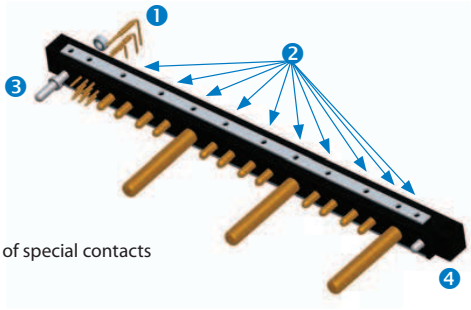
HiLinX

Create the connector you need

Amphenol has engineered a complete range of high & medium density, staggered grid, modular connectors with both 1.905x1.905[.075x.075] & 2.54x2.54 [.100x.100] pitches.
The HiLinX range provides a unique choice of solutions by allowing a mix of various contact types: signal, power, fiber optics and coaxial lines.

The concept

With our HiLinX, build your own connector the way you want it! The HiLinX is a system of modules, metal rails and fittings. Thanks to this modularity, a wide range of contact combinations can be made at the board level. Whatever types of signals required, from power to fiber optics, almost all existing contacts on the market can be adapted to our connector.
Let's maximize the PC board capabilitties!



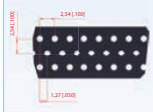
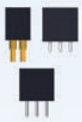
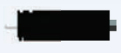
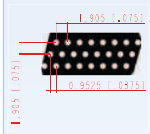
Modularity for custom connector design!

With the HiLinX series, you specify:

- The density of signal contacts
- The type and number of signal contacts
- The type, the number and the position of special contacts
- The guiding and keying system

With the HiLinX series, the design of the connector is up to you![1]

QUICK SELECTION GUIDE

Density	Signal contacts ❶		Special contacts* ❷		Keying & Guiding ❸	Housing ❹	See Section
Medium density: **HiLinX 2.54** 	**FEMALE** 	**MALE** 	**POWER 20A** 	**RADSOK® 70A*** 	**GUIDING** 4 possibilities 65 to 68 **KEYING** 64 possibilities 01 to 64 According to MIL DTL 55302 /57 to /66, /138, /139	**2 ROWS** 0 to 70* contacts with or without special contacts **3 ROWS** 0 to 170* contacts with or without special contacts	**HiLinX 2.54** **pages 10 to 27**
	For solder cup, SMT, soldering on flex, female right angle PC tail, male straight PC tail, consult us.		**AMPHELUX™** 	**COAXIAL** 	*Other fitting, guiding or keying devices, consult us.*	** For further arrangements, consult us.*	
			**For RADSOK® contact, consult us.*				
PAGE 10 to 27	**PAGE 12**	**PAGE 14**	**PAGE 16**		**PAGE 18**	**PAGE 20**	
High density: **HiLinX 1.905** 	**FEMALE** 	**MALE** 	**POWER 20A** 	**RADSOK® 70A** 	**GUIDING** 4 possibilities 65 to 68 **KEYING** 64 possibilities 01 to 64 According to MIL DTL 55302 /190 to /193	**2 ROWS** 10 to 100 contacts **3 ROWS** 0 to 205 contacts with or without special contacts	**HiLinX 1.905** **pages 28 to 41**
	For solder cup, SMT, soldering on flex, female right angle PC tail, male straight PC tail, consult us.		**AMPHELUX™** 	**COAXIAL** 	*Other fitting, guiding or keying devices, consult us.*		
PAGE 28 to 41	**PAGE 30**	**PAGE 32**	**PAGE 34**		**PAGE 36**	**PAGE 38**	

The HiLinX series serves various markets, including:

Commercial avionics & airframe | Navy | Military avionics & airframe | C4ISR | Industrial

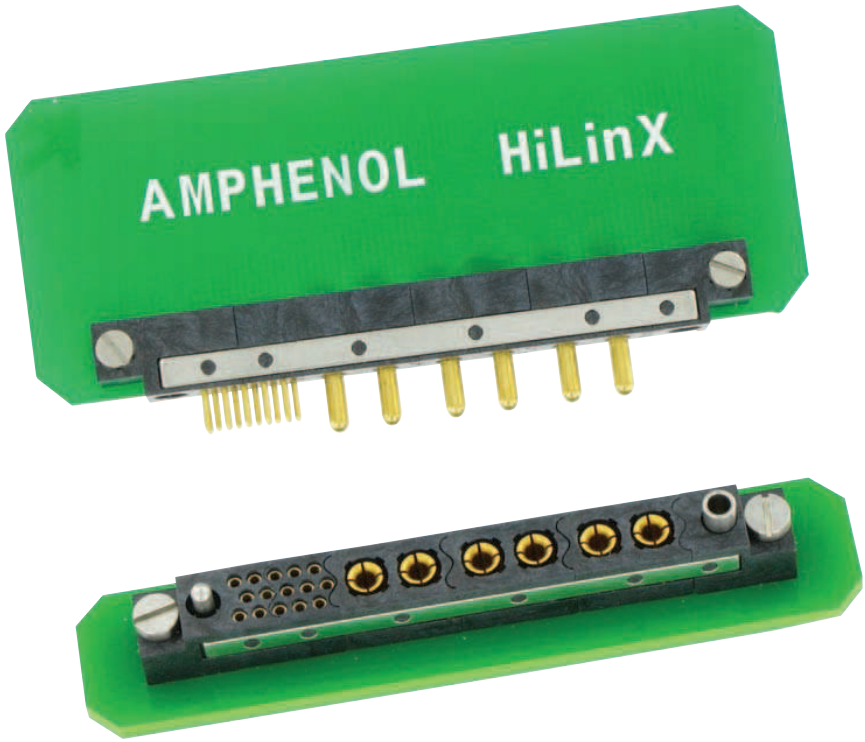
MIL-DTL-55302 /190 to /193

MIL-DTL-55302 /57 to /66, /138, /139

Some HiLinX arrangements are fully compatible with the MIL DTL 55302 (/57 to /66, /138, /139 & /190 to /193 detailed sheets) *(see pages 15 & 33).*

[1] With HiLinX, feel free to create your own product. Amphenol remains the only provider of both assembly and delivery.
** HiLinX[1.905]: special contacts are available for 3-row version only.*

All dimensions are given for information only and are in mm [inch], except as otherwise specified



HiLinX Series

The 100% modular and hybrid connector

HiLinX product range **8**

HiLinX 2.54 ..... **10**
Female signal contacts for receptacles 12
Male signal contacts for plugs.....14
Signal version: compatibility with MIL-DTL-55302..15

Special contacts for hybrid connectors 16

Non keying guides / Realignment capability/
Mating sequence.....18
Keying guides / Connector polarization 19

Signal version: typical arrangements 2 rows.....20
Signal version: layouts 2 rows 21
Signal version: typical arrangements 3 rows.....22
Signal version: layouts 3 rows 23

Hybrid version: typical arrangements 2 rows 24
Hybrid version: layouts 2 rows 25
Hybrid version: typical arrangements 3 rows 26
Hybrid version: layouts 3 rows 27

HiLinX 1.905 ..... **28**
Female signal contacts for receptacles 30
Male signal contacts for plugs.....32
Signal version: compatibility with MIL-DTL-55302..33

Special contacts for 3-row hybrid connectors.....34

Non keying guides / Realignment capability/
Mating sequence.....36
Keying guides / Connector polarization 37

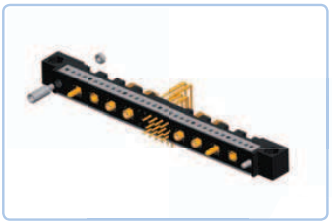
Signal version: typical arrangements 2 & 3 rows ...38
Signal version: layouts 2 & 3 rows 39

Hybrid version: dimensions 40
Hybrid version: layouts 41

Tooling **42**

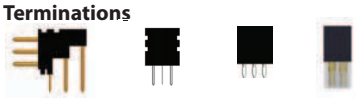
HILINX 2.54 >>> GENERAL SPECIFICATIONS

MEDIUM DENSITY



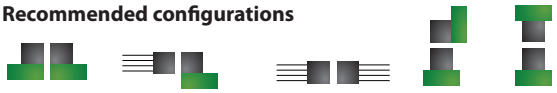
- **A unique connector range, both hybrid and modular**
- **Cost effective, easy to install, highly reliable**
- **More current through each contact**
- **Greater performance and optimal protection in harsh environments**
- **Compatible with signal connectors on the market (MIL DTL 55302 /57 to /66, /138, /139)**
- **2.54 [.100] staggered grid (1.27 [.050] offset), 2.54 [.100] between rows**

Terminations



Special contacts

Recommended configurations



Standard

MIL-DTL-55302
/57 to /66, /138, /139

Main characteristics

- Medium density: 0.11 cts/mm2 [71 cts/inch2]
- From 2 to 3 rows, 10 to 170* signal contacts
- 5 A per signal contact (up to 6A current rating available upon request)
- Press-fit solderless attachment technology and crimp contact available
- Some signal contact version are 100% compatible with the M55302 /57 to /66, /138 & /139

Markets

Main applications

How to order

Connector type

Type of contacts?
- Female
  - Receptacle **R**
  - Extender **E**
- Male
  - Plug **P**

Number of rows

- **2**
- **3**

Signal modules contact termination type *(see pages 12 to 14)*

Female	Male	Description
Consult us	**YCS**	Right angle PC tail short length
	YC	Right angle PC tail standard length
	YCL	Right angle PC tail long length
YDS	*Consult us*	Straight PC tail short length
YD		Straight PC tail standard length
YDL		Straight PC tail long length
YP	/	Press fit
X	**X**	Crimp contact
Z	**Z**	Solder Cup
Consult us		SMT
		Solder tail for flexible circuit

Plating

ØØ: Standard plating
LF: Lead free plating
for RoHS connector

HLX2	-	-	---	---	-	---	•••	--	---	--

Number of signal contacts *(see page 16)*

	Signal version						Hybrid version
2 rows	000	024	040	056			To be defined Divided by 10
	010	026	044	060			
	014	030	046	064			
	016	034	050	066			
	020	036	054	070			
3 rows	000	032	062	092	122	152	To be defined Divided by 12 or 18
	006	036	066	096	126	156	
	008	038	068	098	128	158	
	012	042	072	102	132	162	
	014	044	074	104	134	164	
	018	048	078	108	138	168	
	020	050	080	110	140	170	
	024	054	084	114	144		
	026	056	086	116	146		
	030	060	090	120	150		

Special module *(see page 16)*

	Male	Female
POWER 20A*	**PM1**	**PF1**
RADSOK 70A	*Consult us*	
COAXIAL*	**CM1**	**CF1**
AMPHELUX™ *	**AXM**	**AXF**

* 2 contacts or cavities per module
Number of special modules (X) + type of the module (XXX)
X XXX (blank = signal contacts only)
Ex: 2PM1 3CM1
2 male power modules and
3 male coaxial modules

Keying, guiding *(see page 18)*

Keying? YES → **01** to **64*** according to MIL DTL 55302
NO → **65 66 67 68**

01 by default
* keying guiding devices are supplied installed

Deviation

Standard? YES → **000**
NO → Consult us

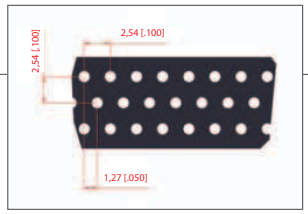
000 by default

RADSOK®, coaxial and Amphelux™ contacts have to be ordered separately.

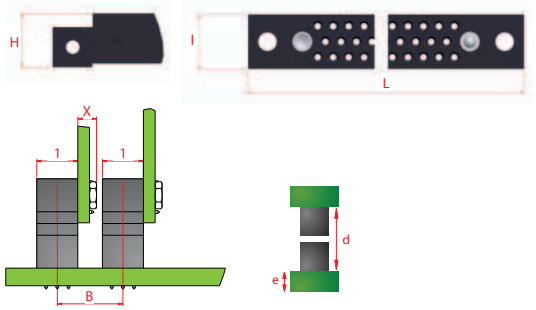
* *available upon request*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> TECHNICAL SPECIFICATIONS



DIMENSIONAL CHARACTERISTICS



H = 8.5 [.335] for receptacles
H = 10.2 $_{MAX}$ [.401] for plugs
I = 6.4$_{MAX}$ [.252] for 2-row connectors
I = 8.95$_{MAX}$ [.352] for 3-row connectors
L = 34.29 [1.350] to 110.49 [4.350] for 2-row connectors
L= 63.5 [2.500] to 165.1 [6.500] for 3-row connectors
B = 7 + X [.276 + X] for 2-row connectors
B = 9.55 + X [.376 + X] for 3-row connectors
X = Board thickness + hardware thickness
d = 17 [.670]
e = 1.8 [.071] to 3.4[.134] or 2.5$_{MIN}$[.098] (for YP contacts)

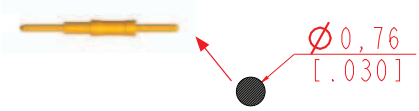
FEMALE CONTACT

Starclip* female technology: 6 tines for better reliability
- 6 contact tines instead of 4
- Excellent mechanical and electrical reliability
- Better resistance to high vibrations
- Improved electrical conductivity
- 100% compatible with other connectors

Material
- Hood: machined brass alloy
- Clip: CuBe [BeCu], stamped and formed

Plating
- Hood: tin lead or lead free
- Clip: gold over nickel

MALE CONTACT



- **Mating end diameter:** Ø 0.76 [.030]
- **Contact section** (mating side)**:** 0.45 mm² [.0007 in²]
- **Material:** brass alloy (machined)
- **Plating:** gold over nickel

MATERIALS

- **Guiding devices:** electroless nickel plating over brass CuZn or passivated stainless steel 303
- **Rails:** passivated stainless steel 316L
- **Plastic insert:** thermoplastic LCP, 30% glass-fiber filled

