATTERY FUSES & BLOCKS

MARINE RATED BATTERY FUSES

- Space-saving ignition protected fuse for 30 to 300 AMP loads. Must use with Terminal Fuse Block.
- High Interrupt Rating 10000 AMPS @ 14V DC, 5000 AMPS @ 32V DC, 2000 AMPS @ 58V DC satisfies ABYC requirements for DC main circuit protection on large battery banks
- Clear window—visual indication of blown condition, use for main or auxiliary circuits.

PART NUMBER	RATED AMPS	PART NUMBER	RATED AMPS	PART NUMBER	RATED AMPS
EMRBF30	30	EMRBF80	80	EMRBF175	175
EMRBF40	40	EMRBF90	90	EMRBF200	200
EMRBF50	50	EMRBF100	100	EMRBF225	225
EMRBF60	60	EMRBF125	125	EMRBF250	250
EMRBF75	75	EMRBF150	150	EMRBF300	300



EFB-MRBF1

EFB-MRBF2

MRBF TERMINAL FUSE BLOCK

- New isolated stud design uses standard M8 (5/16") hardware and permits stacking of terminals
- Compact, high-amp fuse—Appropriate for DC Main, inverter, windlass, and bow thruster circuit protection
- Provides high current protection in tight space constraints
- Insulating cap prevents accidental shorts
- **Note:** Fuses are NOT included when purchasing the MRFB Terminal Fuse Block.

Ordering Information: Order by the piece.



Maxi Blade-Type Fuses



EFH-5006



EFH-MFH



FEATURES:

- Maximum Amperage: 300 AMPS
- Maximum Voltage: 58V DC
- Recommended Torque: 75 in-lb (8.47 N·m)
- Terminal Stud: M8 (5/16")
- Weight: 0.16 lb (0.07 kg)

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

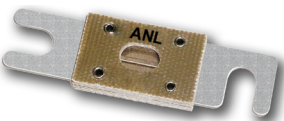
LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



COMPLIANCES:

- SAE J1171 (35-500 AMPS): Ignition Protected



ANL FUSES AND HOLDERS

LIMITER ANL LOW VOLTAGE, NON-TIME-DELAY FUSE

- Use with ANL fuse blocks for many applications with 35-600 AMP loads
- Interrupting Rating: 2,700 AMP DC, 6,000 AMP AC
- Voltage: 80V DC (or less), 32V AC
- Silver-plated connector blades for corrosion resistance
- Visible indication of blown fuse condition
- Isolates faults in equipment systems such as lift trucks and other battery operated system

PART NUMBER	RATED AMPS	PART NUMBER	RATED AMPS	PART NUMBER	RATED AMPS
EANL35	35	EANL130	130	EANL275	275
EANL40	40	EANL150	150	EANL300	300
EANL50	50	EANL175	175	EANL350	350
EANL60	60	EANL200	200	EANL400	400
EANL80	80	EANL225	225	EANL500	500
EANL100	100	EANL250	250	EANL600	600

Ordering Information: Order by the piece.

ANL FUSE BLOCKS

PART NUMBER	DESCRIPTION
EFB-ANL	- ANN & ANL fuse block with lock nuts - High-strength thermoplastic base - Two countersunk mounting holes on 1" centers for #10 flat head screws 400 AMP max, 80 volts DC, 125 volts AC - Bolt down fuses are vibration resistant and ideal for heavy equipment application
EFB-ANL-LT	- Cover included - Accepts 5/16" (M8) ring terminals - Rated 35 - 300 AMPS, for use on systems up to 32 Volts DC - Swing out design allows replacement of the fuse without removing fasteners - Stainless steel studs provide resistance to corrosion and high torquing for excellent electrical contact - UL 94-V0 base resists high heat - Insert molded studs ensure secure fuse mounting - Insulating cover satisfies ABYC/USCG requirements - Cover breakouts allow wire access in any direction
EFB-ANL-HD	- Cover included - Accepts 5/16" (M8) ring terminals - Rated 35 - 750 AMPS, for use on systems up to 32 Volts DC - Swing out design allows replacement of the fuse without removing fasteners - Stainless steel studs provide resistance to corrosion and high torquing for excellent electrical contact - UL 94-V0 base resists high heat - Insert molded studs ensure secure fuse mounting - Insulating cover satisfies ABYC/USCG requirements - Cover breakouts allow wire access in any direction

Ordering Information: Order by the piece.

CLASS T FUSES AND HOLDERS

Class T fuse blocks provide circuit protection for devices, including inverters. High interrupt capacity for large battery banks including Lithium-ion and TPPL batteries. Class T fuse blocks have a small foot print, providing substantial space savings in equipment.



CLASS T FUSES

- Extremely fast short-circuit response
- 20,000 AMP interrupt capacity
- UL rated for DC applications under UL 198L

PART NUMBER	RATED AMPS
ETF-225	225
ETF-250	250
ETF-300	300
ETF-350	350
ETF-400	400

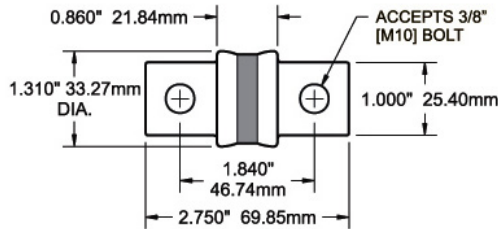
Ordering Information: Order by the piece.



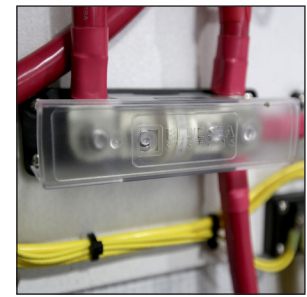
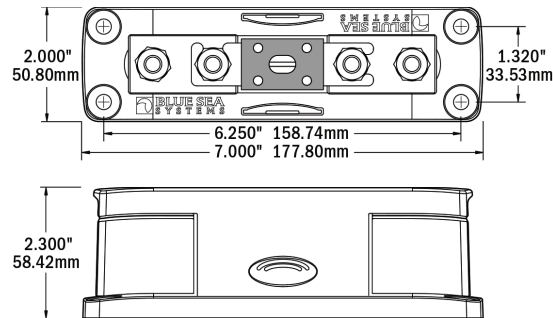
CLASS T FUSE BLOCK WITH INSULATING COVER

PART NUMBER	DESCRIPTION	MAX AMPS
EFB-T	• The fuse system recommended by most inverter manufacturers for high speed response to short circuits • Clear insulating cover, satisfies ABYC/USCG requirements • For use on systems up to 160 Volts DC • 3/8"-16 stud terminals accept ring terminals for wire up to 4/0 AWG • Large heat dissipating tin-plated copper mounting blocks • Two # 8 accessory terminals located on each end	400 AMPS

Ordering Information: Order by the piece.



225-400 Amperes



FEATURES:

- Extremely fast short-circuit response
- 20,000 Ampere Interrupt Capacity (AIC)

COMPLIANCES:

UL 248-15

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

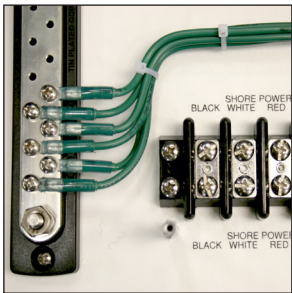
BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

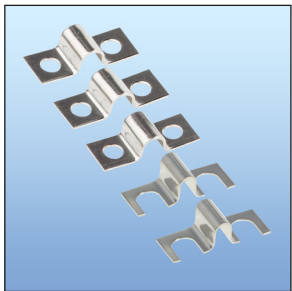
SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



- FEATURES:**
- Nickel plated brass hardware
 - Phenolic base
 - Closed back
 - Eliminates splicing and simplifies wiring
- COMPLIANCES:**
- UL recognized, CSA Certified
- CHARACTERISTICS:**
- Heat Resist.: 290°F Continuous
 - Dielectric Strength: 350 Kv

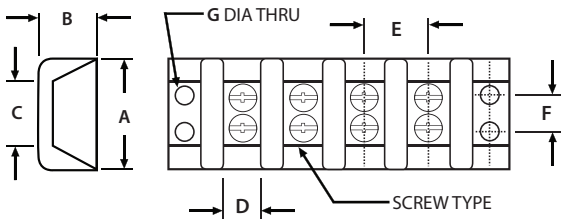


- FEATURES:**
- Terminal block jumpers are constructed of nickel plated brass
 - Available in two styles, enclosed and slotted



- FEATURES:**
- Constructed from 6/6 nylon
 - Tin plated brass inserts
 - Easily cut
 - Recessed screws and terminals to avoid shock hazard
 - Closed back design
- COMPLIANCES:**
- UL recognized, CSA Certified

TERMINAL BLOCKS



SERIES (AMP)	RATED VOLTS	WIRE RANGE	SCREW TYPE	DIMENSIONS (Inches)						
				(A)	(B)	(C)	(D)	(E)	(F)	(G)
20	300V	16-14 AWG	6-32 x 1/4"	1.12	0.53	0.75	0.34	0.44	0.42	0.175
30	600V	14-10 AWG	8-32 x 5/16"	1.31	0.71	0.94	0.42	0.56	0.50	0.203
50	600V	10-8 AWG	10-32 x 3/8"	1.81	0.75	1.06	0.47	0.69	0.62	0.275

TERMINAL BLOCKS			
NO. OF POSITIONS	20 AMP PART NUMBER	30 AMP PART NUMBER	50 AMP* PART NUMBER
2	E20TB2	E30TB2	E50TB2
3	E20TB3	E30TB3	E50TB3
4	E20TB4	E30TB4	E50TB4
5	E20TB5	E30TB5	-
6	E20TB6	E30TB6	E50TB6
7	E20TB7	E30TB7	-
8	E20TB8	E30TB8	E50TB8
9	E20TB9	-	-
10	E20TB10	E30TB10	E50TB10
11	E20TB11	-	-
12	E20TB12	E30TB12	-
15	E20TB15	E30TB15	-
18	E20TB18	-	-
20	E20TB20	E30TB20	-

Ordering Information: Order by the piece.
 *Open back design

TERMINAL BLOCKS JUMPERS - Used to combine circuits on a terminal block				
JUMPER STYLE	20 AMP JUMPER	30 AMP JUMPER	50 AMP JUMPER	PACKAGE SIZE
ENCLOSED	E20TBJ	E30TBJ	E50TBJ	25, 100, 1000
SLOTTED	E20TBJ-S	E30TBJ-S	N/A	25, 100, 1000

Ordering Information: Combine part number and package size.
Example: Order of 100 enclosed 20 Amp Terminal block jumpers = E20TBJ-100

EUROPEAN TERMINAL BLOCKS

European terminal blocks are constructed from 6/6 nylon and incorporate tin plated brass inserts for corrosion resistance and wire protectors to prevent stranded wire damage during installation.

