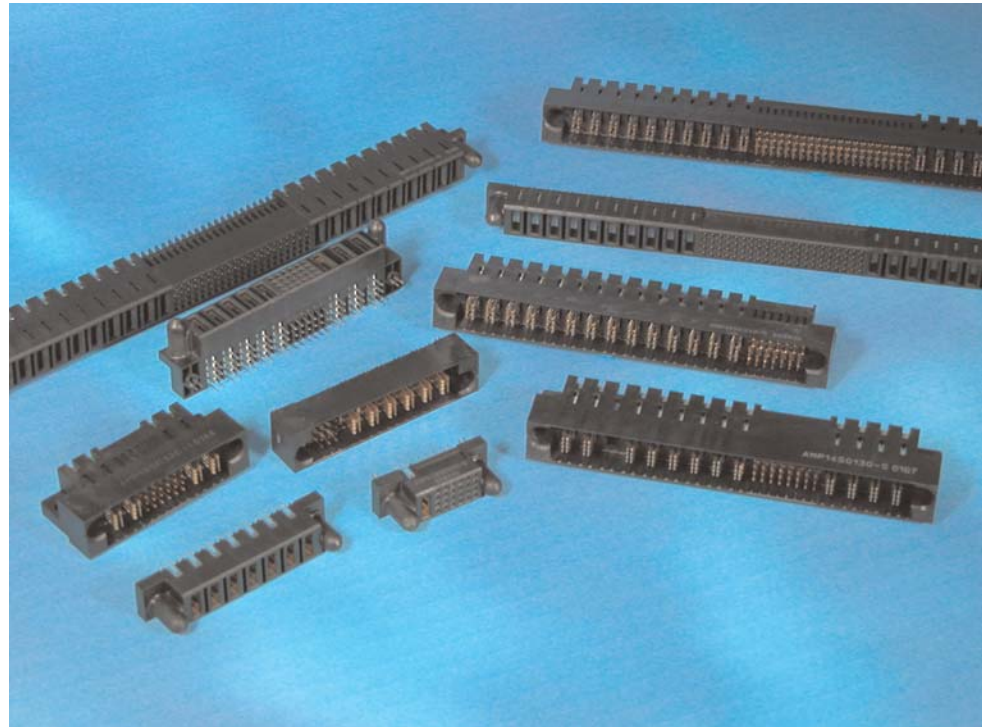


Product Features

- Single-piece molded housings
- Custom configurable modular design
- AC and DC power in the same connector – Meets UL safety requirements.
- Current Interrupt ratings per UL 1977 – for “Hot-Plug” applications.
- Compact size - ideal for distributed DC power applications.
- Molded-in guide pins provide generous blind-mateability.
- Up to 3 levels of contact sequencing:
 - 1st - Pwr/Gnd
 - 2nd – Pwr & Signals
 - 3rd – Trigger Signals
- Low Mating and Un-mating force
- Solder or press-fit termination to PCB.
- Meets SSI power connector requirements for DPS, MPS and HPS applications
- 30 micro-inch [0.76 micro-meters] gold post-plated contacts for high reliability
- Lead-Free versions available 2004



Multi-Beam XL™ is a blind-mateable board-to-board power distribution connector system. The heart of the Multi-Beam XL connector is the unique power contact which offers higher current ratings, lower contact resistance and lower mating forces than alternative designs. The connector is designed and manufactured in a modular approach and therefore allows the customer to select the number of power and signal contacts as well as the mating sequence of contacts they need for their specific application. The product is also available in

versions complying to the Server Systems Infrastructure (SSI) Standard. The Multi-Beam XL product offers high reliability and high current density in a package designed specifically for modular hot-swappable power distribution systems.

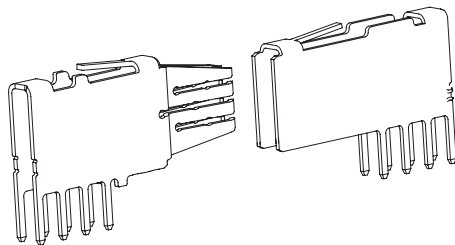
Multi-Beam XL connector is ideal for blind-mating in modular and rack mounted systems. The high performance design and heavy gold plated contacts meet requirements across many applications including Power Distribution for compact (1U) computer servers

up through High-End Servers, Fault-tolerant Computers, Networking Equipment, Telecommunication Switches, Medical Instrumentation and Industrial Control equipment.