MECHANICAL CHARACTERISTICS	MIL DTL 55302 sections	
Backoff[1] (mm)	> 0.9 [.035]***	N/A
Mating force per contact (N)	0.98 $_{MAX}$	§ 4.5.3
Unmating force per contact (N)	0.981 $_{MAX}$	§ 4.5.3
Durability cycles	500	§ 4.5.9
Sinusoidal vibrations (10 to 2000 Hz) micro discontinuity 2ns	15 g	§ 4.5.10
Random vibrations (5 to 2000 Hz) micro discontinuity 2ns	0.5 g² / Hz	§ 4.5.10
Shocks 6ms ½ sinus 2ns	100 g	§ 4.5.10
ENVIRONMENTAL CHARACTERISTICS		
Thermal shocks (°C)	-65 / +150	§ 4.5.13
Salt Spray (hours)	96	§ 4.5.11
Humidity		§ 4.5.15
Days	10	
Temperature (°C)	25 / 65	
Humidity rate (%)	90-95	
ELECTRICAL CHARACTERISTICS		
Current rating per contacts (A)	5**	§ 4.5.5
Insulation resistance (at 500Vdc) (GΩ)	5 $_{MIN}$	§ 4.5.8
Contact resistance (mΩ)	10 $_{MAX}$	§ 4.5.12
Dielectric Withstanding Voltage (Vrms)	1000 $_{MIN}$	§ 4.5.7.1

[1]: When both connectors are fully mated, the backoff is the maximum distance the connectors can be unmated while functioning properly

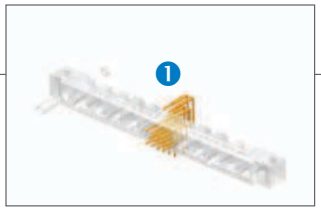
** Except for crimp contacts*
*** Other, please consult us*

**** 0.9 [.035] for crimp contact*
1.3 ± 0.1 [.051 ± .004] for other contacts

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> SIGNAL CONTACTS (❶)

FEMALE CONTACTS FOR RECEPTACLES



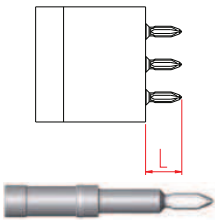
Starclip** female technology

- 6 contact tines instead of 4
- Excellent mechanical and electrical reliability
- Better resistance to high vibrations
- Improved electrical conductivity
- 100% compatible with other connectors

- Size 22: high average current
- Clip for male contact Ø 0.76 ± 0.025 [.030 ± .001]
- **Plating** on active part (clip)

Cu	Ni	**Au**
1 [.039]	3.5 [.138]	**1.3 [.051]**

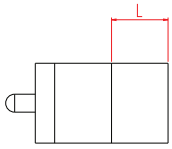
Press-fit



- Solderless assembly
- Mother board or mezzanine connection
- PCB thickness: 2.5 $_{MIN}$ [.098]
- Insertion forces: 65 N typical

Termination style	YP

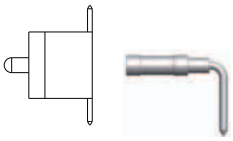
Crimp barrel



- Crimping on wire
- AWG gauge 22 to 24 recommended
- Terminations protected by a casing cemented to the moulding

Termination style	X

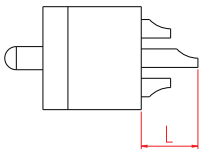
SMT*



- SMT soldering
- PCB thickness: specific, *consult us*

Consult us	T

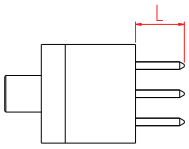
Solder cup*



- Hard-soldering on wire
- Mother board
- Cable to board or cable to cable connection
- Solder cup for 20 to 24 AWG wire

Consult us	Z

Soldering on flex*



- Hard soldering on flexible circuit
- PCB thickness: specific, *consult us*

Consult us	Y

	YP	X	Z*	Y*
L $_{MAX}$	2.8 ± 0.2 [.110±.008]	6.3 ± 0.2 [.248 ± .008]	4.9 ± 0.2 [.193 ± .008]	1.5 ± 0.2 [.059 ± .008]
Termination section	Ø 0.82 [.032]	Ø 1.22 [.048]	1.6 $_{MAX}$ [.063]	0.45 ± 0.3 [.018 ± .001]
Barrel standard termination plating µm [µ in]	2 [.079] Ni electrolytic + 15.2 [.598] Ni electroless + 10 [.394] Sn Pb	1 [.039] Cu + 3.5 [.138] Ni + **1.3 [.051] Au**	3 [.118] Ni + 10 [.394] Sn Pb	
Barrel RoHS termination plating** µm [µ in]	N/A	N/A	2.5 [.089] Ni + 5 [.197] bright pure Sn	

*** Except for crimp contacts* * *Consult us*

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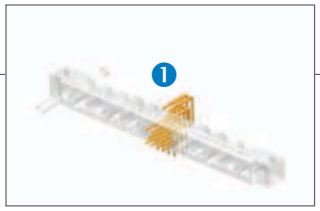
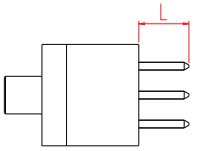
HILINX 2.54 >>> SIGNAL CONTACTS (❶)

FEMALE CONTACTS FOR RECEPTACLES



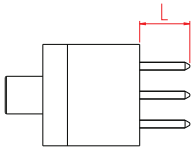
Short straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 2.5 [.098] for 2-row version
  1.8 [.071] for 3-row version

Termination style **YDS**

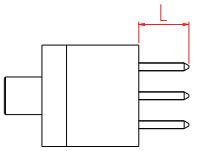
Standard straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 3.5 [.138] for 2-row version
  2.5 [.098] for 3-row version

Termination style **YD**

Long straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 5 [.197] for 2-row version
  3.5 [.138] for 3-row version

Termination style **YDL**

Short right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YCS**

Standard right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YC**

Long right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YCL**

	YDS	YD	YDL	YCS*	YC*	YCL*
L_{MAX}	2-row: 3.5 ± 0.20 [.140 ± .010] 3-row: 2.8 ± 0.20 [.110 ± .010]	2-row: 4.4 ± 0.20 [.172 ± .010] 3-row: 3.5 ± 0.20 [.140 ± .010]	2-row: 5.9 ± 0.20 [.234 ± .010] 3-row: 4.4 ± 0.20 [.172 ± .010]	*Consult us*		
Termination section	Ø 0.68_{MAX} [.027]					
Barrel standard termination plating µm [µ in]	3 [.118] Ni + 10 [.394] Sn Pb					
Barrel RoHS termination plating* µm [µ in]	2.5 [.089] Ni + 6 [.197] bright pure Sn					

** Consult us*

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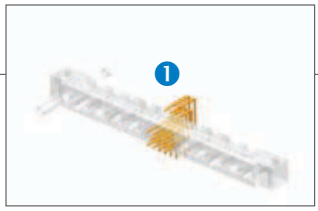
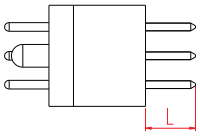
HILINX 2.54 >>> SIGNAL CONTACTS (❶)

MALE CONTACTS FOR PLUGS



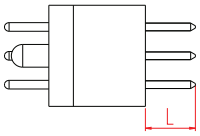
Short straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 1.8 MAX [.071]

Consult us | **YDS**

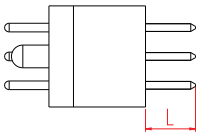
Standard straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 2.5 MAX [.098]

Consult us | **YD**

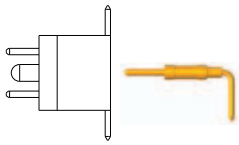
Long straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 3.5 MAX [.138]

Consult us | **YDL**

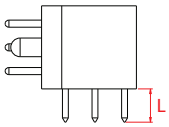
SMT*



- SMT soldering
- Daughter board or extended card
- PCB thickness: specific, *consult us*

Consult us | **T**

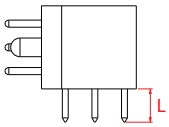
Short right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 1.8 MAX [.071]

Termination style | **YCS**

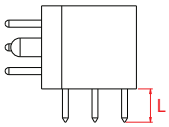
Standard right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 2.5 MAX [.098]

Termination style | **YC**

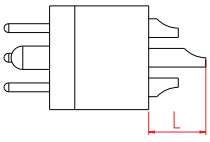
Short right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 3.5 MAX [.138]

Termination style | **YCL**

Solder cup*



- Hard soldering on wire
- Daughter board
- Cable to board or cable to cable connection
- Solder cup for 20 to 24 AWG wire

Consult us | **Z**

	YDS*	YD*	YDL*	YCS	YC	YCL	Z*
L MAX	2.8 ± 0.20 [.110 ± .010]	3.5 ± 0.20 [.140 ± .010]	4.4 ± 0.20 [.172 ± .010]	2.8 ± 0.20 [.110 ± .010]	3.5 ± 0.20 [.140 ± .010]	4.4 ± 0.20 [.172 ± .010]	2.54± 0.25 [.100 ± .010]
Termination section	Ø 0.68 MAX [.027]						Ø 1.6 MAX [.063]
Mating end diameter	Ø 0.76 ± 0.025 [.030 ± .001]						
Plating (µm [µin])	1 [.039] Cu + 3.5 [.138] Ni + **1.3 [.051] Au**						

** Consult us*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

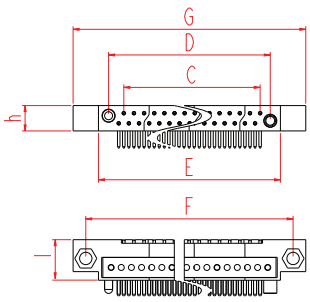
HILINX 2.54 >>> SIGNAL VERSION ONLY

MIL-DTL-55302
/57 to /66, /138 & /139

COMPATIBILITY WITH THE MIL DTL 55302 /57 TO /66, /138 & /139 DETAILED SHEETS

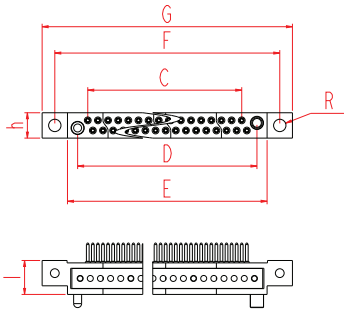
2 rows

Plug: with YCS / YC / YCL contacts



HLX2 P 2 xxx YCS xx – 000
HLX2 P 2 xxx YC xx – 000
HLX2 P 2 xxx YCL xx – 000

Receptacle: with YDS / YD / YDL contacts

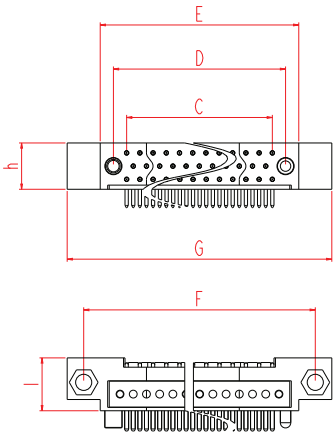


HLX2 R 2 xxx YCS xx – 000
HLX2 R 2 xxx YC xx – 000
HLX2 R 2 xxx YCL xx – 000

Available with 10, 20, 30, 40, 50, 60, 70, 14, 54, 44, 54, 26, 36, 56, 66 signal contacts or with 90, 100, 120 signal contacts with a central fitting

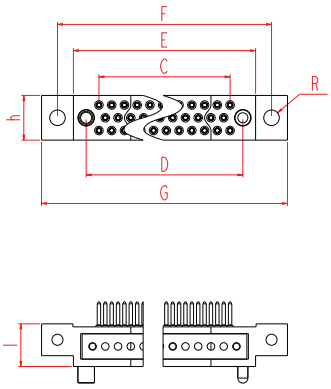
3 rows

Plug: with YCS / YC / YCL contacts



HLX2 P 3 xxx YCS xx – 000
HLX2 P 3 xxx YC xx – 000
HLX2 P 3 xxx YCL xx – 000

Receptacle: with YDS / YD / YDL contacts



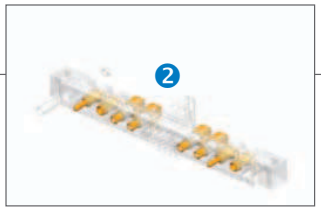
HLX2 R 3 xxx YCS xx – 000
HLX2 R 3 xxx YC xx – 000
HLX2 R 3 xxx YCL xx – 000

	2-row plug	2-row receptacle	3-row plug	3-row receptacle
C	n x 1.27 – 2.54		(n-2) x 2.54 / 3	
D	C + 6.35		C + 5.08	
E	D + 5.08		D + 5.08	
F	E + 6.35		E + 6.35	
G	F + 6.35		F + 6.35	
h	6.4 MAX		8.95 MAX	
I	8.5 MAX	10.2 MAX	8.5	10.2 MAX
R	3.1		3.1	

All dimensions are given for information only and are in mm [inch], except as otherwise specified

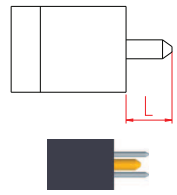
HILINX 2.54 >>> SPECIAL CONTACTS (❷)

FOR 2-ROW CONNECTORS *



POWER contacts

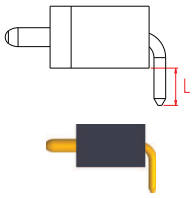
Straight female power contact



- Thru hole soldering
- Mother board
- 2 straight female contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 2.5 [.098]
- Termination section Ø 1.4 $_{MAXI}$[.055]

Module designation	PF1

Right angle male power contact

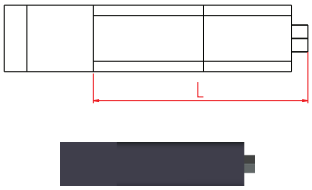


- Thru hole soldering
- Daughter board
- 2 right angle male contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 2.5 [.098]
- Termination section: Ø 1.2 $_{MAXI}$ [.047]