EUROPEAN TERMINAL BLOCKS				
NO. OF POSITIONS	PART NUMBER	PART NUMBER	PART NUMBER	PART NUMBER
	15 AMP 300V 14 AWG MAX	30 AMP 300V 12 AWG MAX	40 AMP 300V 10 AWG MAX	65 AMP 600V 8 AWG MAX
12	E150-12	E200-12	E400-12	E650-12

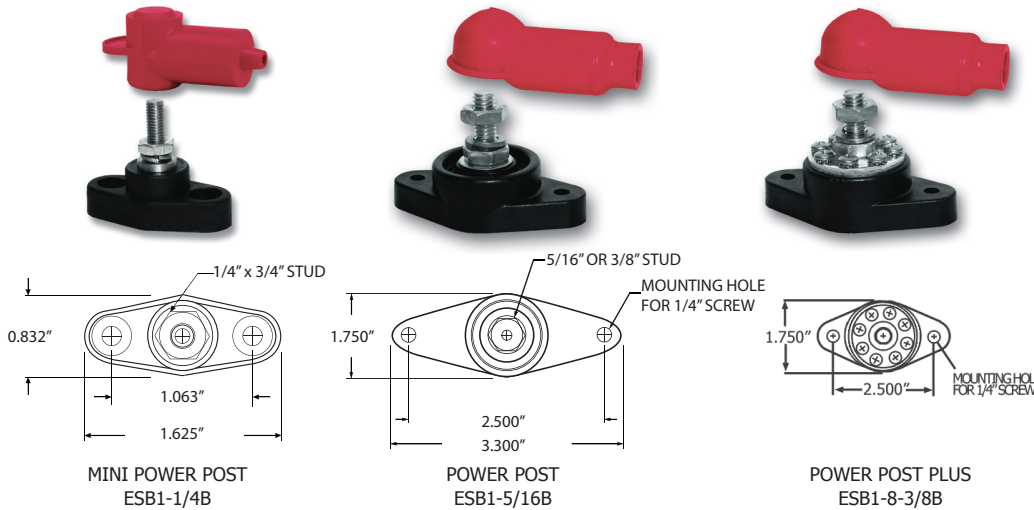
Ordering Information: Order by the piece.



POWER POSTS

Pacer stocks a large variety of power post solutions. Improper or corroded buses can rob precious voltage from a circuit. In starter and anchor windlass circuits where hundreds of amps flow, this could mean a significant difference in cranking/lifting capability.

Connect all high amperage cables securely.



FEATURES:

POWER POSTS

- Connects high amperage cables securely

POWER POST PLUS

- 150 Amp bus allows small wire connections at high amperage cable connections
- Connects high amperage cables securely

CHARACTERISTICS:

- Base Material: Reinforced thermoplastic
- Max. Voltage: 48V DC

SINGLE POWER POST

PART NUMBER WITHOUT BOOT	PART NUMBER WITH BOOT	CURRENT RATING	STUD TYPE	CONFIGURATION
N/A	ESB1-1/4B	NR*	1/4"	Mini Power Post
ESB1-5/16	ESB1-5/16B	NR*	5/16"	Power Post
ESB1-3/8	ESB1-3/8B	NR*	3/8"	Power Post
ESB1-8-5/16	ESB1-8-5/16B	150	5/16"	Power Post Plus w/ 8 (#8) Screws
ESB1-8-3/8	ESB1-8-3/8B	150	3/8"	Power Post Plus w/ 8 (#8) Screws

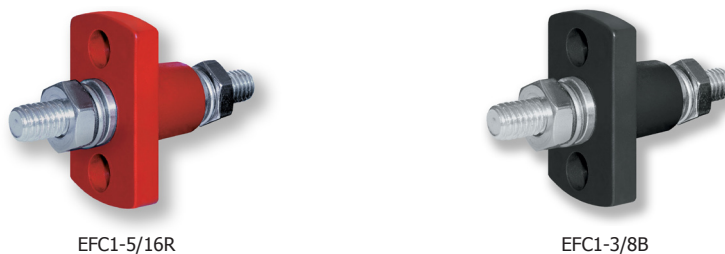
*Not Rated - Amperage flow is between terminals stacked on the post and is dependent on the wire and terminals used.

Ordering Information: Order by the piece.

FEED THROUGH CONNECTORS

Large cables passed through holes are subject to chafing even when protective grommeting is used. Terminal Feed Through Connectors eliminate chafing and provide excellent strain relief for the cable.

Connect all high amperage cables securely.



FEATURES:

- Available in red or black for both 5/16" and 3/8" stud sizes
- Perfect for passing high current cables through hulls, decks and bulkheads
- Large size terminals have a mounting face that can be gasketed or bedded to provide a water tight installation
- Rated IP66 — withstands water from heavy seas

CHARACTERISTICS:

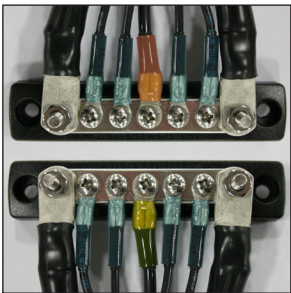
- Base Material: Reinforced thermoplastic
- Stud Material: Tin-plated copper alloy
- Max Voltage: 48V DC
- Amperage: 250 AMPS
- Recommended Torque: 100 in-lb (11.3 N-m)

TERMINAL FEED THROUGH CONNECTOR POSTS

PART NUMBER WITHOUT BOOT	COLOR	CURRENT RATING	STUD TYPE
EFC1-5/16B	BLACK	250	5/16"
EFC1-5/16R	RED	250	5/16"
EFC1-3/8B	BLACK	250	3/8"
EFC1-3/8R	RED	250	3/8"

Ordering Information: Order by the piece.

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS

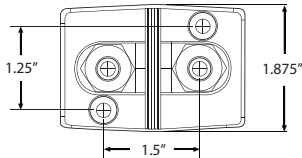


- FEATURES:**
- Designed for connecting high amp conductors
 - Includes one black and one red insulator
 - Tin plated brass bus
 - 48V DC

- FEATURES:**
- Provides compact high-ampere busing with 3/8-16 terminal studs
 - Designed for connecting high amp conductors
 - Includes two red insulators
 - 48V DC Max

DUAL POWER POST

Provides a termination point for extending the length of outboard harnesses or other conductors.



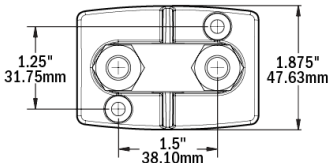
DUAL POWER POST

PART NUMBER	BOOTS INCLUDED	CURRENT RATING	STUD TYPE	CONFIGURATION
EDB2-5/16	(1) BLACK, (1) RED	N/A*	5/16"	Dual Power Post
EDB2-3/8	(1) BLACK, (1) RED	N/A*	3/8"	Dual Power Post

*Not Rated - Amperage flow is between terminals stacked on the post and is dependent on the wire and terminals used.

Ordering Information: Order by the piece.

DUAL POWER BUS BAR



DUAL POWER BUS BAR

PART NUMBER	BOOTS INCLUDED	CURRENT RATING	STUD TYPE	CONFIGURATION
EPB2	(2) RED	N/A	3/8"	Dual Stud Bus Bar

Ordering Information: Order by the piece.

100 AMP MINI BUS BARS



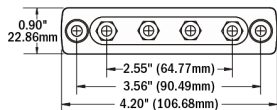
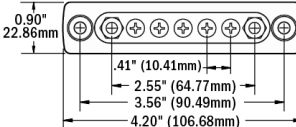
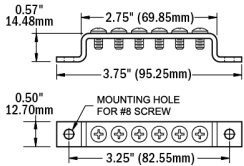
EMB0-6



EMB2-5



EMB4



100 AMPS MINI BUS BARS

PART NUMBER	AMPS	CONFIGURATION	COVER PART NUMBER
EMB0-6	100	Non-Insulated Grounding Bar with (6) #8-32 Screws	N/A
EMB2-5	100	Common Bus Bar with (2) #10-32 Studs & (5) #8-32 Screws	EMBC
EMB4	100	Common Bus Bar with (4) #10-32 Studs	EMBC

Ordering Information: Order by the piece.



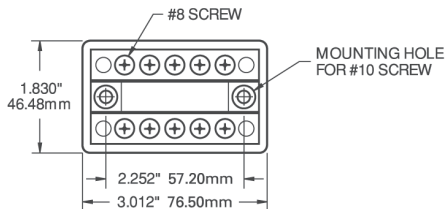
EMBC
MINI BUS BAR COVER
(for EMB2-5 & EMB4)
Sold Separately

100 AMP DUAL ROW BUS BARS

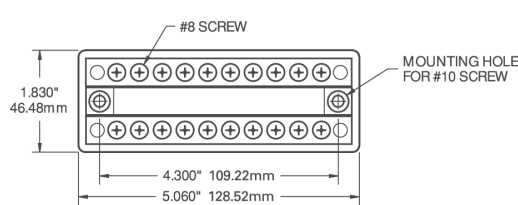
Combines negative and positive buses on one block.



EDB10



EDB20



FEATURES:

- 100 AMP continuous rating
- 48V DC Max
- 300V AC Max
- Bus Material: Tin-plated copper CDA 110/UNS11000
- Base Material: Reinforced polycarbonate



EDB20C

100 AMP DUAL BUS BARS

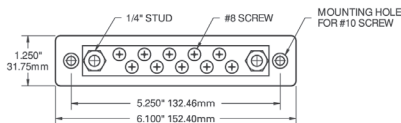
PART NUMBER	AMPS	CONFIGURATION	COVER PART NUMBER
EDB10	100	Dual bus bar - 5 circuit has (5) #8-32 screws on each side	EDB10C
EDB20	100	Dual bus bar - 10 circuit has (10) #8-32 screws on each side	EDB20C

Ordering Information: Order by the piece. Bus bars and covers are sold separately.

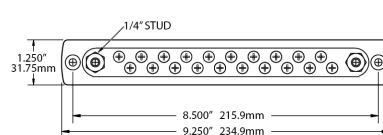
150 AMP COMMON BUS BARS



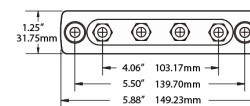
EBB2-10



EBB2-20



EBB4



FEATURES:

- Industry standard
- 150 AMP continuous rating
- 48V DC Max
- 300V AC Max
- Bus Material: Tin-plated copper CDA 110/UNS11000
- Base Material: Reinforced polycarbonate
- Lock washers and nuts included on studs



EBB2-20C

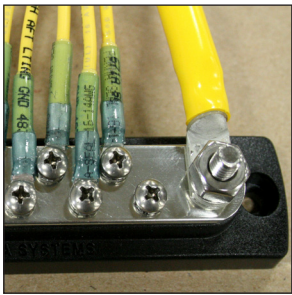
COMMON BUS BAR COVER
Sold Separately

150 AMPS COMMON BUS BARS

PART NUMBER	AMPS	CONFIGURATION	COVER PART NUMBER
EBB2-10	150	Common bus bar with (10) #8-32 screws, (2) 1/4" studs	EBB2-10C
EBB2-20	150	Common bus bar with (20) #8-32 screws, (2) 1/4" studs	EBB2-20C
EBB4	150	Common bus bar with (4) 1/4" studs	EBB2-10C

Ordering Information: Order by the piece. Bus bars and covers are sold separately.

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



- FEATURES:**
- 250A continuous rating
 - 48V DC Max
 - 300V AC Max
 - Bus Material: Tin-plated copper CDA 110/UNS11000
 - UL 94-V0 rated base material resists high heat
 - Raised bus provides easy access to multiple wires on a single screw or stud

250 AMP MAXI BUS BARS

Insert molded stainless steel studs to eliminate the need for securing nuts and allow high torquing for excellent electrical contact. The recessed mounting holes eliminate shorts to metal mounting surfaces.

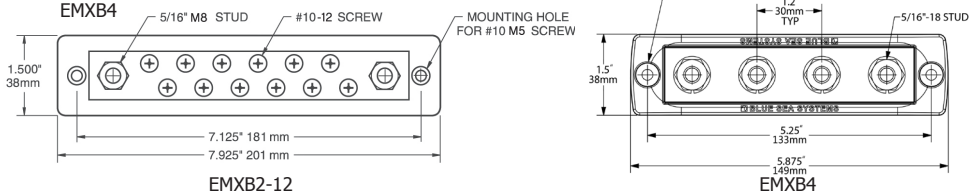


EMXB2-12

EMXB4

PART NUMBER	AMPS	DESCRIPTION	COVER PART NUMBER
EMXB2-12	250	(2) 5/16" - 18 Studs & (12) #10-12 Screws	EMXBC6
EMXB4	250	(4) 5/16" - 18 Studs	EMXBC4

Ordering Information: Order by the piece.