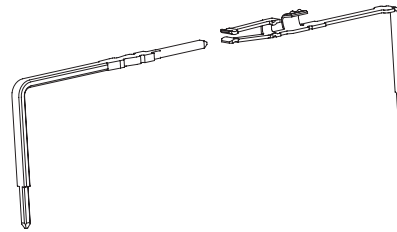
The compact design also meets the I/O needs of modern Modular and Hot-Swappable redundant (N+1) Power Supplies and Uninterruptible Power Supplies.

- www.tycoelectronics.com
- <http://mbxl.tycoelectronics.com>

Power Contacts

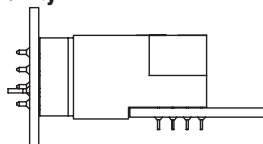


Signal Contacts

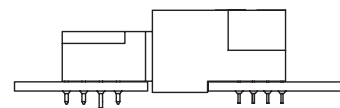


- Improved Multi-Beam power contact design features eight independent beams which provide:
 - Electrical performance - Parallel current paths yield a lower contact resistance.
 - Mechanical performance – Tuned beam design provides low mating forces and high durability life cycles.
 - Traditional Dual-Beam design also available
- Twin-beam signal receptacle contact design mates on milled surface, to reduce plating wear / and improve durability.
- Multi-Beam XL connector assures you of **EXTRA LONG CONTACT WIPE**.
 - Power contacts feature up to 0.200" [5.08mm] minimum wipe.
 - Shortest "trigger" signal contacts feature a minimum wipe of 0.100" [2.54mm].
- Multi-Beam XL connectors provides **EXPANDABLE LENGTH** connectors.
 - Overall length is expandable to accommodate up to 28 power contacts.
 - Contact spacings are expandable to accommodate higher voltages and/or higher current requirements.
- Base metal made from high conductivity copper alloy (over 98% copper) offers superior performance compared to alternative materials (brass, phosphor bronze, beryllium copper, etc.) often used in power connectors.
- 0.100" [2.54mm] x 0.100" [2.54mm] PCB contact grid.

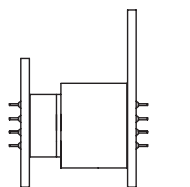
Application Flexibility



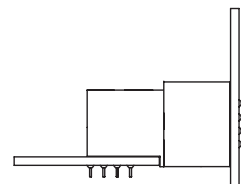
**Vertical Receptacle
Right-Angle Header**



**Right-Angle Receptacle
Right-Angle Header**



**Vertical Receptacle
Vertical Header**



**Right-Angle Receptacle
Vertical Header**

Contact Wipe

Contact Type	Description	Sequence	Minimum Wipe
Power (or GND) Contact	Make First Break Last (MFBL)	1	0.200" [5.08mm]
Power Contact	Standard	2	0.150" [3.81mm]
Signal Contact	Standard	2	0.150" [3.81mm]
Signal (trigger) Contact	Make Last Break First (MLBF)	3	0.100" [2.54mm]

The MLBF power contact and the Standard Signal contact are sequenced to mate at the same time ... sequence #2.

Product Configurations and Part Numbers

Product Configurations and Part Numbers

The connector configuration is described by reading Left-to-Right on the Header mating interface and Right-to-Left on the Receptacle mating interface. Custom configurations can be produced due to the modular design of the product. Some popular configurations are shown in the tables below.

Configuration Description: ACP indicates AC Power, P indicates DC Power, HDP indicates High Density Power, S indicates Signal. The corresponding contact spacing and voltage ratings are shown below.

ACP	P	HDP	S
0.300" [7.62mm] spacing	0.250" [6.35mm] spacing	0.200" [5.08mm] spacing	0.100" [2.54mm] grid
300 Volts*	150 Volts*	Connection to same voltage*	50 Volts*