Module designation	PM1

AMPHELUX™ ARINC 801 termini

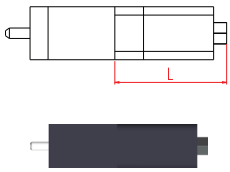
Female amphelux™ contact



- 2 amphelux™ termini
- Multi-mode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXF

Male amphelux™ contact

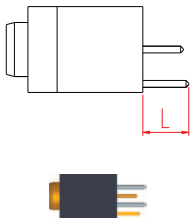


- 2 amphelux™ termini
- Multi-mode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXM

COAXIAL contacts

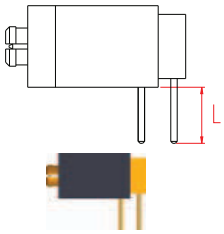
Straight female coaxial contact



- Thru hole soldering
- Mother board or mezzanine connection
- 2 cavities for straight coaxial female contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CF1

Right angle male coaxial contact



- Thru hole soldering
- Daughter board or extender card
- 2 cavities for right angle coaxial male contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CM1

RADSOK® contacts

Female cavity module for RADSOK® contact

- 1 cavity for male RADSOK® contact
- Mother board
- 70A / contact
- Termination section: the body shape, the section and the length of the termination are specific to your need: *consult us*

Consult us	-

Right angle male RADSOK® contact

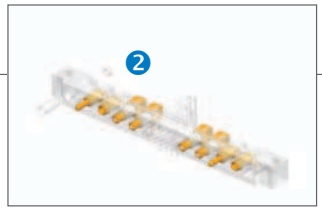
- Fixing with retainer
- Daughter board
- 1 male RADSOK® contact
- 70A / contact
- Termination section: the body shape, the section and the length of the termination are specific to your need: *consult us*

Consult us	-

All dimensions are given for information only and are in mm [inch], except as otherwise specified

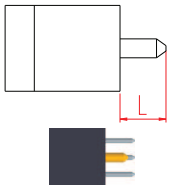
HILINX 2.54 >>> SPECIAL CONTACTS (❷)

FOR 3-ROW CONNECTORS *



POWER contacts

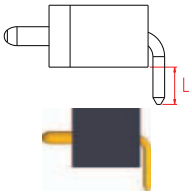
Straight female power contact



- Thru hole soldering
- Mother board
- 2 straight female contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 2.5 [.098]
- Termination section Ø 1.4 $_{MAXI}$[.055]

Module designation	PF1

Right angle male power contact

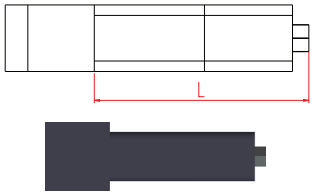


- Thru hole soldering
- Daughter board
- 2 right angle male contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 2.5 [.098]
- Termination section: Ø 1.2 $_{MAXI}$ [.047]

Module designation	PM1

AMPHELUX™ ARINC 801 termini

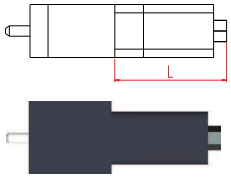
Female amphelux™ contact



- 2 amphelux™ termini
- Multi-mode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXF

Male amphelux™ contact

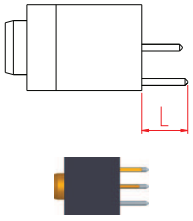


- 2 amphelux™ termini
- Multi-mode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXM

COAXIAL contacts

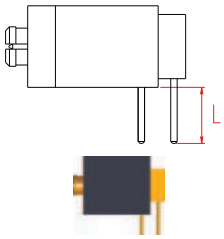
Straight female coaxial contact



- Thru hole soldering
- Mother board or mezzanine connection
- 2 cavities for straight coaxial female contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CF1

Right angle male coaxial contact



- Thru hole soldering
- Daughter board or extender card
- 2 cavities for right angle coaxial male contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CM1

RADSOK® contacts

Female cavity module for RADSOK® contact

- 1 cavity for male RADSOK® contact
- Mother board
- 70A / contact
- Termination section: the body shape, the section and the length of the termination are specific to your need: *consult us*

Consult us	-

Right angle male RADSOK® contact

- Fixing with retainer
- Daughter board
- 1 male RADSOK® contact
- 70A / contact
- Termination section: the body shape, the section and the length of the termination are specific to your need: *consult us*

Consult us	-

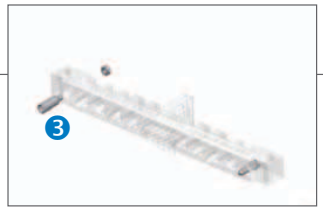
L $_{MAX}$	PF1	PM1	AXF	AXM	CF1	CM1
2 rows	3.4 [.134]	3.825 [.151]	20.47 [.806]	13.4 [.528]	3 [.118]	4.365 [.172]
3 rows	3.4 [.134]	3.55 [.140]	20.47 [.806]	13.4 [.528]	3 [.118]	3 [.118]

	COAXIAL CONTACTS
Impedance (Ω)	50
Voltage rating (V $_{RMS}$)	180
Current rating (mA)	500
Contact retention (N)	50 $_{MIN}$
Frequency range (GHz)	0 to 1
Contact resistance (mΩ)	12 $_{MAX}$
VSWR at 1 (GHz)	1.3 $_{MAX}$
Insertion and extraction force per contact (N)	1 ≤ F ≤ 15

** Hybrid modules will be preferably positioned on the connector sides*

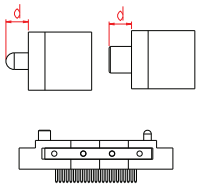
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> KEYING & GUIDING (❸)



NON KEYING GUIDES

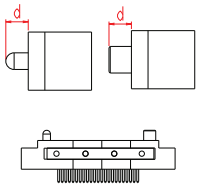
65



- 1 female socket and 1 male pin
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX2 - - --- --- **65** ---

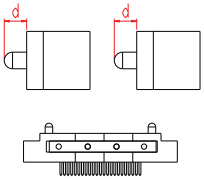
66



- 1 male pin and 1 female socket
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX2 - - --- --- **66** ---

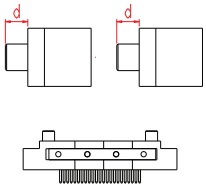
67



- 2 male guide pins
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX2 - - --- --- **67** ---

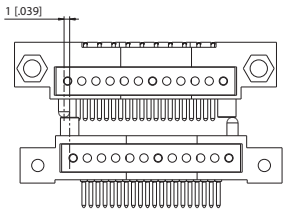
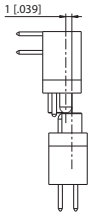
68

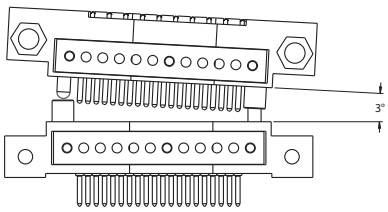
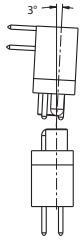


- 2 female guide sockets
- Non keying
- For plug or receptacle
- Passivated stainless steel

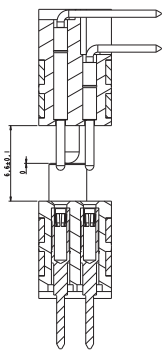
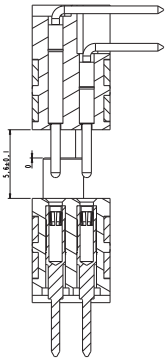
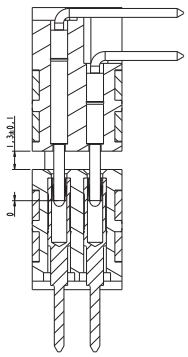
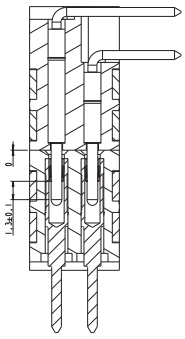
HLX2 - - --- --- **68** ---

REALIGNMENT CAPABILITY

In the longitudinal axis	In the lateral axis
	

In the longitudinal axis	In the lateral axis
	

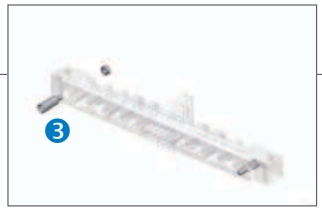
MATING SEQUENCE*

Guiding		Signal contact	Mated connector
			
6.6 ± 0.1 [.260 ± .004]	5.6 ± 0.1 [.220 ± .004]	1.3 ± 0.1 [.051 ± .004]	1.3 ± 0.1 [.051 ± .004]

** Except for crimp contacts. Backoff is 0.9 [.035] only for crimp contacts.*

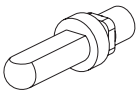
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> KEYING & GUIDING (❸)



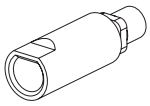
KEYING GUIDES

D shaped male guide pin



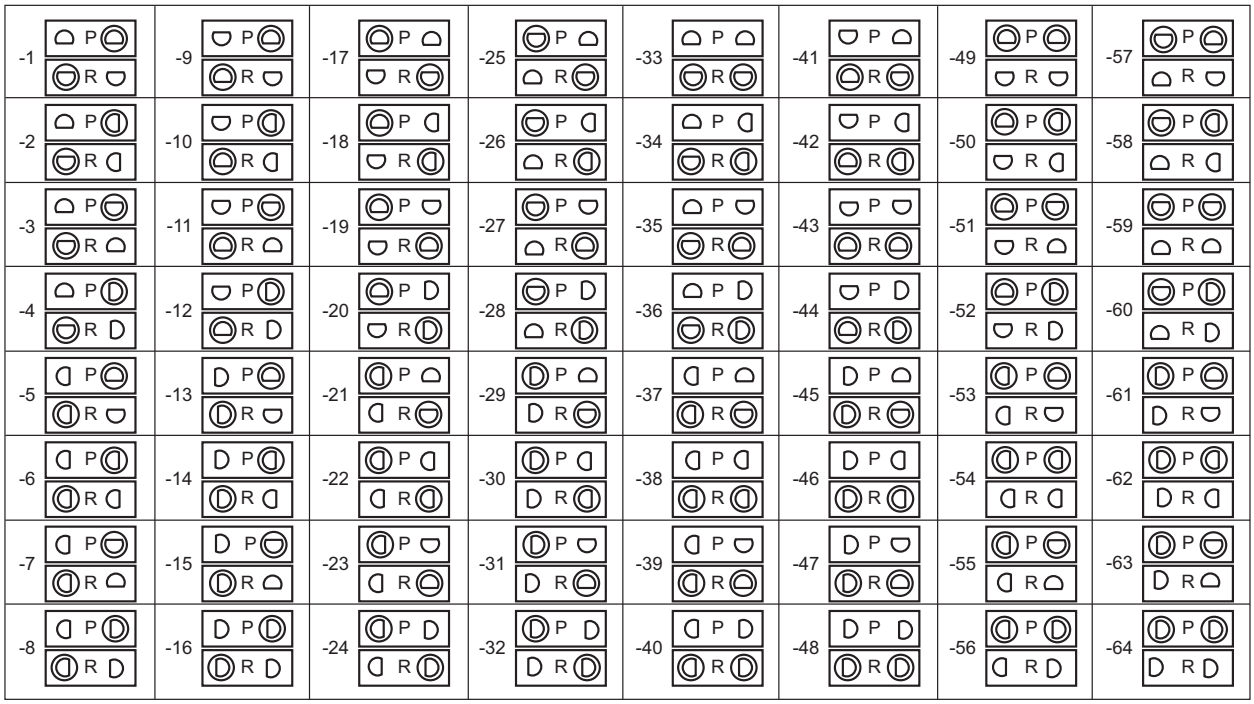
- 4 keying possibilities
- Realignment capability: 1 [.039]
- For plug or receptacle
- Electroless nickel over brass

D shaped female guide socket



- 4 keying possibilities
- Realignment capability: 1 [.039]
- For plug or receptacle
- Electroless nickel over brass

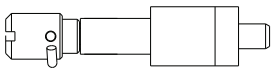
CONNECTOR POLARIZATION WITH 'D' SHAPED GUIDE PINS AND SOCKETS



	Non keying male pin guide	Non keying female socket guide	Keying male pin guide	Keying female socket guide
d	3.3 ± 0.2 [.130 ± .008]			

SPECIAL KEYING CAPABILITIES

Jackset-Jackscrew-Jacksocket



- Turning jackset / Reversed turning jackset
- Turning jackscrew
- Turning jacksocket

Consult us	-

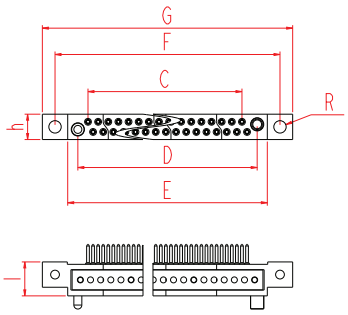
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> SIGNAL CONTACT VERSION (❹)