EMXB2-12

EMXB4

600 AMP POWER BUS BARS

High amperage bus bars are constructed from tinned plate CDA110 copper with a reinforced polycarbonate base. Lugs can be stacked and (4) #8-32 screws allow for easy connection of smaller conductors.

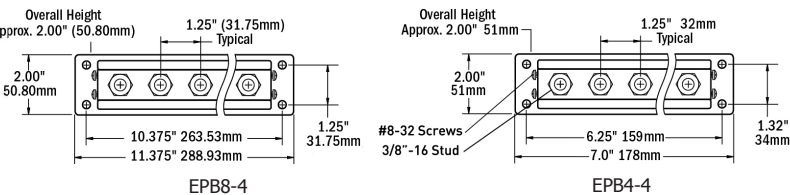


EPB4-4

EPB8-4

PART NUMBER	AMPS	DESCRIPTION	COVER PART NUMBER
EPB8-4	600	(8) 3/8" - 16 Studs	EPB8-4
EPB4-4	600	(4) 3/8" - 16 Studs	EPB4-4

Ordering Information: Order by the piece.



EPB4-4

EPB8-4

SEALED BUS BARS

Sealed bus bars finish the electrical system with a corrosion resistant design that is not prone to loose screws. Quick installation takes less than 10% of the time of a traditional bus bar.

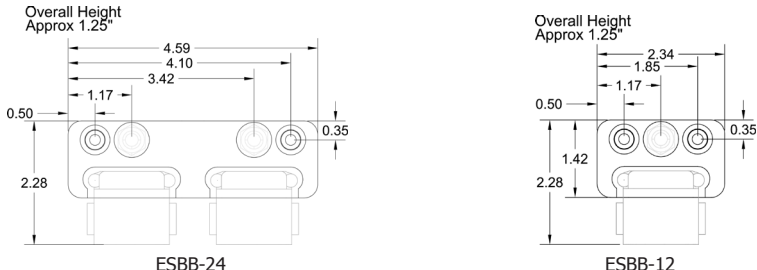


ESBB-24

ESBB-12

PART NUMBER	AMPS	DESCRIPTION
ESBB-12	150	(1) 5/16" - 18 Stud/(1) 12 pos. Deutsch
ESBB-24	300	(2) 5/16" - 18 Studs/(2) 12 pos. Deutsch

Ordering Information: Order by the piece.

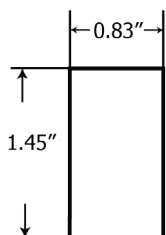


ESBB-24

ESBB-12

CONTURA SWITCHES

The V-Series CONTURA with sealed front panel components are certified to IP66 and IP68, signifying complete protection against dust, prolonged spray and submersion under pressure. Contura switches are recognized at UL1500 - Ignition Protection for Marine Products.



Switch Mounting Hole

DESCRIPTION

- S.P.S.T. = Single pole, single throw
- S.P.D.T. = Single pole, double throw
- D.P.S.T. = Double pole, single throw
- D.P.D.T. = Double pole, double throw

SINGLE POLE SWITCHES

PART NUMBER	SWITCH FUNCTION	LAMPS / VOLTS	DESCRIPTION
ES-V1DA	ON - OFF	1 DEP. / 12-V	S.P.S.T.
ES-V4DA	ON - ON	2 DEP. / 12-V	S.P.D.T.
ES-V6DA	ON - OFF - ON	2 DEP. / 12-V	S.P.D.T. Center Off
(MOMENTARY)			
ES-V2DA	(ON) - OFF	1 DEP. / 12-V	S.P.S.T.
ES-V3DA	ON - (OFF)	1 DEP. / 12-V	S.P.S.T.
ES-V5DA	ON - (ON)	2 DEP. / 12-V	S.P.D.T.
ES-V7DA	ON - OFF - (ON)	2 DEP. / 12-V	S.P.D.T. Center Off
ES-V8DA	(ON) - OFF - (ON)	2 DEP. / 12-V	S.P.D.T. Center Off

DOUBLE POLE SWITCHES

PART NUMBER	SWITCH FUNCTION*	LAMPS / VOLTS	DESCRIPTION
ES-VADA	ON - OFF	1 DEP. / 12-V	D.P.S.T.
ES-VDDA	ON - ON	2 DEP. / 12-V	D.P.D.T.
ES-VJDA	ON - OFF - ON	2 DEP. / 12-V	D.P.D.T. Center Off
(MOMENTARY)			
ES-VBDA	(ON) - OFF	1 DEP. / 12-V	D.P.S.T.
ES-VFDA	ON - (ON)	2 DEP. / 12-V	D.P.D.T.
ES-VKDA	ON - OFF - (ON)	2 DEP. / 12-V	D.P.D.T. Center Off
ES-VLDA	(ON) - OFF - (ON)	2 DEP. / 12-V	D.P.D.T. Center Off

Ordering Information: Order by the piece. *For more available options, contact a Pacer expert today. Actuators sold separately.

MOUNTING PANELS

PART NUMBER	DESCRIPTION
ES-CVMS	Single Mounting Panel
ES-CVMM	Middle Panel
ES-CVME	End Panel
ES-CVHP	Hole Plug

Ordering Information: Order by the piece.

CONTURA SWITCH ACCESSORIES



ES-VPS

PANEL SEALS



ES-CVRT

ACTUATOR REMOVAL TOOL



FEATURES:

- Snap-in mounting
- Multi-step mounting wings provide a secure fit for panel thicknesses of 0.032" thru 0.250" in an industry standard 0.830" x 1.450" mounting hole
- Silver plated butt contact mechanism provides 50 to 100 thousand electrical cycles and a variety of different electrical ratings
- Single or double pole
- Removable actuators
- Maximum sealing protection with dual seals around lamps and rocker stem certified to IP66 & IP68.
- Optional panel seals for additional protection
- Multiple illumination options

COMPLIANCES:

- Passed a range of environmental, corrosion, temperature, vibration, shock and sealing tests including MIL Std 202F, MIL Std 810C, UL 1500, ISO 8846, IEC 60529, BS 5490 and more
- UL CSA DEMKO SEMKO NEMKO

CHARACTERISTICS:

- Base Material: Polyester
- Dielectric Strength: 2000V RMS
- Insulation Resistance: 50 MegOhms
- Rating: 20 AMPS 12V
- Terminal: 0.250 QC Tabs
- Mounting Method: Snap-in
- Mounting Hole Dimensions: 0.83" x 1.45" (21.08 mm x 36.83 mm)

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

Ordering Information: Order by the piece.

Pacer Group - Sarasota
1-800-424-9549 • Fax: 941-379-9015
www.pacergroup.net
www.pacerwire.com



Pacer Group - Hollywood
1-800-634-5031 • Fax: 954-767-0775
www.pacergroup.net
www.pacerwire.com

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
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HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

Contura II (ES):

- Styling consists of raised bumps or finger traction
- Available with red, blue or white lens

Contura III (EC):

- Styling consists of three rows of bars on top and bottom
- Available with red or blue lens

Contura V (EV):

- Styling consists of a symmetrically curved design
- Available with red, blue or white lens

CONTURA ACTUATORS

Contura actuators are constructed of thermoplastic polycarbonate with a hard nylon overlay. All three body styles are removable and interchangeable on V-Series Contura Switches. Available non-illuminated or with a single or double lens. Over 100 ISO symbols are available for print on any switch cover.

ES

(A)
Body

1

(B)
of Lenses

BL

(C)
Color of Lens

WA

(D)
Color of Actuator

-

ACC

(E)
Part Number Extension

Actuator Ordering Information:

Build the part numbers. Select (A) Body Style, (B) Number of Lenses, (C) Lens Color, (D) Actuator Color, (E) Part Number Extension. For Printed Actuators see available ISO symbols on pages 77-79.

	(A) Body Style	(B) No. of Lenses	(C) Lens Color (if not red)	(D) Actuator Color (if not black)
Contura II	ES	0	n/a	Red
Contura III	EC	1	1	Blue
Contura V	EV	2	2	White

(A) Body Style



(ES)



(EC)



(EV)

(B) Number of Lenses (for no lens leave blank)



(1) - Top square
(2) - Top square & bottom bar



(1) - Top bar
(2) - Top bar & bottom bar



(1) - Top circle
(2) - Top circle & bottom oval

(C) Lens Color (for red lens or no lens leave blank)



Red



Blue*



White*

-

(BL)

(WL)

(D) Actuator Color (for black actuator leave blank)



Black



Red



White

-

(RA)

(WA)

(E) Part Number Extension. (for no print write "BLANK")

(ISO Print)**

*Blue lens not available in red actuators, and white lens not available in EC style or white actuators.

**See available ISO Print on pages 77-79.

Examples of Common Actuators:



ES1BLWA-ACC



ES1RA-HRN



EC-BLANK



EC1WA-ACC1



EV2WL-NAVANC



EV-CKPT

ACTUATOR SYMBOLS

PART NUMBER EXTENSION	ABLG	ACC	ACC1	ACC2	ACCLT	ANC	ARCH	ARTR
ISO PRINT	 AFT BILGE	 ACCY	 ACCY 1	 ACCY 2	 ACC LIGHTS	 ANCHOR	 ARCH	 AERATOR
PART NUMBER EXTENSION	ASPD	ATPLT	BATT	BDOC	BDLT	BLG	BLG1	BLG2
ISO PRINT	 AFT SPREADER LIGHTS	 AUTOPILOT	 BATTERY PARALLEL	 BRIDGEDECK OPEN/CLOSE	 BRIDGEDECK LIGHTS	 BILGE	 BILGE 1	 BILGE 2
PART NUMBER EXTENSION	BLG3	BLST	BLWR	BTWL	BTWL1	BTWL2	CBN	CHRT
ISO PRINT	 BILGE 3	 FILL BALLAST DRAIN	 BLOWER	 BAITWELL	 BAITWELL 1	 BAITWELL 2	 CABIN	 CHART PLOTTER
PART NUMBER EXTENSION	CKPT	CNSL	CTSY	CWPR	DECK	DMLT	DMMR	DOCK
ISO PRINT	 COCKPIT	 CONSOLE	 COURTESY	 CENTER WIPER	 DECK LIGHTS	 DOME LIGHTS	 DIMMER	 DOCKING LIGHTS
PART NUMBER EXTENSION	DPTH	EHD	ENG	ENGRM	ESTP	ETRM	EXHST	FAN
ISO PRINT	 DEPTH FINDER	 ELECTRIC HEAD	 ENGINE	 ENGINE ROOM	 ENGINE STOP	 ENGINE TRIM	 EXHAUST SYSTEM	 FAN
PART NUMBER EXTENSION	FBLG	FBX	FFBX	FLIR	FRSH	FSPDR	FUEL	FUELG
ISO PRINT	 FWD BILGE	 FISHBOX	 FWD FISHBOX	 FLIR NIGHT CAMERA	 FRESH WATER	 FWD SPREADER LIGHTS	 FUEL	 FUEL GAUGE

Ordering Information: Order by the piece. See Page 76 for details.