* With circuit board designed to UL 1950, IEC 60950

Right Angle Receptacles



Configuration *	Part Number	Application	Overall Length " and [mm]	PCB Tail Type (Solder, Press-Fit)	Power Contact Sequencing
1P/24S/1P	1450160-3	SSI "DPS"	1.925" [48.90mm]	Solder	No
2P/24S/2P	1-1450160-0	Distributed DC Power + Signal	2.250" [57.15mm]	Solder	No
3P/24S/3P	1450570-2	Distributed DC Power + Signal	2.750" [69.85mm]	Press-fit	Yes
3ACP/24S/5P	1450170-2	AC and DC Power + Signal	3.400" [86.36mm]	Solder	Yes
3ACP/24S/6P	1450170-8	AC and DC Power + Signal	3.650" [92.71mm]	Solder	Yes
5P/24S/6P	1450160-5	SSI "MPS"	4.350" [110.49mm]	Solder	No
8P/32S/8P	1450160-1	AC and DC Power + Signal	5.450" [138.43mm]	Solder	No
10P/84S/10P	1450160-6	AC and DC Power + Signal	7.750" [196.85mm]	Solder	No
3ACP	1450173-1	AC Power	1.550" [39.37mm]	Solder	Yes
8P/28S	1450172-2	Distributed DC Power + Signal	3.350" [85.09mm]	Solder	Yes
14P/32S	1450172-1	Distributed DC Power + Signal	4.950" [125.73mm]	Solder	Yes
8P	1450163-2	DC Power	2.650" [67.31mm]	Solder	No

* Custom configurations are available – see back page for instructions to have Tyco Electronics build your custom part.

Vertical Receptacles

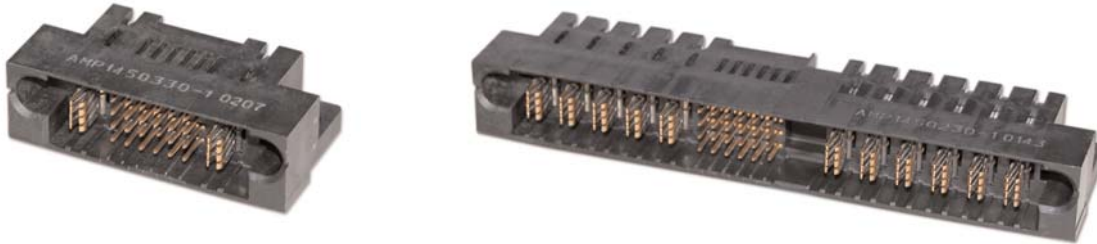


Configuration *	Part Number	Application	Overall Length " and [mm]	PCB Tail Type (Solder, Press-Fit)	Power Contact Sequencing
1P/24S/1P	1450540-1	SSI "DPS"	1.925" [48.90mm]	Press-fit	No
2P/24S/2P	1450140-5	Distributed DC Power + Signal	2.250" [57.15mm]	Solder	No
3P/24S/3P	1-1450140-0	Distributed DC Power + Signal	2.750" [69.85mm]	Solder	No
4P/24S/4P	1450150-6	Distributed DC Power + Signal	3.350" [85.09mm]	Solder	Yes
4P/24S/3ACP	1450150-3	AC and DC Power + Signal	3.150" [80.01mm]	Solder	Yes
3ACP/24S/5P	1450550-1	AC and DC Power + Signal	3.400" [86.36mm]	Press-fit	Yes
5P/24S/6P	1450540-2	SSI "MPS"	4.350" [110.49mm]	Press-fit	No
10P/84S/10P	1450140-4	Distributed DC Power + Signal	7.750" [196.85mm]	Solder	No
3P	1450543-1	DC Power	1.400" [35.56mm]	Press-fit	No
5P	1450553-1	DC Power	1.900" [48.26mm]	Press-fit	Yes
6P	1450553-2	DC Power	2.050" [52.07mm]	Press-fit	Yes
7P	1450543-3	DC Power	2.400" [60.96mm]	Press-fit	No
8P/28S	1450142-3	Distributed DC Power + Signal	3.350" [85.09mm]	Solder	No
14P/32S	1450152-1	Distributed DC Power + Signal	4.950" [125.73mm]	Solder	Yes

* Custom configurations are available – see back page for instructions to have Tyco Electronics build your custom part.