TYPICAL ARRANGEMENTS 2 ROWS

n indicates the total number of signal contacts**

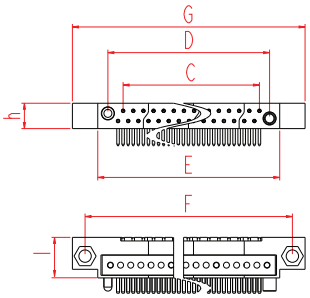
2-row signal contact receptacles, from 10 to 70 contacts*



n = 10, 14, 16, 20, 24, 26, 30, 34, 36, 40, 44, 46, 50, 54, 56, 60, 64, 66, 70**

C	n x 1.27 – 2.54
D	C + 6.35
E	D + 5.08
F	E + 6.35
G	F + 6.35
h	6.4 MAX
I	8.5 MAX
R	3.1

2-row signal contact plugs, from 10 to 70 contacts*



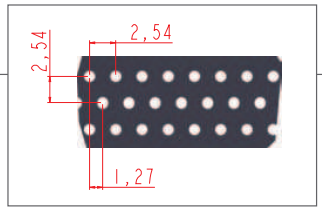
n = 10, 14, 20, 24, 26, 30, 34, 36, 40, 44, 46, 50, 54, 56, 60, 64, 66, 70**

C	n x 1.27 -2.54
D	C + 6.35
E	D + 5.08
F	E + 6.35
G	F + 6.35
h	6.4 MAX
I	10.2 MAX

** in mm. 1mm = 0.03937 inch*

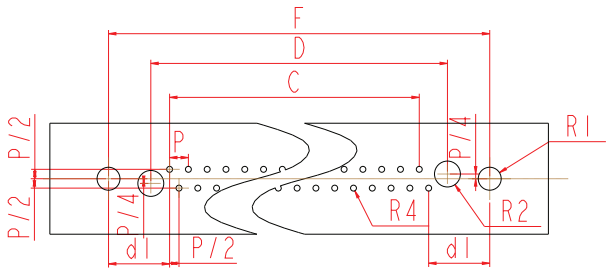
*** Further arrangements up to 160 contacts, with or without central fitting, are available, consult us*

HILINX 2.54 >>> SIGNAL CONTACT VERSION (❹)



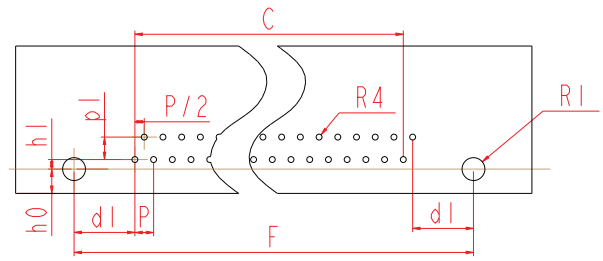
LAYOUTS 2 ROWS

The boards are shown from the connector side
All contact locations are equidistant.

n	YC/YCS/YCL CONTACT (male for plug)*
2 ROWS FROM 10 TO 70 CONTACTS**	

n = 10, 14, 20, 24, 26, 30, 34, 36, 40, 44, 46, 50, 54, 56, 60, 64, 66, 70**

C	n x 1.27 – 2.54
D	C + 6.35
F	C + 17.78

n	YC/YCS/YCL CONTACT (male for plug)*
2 ROWS FROM 10 TO 70 CONTACTS**	

n = 10, 14, 20, 24, 26, 30, 34, 36, 40, 44, 46, 50, 54, 56, 60, 64, 66, 70**

C	n x 1.27 – 2.54
F	C + 17.78

p	p/2	p/4	p1	R1	R2	R4	d1	h0	h1
2.54 [.100]	1.27 [.050]	0.635 [.025]	3.05 [.120]	To be defined by customer. Hardware is not provided with connector.	Not compulsory. 3.75 ± 0.1 [.18 ± .004]	Ø 0.8 $_{MIN}$ [.031] With metallization	8.255 [.325]	5.3 $_{MAX}$ [.209]	1.27 [.050]

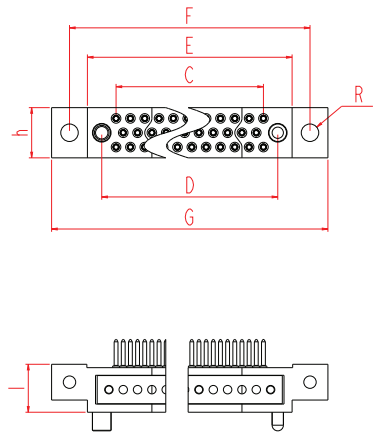
**in mm. 1mm = 0.03937 inch*
*** Further arrangements up to 160 contacts, with or without central fitting, are available, consult us*

HILINX 2.54 >>> SIGNAL CONTACT VERSION (4)

TYPICAL ARRANGEMENTS 3 ROWS

n indicates the total number of signal contacts**

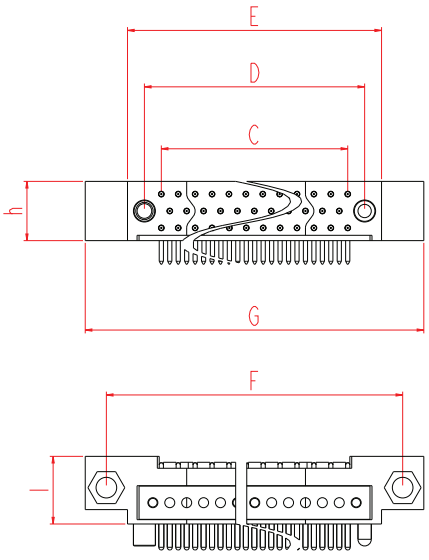
3-row signal contact receptacles, from 50 to 170 contacts*



n = 00, 06, 08, 12, 14, 18, 20, 24, 26, 30, 32, 36, 38, 42, 44, 48, 50, 54, 56, 60, 62, 66, 68, 72, 74, 78, 80, 84, 86, 90, 92, 96, 98, 102, 104, 108, 110, 114, 116, 120, 122, 126, 128, 132, 134, 138, 140, 144, 146, 150, 152, 156, 158, 162, 164, 168, 170**

C	(n – 2) x 2.54 / 3
D	C + 5.08
E	D + 5.08
F	E + 6.35
G	F + 6.35
h	8.95 MAX
I	8.5
R	3.1

3-row signal contact plugs, from 50 to 170 contacts*



n = 00, 06, 08, 12, 14, 18, 20, 24, 26, 30, 32, 36, 38, 42, 44, 48, 50, 54, 56, 60, 62, 66, 68, 72, 74, 78, 80, 84, 86, 90, 92, 96, 98, 102, 104, 108, 110, 114, 116, 120, 122, 126, 128, 132, 134, 138, 140, 144, 146, 150, 152, 156, 158, 162, 164, 168, 170**

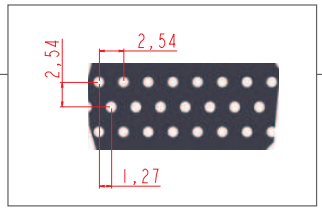
C	(n – 2) x 2.54 / 3
D	C + 5.08
E	D + 5.08
F	E + 6.35
G	F + 6.35
h	8.95 MAX
I	10.16

in mm. 1mm = 0.03937 inch

*** Further arrangements up to 188 contacts, with or without central fitting, are available, consult us*

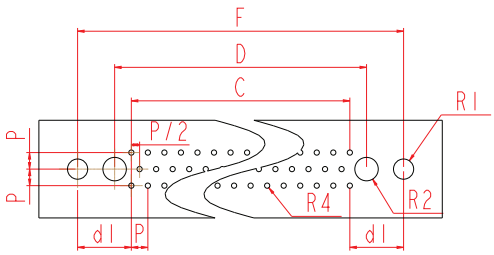
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> SIGNAL CONTACT VERSION (❹)



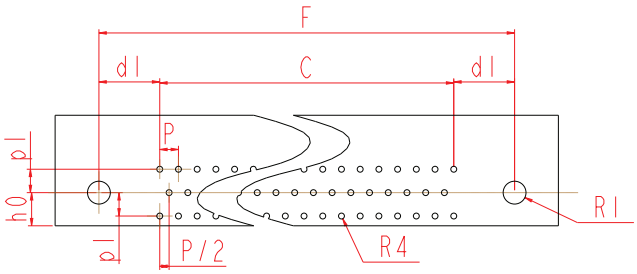
LAYOUTS 3 ROWS

The boards are shown from the connector side
All contact locations are equidistant.

n	YD/YDS/YDL & YP CONTACT (female for receptacle)*
3 ROWS FROM 50 TO 170 CONTACTS**	

n = 00, 06, 08, 12, 14, 18, 20, 24, 26, 30, 32, 36, 38, 42, 44, 48, 50, 54, 56, 60, 62, 66, 68, 72, 74, 78, 80, 84, 86, 90, 92, 96, 98, 102, 104, 108, 110, 114, 116, 120, 122, 126, 128, 132, 134, 138, 140, 144, 146, 150, 152, 156, 158, 162, 164, 168, 170**

C	(n – 2) x 2.54 / 3
D	C + 5.08
F	C + 16.51

n	YC/YCS/YCL CONTACT (male for plug)*
3 ROWS FROM 50 TO 170 CONTACTS**	

n = 00, 06, 08, 12, 14, 18, 20, 24, 26, 30, 32, 36, 38, 42, 44, 48, 50, 54, 56, 60, 62, 66, 68, 72, 74, 78, 80, 84, 86, 90, 92, 96, 98, 102, 104, 108, 110, 114, 116, 120, 122, 126, 128, 132, 134, 138, 140, 144, 146, 150, 152, 156, 158, 162, 164, 168, 170**

C	(n – 2) x 2.54 / 3
F	C + 16.51

p	p/2	p1	R1	R2	R4	d1	h0
2.54 [.100]	1.27 [.050]	3.175 [.125]	To be defined by customer. Hardware is not provided with connector.	Not compulsory. 3.75 ± 0.1 [.18 ± .004]	Ø 0.8 $_{MIN}$ [.031] With metallization	8.255 [.325]	3.5 $_{MIN}$ [.138]

** in mm: 1mm = 0.03937 inch*

*** Further arrangements up to 188 contacts, with or without central fitting, are available, consult us*

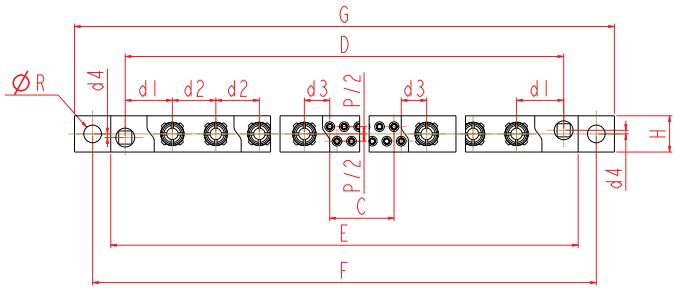
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> HYBRID VERSION (❹)

DIMENSIONS 2 ROWS**

s indicates the total number of special contacts.
n indicates the total number of signal contacts

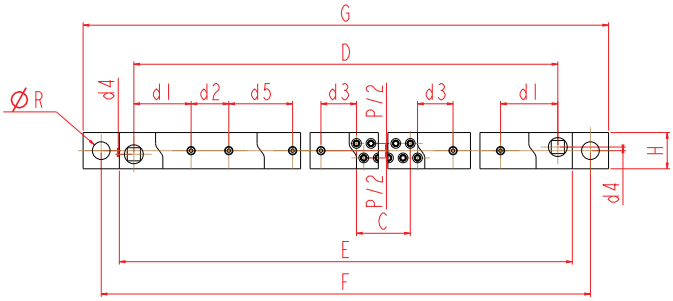
Power contacts 20A*



s = 2, 4, 6…

C	n x 1.27 – 2.54
D	8.89 + s x 7.62 + n x 1.27
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	6.4 MAX
d1	8.25 [.325]
d2	7.62 [.300]
d3	4.445 [.175]
d4	0.635 [.025]
R	3.1+0.1 [.122 + .004]
p/2	1.27 [.050]

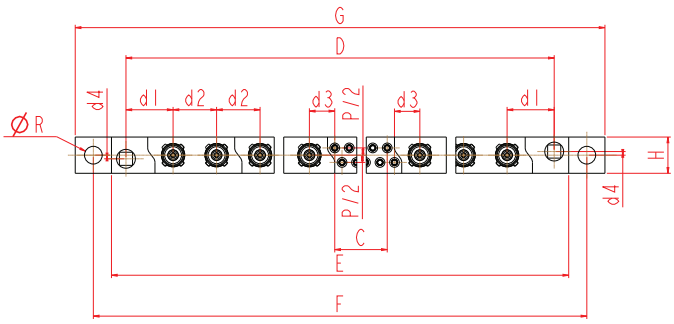
AMPHELUX™ contacts*



s = 2, 4, 6…

C	n x 1.27 – 2.54
D	8.89 + s x 8.89 + n x 1.27
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	6.4 MAX
d1	10.035 [.395]
d2	6.6 [.260]
d3	6.225 [.245]
d4	0.635 [.025]
d5	11.18 [.440]
R	3.1+0.1 [.122 + .004]
p/2	1.27 [.050]

Coaxial contacts*



s = 2, 4, 6…

C	n x 1.27 – 2.54
D	8.89 + s x 7.62 + n x 1.27
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	6.4 MAX
d1	8.25 [.325]
d2	7.62 [.300]
d3	4.445 [.175]
d4	0.635 [.025]
R	3.1+0.1 [.122 + .004]
p/2	1.27 [.050]

RADSOK® contacts 70A*

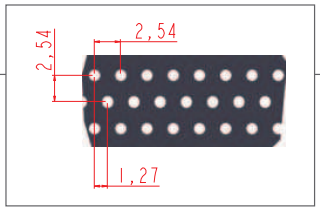
Please consult us

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferrably positionned on the connector sides*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> HYBRID VERSION (❹)

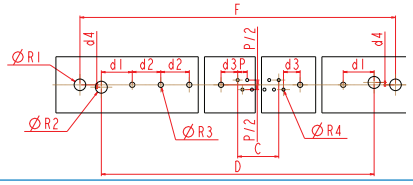


LAYOUTS 2 ROWS**

The boards are shown from the connector side
All contact locations are equidistant.