ACTUATOR SYMBOLS

PART NUMBER EXTENSION	GLLY	HRN	HTC	HTP	INT	JPT	LT	LVWL
ISO PRINT								
	GALLEY	HORN	HATCH	HARDTOP	INTERIOR	JACK PLATE	LIGHT	LIVEWELL
PART NUMBER EXTENSION	LVWLLT	LWRC	LZTT	MAC	MAP	MBLG	MCHNRY	MFUELA
ISO PRINT								
	LIVEWELL LIGHT	LIVEWELL RECIRC	LAZARETTE	MACERATOR	MAP	MID BILGE	MACHINERY SPACE	MAIN FUEL AUX
PART NUMBER EXTENSION	NAV	NAVANC	OC	OH	PBLG	PENG	PFBX	PFBXS
ISO PRINT								
	NAVIGATION	NAV/ANC	OPEN CLOSE	OVER HEAD LIGHTS	PORT BILGE	PORT ENGINE	PORT FISHBOX	PORT FISHBOX STBD
PART NUMBER EXTENSION	PFUELS	PMAC	PNL	PPWR	PSTP	PTRM	PVNT	PWPR
ISO PRINT								
	PORT FUEL STBD	PORT MACERATOR	PANEL	PORT ENG POWER	PORT STOP	BOW DOWN PORT BOW UP	PORT VENT	PORT WIPER
PART NUMBER EXTENSION	PWRSTR	RAW	RCP	RDR	SALT	SBLG	SENG	SFBX
ISO PRINT								
	POWER STEERING	RAW WATER	RECIRC	RADAR	SALT WATER	STBD BILGE	STBD ENGINE	STBD FISHBOX
PART NUMBER EXTENSION	SLN	SMAC	SPDR	SPT	SPWR	SSTP	STR	STRM
ISO PRINT								
	SALON LIGHTS	STBD MACERATOR	SPREADER LIGHTS	SPOT	STBD ENG POWER	STBD STOP	STEREO	BOW DOWN STBD BOW UP

Ordering Information: Order by the piece. See Page 76 for details.

ACTUATOR SYMBOLS

PART NUMBER EXTENSION	STRT	SVNT	SWM	SWPR	TRM	TRNSM	TWR	UFUELL
ISO PRINT								
	PARALLEL START	STBD VENT	SWIM PLATFORM	STBD WIPER	TRIM TABS	TRANSOM LIGHT	TOWER	UPPER FUEL GAUGE LOWER
PART NUMBER EXTENSION	UW	VNT	VHF	WND	WNDPWR	WPR	WSHR	WSHDWN
ISO PRINT								
	UNDER WATER LIGHTS	VENT	VHF	DEPLOY WINDLASS RETRIEVE	WINDLASS POWER	WIPER	WINDSHIELD WASHER	WASHDOWN

Ordering Information: Order by the piece. See Page 76 for details.

PANEL SWITCH JUMPERS

Pre-made wire jumpers save time and money. Pacer wire jumpers are the most common configurations to bus breakers, jumper from breaker to switch or receptacle, connect lights from switch to switch and easily connect switch light grounds.

PART NUMBER	AWG NO.	COLOR	LENGTH (Inches)	TERMINAL #1	TERMINAL #2
EJ-DIODE-PB-PB*	N/A	N/A	4	0.250 DISC. w/ MALE TAB	0.250 DISC. w/ MALE TAB
EJ10RD4-10-10-E	10	RED	4	#10 RING TERMINAL	#10 RING TERMINAL
EJ10RD4-250-250	10	RED	4	0.250 FEMALE DISCONNECT	0.250 FEMALE DISCONNECT
EJ10RD4-250-PB	10	RED	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ10RD4-8-8-E	10	RED	4	#8 RING TERMINAL	#8 RING TERMINAL
EJ10RD6-250-PB	10	RED	6	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14BK4-250-PB	14	BLACK	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14BK6-250-PB	14	BLACK	6	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14BL4-250-PB	14	BLUE	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14BL6-250-PB	14	BLUE	6	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14OR4-250-PB	14	ORANGE	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14RD4-250-250	14	RED	4	0.250 FEMALE DISCONNECT	0.250 FEMALE DISCONNECT
EJ14RD4-250-8-E	14	RED	4	0.250 FEMALE DISCONNECT	#8 RING TERMINAL
EJ14RD4-250-PB	14	RED	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14YL4-250-PB	14	YELLOW	4	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB
EJ14YL6-250-PB	14	YELLOW	6	0.250 FEMALE DISCONNECT	0.250 DISC. w/ MALE TAB

Ordering Information: Order by multiples of 10.

*EJ-DIODE-PB-PB, order by the piece.



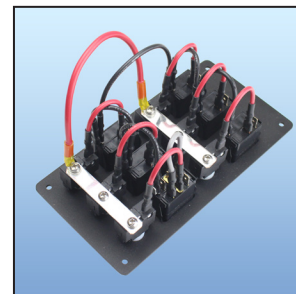
EJ-DIODE-PB-PB



EJ10RD4-250-PB



EJ14BK6-250-PB



FEATURES:

- Stranded, tinned copper conductors
- Highly flexible color coded insulation

COMPLIANCES:

- UL stranded 1426 BC-5W2 (16-8 AWG)
- AWM 1015/1230 (22-10 AWG)
- MTW
- CSA: TEW
- ABYC: E-11.14 (16-8 AWG)
- Coast Guard: 33 CFR 183.401 Subpart 1-Electrical Systems

CHARACTERISTICS:

Conductor:

Annealed Finely Stranded Tinned Copper ASTM B172 Class K

Insulation:

-20°C to 105°C Flexible, Color Coded PVC

Temperature Rating:

105°C Dry, 75°C Wet
60°C Oil

Voltage Rating:

600V

Resistant to:

Acid, Alkali, Abrasion, Flame, Gasoline, Oil and Moisture

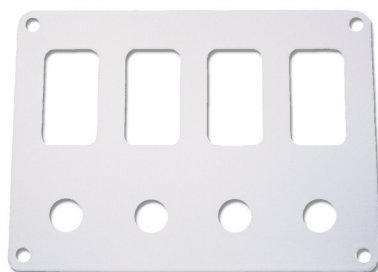
WIRE & CABLE
MULTI- CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



PSC-31WH

FEATURES:

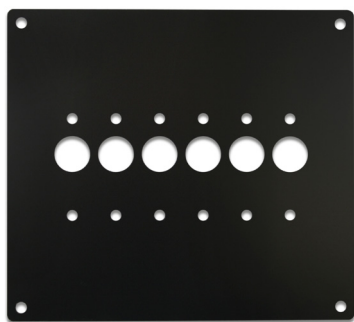
- Cut from .090 thick 5052 H32 marine grade aluminum alloy
- Powder coated on all sides for maximum durability
- Powder coat colors are textured black or smooth gloss white



PSBC-41WH

FEATURES:

- Cutouts fit standard Contura switches See page 75 for selection
- Cutouts for standard 3/8 push to reset breakers See page 62 for selection
- Choose from 658 on 45 series
- Choose black or clear boots See page 81



EP-BRK-6

FEATURES:

- Made from durable 3/16 black Lexan
- Cutouts fit standard A-frame breakers See page 60
- Uses screw EGF-6-32-375 to mount breakers to panel Sold separately. See page 63
- Breaker openings spaced for Breakers Bus Bars
- Use EBB-BRKR1 for power feed or panel jumpers See page 79

PANELS

CONTURA SWITCH PANEL BLANKS

PART NUMBER	POSITIONS	ROWS	WIDTH (Inches)	HEIGHT (Inches)	AVAILABLE COLOR
PSC-11	1	1	1 3/4	2 3/4	BK, WH
PSC-21	2	1	3	2 3/4	BK, WH
PSC-22	4	2	3	4 3/4	BK, WH
PSC-31	3	1	4 1/4	2 3/4	BK, WH
PSC-41	4	1	5 1/2	2 3/4	BK, WH
PSC-61	6	1	8 1/2	2 3/4	BK, WH
PSC-81	8	1	10 1/2	2 3/4	BK, WH

Ordering Information: Combine part numbers with color.

Example: PSC-11 in Black=PSC-11-BK. Order by the piece.

CONTURA SWITCH AND BREAKER PANEL BLANKS

PART NUMBER	POSITIONS	ROWS	WIDTH (Inches)	HEIGHT (Inches)	AVAILABLE COLOR
PSBC-11	1	1	1 3/4	4	BK, WH
PSBC-21	2	1	3	4	BK, WH
PSBC-31	3	1	4 1/4	4	BK, WH
PSBC-41	4	1	5 1/2	4	BK, WH
PSBC-61	6	1	8	4	BK, WH
PSBC-81	8	1	10 1/2	4	BK, WH
PSBC-22	4	2	5 1/2	7 9/16	BK, WH
PSBC-32	6	2	8	7 9/16	BK, WH
PSBC-42	8	2	10 1/2	7 9/16	BK, WH
PSBC-62	12	2	8	7 9/16	BK, WH
PSBC-82	16	2	10 1/2	7 9/16	BK, WH

Ordering Information: Combine part numbers with color.

Example: PSBC-22 in White=PSBC-22-WH. Order by the piece.

A-FRAME BREAKER PANEL BLANKS

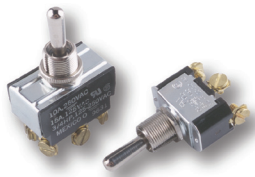
PART NUMBER	A-FRAME POSITIONS	WIDTH (Inches)	HEIGHT (Inches)
EP-BRK-1	1	3 1/2	3 1/2
EP-BRK-2	2	3 1/2	3 1/2
EP-BRK-3	3	5 3/8	6
EP-BRK-4	4	5 3/8	6
EP-BRK-6	6	5 3/8	6

Ordering Information: Order by the piece.

PANEL ACCESSORIES

PART	PAGE #
Switches	75, 81-85
Actuators	76 - 79
Breakers	60 - 64
Breaker Boots	63 & 81
Busbars	72 - 74
Panel Jumpers	79

METAL BAT TOGGLE SWITCHES



DESCRIPTION

S.P.S.T. = Single pole, single throw
 S.P.D.T. = Single pole, double throw
 S.P.T.T. = Single pole, triple throw
 D.P.S.T. = Double pole, single throw
 D.P.D.T. = Double pole, double throw

SINGLE POLE SWITCHES

PART NUMBER	SWITCH FUNCTION	DESCRIPTION
ES-B2FA54	ON-OFF	S.P.S.T.
ES-B2FB54	ON-ON	S.P.D.T.
ES-B2FC54	ON-OFF-ON	S.P.D.T. (Center Off)
ES-B2GE54	ON-ON-ON	S.P.T.T.
(MOMENTARY) The parenthesis means that the action is momentary.		
ES-B6FA54	(ON)-OFF	S.P.S.T.
ES-B6FA58	ON-(OFF)	S.P.S.T.
ES-B6FB54	ON-(ON)	S.P.D.T.
ES-B6FC54	(ON)-OFF-(ON)	S.P.D.T. (Center Off)
ES-B6FC58	ON-OFF-(ON)	S.P.D.T. (Center Off)

DOUBLE POLE SWITCHES

PART NUMBER	SWITCH FUNCTION	DESCRIPTION
ES-B2GK54	ON-OFF	D.P.S.T.
ES-B2GL54	ON-ON	D.P.D.T.
ES-B2GM54	ON-OFF-ON	D.P.D.T. (Center Off)
(MOMENTARY) The parenthesis means that the action is momentary.		
ES-B6GK5E	(ON)-OFF	D.P.S.T.
ES-B6GK5S	ON-(OFF)	D.P.S.T.
ES-B6GL5E	ON-(ON)	D.P.D.T.
ES-B6GM5S	(ON)-OFF-(ON)	D.P.D.T. (Center Off)
ES-B6GM5E	ON-OFF-(ON)	D.P.D.T. (Center Off)
ES-B6GG54	(ON)-ON-OFF	PROGRESSIVE

Ordering Information: Order by the piece.

SILICONE RUBBER BOOTS

These one piece bonded silicone rubber boots are resistant to salt, water, acids, weather, dust, sunlight and ozone. They are designed for use on metal bat toggle switches.

PART NUMBER	HEIGHT (Inches)	THREAD (Inches)	COLOR
ES-BOOT	15/16	15/32	Black
ES-BOOT-W	15/16	15/32	White

Ordering Information: Order by the piece.

See page 91 for typical uses of switches on boats.