Product Configurations and Part Numbers (Continued)

Right Angle Headers



Configuration *	Part Number	Application	Overall Length " and [mm]	PCB Tail Type (Solder, Press-Fit)	Signal Contact Sequencing
1P/24S/1P	1450330-1	SSI "DPS"	1.925" [48.90mm]	Solder	Yes
2P/24S/2P	1450120-2	Distributed DC Power + Signal	2.250" [57.15mm]	Solder	No
3P/24S/3P	1450130-6	Distributed DC Power + Signal	2.750" [69.85mm]	Solder	Yes
4P/24S/3ACP	1450130-4	AC and DC Power + Signal	3.150" [80.01mm]	Solder	Yes
3ACP/24S/5P	1450130-3	AC and DC Power	3.400" [86.36mm]	Solder	Yes
3ACP/24S/6P	1-1450130-4	AC and DC Power + Signal	3.650" [92.71mm]	Solder	Yes
5P/24S/6P	1450230-1	SSI "MPS"	4.350" [110.49mm]	Solder	Yes
8P/32S/8P	1450120-1	Distributed DC Power + Signal	5.450" [138.43mm]	Solder	No
10P/84S/10P	1450120-6	Distributed DC Power + Signal	7.750" [196.85mm]	Solder	No
3ACP	1450123-3	AC Power	1.550" [39.37mm]	Solder	N/A
3P	1450123-1	DC Power	1.400" [35.56mm]	Solder	N/A
5P	1450123-6	DC Power	1.900" [48.26mm]	Solder	N/A
6P	1450523-2	DC Power	2.050" [52.07mm]	Press-fit	N/A
7P	1450123-5	DC Power	2.400" [60.96mm]	Solder	N/A
8P/28S	1450132-3	Distributed DC Power + Signal	3.350" [85.09mm]	Solder	Yes
14P/32S	1450132-4	Distributed DC Power + Signal	4.950" [125.73mm]	Solder	Yes

* Custom configurations are available – see back page for instructions to have Tyco Electronics build your custom part.

Vertical Headers



Configuration *	Part Number	Application	Overall Length " and [mm]	PCB Tail Type (Solder, Press-Fit)	Signal Contact Sequencing
1P/24S/1P	1450100-5	SSI "DPS"	1.925" [48.90mm]	Solder	Yes
2P/24S/2P	1450500-3	Distributed DC Power + Signal	2.350" [59.69mm]	Press-fit	Yes
3P/16S/3P	1450500-8	Distributed DC Power + Signal	2.650" [67.31mm]	Press-fit	Yes
4P/24S/4P	1450500-4	Distributed DC Power + Signal	3.350" [85.09mm]	Press-fit	Yes
5P/24S/5P	1450500-1	Distributed DC Power + Signal	4.350" [110.49mm]	Press-fit	Yes
8P	1450503-1	DC Power	2.650" [67.31mm]	Press-fit	N/A

* Custom configurations are available – see back page for instructions to have Tyco Electronics build your custom part.

Specifications

Specifications

Materials

Housing:	High temperature thermoplastic
Power contacts:	High Conductivity Copper alloy
Signal contacts:	Copper Alloy
Boardlocks:	Phosphor Bronze

Finish

Power and signal contacts:	30 microinches [0.76 micrometers] min. gold over 50 microinches [1.27 micrometers] min. nickel on mating surfaces, 100 microinches [2.54 micrometers] min. tin-lead over 50 microinches [1.27 micrometers] min nickel at PCB terminations
Lead-Free versions available in 2004	

Performance Specifications

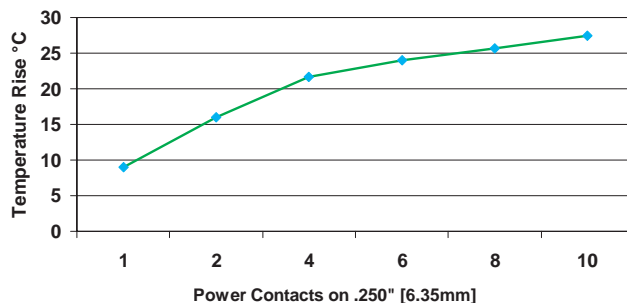
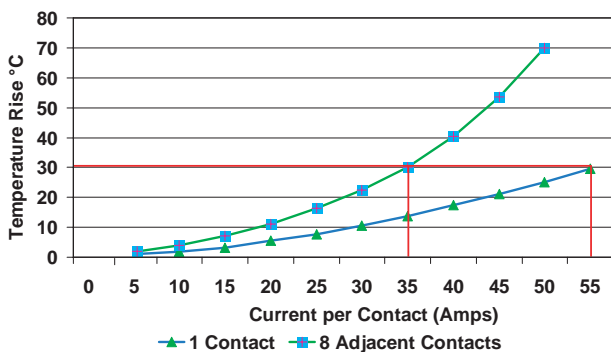
Up to 55 amps per power contact, de-rated to 35 amps in equally energized (8 adjacent positions) connector.
Up to 4 amps per signal contact, de-rated to 1.5 amps in equally energized 24 position pin field.
Maximum continuous operating temperature 105°C
0.7 milli-ohm contact resistance
250 cycle durability
+/- 0.075" [1.91mm] radial mis-alignment capability
Minimum of 0.100" [2.54mm] of contact wipe on shortest signal contact
UL 94V-0 High-temperature thermoplastic housings