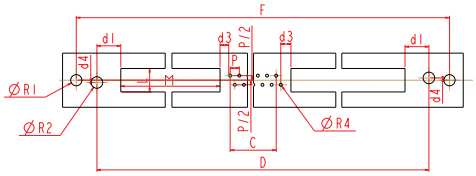
With YD/YDS/YDL & YP CONTACT (female for receptacle)*

WITH POWER CONTACT 20A



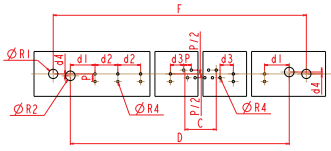
C	n x 1.27 – 2.54
D	8.89 + s x 7.62 + n x 1.27
F	D + 11.43

WITH AMPHELUX™ CONTACT



C	n x 1.27 – 2.54
D	8.89 + s x 8.89 + n x 1.27
F	D + 11.43
L	6.45 MIN
M	Depending on s

WITH COAXIAL CONTACT

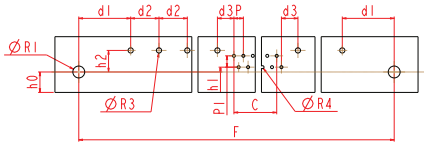


C	n x 1.27 – 2.54
D	8.89 + s x 7.62 + n x 1.27
F	D + 11.43

YDS/YD/YDL & YP	d_1	d_2	d_3	d_4	R_1	R_2	R_3	R_4	p/2	p
Power	8.25 [.325]	7.62 [.300]	4.445 [.175]	0.635 [.025]	3.1 MIN [.122]	3.6 MIN [.142]	1.5 MIN [.059]	0.75 MIN [.030]	1.27 [.050]	2.54 [.100]
Amphelux™	6.61 MAX [.260]		2.8 MAX [.110]							
Coaxial	8.25 [.325]	7.62 [.300]	4.445 [.175]							

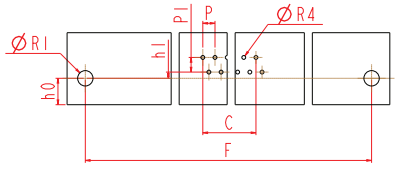
With YC/YCS/YCL CONTACT (male for plug)*

WITH POWER CONTACT 20A



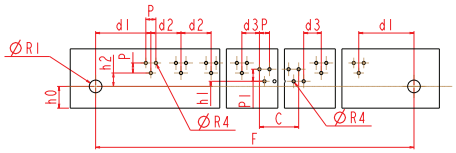
C	n x 1.27 – 2.54
F	20.32 + s x 7.62 + n x 1.27

WITH AMPHELUX™ CONTACT



C	n x 1.27 – 2.54
F	20.32 + s x 8.89 + n x 1.27

WITH COAXIAL CONTACT



C	n x 1.27 – 2.54
D	8.89 + s x 7.62 + n x 1.27
F	20.32 + s x 7.62 + n x 1.27

YC/YCS/YCL	d_1	d_2	d_3	R_1	R_3	R_4	p	p_1	h_1	h_0	h_2
Power	13.97 [.550]	7.62 [.300]	4.445 [.175]	3.1 MIN [.122]	1.5 MIN [.059]	0.75 MIN [.030]	2.54 [.100]	3.048 [.120]	1.2954 [.051]	3.5 MIN [.138]	5.8 [.228]
Amphelux™											
Coaxial	13.97 [.550]	7.62 [.300]	4.445 [.175]								3.39 [.133]

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferrably positionned on the connector sides*

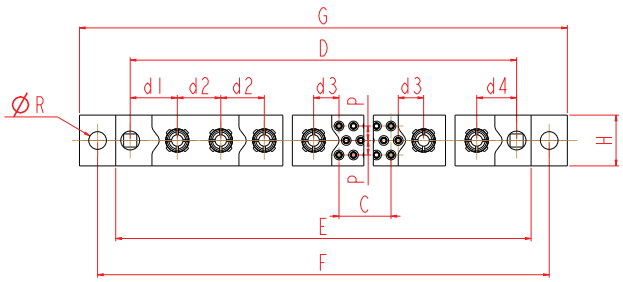
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> HYBRID VERSION (4)

DIMENSIONS 3 ROWS**

s indicates the total number of special contacts.
n indicates the total number of signal contacts

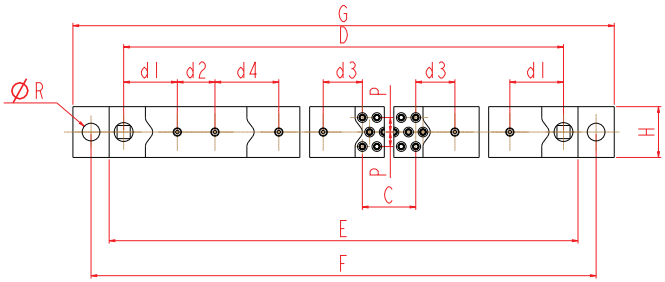
Power contacts 20A*



s = 2, 4, 6…

C	(n – 2) x 2.54 / 3
D	7.62 + s x 7.62 + n x 0.847
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	8.95 MAX
d1	8.255 [.325]
d2	7.62 [.300]
d3	4.445 [.175]
d4	6.985 [.275]
R	3.1 +0.1 [.122 +.004]
p	2.54 [.100]

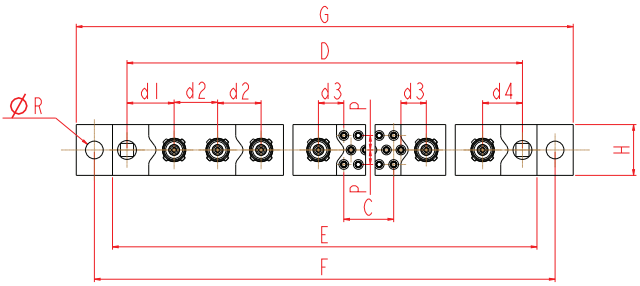
AMPHELUX™ contacts*



s = 2, 4, 6…

C	(n – 2) x 2.54 / 3
D	7.62 + s x 8.89 + n x 0.847
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	8.95 MAX
d1	9.4 [.370]
d2	6.6 [.260]
d3	6.86 [.270]
d4	11.18 [.440]
R	3.1 +0.1 [.122 +.004]
p	2.54 [.100]

Coaxial contacts*



s = 2, 4, 6…

C	(n – 2) x 2.54 / 3
D	7.62 + s x 7.62 + n x 0.847
E	D + 5.08
F	E + 6.35
G	F + 6.35
H	8.95 MAX
d1	8.255 [.325]
d2	7.62 [.300]
d3	4.445 [.175]
d4	6.985 [.275]
R	3.1 +0.1 [.122 +.004]
p	2.54 [.100]

RADSOK® contacts 70A*

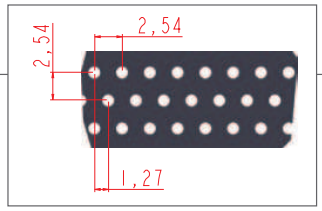
Please consult us

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferrably positionned on the connector sides*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 2.54 >>> HYBRID VERSION (❹)

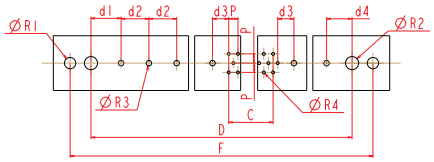


LAYOUTS 3 ROWS**

The boards are shown from the connector side
All contact locations are equidistant.

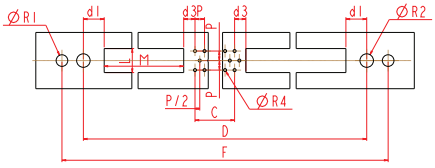
With YD/YDS/YDL & YP CONTACT (female for receptacle)*

WITH POWER CONTACT 20A



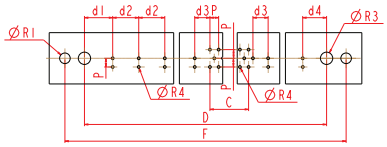
C	(n – 2) x 2.54 / 3
D	7.62 + s x 7.62 + n x 0.847
F	D + 11.43

WITH AMPHELUX™ CONTACT



C	(n – 2) x 2.54 / 3
D	7.62 + s x 8.89 + n x 0.847
F	D + 11.43
L	6.45 MIN
M	Depending on s

WITH COAXIAL CONTACT

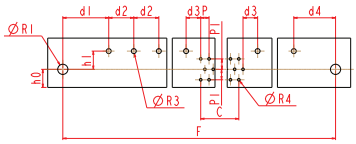


C	(n – 2) x 2.54 / 3
D	7.62 + s x 7.62 + n x 0.847
F	D + 11.43

YDS/YD/YDL & YP	d_1	d_2	d_3	d_4	R_1	R_2	R_3	R_4	p/2	p
Power	8.255 [.325]	7.62 [.300]	4.445 [.175]	6.985 [.275]	3.1 MIN [.122]	3.6 MIN [.142]	1.5 MIN [.059]	0.75 MIN [.030]	1.27 [.050]	2.54 [.100]
Amphelux™	5.55 MAX [.219]		3.0 MAX [.118]							
Coaxial	8.255 [.325]	7.62 [.300]	4.445 [.175]	6.985 [.275]						

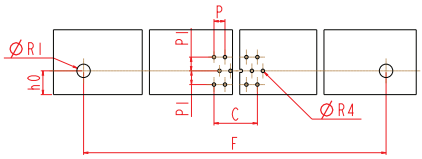
With YC/YCS/YCL CONTACT (male for plug)*

WITH POWER CONTACT 20A



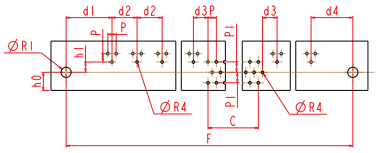
C	(n – 2) x 2.54 / 3
F	19.05 + s x 7.62 + n x 1.27

WITH AMPHELUX™ CONTACT



C	(n – 2) x 2.54 / 3
F	19.05 + s x 8.89 + n x 1.27

WITH COAXIAL CONTACT



C	(n – 2) x 2.54 / 3
F	19.05 + s x 7.62 + n x 1.27

YC/YCS/YCL	d_1	d_2	d_3	d_4	R_1	R_3	R_4	p	p_1	h_1	h_0
Power	13.97 [.550]	7.62 [.300]	4.445 [.175]	12.7 [.500]	3.1 MIN [.122]	1.5 MIN [.059]	0.75 MIN [.030]	2.54 [.100]	3.048 [.120]	5.545 [.218]	5.3 MIN [.209]
Amphelux™											
Coaxial	13.97 [.550]	7.62 [.300]	4.445 [.175]	12.7 [.500]						3.135 [.123]	

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferrably positionned on the connector sides*

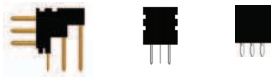
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> GENERAL SPECIFICATIONS

HIGH DENSITY

- **A unique connector, both hybrid and modular**
- **Cost effective, easy to install, highly reliable**
- **More current through each contact**
- **Greater performance and optimal protection in harsh environments**
- **Compatible with signal connectors on the market (MIL-DTL-55302/190 to /193)**
- **1.905[.075] staggered grid (0.9525[.0375] offset), 1.905[.075] between rows**

Terminations

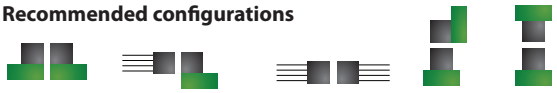


Special contacts

Main characteristics

- High density: 0.16 cts / mm² [103 cts / inch²]
- From 2 to 3 rows, 10 to 206 signal contacts
- 3A per signal contact (up to 5A current rating available upon request)
- Press-fit solderless attachment technology available
- Some signal contact version are 100% compatible with the M55302 /190 to /193.