FEATURES:

- Durable brass/nickel plated metal bat toggle switch
- Nickel plated hardware
- Screw Terminal connection
- Single and double pole
- Mounting Hole .50"

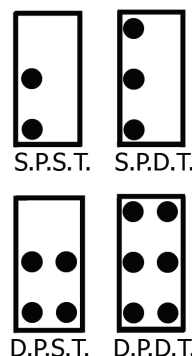
COMPLIANCES:

- UL, CSA, and VDE approvals

CHARACTERISTICS:

- Base Material: Phenolic
- Actuator (Bat): Brass/Nickel Plated
- Bushing: Brass/Nickel Plated
- Dielectric Strength: 100V Min.
- Insulation Resistance: 100 Megohm
- Rating:
 - 15 AMPS 125V AC
 - 10 AMPS 250V AC
 - 3/4" HP 125-250V AC
- Screw Terminal: #6-32NC2
- Bushing Length: 0.465"
- Panel Mounting Hole: 1/2" diameter

Terminal Positions



D.P.S.T. D.P.D.T.



WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



M-SERIES FEATURES:

- 300 Amps continuous rating for outboards and small gasoline or diesel engines
- Ignition protected
- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Studs accept 3/8" (M10) ring terminals
- 7/8" (22 mm) stud length accepts multiple cable terminals
- Mounting Holes: #10 screw
- Blue Sea Systems one-piece terminal stud design never loosens over time
- Case design allows surface, rear, or front panel mounting options
- Selector type battery switches with a "make before break" contact design allows switching between battery banks without power interruption

M-SERIES COMPLIANCES:

- UL 1107(only 6005), UL 1500
- CE
- IP 66
- ISO 8846
- SAE J1171(excl. 6007)
- ABYC E-11(only 6005)

E-SERIES FEATURES:

- 350 Amps continuous rating for outboards, small gasoline or diesel engines
- Ignition protected
- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Studs accepts 3/8" (M10) ring terminals
- 7/8" (22 mm) stud length accepts multiple cable terminals
- Blue Sea Systems one-piece terminal stud design never loosens over time
- Fits most Perko and Guest low amperage battery switch hole patterns
- Case design allows surface, rear, or front panel mounting options
- Tactile indicator conveys knob position by feel
- Selector type battery switches with a "make before break" contact design allows switching between battery banks without power interruption



M-SERIES BATTERY SWITCHES

Blue Sea Systems compact high-amperage switches are vapor/ignition protected and UL Listed. The M-Series are 300 Amp continuous rated for outboards, small gasoline or diesel engines.

M-SERIES MINI BATTERY SWITCHES

300 AMPS continuous, 500 AMPS (5 min.) intermittent rating, Crank rating (30 sec.) 900 AMPS.

EBS-6005



Single Circuit ON-OFF

Switches a single battery to a single load group (48V DC Max). Comes with removable key.

EBS-6006



Single Circuit ON-OFF

Switches a single battery to a single load group (48V DC Max).

EBS-6007



Selector 4-Position

Switches isolated battery banks to all loads or combines battery banks to all loads (32V DC Max).

M-SERIES MINI DUAL CIRCUIT BATTERY SWITCHES

300 AMPS per circuit continuous, 450 AMPS per circuit (5 min.) intermittent rating, Crank rating (30 sec.) 675 AMPS per circuit

EBS-6010



Dual Circuit ON-OFF

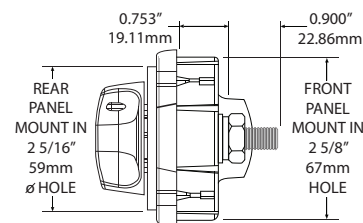
Simultaneously switches two isolated battery banks (32V DC Max).

EBS-6011



Dual Circuit Plus ON-OFF

Simultaneously switches two isolated battery banks or combines battery banks to all loads (32V DC Max).



E-SERIES BATTERY SWITCHES

E-SERIES BATTERY SWITCHES

350 AMPS continuous, 600 AMPS (5 min.) intermittent rating, Crank rating (30 sec.) 1200 AMPS

EBS-9001E



Selector 4-Position

Switches isolated battery banks to all loads or combines battery banks to all loads (32V DC Max).

EBS-9002E



Selector 4-Position with AFD

Switches isolated battery banks to all loads or combines battery banks to all loads (32V Max). Includes AFD (Alternator Field Disconnect).

EBS-9003E



Single Circuit ON-OFF

Switches a single battery to a single load group (48V DC Max).

Ordering Information: Order by the piece.

E-SERIES BATTERY SWITCHES CONT.

E-SERIES DUAL CIRCUIT PLUS BATTERY SWITCH

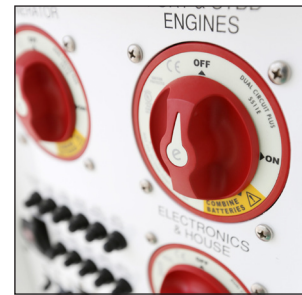
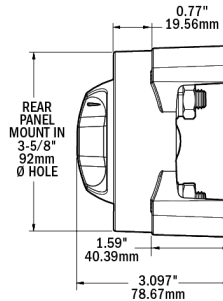
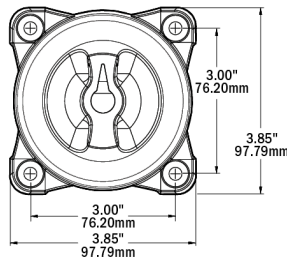
350 AMPS continuous, 525 AMPS (5 min.) intermittent rating, Crank rating (30 sec.) 700 AMPS per circuit.

EBS-5511E



Dual Circuit Plus ON-OFF

Simultaneously switches two isolated battery banks or combines battery banks to all loads (32V DC Max).



E-SERIES COMPLIANCES:

- UL 1500, UL 1107
- CE
- IP 66
- ISO 8846 Marine
- SAE J1171 Marine
- ABYC E-11



HD-SERIES BATTERY SWITCHES

HD-SERIES BATTERY SWITCHES

EBS-3000



Single Circuit - ON-OFF

Switches a single battery to a single load group (32V DC Max).

600 AMPS continuous rating
900 Amps (5 min) intermittent rating
Crank rating (30 sec.) 1750 AMPS
Crank rating (1 min.) 1325 AMPS

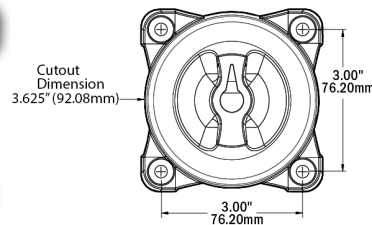
EBS-3002



Selector 4 Position

Switches isolated battery banks to all loads or combines battery banks to all loads (32V Max).

500 AMPS continuous rating
700 Amps (5 min) intermittent rating
Crank rating (30 sec.) 1600 AMPS
Crank rating (1 min.) 1150 AMPS



HD-SERIES FEATURES:

- Up to 600 Amps continuous rating for large diesel engines.
- Tin-plated copper studs for maximum conductivity and corrosion resistance
- Accepts up to 4/0 AWG battery cables
- Studs accepts 1/2" (M12) ring terminals
- 7/8" (22 mm) stud length accepts multiple cable terminals
- Blue Sea Systems one-piece terminal stud design never loosens over time
- Fits most Perko and Guest low amperage battery switch hole patterns
- Case design allows surface, rear, or front panel mounting options
- Tactile indicator conveys knob position by feel

HD-SERIES COMPLIANCES:

- UL 1107, UL 1500
- CE
- IP 66
- ISO 8846 Marine
- SAE J1171 Marine
- ABYC E-11

Ordering Information: Order by the piece.

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

GUEST BATTERY SWITCHES

All Guest Battery Switches safely provide battery disconnect, isolate all circuits and conform to USCG safety standard 183.410 for ignition protection.

GUEST UNIVERSAL MOUNT BATTERY SWITCHES

EBS-2111



EBS-2112



EBS-2300A



EBS-2303A / EBS-2304A



Universal Selector

Switches battery bank 1 or bank 2 or BOTH to a single load using one switch (32V Max)

Continuous AMPS: 230
Momentary AMPS: 345
Cable Lug Size: 3/8"
Dimensions: 5.0" x 2.75"

Universal ON-OFF

Switches a single battery to a single load group (32V Max)

Continuous AMPS: 230
Momentary AMPS: 345
Cable Lug Size: 3/8"
Dimensions: 5.0" x 2.75"

Heavy-Duty Selector

Switches battery bank 1 or bank 2 or BOTH to a single load using one switch (32V Max)

Continuous AMPS: 360
Momentary AMPS: 600
Cable Lug Size: 1/2"
Dimensions: 5.5" x 3.5"

Heavy-Duty On-Off with AFD (Alternator Field Disconnect)

Switches a single battery to a single load group (32V Max)

EBS-2303A
Heavy -Duty On/Off Switch
Continuous AMPS: 450
Momentary AMPS: 800
EBS-2304A
Extra-Duty On/Off Switch
Continuous AMPS: 600
Momentary AMPS: 1000

Ordering Information: Order by the piece.



FEATURES:

- New ergonomically styled turn knob provides easy On/Off switching
- Updated color scheme and graphics make it easier to determine switch status
- Longer stud lengths for improved assembly and easier cable routing
- Built with heavy-duty copper sweep contacts to ensure positive circuit control
- Rugged internal components protected by a tough, impact resistant polycarbonate housing that is impervious to the elements
- Positive click-stop on all positions
- "Make before break" contacts allow selection of all positions except "Off" while engine is running



SI ACR AUTOMATIC CHARGING RELAY 12/24V DC 120A

Automatically manages the charging of two battery banks and isolates batteries during starting to protect sensitive electronics.

P/N: EACR-7610

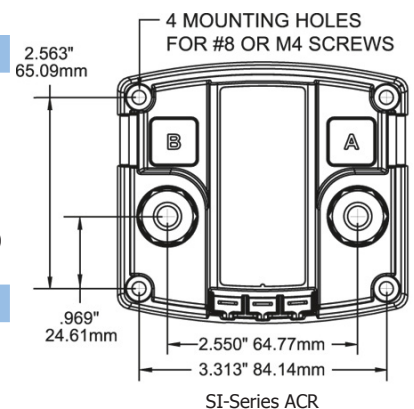
SPECIFICATIONS

	12 VOLTS DC	24 VOLTS DC
Intermittent Rating	210 Amps	210 Amps
Continuous Rating	120 Amps DC	120 Amps DC
(Combine) Amperage Oper. Current	175 mA	115 mA
(Open) Amperage Oper. Current	15 mA	15 mA
Maximum Cable Size	1/0 AWG	1/0 AWG
Terminal Stud Size	3/8" - 16 (M10)	3/8" - 16 (M10)
Maximum Torque	140 in-lb	140 in-lb

RELAY CONTACT POSITION

Combine (30 sec)	13.6V DC	27.2V DC
(90 sec)	13.0V DC	26.0V DC
Open (10 sec)	12.35V DC	24.7V DC
(30 sec)	12.75V DC	25.5V DC
Open High 16.0 Volts	16.0V DC	30.0V DC
Over Voltage Lockout	16.0V DC	32.0V DC
Under Voltage Lockout	9.5V DC	19.0V DC

Ordering Information: Order by the piece.



L SOLENOID 12/24V DC 250A

Used as a manual battery paralleling switch, this switch has integrated coil control and minimizes heating and amperage draw.

P/N: ESOL-9012

L-SERIES SOLENOID SWITCH with COIL ECONOMIZER 12/24V DC 250 AMPS

COIL CIRCUIT

Input Voltage	9 - 36V DC Maximum
Power Consumption	12 - 36V / 3.80A
- inrush max, 130ms	12V / 0.13A
- holding	24V / 0.07A

MAIN POWER CONTACTS

Inrush Rating: 0.25 sec (10 repeats)*	2,000A
Voltage Rating	60V DC
Stud Terminal Size	5/16" (m8)

*Blue Sea Systems Engine Starting Standard

Ordering Information: Order by the piece.