Technical Documents

Product Specification: 108-1973
Application Specification: 114-13038
Safety Certifications:

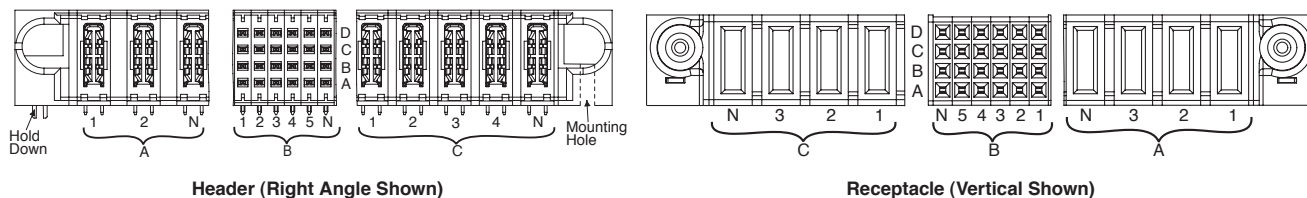


Performance @ 30 Amps per Contact



Cable Connectors See Catalog 1654850





Use this form to specify the desired Multi-Beam XL Connector configuration. The steps below provide for specifying housing configuration, termination style application, circuit board mounting options and contact sequencing as required by the application. Tyco Electronics will create a unique part number and customer drawing for review/approval by you. Complete the form and forward to your local Tyco Electronics Sales Engineer.

Complete One Form for Each Connector

1. Gender Header Receptacle

2. Orientation Right Angle Vertical

3. Termination Style

<input type="checkbox"/> Solder tail .090" [2.29mm]	<input type="checkbox"/> Press-Fit .115" [2.92mm]
<input type="checkbox"/> Solder tail .135" [3.43mm]	<input type="checkbox"/> Press-Fit .135" [3.43mm]
<input type="checkbox"/> Solder tail .165" [4.19mm]	<input type="checkbox"/> Press-Fit .165" [4.19mm]

4. Mounting to PCB

Hold Downs (one on either end)

.122" [3.10mm] Mounting holes (Accepts #4 screws, right angle connectors only)

.150" [3.81mm] Mounting holes (Accepts #6 screws, right angle connectors only)

5. Select # of Contacts

Section A:

(Power Contacts) ___ Enter # of Power Contacts (Loaded with standard length Power Contacts)

 ___ Enter the position(s) to be loaded with Pre-mate contact (Receptacles only)
(Mate-First-Break-Last) (i.e. #1, #3, etc.)

Contact Centerline Spacings: .200" [5.08mm] (HDP)

.250" [6.35mm] (P)

.300" [7.62mm] (ACP)

Section B:

(Signal Contacts) ___ Enter # of Signal Contacts (Multiples of 8 are standard, i.e. 16, 24, 32...)

 ___ Enter the Positions with Post-Mate Contacts (Mate-Last-Break-First, Headers only)

Note: Row A is standard (i.e. A1, A3, etc.)

Section C:

(Power Contacts) ___ Enter # of Power Contacts (Loaded with standard length Power Contacts)

 ___ Enter the positions to be loaded with Pre-Mate Contacts (Receptacles only)
(Mate-First-Break-Last, i.e. #1, #3, etc.)

Contact Centerline Spacings: .200" [5.08mm] (HDP)

.250" [6.35mm] (P)

.300" [7.62mm] (ACP)

6. Additional Requirements

7. Customer Information

Name: _____ **Company:** _____ **Location:** _____

Phone: _____ **Fax:** _____ **e-mail:** _____

(Submit to your local Tyco Electronics Sales Engineer or Fax to Multi-Beam XL Engineering @ 717-985-2833)