Recommended configurations



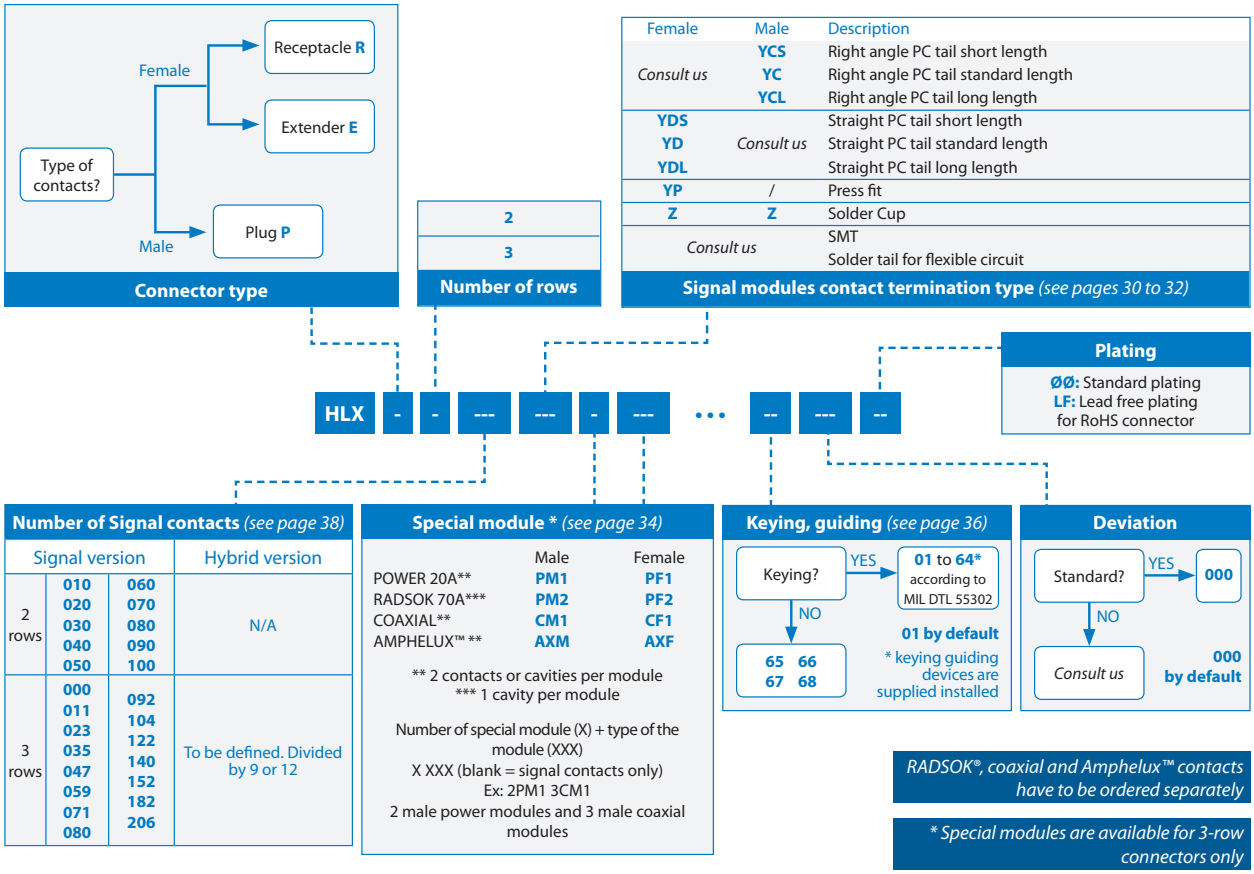
Markets

Standard

MIL-DTL-55302
/190 to /193

Main applications

How to order

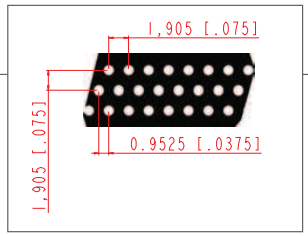


RADSOK®, coaxial and Amphelux™ contacts have to be ordered separately

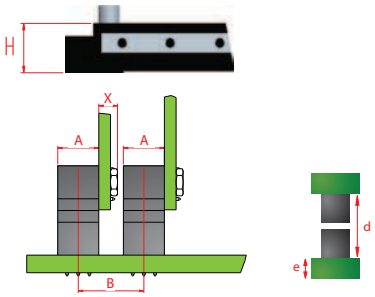
** Special modules are available for 3-row connectors only*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> TECHNICAL SPECIFICATIONS



DIMENSIONAL CHARACTERISTICS



H = 7.62 $_{MAX}$ [.300]
A = 5.12 $_{MAX}$ [.202] for 2-row connectors
A = 7 $_{MAX}$ [.276] for 3-row connectors
B = 5.72 + X [.225 + X] for 2-row connectors
B = 7.6 + X [.300 + X] for 3-row connectors
X = Board thickness + hardware thickness
d = 15.24 $_{MAX}$ [.600]
e = 1.8 [.071] to 3.4 [.134] or 2.5 $_{MIN}$ [.098] (for YP contacts)

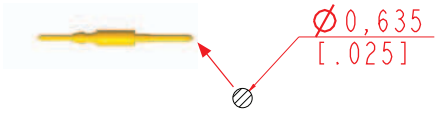
FEMALE CONTACT

Starclip female technology: 6 tines for better reliability
- 6 contact tines instead of 4
- Excellent mechanical and electrical reliability
- Better resistance to high vibrations
- Improved electrical conductivity
- 100% compatible with other connectors

Material
- Hood: machined brass alloy
- Clip: CuBe[BeCu], stamped and formed

Plating
- Hood: tin lead or lead free
- Clip: gold over nickel

MALE CONTACT



- **Mating end diameter:** Ø 0.635 [.025]
- **Mating end section** (mating side): 0.32 mm² [.0005 in²]
- **Material:** brass alloy (machined)
- **Plating:** gold over nickel

MATERIALS

- **Guiding devices:** electroless nickel plating over brass CuZn or passivated stainless steel 303
- **Rails:** passivated stainless steel 316L
- **Plastic insert:** thermoplastic LCP, 30% glass-fiber filled

MECHANICAL CHARACTERISTICS	MIL DTL 55302 sections	
Backoff[1] (mm)	0.8 $_{MAX}$ [.031]	N/A
Mating force per contact (N)	0.85 $_{MAX}$	§ 4.5.3
Unmating force per contact (N)	0.35 < F < 0.85	§ 4.5.3
Durability cycles	500	§ 4.5.9
Sinusoidal vibrations (10 to 2000 Hz) micro discontinuity 2ns	15 g	§ 4.5.10
Random vibrations (5 to 2000 Hz) micro discontinuity 2ns	0.5 g² / Hz	§ 4.5.10
Shocks 6ms ½ sinus 2ns	100 g	§ 4.5.10
ENVIRONMENTAL CHARACTERISTICS		
Thermal shocks (°C)	-65 / +150	§ 4.5.13
Salt Spray (hours)	96	§ 4.5.11
Humidity		
Days	10	§ 4.5.15
Temperature (°C)	25/65	
Humidity rate (%)	90-95	
ELECTRICAL CHARACTERISTICS		
Current rating per contacts (A)	3*	§ 4.5.5
Insulation resistance (at 500Vdc) (GΩ)	5 $_{MIN}$	§ 4.5.8
Contact resistance (mΩ)	10 $_{MAX}$	§ 4.5.12
Dielectric Withstanding Voltage (Vrms)	750 $_{MIN}$	§ 4.5.7.1

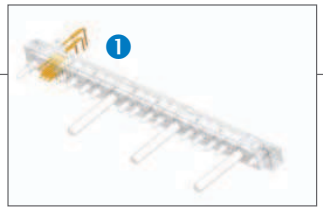
[1]: When both connectors are fully mated, the backoff is the maximum distance the connectors can be unmated while functioning properly

** Other, please consult us*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> SIGNAL CONTACTS (❶)

FEMALE CONTACTS FOR RECEPTACLES



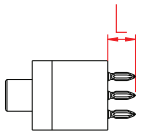
Starclip female technology

- 6 contact tines instead of 4
- Excellent mechanical and electrical reliability
- Better resistance to high vibrations
- Improved electrical conductivity
- 100% compatible with other connectors

- Size 23: high average current
- Clip for male contact Ø 0.635 [.025]
- **Plating** on active part (clip)

Cu	Ni	**Au**
1 [.039]	3.5 [.138]	**1.3 [.051]**

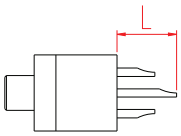
Press-fit



- Solderless assembly
- Mother board or mezzanine connection
- PCB thickness: 2.5 $_{MIN}$ [.098]
- Insertion forces: 65 N typical

Termination style **YP**

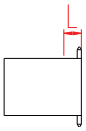
Solder cup*



- Hard soldering on wire
- Mother board for cable to board connection
- Solder cup for 24 to 28 AWG wire

Consult us **Z**

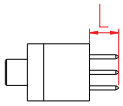
SMT*



- SMT soldering
- PCB thickness: specific, *consult us*

Consult us **T**

Soldering on flex*



- Hard soldering on flexible circuit
- PCB thickness: specific, *consult us*

Consult us **Y**

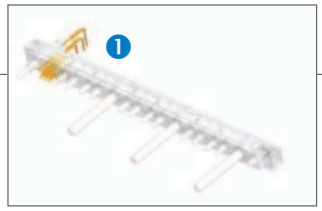
	YP	Z*	T*	Y*
L $_{MAX}$	2.8 ± 0.2 [.110 ± .008]	5.5 ± 0.2 [.217 ± .008]	1.85 [.073]	2.4 ± 0.2 [.094 ± .008]
Termination section	Ø 0.82 [.032]	Ø 0.75 $_{MAX}$ [.030]	Ø 0.51 $_{MAX}$ [.020]	
Barrel standard termination plating µm [µin]	2 [.079] Ni electrolytic + 15.2 [.598] Ni electroless + 10 [.394] Sn Pb	3 [.118] Ni + 10 [.394] Sn Pb		
Barrel RoHS termination plating* µm [µin]	N/A	2.5 [.089] Ni + 5 [.197] bright pure Sn		

** Consult us*

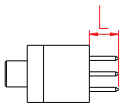
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> SIGNAL CONTACTS (❶)

FEMALE CONTACTS FOR RECEPTACLES



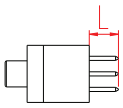
Short straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 1.8 $_{MAX}$ [.071]

Termination style **YDS**

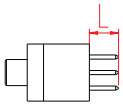
Standard straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 2.5 $_{MAX}$ [.098]

Termination style **YD**

Long straight PC tail



- Thru hole soldering
- Mother board or mezzanine connection
- PCB thickness: 3.5 $_{MAX}$ [.138]

Termination style **YDL**

Short right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YCS**

Standard right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YC**

Long right angle PC tail*

- Thru hole soldering
- Extender card
- PCB thickness: *consult us*

Consult us **YCL**

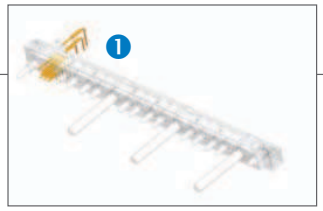
	YDS	YD	YDL	YCS*	YC*	YCL*
L $_{MAX}$	2.8 ± 0.2 [.110 ± .008]	3.5 ± 0.2 [.140 ± .008]	4.4 ± 0.2 [.172 ± .008]	*Consult us*		
Termination section	Ø 0.51 $_{MAX}$ [.020]					
Barrel standard termination plating µm [µin]	3 [.118] Ni + 10 [.394] Sn Pb					
Barrel RoHS termination plating* µm [µin]	2.5 [.089] Ni + 6 [.197] bright pure Sn					

** Consult us*

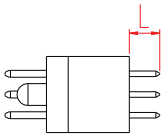
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> SIGNAL CONTACTS (❶)

MALE CONTACTS FOR PLUGS



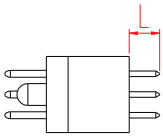
Short straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 1.8 $_{MAX}$ [.071]

Consult us | **YDS**

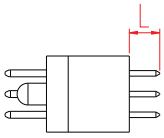
Standard straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 2.5 $_{MAX}$ [.098]

Consult us | **YD**

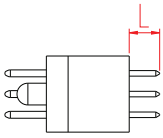
Long straight PC tail*



- Thru hole soldering
- Daughter board or mezzanine connection
- PCB thickness: 3.5 $_{MAX}$ [.138]

Consult us | **YDL**

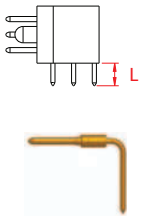
Soldering on flex*



- Hard soldering on flexible circuit
- SMT connection
- PCB thickness: *consult us*

Consult us | **Y**

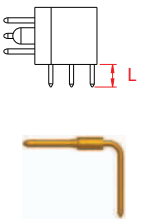
Short right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 1.8 $_{MAX}$ [.071]

Termination style | **YCS**

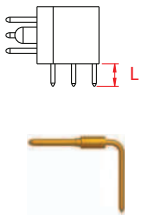
Standard right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 2.5 $_{MAX}$ [.098]

Termination style | **YC**

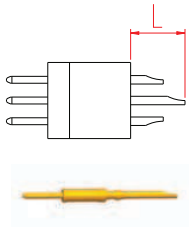
Long right angle PC tail



- Thru hole soldering
- Daughter board or extender card
- PCB thickness: 3.5 $_{MAX}$ [.138]

Termination style | **YCL**

Solder cup*



- Hard soldering on wire
- Daughter board for cable to board connection
- Solder cup for 24 to 28 AWG wire

Consult us | **Z**

	YDS*	YD*	YDL*	Y*	YCS	YC	YCL	Z*
L $_{MAX}$	2.8 ± 0.2 [.110 ± .008]	3.5 ± 0.2 [.140 ± .008]	4.4 ± 0.2 [.172 ± .008]	2.4 ± 0.2 [.094 ± .008]	2.8 ± 0.2 [.110 ± .008]	3.5 ± 0.2 [.140 ± .008]	4.4 ± 0.2 [.173 ± .008]	5 $_{MAX}$ ± 0.2 [.197 ± .008]
Termination section	Ø 0.51 $_{MAX}$ [.020]							Ø 0.8 $_{MAX}$ [.032]
Mating end diameter	Ø 0.635 ± 0.02 [.025 ± .001]							
Plating µm [µin]	1 [.039] Cu + 3.5 [.138] Ni + **1.3 [.051] Au**							

** Consult us*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

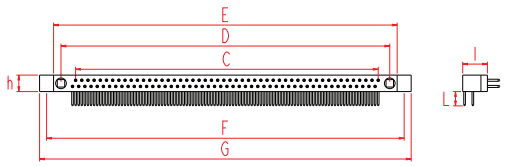
HILINX 1.905 >>> SIGNAL VERSION ONLY

COMPATIBILITY WITH THE MIL DTL 55302 /190 TO /193 DETAILED SHEETS

MIL-DTL-55302
/190 to /193

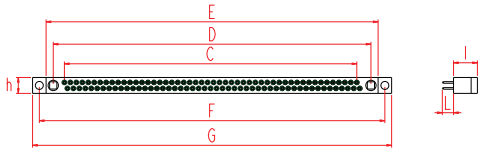
2 rows / 100 signal contacts

Plug: withYCS / YC / YCL contacts



HLX P 2 100 YCS xx – 000
HLX P 2 100 YC xx – 000
HLX P 2 100 YCL xx – 000

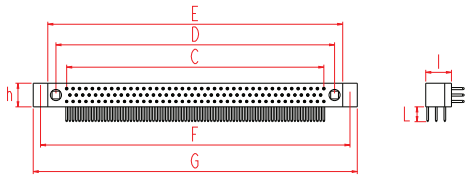
Receptacle: with YDS / YD / YDL contacts