FEATURES:

- Hermetically sealed contacts / vapor-proof
- Ignition protected - safe for installation aboard gasoline powered boats
- Integrated coil control minimizes heating and amperage draw
- 450 Amp Class
- Activated by a low amperage ON-OFF switch mounted anywhere
- Designed for 12 or 24 volt systems

POWER TRANSFER SWITCHES

"Ship Shore" Power transfer switches are double throw, multiple pole, and have "SHORE-OFF-GEN" 60 ° switching.

"SHIP SHORE" POWER TRANSFER SWITCHES

PART NUMBER	# OF POLES	GEN. PURPOSE (UL) RATED AMPS	THERMAL CURRENT AMPS	(A) DIMENSIONS (Inches ²)
EPTS-2P-10A-S00	2	10	10	1.18
EPTS-3P-10A-S00	3	10	10	1.18
EPTS-2P-20A-S0	2	20	20	1.89
EPTS-2P-25A-S0	2	25	25	1.89
EPTS-3P-15A-S0	3	15	20	1.89
EPTS-3P-25A-S0	3	25	25	1.89
EPTS-2P-35A-S1	2	35	40	2.52
EPTS-3P-35A-S1	3	35	40	2.52
EPTS-4P-35A-S1	4	35	40	2.52
EPTS-2P-50A-S1	2	50	63	2.52
EPTS-3P-50A-S1	3	50	63	2.52
EPTS-4P-50A-S1	4	50	63	2.52
EPTS-2P-65A-S1	2	65	80	2.52
EPTS-3P-65A-S1	3	65	80	2.52
EPTS-4P-65A-S1	4	65	80	2.52
EPTS-3P-100A-S2	3	100	125	3.46
EPTS-4P-100A-S2	4	100	125	3.46
EPTS-3P-150A-S2	3	150	200	3.46
EPTS-4P-150A-S2	4	150	200	3.46

MULTI-STEP "SHORE 1, SHORE 1 & 2, GEN"

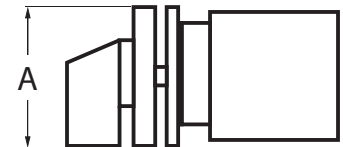
EPTS-MS-65A	65	80	2.52
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Alternative escutcheon plates available upon request.

COVER PLATE FOR MULTI-STEP

EPTS-F262 Shore 1, Shore 1 & 2, Gen

Ordering Information: Order by the piece.



Power Transfer switch

COMPLIANCES:

- CSA, CUL, CULUS, GOST, UL

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS



FEATURES:

- Designed for harsh marine and industrial environments - moisture, salt, shock and vibration tested
- Short circuit and thermal protection
- LED status indicator
- Reverse polarity protected
- Ignition Protection



EBC-28210

- Total Amps: 10
- Charges two independent 12 volt batteries
- Number of Outputs: 2
- Amps per output: 5/5
- Battery System: 2-12V or 1-24V
- Output: Studs for hardwire
- Output Voltage: 12V
- Input Voltage: 120/230V 50/60 Hz
- AC: Studs for hardwire
- Dimensions: 7.8" x 5.50" x 2.42"



EBC-2613A

- Total Amps: 15 AMPS
- Fully Potted to Waterproof Electronics
- Maintenance Mode protects batteries during storage
- 3-Stage Switching Electronic Circuit
- Short Circuit Protected
- Reverse Polarity Protected
- Number of Outputs: 3
- Amps per output: 5/5/5
- Battery System: 3-12V or 24V plus 12V
- Output Voltage: 12V DC per output
- DC Output: 2 4' and 1 6' DC output cables with terminal rings
- Input Voltage: 100-130V AC/60 Hz
- Input Connection: 6' AC Cord with Connect Charge Plug
- Dimensions: 7.0" x 9.6" x 2.6"



EBC-28220

- Total Amps: 20
- Number of Outputs: 2
- Amps per output: 10/10
- Battery System: 2-12V or 1-24V
- Output: Studs for hardwire
- Output Voltage: 12V DC per output
- Input Voltage: 120/230V 50/60 Hz
- Output: 2 -6' DC Outputs with ring terminals
- Input Connection: 6' AC Cord w/Connect Charge Pro
- Dimensions: 9.5" x 7" x 3"

Ordering Information: Order by the piece.



BATTERY CHARGERS

Rugged, finned aluminum case, universal line voltage 90-265V AC, 45/65 Hz. PreFloat stage prevents over charging by allowing each battery to end absorption stage individually. The three outputs provide charging for up to three battery banks. User selectable charge profiles for lead acid, gel, AGM or new TPPL (Thin Plate Pure Lead), supports Lithium and other battery types with user adjustable charge profiles. ACR Charge Coordination controls ACR state ensuring proper float stage for each battery. Ignition protected, over and under temperature protection for batteries, overheating protection, DC over voltage protection, DC reverse polarity protection, surge and short circuit protection.

FEATURES:

- Reliability
- Electrical Performance
- Advanced Multi Stage Charging
- Built In Safety Features
- Durable Aluminum Case

COMPLIANCES:

UL 1236, CSA, CE, ISO8846, SAE J1171, ABYC A-31



EBC-7521

- Maximum Output Current: 25 AMPS
- Maximum Output Voltage: 16V DC
- Nominal Voltage: 12V DC
- Number of Outputs: 3
- Minimum Input Voltage: 90V AC
- Maximum Input Voltage: 265V AC
- Minimum Operating Temperature: -20°C
- Maximum Operating Temperature: 70°C
- Charger Efficiency: >80%
- Dimensions: 13.03" H x 8.46" W x 3.66" D



EBC-7522

- Maximum Output Current: 40 AMPS
- Maximum Output Voltage: 16V DC
- Nominal Voltage: 12V DC
- Number of Outputs: 3
- Minimum Input Voltage: 90V AC
- Maximum Input Voltage: 265V AC
- Minimum Operating Temperature: -20°C
- Maximum Operating Temperature: 70°C
- Charger Efficiency: >80%
- Dimensions: 13.03" H x 8.46" W x 3.66" D

Ordering Information: Order by the piece.

INDICATOR LIGHTS



E3L Series



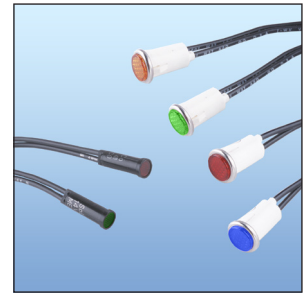
E5S Series

3L Series are compact style lights that snap-fit into a 5/16" hole and are secured with a spring clip. These lights have a built-in resistor, available with a 14, 28 and 125 volt incandescent bulb, flush type mount and translucent lexan lens. All lights come with a six inch 105°C tinned copper wire leads. Base and bezel colors are black. UL Listed. 5S Series lights snap fit into a 1/2" hole, and are secured into place with self-locking ears. These lights are available with 14, 28, and 125 volt incandescent bulbs. All 5S lights have a silver plated bezel.

PART NUMBER	VOLTAGE RATING	MOUNTING METHOD	MOUNTING HOLE SIZE (Inches)	REQUIRED PANEL DEPTH (Inches)	PANEL THICKNESS (Inches)
E3L-14	14	Snap In w/Spring Clip	5/16	1.430	0.030 Min
E3L-28	28	Snap In w/Spring Clip	5/16	1.430	0.030 Min
E3L-125	125	Snap In w/Spring Clip	5/16	1.430	0.030 Min
E5S-14	14	Self Locking Ears	1/2	1.090	0.030 to 0.093
E5S-28	28	Self Locking Ears	1/2	1.090	0.030 to 0.093
E5S-125	125	Self Locking Ears	1/2	1.090	0.030 to 0.093

Ordering Information: Available lens colors: -R for Red lens, -G for Green lens, -A for Amber lens, -B for Blue lens. Combine part number with color. Order by the piece.

Example: E3L series, 14 volt, with a blue lens = E3L-14-B



FEATURES:

- 3L Series are compact style. Base and Bezel colors are black.
- 5S Series lights snap fit into 1/2" hole. Silver plated Bezel.
- Multiple voltage rating
- 6" UL tinned copper lead wires
- Available in red, green, amber and blue
- Built-in resistor

COMPLIANCES:

- UL Listed



DC ANALOG AMPMETERS

Blue Seas analog amp or volt meters can be panel or surface mounted. They feature a simple wire connection and sense power from the same connection.



**MICRO AMMETER
(SHUNT INCL.)**



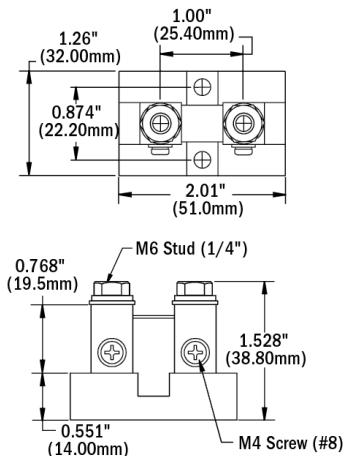
**AMMETER
(SHUNT INCL.)**



DC SHUNTS

PART NUMBER	AMPS	DESCRIPTION
EMM-DCA-50BS	0 to 50 AMPS	Simple 2-wire connection from shunt (Included). Meter senses and powers from shunt connection. Face dimension: 2"
EM-DCA-50BS	0 to 50 AMPS	Simple 4-wire connection from shunt (Included). Meter senses and powers from shunt connection. Face dimension: 2.75"
EM-DCA-100BS	0 to 100 AMPS	Simple 4-wire connection from shunt (Included). Meter senses and powers from shunt connection. Face dimension: 2.75"
EM-DCA-150BS	0 to 150 AMPS	Simple 4-wire connection from shunt (Included). Meter senses and powers from shunt connection. Face dimension: 2.75"
EM-9228	50 AMPS/50 MV	For continuous operation, it is recommended that shunts not be run at more than two-thirds (66%) the rated current under normal conditions.
EM-9230	100 AMPS/50 MV	For continuous operation, it is recommended that shunts not be run at more than two-thirds (66%) the rated current under normal conditions.

Ordering Information: Order by the meter.



DC Resistive Shunts

FEATURES:

- Micro and standard size meters with back lighting for low light conditions
- Meters include shunts
- Surface or Panel mounted
- Easy to read characters

WIRE & CABLE
MULTI-CONDUCTOR
COAX CABLES
NETWORK CABLES
HEAT SHRINK
ROUTING & BUNDLING MATERIALS
CABLE TIES
TERMINALS
DEUTSCH & DELPHI
LUGS & BOOTS
ID PRODUCTS & LABELERS
TOOLS
BREAKERS & FUSES
TERMINAL BLOCKS & BUS BARS
SWITCHES & ACTUATORS
LIGHTS & METERS

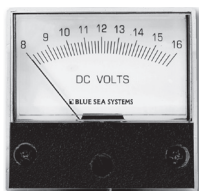


FEATURES:

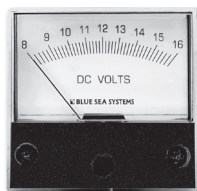
- Micro and standard size meters with backlighting for low light conditions
- Meters include shunts
- Surface or panel mounted
- Easy to read characters
- They feature a simple wire connection
- Sense power from the same connection



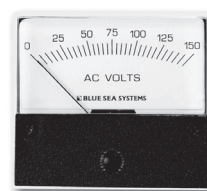
ANALOG DC & AC VOLT METERS



DC MICRO VOLTMETER



DC ANALOG VOLTMETER



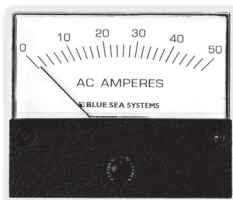
DC VOLTMETER

PART NUMBER	VOLTS	DESCRIPTION
EMM-DCV-8-16BS	8 to 16V	Meter Current: 1 mA at full scale. Face dimension: 2"
EM-DCV-8-16BS	8 to 16V	Meter Current: 1 mA at full scale. Face dimension: 2.75"
EM-AVC-150BS	0 to 150V	Dial marked in 5 volt increments. 2-wire connections to AC hot and neutral. Meter senses and powers from same connection. Face dimension: 2.75"

Ordering Information: Order by the meter.



ANALOG AC AMP METERS



AC MICRO AMMETER



AC AMMETER



TRANSFORMER COIL

PART NUMBER	DESCRIPTION
EMM-ACA-50BS	0 to 50 AMPS. Face dimension: 2"
EM-ACA-50BS	0 to 50 AMPS. Simple 4-wire connection. Face dimension: 2.75"
EM-ACA-100BS	0 to 100 AMPS. Simple 4-wire connection. Face dimension: 2.75"
EM-8073	Ratio: 50 AC/50 mA AC. For use with AC Ammeters
EM-8257	Ratio: 100 AC/50 mA AC. For use with AC Ammeters
EM-8256	Ratio: 150 AC/50 mA AC. For use with AC Ammeters

Ordering Information: Order by the meter.



DIGITAL DC & AC METERS



DC DIGITAL METERS



AC DIGITAL METERS

PART NUMBER	DESCRIPTION
EMD-DCMM	Multi-Function Meter with Alarm. Displays amperage from -500 to +500 Amps. Displays voltage from 0 to 60 Volts in 0.01 Volt increments. Includes 500 Amp shunt
EMD-DCV-0-60BS	DC Digital Voltmeter. Displays voltage from 0 to 60 Volts
EMD-ACMM	Multi-Function Meter with Alarm. Displays amperage from 0 to 150. Displays voltage from 80 to 270. Displays power from 0 to 35 Kilowatts. Displays freq. from 40 to 90 Hertz.
EMD-ACV-80-249BS	AC Digital Voltmeter. Displays voltage from 80 to 270

Ordering Information: Order by the meter.

JUNCTION BOXES & ENCLOSURES



ENCL332



ENCL606W



ENCL1210W

JUNCTION BOXES with KNOCKOUTS

BOX PART NUMBER	OUTSIDE DIMENSION (Inches)			INSIDE DIMENSION (Inches)			COVER STYLE	MOUNTING PLATE PART NUMBER (Inches)
	HEIGHT	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH		
ENCL332	3.50	3.50	1.64	2.75	2.75	1.01	SOLID	N/A
ENCL533	5.03	3.06	3.02	4.69	2.72	2.72	SOLID	EMP533
ENCL533C	5.03	3.06	3.02	4.69	2.72	2.72	CLEAR	4.21 X 2.25
ENCL553	5.03	5.03	3.02	4.69	4.69	2.72	SOLID	EMP553
ENCL553C	5.03	5.03	3.02	4.69	4.69	2.72	CLEAR	4.21 X 4.21
ENCL753	7.00	5.03	2.97	6.65	4.69	2.72	SOLID	EMP753 6.18 x 4.22

Ordering Information: Order by the piece.

ENCLOSURES

BOX PART NUMBER	OUTSIDE DIMENSION (Inches)			INSIDE DIMENSION (Inches)			COVER STYLE	MOUNTING PLATE PART NUMBER (Inches)
	HEIGHT	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH		
ENCL606W	7.32	7.32	4.90	6.00	6.00	4.60	SCREW	EMP606A
ENCL606HW	-	-	-	-	-	-	HINGE & SCREW	4.88 x 4.88
ENCL606HWPL1	-	-	-	-	-	-	HINGE & LATCH	
ENCL806W	9.32	7.32	4.90	8.00	6.00	4.60	SCREW	EMP806A
ENCL806HW	-	-	-	-	-	-	HINGE & SCREW	6.75 x 4.88
ENCL806HWPL1	-	-	-	-	-	-	HINGE & LATCH	
ENCL1008W	11.32	9.32	5.39	10.00	8.00	5.10	SCREW	EMP1008A
ENCL1008HW	-	-	-	-	-	-	HINGE & SCREW	8.75 x 6.88
ENCL1008HWPL1	-	-	-	-	-	-	HINGE & LATCH	
ENCL1210W	13.32	11.32	5.52	12.00	10.00	5.22	SCREW	EMP1210A
ENCL1210HW	-	-	-	-	-	-	HINGE & SCREW	10.75 x 8.88
ENCL1210HWPL2	-	-	-	-	-	-	HINGE & LATCH	
ENCL1412W	15.32	13.32	6.65	14.00	12.00	6.65	SCREW	EMP1412A
ENCL1412HW	-	-	-	-	-	-	HINGE & SCREW	12.75 x 10.88
ENCL1412HWPL2	-	-	-	-	-	-	HINGE & LATCH	
ENCL1614W	17.32	15.32	6.65	16.00	14.00	6.35	SCREW	EMP1614A
ENCL1614HW	-	-	-	-	-	-	HINGE & SCREW	14.75 x 12.88
ENCL1614HWPL2	-	-	-	-	-	-	HINGE & LATCH	
ENCL1816W	19.32	17.32	9.52	18.00	16.00	9.23	SCREW	EMP1816A
ENCL1816HW	-	-	-	-	-	-	HINGE & SCREW	16.75 x 14.88
ENCL1816HWPL2	-	-	-	-	-	-	HINGE & LATCH	

Ordering Information: Order by the piece.



FEATURES:

- Designed in accordance with the Joint Industrial Council (JIC)-USA
- Continuous gaskets made of polyurethane foam guarantee optimal integrity
- Cover screw holes in corners are outside of gasket area
- All mounting hardware is made of 316 stainless steel
- The enclosure can be readily worked with conventional tools
- Withstands continuous temperatures up to 150°C
- Enclosures have three configurations:
 - Screw fastened
 - Hinged and screw fastened
 - Hinged and padlock latch
- Aluminum mounting plates sold separately
- Junction boxes are sold with solid or clear covers
- Junction boxes made of thermoplastic high impact polyethylene oxide (not reinforced polyester)
- All mounting plates are made of aluminum.

WIRE
& CABLE

MULTI-
CONDUCTOR

COAX
CABLES

NETWORK
CABLES

HEAT
SHRINK

ROUTING &
BUNDLING
MATERIALS

CABLE
TIES

TERMINALS

DEUTSCH &
DELPHI

LUGS
& BOOTS

ID PRODUCTS
& LABELERS

TOOLS

BREAKERS
& FUSES

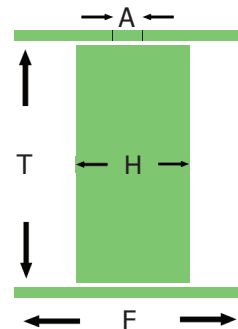
TERMINAL
BLOCKS &
BUS BARS

SWITCHES &
ACTUATORS

LIGHTS &
METERS

REEL MEASUREMENT TABLE

REEL	FLANGE F (Inches)	HUB H (Inches)	TRAVERSE T (Inches)	ARBOR A (Inches)	MATERIAL
#2	4.5	1.875	2.5	0.75	Plastic
#2W	6.5	1.875	2	0.75	Plastic
#3	6.5	1.875	3	0.75	Plastic
#4	6.5	1.875	4	0.75	Plastic
#5	6.5	1.875	5	0.75	Plastic
#6	6.5	1.875	6	0.75	Plastic
#7	6.5	1.875	7	0.75	Plastic
#9	9.5	3.25	6	0.75	Paper 9
#10	10.5	3.25	8	1.25	Paper 10
#14	13.5	6	11	1.25	Wood
#16	15.5	6	11	1.25	Wood
#18	17.5	6	11	1.25	Wood
#24	23.5	6	11	1.25	Wood
#30	30.0	12	12	1.25	Wood



TERMINALS & CONNECTORS FOR MARINE APPLICATIONS

PERFORMANCE REQUIREMENTS FOR #22 - #10 AWG TERMINALS ON COPPER WIRE:

MIL-T-7928G

AWG	22	20	18	16	14	12	10
A	9	11	16	22	32	45	55
B	7		7	8	5	5.5	4
C	15	19	38	50	70	110	150

A = Test Current (AMPS)

B = Voltage Drop (MV) Max Allowable

C = Min. Tensile Strength (lb) Pull-out force of the crimped terminal

UL 486A

AWG	22	20	18	16	14	12	10
C	8	13	20	30	50	70	80
D	9	12	17	16	30	35	50

C = Min. Tensile Strength (lb) Pull-out force of the crimped terminal

D = Test Current for Max 50 °C Rise (AMPS)

TYPE

APPROVED CONNECTORS

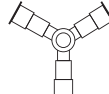
DISAPPROVED CONNECTORS

Splice

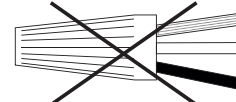
Butt Splice



3 or 4 Ways



Twist Wire Nut



Friction

Disconnect Tab



Bullet/Snap Plug



Set Screw

Indirect-bearing



Direct-bearing



Terminals

Ring



Locking Fork



Flanged Fork



Straight Fork



AMERICAN BOAT and YACHT COUNCIL STANDARDS

COLOR	PACER COLOR CODE	PACER STRIPE CODE	ITEM	USE
Black	BK	0	Ground	Negative / Neutral Main Return
Brown	BR	-1	Alternator Charge Light Generator Armature Pumps	Generator Terminal or Alternator Auxilliary Terminal to Regulator Generator Armature to Regulator Circuit Breaker or Switch to Pumps
Red	RD	-2	Instrument Feed Power Feeds	Distribution Panel to Electrical Instruments Positive Main Power (particulary un-fused)
Orange	OR	-3	Accessory Feed Common Feed Feed	Ammeter to Alternator or Generator Distribution Panel to Accessory Switch Accessory Circuit Breakers or Switches
Yellow	YL	-4	Generator Field Ground	Generator to Regulator Field Terminal Negative / Neutral Main Return
Green	GN	-5	Bonding System	Grounding Wires (if insulated)
Lt. Green	LG	-15		
Blue	BL	-6	Cabin & Instrument Lights	Fuse or Switch to Lights
Lt. Blue	LB	-16	Oil Pressure	Oil Pressure to Sender to Gauge
Violet	VI	-7	Ignition Instrument Feed	Ignition Switch to Coil & Electrical Instrument Distribution Panel Electrical Instruments
Grey	GY	-8	Navigation Lights Tachometer	Circuit Breaker or Switch to Lights Tachometer Sender to Gauge
White	WH	-9		
Tan	TN	-11	Water Temperature	Water Temperature Sender to Gauge
Pink	PK	-12	Fuel Gauge	Fuel Gauge Sender to Gauge

TYPICAL USES FOR SWITCHES ON BOATS

ON-OFF	Accessories, Auto-Pilot, Bilge Pumps, Pre-Heat, Converter, Deck Wash Pump, Depth Finder, Loran, Radios, Recorder, Stereo, Water Pressure
(ON)-OFF	Horn, Head Flush, Macerator, Alarm Silence
ON-ON	Meter Read, Battery 1, Battery 2, Bilge Pumps, Auto Man, Fuel Tank, Gauge Select, Port/Starboard
ON-OFF-ON	Bilge Pump, Auto/Off/Man, Aerator, Timed/Off/Man, Spotlight, Spot/Off/Flood, Navigation Lights, Run/Off/Anchor, Motor Control, Fwd/Off/Rev
(ON)-OFF(ON)	Meter Read, Port/Off/Stbd, Trim Tabs, Forward/Reverse, Windlass, Raise/Off/Lower, Hatch, Open/Off/Close, Motor Reverse
ON-OFF-(ON)	Bilge Pump, Auto/Off/Man, Wiper Washer, Lights

*The parenthesis mean that the action is momentary.

CIRCUIT BREAKERS INTERRUPTING CAPACITY (AMPS) ABYC TABLE V.B E-11.16

SHORE POWER	AMPS	MAIN BREAKER SHORE POWER DISCONNECT BREAKER	BRANCH BREAKER
120V 30 AMPS	30 AMPS	3,000	3,000
120V 50 AMPS	50 AMPS	3,000	3,000

NOTE 1: The main circuit breaker is considered to be the first circuit breaker connected to a source of AC power. All subsequent breakers, including sub-main breakers, connected in series with a main circuit breaker shall be considered to be branch circuit breakers.