HLX P 2 100 YCS xx – 000
HLX P 2 100 YC xx – 000
HLX P 2 100 YCL xx – 000

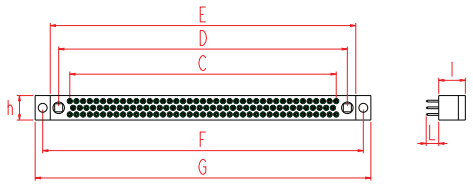
3 rows / 122 signal contacts

Plug: withYCS / YC / YCL contacts



HLX P 2 122 YCS xx – 000
HLX P 2 122 YC xx – 000
HLX P 2 122 YCL xx – 000

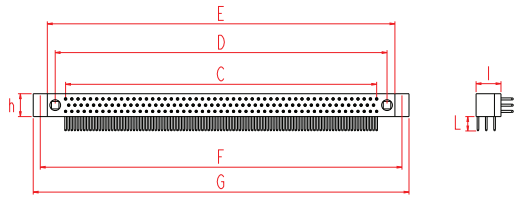
Receptacle: with YDS / YD / YDL contacts



HLX P 2 122 YCS xx – 000
HLX P 2 122 YC xx – 000
HLX P 2 122 YCL xx – 000

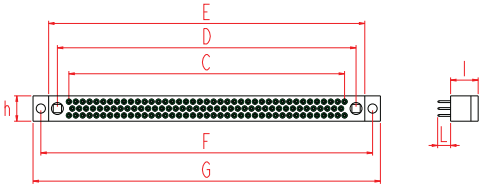
3 rows / 152 signal contacts

Plug: withYCS / YC / YCL contacts



HLX P 2 152 YCS xx – 000
HLX P 2 152 YC xx – 000
HLX P 2 152 YCL xx – 000

Receptacle: with YDS / YD / YDL contacts

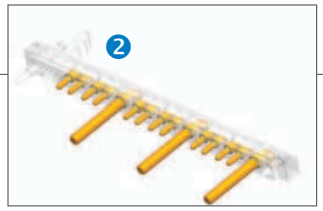


HLX P 2 152 YCS xx – 000
HLX P 2 152 YC xx – 000
HLX P 2 152 YCL xx – 000

	2 rows 100 cts YCS/YC/YCL	2 rows 100 cts YDS/YD/YDL	3 rows 122 cts YCS/YC/YCL	3 rows 122 cts YDS/YD/YDL	3 rows 152 cts YCS/YC/YCL	3 rows 152 cts YDS/YD/YDL
C	93.35 [3.675]		76.20 [3.000]		95.25 [3.750]	
D	101.40 [3.992]		82.55 [3.250]		101.60 [4.000]	
E	106.00 [4.173]		87.39 [3.441]		106.44 [4.191]	
F	110.29 [4.342]		91.68 [3.609]		110.73 [4.359]	
G	114.70 [4.516]		96.09 [3.783]		115.14 [4.533]	
h	5.12 [.202]		7 [.276]			
I	7.62 [.300]					
L_{xxS}	2.8 ± 0.2 [.110 ± .008]					
L_{xx}	3.5 ± 0.2 [.140 ± .008]					
L_{xxL}	4.4 ± 0.2 [.172 ± .008]					

All dimensions are given for information only and are in mm [inch], except as otherwise specified

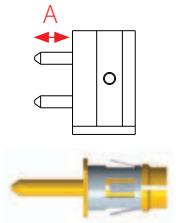
HILINX [1.905] >>> SPECIAL CONTACTS (❷)



HYBRID MODULES FOR 3-ROW CONNECTORS*

POWER contacts

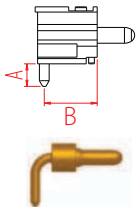
Straight female power module



- Thru hole soldering
- Mother board
- 2 straight female contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 3.4 [.134]
- Termination section Ø 1.4 $_{MAX}$ [.055]

Module designation	PF1

Right angle male power module

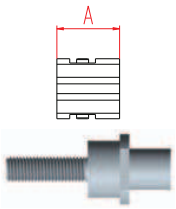


- Thru hole soldering
- Daughter board
- 2 right angle male contacts
- 20A / contact
- PCB thickness: 1.8 [.071] to 3.4 [.134]
- Termination section: Ø 1.2 $_{MAX}$ [.047]

Module designation	PM1

RADSOK® contacts

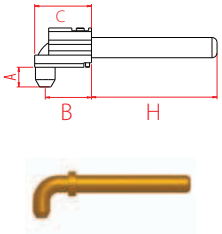
Female cavity module for RADSOK® contact



- 1 cavity for male RADSOK® contact
- Mother board
- 70A / contact
- Termination section: the body shape, the section and the length of the termination are specific to your need: *consult us*

Module designation	PF2

Right angle male RADSOK® contact

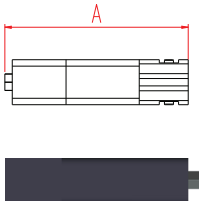


- Fixing with retainer
- Daughter board
- 1 male RADSOK® contact
- 70A / contact
- H: the body shape, the section and the length of the termination are specific to your need: *consult us*

Module designation	PM2

AMPHELUX™ ARINC 801 termini

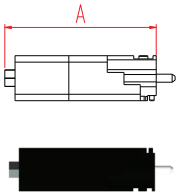
Female amphelux™ module



- 2 amphelux™ termini
- Multimode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXF

Male amphelux™ module



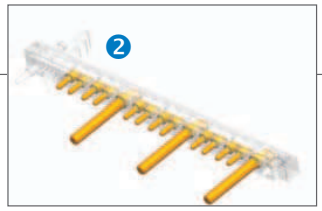
- 2 amphelux™ termini
- Multimode
- Modules are supplied less contacts, *consult us*
- Complied with the ARINC 801 specification
- Keyed to provide anti-rotation

Module designation	AXM

	PF1	PF2	PM1	PM2	AXF	AXM
A	4.1 ± 0.2 [.161 ± .008]	7.62 $_{MAX}$ [.300]	2.8 ± 0.2 [.110 ± .008] 3.5 ± 0.2 [.140 ± .008] 4.4 ± 0.2 [.172 ± .008]		28.5 ± 0.2 [1.122 ± .008]	23.6 ± 0.2 [.929 ± .008]
B			6.5 [.256]	8.23 [.324]		
C				10.1 $_{MAX}$ [.398]		

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> SPECIAL CONTACTS (❷)



HYBRID MODULES FOR 3-ROW CONNECTORS*

COAXIAL contacts

Straight female coaxial module

- Thru hole soldering
- Mother board or mezzanine connection
- 2 cavities for straight coaxial female contacts
- For more information, *consult us*
- Modules are supplied less contacts

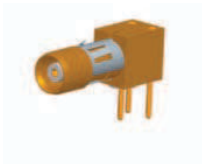
Module designation	CF1	F041

Straight male coaxial module

- Thru hole soldering
- Mezzanine connection
- 2 cavities for straight coaxial male contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CF1	M041

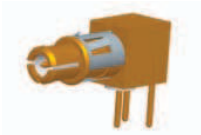
Right angle female coaxial module



- Thru hole soldering
- Extended card
- 2 cavities for right angle coaxial female contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CM1	F032

Right angle male coaxial module



- Thru hole soldering
- Daughter board or extended card
- 2 cavities for right angle coaxial male contacts
- For more information, *consult us*
- Modules are supplied less contacts

Module designation	CM1	M032

	TECHNICAL CHARACTERISTICS
Impedance (Ω)	50
Voltage rating (V_{RMS})	180
Current rating (mA)	500
Contact retention (N)	50_{MIN}
Frequency range (GHz)	0 to 1
Contact resistance (mΩ)	12_{MAX}
SWR (at 1 GHz)	1.3
Insertion and extraction force per contact (N)	1 ≤ F ≤ 15

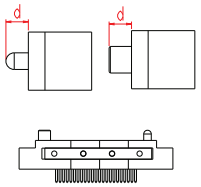
** Hybrid modules will be preferably positioned on the connector sides*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX [1.905] >>> KEYING & GUIDING (❸)

NON KEYING GUIDES

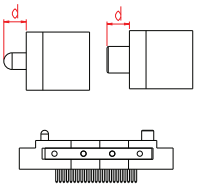
65



- 1 female socket and 1 male pin
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX - - --- --- **65** ---

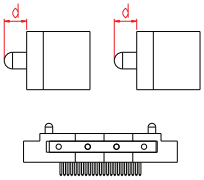
66



- 1 male pin and 1 female socket
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX - - --- --- **66** ---

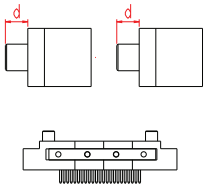
67



- 2 male guide pins
- Non keying
- For plug or receptacle
- Passivated stainless steel

HLX - - --- --- **67** ---

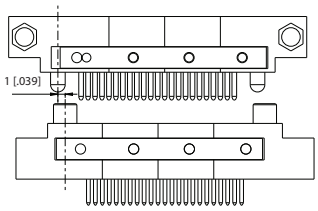
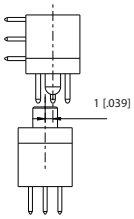
68

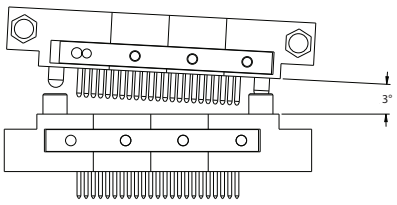
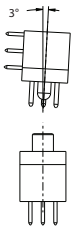


- 2 female guide sockets
- Non keying
- For plug or receptacle
- Passivated stainless steel

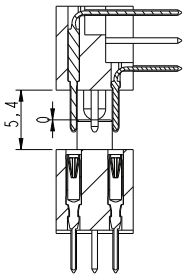
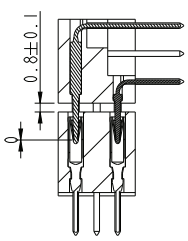
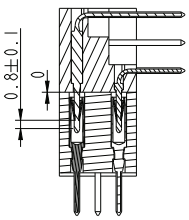
HLX - - --- --- **68** ---

REALIGNMENT CAPABILITY

In the longitudinal axis	In the lateral axis
	

In the longitudinal axis	In the lateral axis
	

MATING SEQUENCE

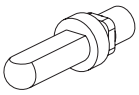
Guiding	Signal contact	Mated connector
		
5.4 [.213]	0.8 ± 0.1 [.031 ± .004]	0 [0]

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> KEYING & GUIDING (❸)

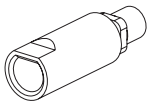
KEYING GUIDES

D shaped male guide pin



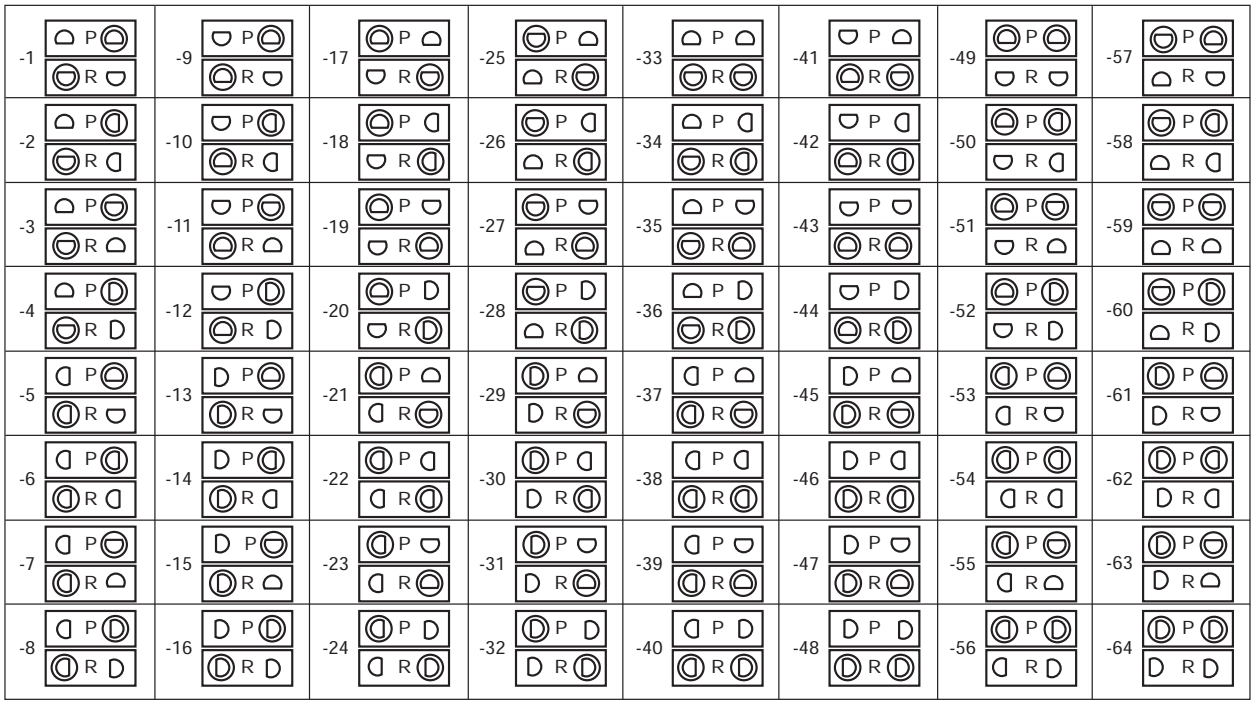
- 4 keying possibilities
- Realignment capability: 1 [.039]
- For plug or receptacle
- Electroless nickel over brass

D shaped female guide socket



- 4 keying possibilities
- Realignment capability: 1 [.039]
- For plug or receptacle
- Electroless nickel over brass

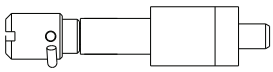
CONNECTOR POLARIZATION WITH 'D' SHAPED GUIDE PINS AND SOCKETS



	Non keying male pin guide	Non keying female socket guide	Keying male pin guide	Keying female socket guide
d	2.7 ± 0.2 [.106 ± .008]			

SPECIAL KEYING CAPABILITIES

Jackset-Jackscrew-Jacksocket



- Turning jackset / Reversed turning jackset
- Turning jackscrew
- Turning jacksocket

Consult us	**73 to 76** **81 to 92**

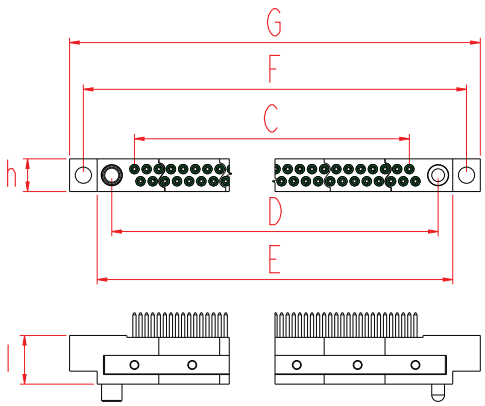
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> SIGNAL CONTACT VERSION (❹)

TYPICAL ARRANGEMENTS 2 & 3 ROWS

n indicates the total number of signal contacts.