NOTE 2: A fuse in series with and ahead of, a circuit breaker may be required by the circuit breaker manufacturer to achieve the interrupting capacity in the above table.

CIRCUIT BREAKER INTERRUPTING CAPACITY (AMPS) ABYC TABLE V.A E-11.16

	TOTAL CONNECTED BATTERY COLD CRANKING AMPS	MAIN BREAKER (AMPERES)	BRANCH BREAKER (AMPERES)
12V to 24V	650 or LESS	1500	750
12V to 24V	651 - 1100	3000	1500
12V to 24V	OVER 1100	5000	2500

NOTE: The main circuit breaker(s) is considered to be the first breaker(s) in a circuit connected in series with the battery. All subsequent breakers, including sub-main breakers, connected in series with a main circuit breaker shall be considered to be branch circuit breakers.

CALCULATING VOLTAGE DROP

All wire has a finite resistance to current flow. This resistance causes voltage to develop across the length of a current carrying conductor. The result is that the intended load is robbed of the full potential of its source battery. The included tables below are calculated for the two allowable voltage drops specified

by ABYC (cf. E-11.16). Conductors shall be sized for a voltage drop not to exceed:

3%: For conductors feeding panelboard to switchboards, bilge blowers, navigation lights, electronic equipment and any other circuit where voltage drop must be kept to a minimum.

10%: For conductors used for general lighting (other than navigational lights) and other non-critical circuits.

To calculate the size of the wire required for a given voltage drop the following formula is used:

$$CM = \frac{K \times I \times L}{E}$$

CM = The required circular mil area of the wire. (See Table 1)

K = Equals 10.75 (represents the mil-foot resistance of copper)

I = The load current in amperes. (Note: for maximum current carrying capabilities of a conductor refer to Table 2)

L = The round trip length of the wire measured in feet from the positive terminal of the source, to the load, and back to the negative terminal source.

E = The voltage drop on the conductor in volts. For example: a 3% drop from a 12 volt source results in: $E = (12 \times 0.03) = 0.36$

TABLE 1: CONDUCTOR CIRCULAR MIL (CM) AREA

AWG	Square mm	ISO MH ^c	ABYC UL CM Area E-11.16 Tbl XII	SAE Wire CM Area J1127, J1128
18	0.8	0.75	1,620	1,537
16	1.0	1.50	2,583	2,336
14	2.0	2.50	4,110	3,702
12	3.0	4.00	6,530	5,833
10	5.0	6.00	10,380	9,343
8	8.0	10.0	16,510	14,810
6	13.0	16.0	26,240	24,538
4	19.0	-	41,740	37,360
2	32.0	35.0	66,360	62,450
1	40.0	-	83,690	77,790
1/0	50.0	50.0	105,600	98,980
2/0	62.0	70.0	133,100	125,100
3/0	81.0	95.0	167,800	158,100
4/0	103.0	-	211,600	205,500

TABLE 2:
(A) ALLOWABLE AMPERAGE
OF CURRENT CARRYING
CONDUCTORS UNDER 50
VOLTS FOR 105°C CABLES -
ABYC E-11.16

(B): ALLOWABLE AMPERAGE
OF CONDUCTORS WHEN
MULTIPLE CONDUCTORS ARE
BUNDLED TOGETHER FOR
105°C CABLES - ABYC E-11.16

CONDUCTOR SIZE	A		B		B		B		B	
	SINGLE CONDUCTOR		2 BUNDLED CONDUCTORS		3 BUNDLED CONDUCTORS		4-6 BUNDLED CONDUCTORS		7-24 BUNDLED CONDUCTORS	
ENGLISH (METRIC)	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces
18 (0.8)	20	17.0	20	17.0	14.0	11.9	12.0	10.2	10.0	8.5
16 (1.0)	25	21.3	25	21.3	17.5	14.9	15.0	12.8	12.5	10.6
14 (2.0)	35	29.8	35	29.8	24.5	20.8	21.0	17.9	17.5	14.9
12 (3.0)	45	38.8	45	38.3	31.5	26.8	27.0	23.0	22.5	19.1
10 (5.0)	60	51	60	51.0	42.0	35.7	36.0	30.6	30.0	25.5
8 (8.0)	80	68	80	68.0	56.0	47.6	48.0	40.8	40.0	34.0
6 (13)	120	102	120	102	84.0	71.4	72.0	61.2	60.0	51.0
4 (19)	160	136	160	136	112.0	95.2	96.0	81.6	80.0	68.0
2 (32)	210	178	210	178	147.0	125.0	126.0	107.1	105.0	89.3
1 (40)	245	208	245	208	171.5	145.8	147.0	125.0	122.5	104.1
0 (50)	285	242	285	242	199.5	169.6	171.0	145.4	142.5	121.1
00 (62)	330	280	330	280	231.0	196.4	198.0	168.3	165.0	140.3
000 (81)	385	327	385	327	269.5	229.1	231.0	196.4	192.5	163.6
0000 (103)	445	378	445	378	311.5	264.8	267.0	227.0	222.5	189.1

WIRE GAUGE & VOLTAGE DROP TABLES

WIRE GAUGE BASED ON MIN CIRCULAR MIL (CM) AREA, 12 VOLT, 3% DROP

LENGTH*	TOTAL CURRENT ON CIRCUIT IN AMPS													
	5	10	15	20	25	30	40	50	60	70	80	90	100	
10	18	14	12	10	10	10	8	6	6	6	6	4	4	
15	16	12	10	10	8	8	6	6	4	4	4	2	2	
20	14	10	10	8	6	6	6	4	4	2	2	2	2	
25	12	10	8	6	6	6	4	4	2	2	2	1	1	
30	12	10	8	6	6	4	4	2	2	1	1	1/0	1/0	
40	10	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0	
50	10	6	6	4	4	2	2	1	1/0	2/0	3/0	3/0	3/0	
60	10	6	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	
70	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	-	
80	8	6	4	2	2	1	1/0	2/0	3/0	4/0	4/0	-	-	
90	8	4	2	2	1	1/0	2/0	3/0	4/0	4/0	-	-	-	
100	6	4	2	2	1	1/0	2/0	3/0	4/0	-	-	-	-	
110	6	4	2	1	1/0	1/0	2/0	3/0	4/0	-	-	-	-	
120	6	4	2	1	1/0	2/0	3/0	4/0	-	-	-	-	-	
130	6	2	2	1	1/0	2/0	3/0	4/0	-	-	-	-	-	
140	6	2	1	1/0	2/0	3/0	4/0	-	-	-	-	-	-	
150	6	2	1	1/0	2/0	3/0	4/0	-	-	-	-	-	-	
160	6	2	1	1/0	2/0	3/0	4/0	-	-	-	-	-	-	
170	6	2	1	2/0	3/0	3/0	4/0	-	-	-	-	-	-	

WIRE GAUE BASED ON MIN CIRCULAR MIL (CM) AREA, 12 VOLT, 10% DROP

LENGTH*	TOTAL CURRENT ON CIRCUIT IN AMPS													
	5	10	15	20	25	30	40	50	60	70	80	90	100	
10	18	18	18	16	16	14	14	12	12	10	10	10	10	
15	18	18	16	14	14	12	12	10	10	8	8	8	8	
20	18	16	14	14	12	12	10	10	8	8	8	6	6	
25	18	16	14	12	12	10	10	8	8	6	6	6	6	
30	18	14	12	12	10	10	8	8	6	6	6	6	4	
40	16	14	12	10	10	8	8	6	6	6	4	4	4	
50	16	12	10	10	8	8	6	6	4	4	4	2	2	
60	14	12	10	8	8	6	6	4	4	2	2	2	2	
70	14	10	8	8	6	6	6	4	2	2	2	2	1	
80	14	10	8	8	6	6	4	4	2	2	2	1	1	
90	12	10	8	6	6	6	4	2	2	2	1	1	1/0	
100	12	10	8	6	6	4	4	2	2	1	1	1/0	1/0	
110	12	8	6	6	4	4	2	2	1	1	1/0	1/0	1/0	
120	12	8	6	6	4	4	2	2	1	1	1/0	1/0	2/0	
130	12	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0	
140	10	8	6	6	4	2	2	1	1	1/0	2/0	2/0	2/0	
150	10	8	6	4	4	2	2	1	1/0	1/0	2/0	2/0	3/0	
160	10	8	6	4	4	2	2	1	1/0	2/0	2/0	3/0	3/0	
170	10	6	6	4	2	2	2	1	1/0	2/0	2/0	3/0	3/0	

WIRE GAUGE BASED ON MIN CIRCULAR MIL (CM) AREA, 24 VOLT, 3% DROP

LENGTH*	TOTAL CURRENT ON CIRCUIT IN AMPS													
	5	10	15	20	25	30	40	50	60	70	80	90	100	
10	18	18	16	14	12	12	10	10	10	8	8	8	6	
15	18	16	14	12	12	10	10	8	8	6	6	6	6	
20	18	14	12	10	10	10	8	6	6	6	6	4	4	
25	16	12	12	10	10	8	6	6	6	4	4	4	4	
30	16	12	10	10	8	8	6	6	4	4	4	2	2	
40	14	10	10	8	6	6	6	4	4	2	2	2	2	
50	12	10	8	6	6	6	4	4	2	2	2	1	1	
60	12	10	8	6	6	4	4	2	2	1	1	1/0	1/0	
70	12	8	6	6	4	4	2	2	1	1	1/0	1/0	2/0	
80	10	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0	
90	10	8	6	4	4	4	2	1	1/0	1/0	2/0	2/0	3/0	
100	10	6	6	4	4	2	2	1	1/0	1/0	2/0	3/0	3/0	
110	10	6	6	4	2	2	1	1/0	1/0	2/0	3/0	3/0	4/0	
120	10	6	4	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	
130	8	6	4	2	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	
140	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	-	
150	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	-	
160	8	6	4	2	2	1	1/0	2/0	3/0	4/0	4/0	4/0	-	
170	8	6	2	2	1	1	2/0	3/0	3/0	4/0	4/0	4/0	-	

WIRE GAUGE BASED ON MIN CIRCULAR MIL (CM) AREA, 24 VOLT, 10% DROP

LENGTH*	TOTAL CURRENT ON CIRCUIT IN AMPS													
	5	10	15	20	25	30	40	50	60	70	80	90	100	
10	18	18	18	18	18	18	16	16	14	14	14	12	12	
15	18	18	18	18	16	16	14	14	12	12	12	10	10	
20	18	18	18	16	16	14	14	12	12	10	10	10	10	
25	18	18	16	16	14	14	12	12	10	10	10	8	8	
30	18	18	16	14	14	12	12	10	10	8	8	8	8	
40	18	16	14	14	12	12	10	10	8	8	8	6	6	
50	18	16	14	12	12	10	10	8	8	6	6	6	6	
60	18	14	12	12	10	10	8	8	6	6	6	6	4	
70	16	14	12	10	10	8	8	6	6	6	6	4	4	
80	16	14	12	10	10	8	8	6	6	6	4	4	4	
90	16	12	10	10	8	8	6	6	6	4	4	4	2	
100	16	12	10	10	8	8	6	6	4	4	4	2	2	
110	14	12	10	8	8	8	6	6	4	4	2	2	2	
120	14	12	10	8	8	6	6	4	4	2	2	2	2	
130	14	12	10	8	8	6	6	4	4	2	2	2	2	
140	14	10	8	8	6	6	6	4	2	2	2	2	1	
150	14	10	8	8	6	6	4	4	2	2	2	2	1	
160	14	10	8	8	6	6	4	4	2	2	2	1	1	
170	12	10	8	6	6	6	4	2	2	2	2	1	1	

*Round trip length in feet.



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