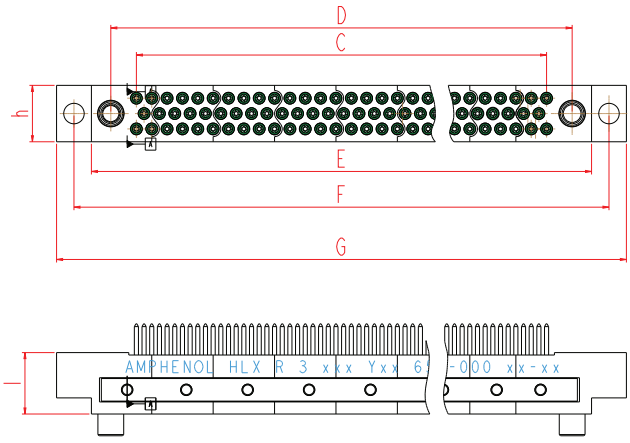
Signal contacts on 2 rows*, from 10 to 100 contacts*



n = 10, 20, 30, 40, 50, 60, 70, 80, 90 or100

C	n x 0.9525 - 1.905
D	C + 8.0525
E	D + 4.6
F	E + 4.29
G	F + 4.41
h	5.12
I	7.62

Signal contacts on 3 rows from 11 to 206 contacts*



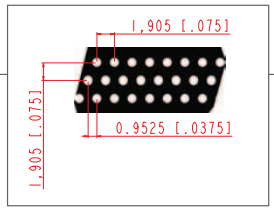
n = 011, 023, 035, 047, 059, 071, 080, 092, 104, 122, 140, 152, 182 or 206

C	n x 0.635 - 1.27
D	C + 6.35
E	D + 4.84
F	E + 4.29
G	F + 4.41
h	7
I	7.62

** in mm: 1mm = 0.03937 inch*

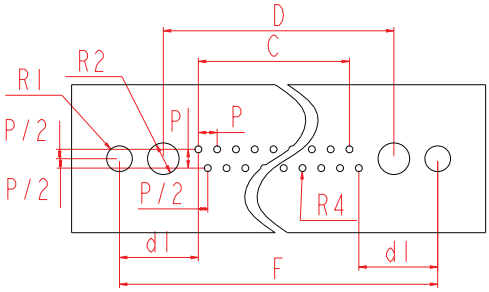
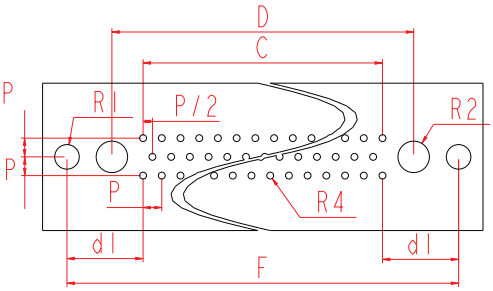
All dimensions are given for information only and are in mm [inch], except as otherwise specified

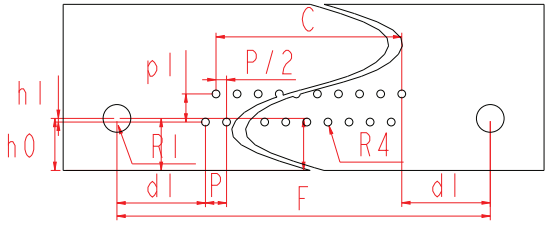
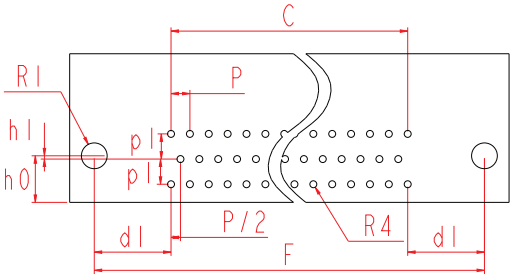
HILINX 1.905 >>> SIGNAL CONTACT VERSION (❹)



LAYOUTS 2 & 3 ROWS

The boards are shown from the connector side.
All contact outputs are equidistant.

n	YD/YDS/YDL & YP CONTACT (female for receptacle)*	
2 ROWS FROM 10 TO 100 CONTACTS		n = 10, 20, 30, 40, 50, 60, 70, 80, 90 or100 C: n x 0.9525 - 1.905 F: C + 16.9425
3 ROWS FROM 11 TO 206 CONTACTS		n = 011, 023, 035, 047, 059, 071, 080, 092, 104, 122, 140, 152, 182 or 206 C: n x 0.635 - 1.27 F: C + 15.48

n	YC/YCS/YCL CONTACT (male for plug)*	
2 ROWS FROM 10 TO 100 CONTACTS		n = 10, 20, 30, 40, 50, 60, 70, 80, 90 or100 C: n x 0.635 - 1.27 F: C + 16.9425
3 ROWS FROM 11 TO 206 CONTACTS		n = 011, 023, 035, 047, 059, 071, 080, 092, 104, 122, 140, 152, 182 or 206 C: n x 0.635 - 1.27 F: C + 15.48

R_1	R_2	R_4	d_1	d'_1	p	p / 2	p_1	h_0	h_1
2.8 [.110]	Not complusory 3.75 ± 0.1 [.148 ± .004]	0.65 $_{MIN}$ [.026]	8 [.315]	7.747 [.305]	1.905 [.075]	0.9525 [.037]	2.54 [.100]	4.7 $_{MAX}$ [.185]	0.32 [.013]

** in mm: 1mm = 0.03937 inch*

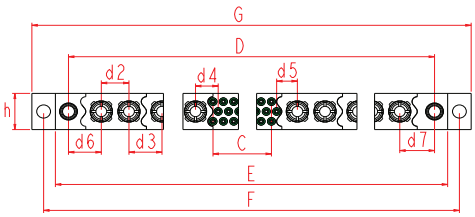
All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX 1.905 >>> HYBRID VERSION (❹)

DIMENSIONS 3 ROWS**

s indicates the total number of special contacts.
n indicates the total number of signal contacts.

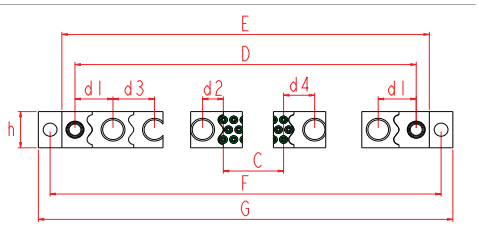
Power contacts 20A*



s = 2, 4, 6…

C	0,635 * n - 1,27
D	6,985 + s*5,575 + n*0,635
E	D + 4,84
F	E + 4,29
G	F + 4,41
d2	5,08
d3	6,07
d4	4,1625
d5	3,81
d6	6,032
d7	6,39
h	7

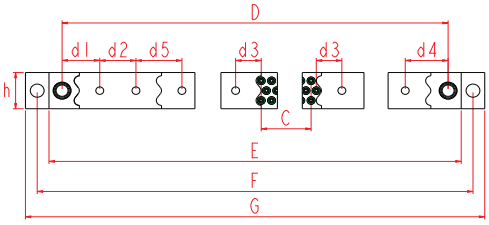
RADSOK® contacts 70A*



s = 1, 2, 3,…

C	0,635 * n - 1,27
D	6,985 + s*7,62 + n*0,635
E	D + 4,84
F	E + 4,29
G	F + 4,41
h	7
d1	6,985
d2	3,81
d3	7,62
d4	5,7155

AMPHELUX™ contacts*



s = 2, 4, 6…

C	0,635 * n - 1,27
D	6,985 + s*7,55 + n*0,635
E	D + 4,84
F	E + 4,29
G	F + 4,41
h	7
d1	6,924
d2	6,65
d3	4,702
d4	7,876
d5	8,45

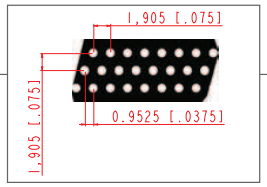
Coaxial contacts

Please consult us

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferably positioned on the connector sides*

HILINX 1.905 >>> HYBRID VERSION (❹)

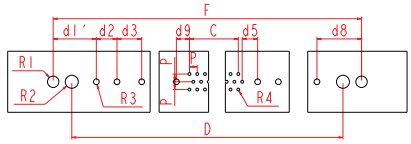


LAYOUTS 3 ROWS**

The boards are illustrated from the connector side
All contacts outputs are equidistant.

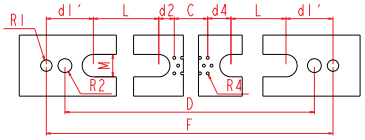
With YDS/YD/YDL & YP CONTACT (female for receptacle)*

WITH POWER CONTACT 20A



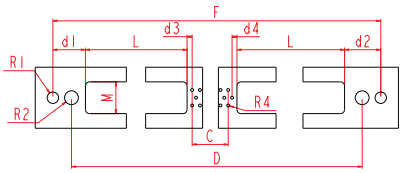
C	0.635 x n - 1.27
D	6.985 + n x 0.635 + s x 5.575
F	D + 9.13

WITH RADSOK® CONTACT 70A



C	0.635 x n - 1.27
D	6.985 + n x 0.635 + s x 7.62
F	D + 9.13
L	(s - 1) x 7.62
M	6.5 ± 0.1

WITH AMPHELUX™ CONTACT

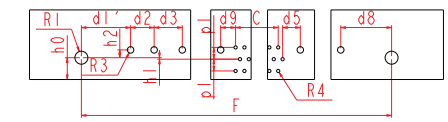


C	0.635 x n - 1.27
D	6.985 + n x 0.635 + s x 7.55
F	D + 9.13
L	(s - 2) x 7.55
M	7.8 ± 0.1

YDS/YD/YDL YP	d1	d'1	d2	d3	d4	d5	d8	d9	p	R1	R2	R3	R4
Power		10.605 [.418]	5.080 [.200]	6.072 [.239]		3.810 [.150]	10.963 [.432]	3.210 [.126]	1.905 [.075]	2.8 ± 0.1 [.110 ± 0.004]	3.75 [.148]	1.5 MIN [.059 MIN]	0.65 MIN [.026 MIN]
RADSOK®		11.557 [.455]	3.810 [.150]		7.620 [.300]								
Amphelux™	8 MAX [.315 MAX]		8.8 MAX [.346 MAX]	1.2 MAX [.047 MAX]	1.2 MAX [.047 MAX]								

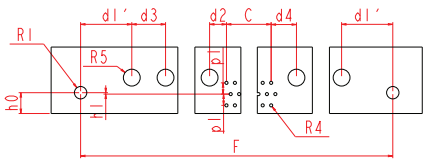
With YC/YCS/YCL CONTACT (male for plug)*

WITH POWER CONTACT 20A



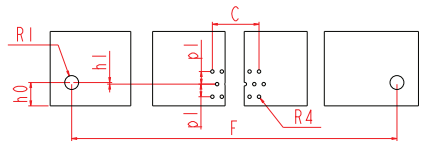
C	0.635 x n - 1.27
F	16.115 + n x 0.635 + s x 5.575

WITH RADSOK® CONTACT 70A



C	0.635 x n - 1.27
F	16.115 + n x 0.635 + s x 7.62

WITH AMPHELUX™ CONTACT



C	0.635 x n - 1.27
F	16.115 + n x 0.635 + s x 7.55

YCS/YC/YCL	h0	h1	h2	d'1	d2	d3	d4	d5	d8	d9	p1	R1	R3	R4	R5
Power	4.7 MAX [.185 MAX]	0.320 [.013]	1.680 [.066]	10.605 [.418]	5.080 [.200]	6.072 [.239]	x	3.810 [.150]	10.963 [.432]	3.210 [.126]	2.540 [.100]	2.8 ± 0.1 [.110 ± 0.004]	1.5 MIN [.059 MIN]	0.65 MIN [.026 MIN]	
RADSOK®				11.557 [.455]	3.810 [.150]	4.763 [.187]	7.620 [.300]								3.8 MIN [.150 MIN]
Amphelux™															

** in mm: 1mm = 0.03937 inch*

*** Hybrid modules will be preferably positioned on the connector sides*

All dimensions are given for information only and are in mm [inch], except as otherwise specified

HILINX >>> TOOLING

TOOLING

HLX ODP

- Screw driver for guiding devices

Part number	**HLX ODP**

23550

- Removal tool
- For coaxial contacts
- Rear release
- HiLinX 2.54

Part number	**23550**

All dimensions are given for information only and are in mm [inch], except as otherwise specified

NOTES