



MULTI-BEAM HIGH DENSITY (HD) CONNECTORS

TE Connectivity's (TE) MULTI-BEAM HD connectors are next-generation MULTI-BEAM connectors, which offer a more compact design with up to 135A per power contact, and feature high density power and signal which saves space and reduces overall power consumption. The scalable and modular design also supports greater flexibility in configuration and PCB design.

Applications

- Data Center
- Telecommunications
- Industrial Automation Devices
- Power System

Key Features

- High current density, max. 390Amps/linear inch.
- Uses TE's innovative MULTI-BEAM (6 Beams) power contacts.
- Three levels of contact sequencing: ground, power/signal, enable PIN.
- Flexible and modular configuration.

Electrical Specifications

Current-Ratings

Power Contacts				
Type	Module Power Contact Pitch(mm)	Single Power Contact(A)	Four Adjacent Power Contact(A)	Eight Adjacent Power Contact(A)
Power	5.0	135	93	75
Power	6.0	135	100	78
Power	7.0	135	100	NA
Low Power	3.0	42	32	22
Low Power	5.0	42	32	23

*test data based on customized test setup

Mechanical Specifications

- Durability: 500 mating cycles
- Mechanism shock: 50G Per EIA-364 standard
- Vibration: 4.9G, 20-500Hz
- Operating temperature: -40 °C to 125 °C
- Mating force:
 - 3.5N max. per power contact
 - 1.5N max. per low power contact
- Un-mating force:
 - 2.2N min. per power contact
 - 2.5N min. per low power contact
- Insertion force:
 - The insertion force per eye-of-needle (EON): 50N max.
- PCB thickness:
 - Press-fit type: 1.5mm min.
 - Solder type: tail length - 0.04mm max.

Product Dimensions

- Length: 100mm max.
- Depth: 51.0mm (The total depth for plug and receptacle mating)
- Height above PCB face: 18.90mm.

Contact Spacing and Operating Voltage

- High power
 - 7.0mm - up to 300V RMS or DC.
 - 6.0mm - up to 200V RMS or DC.
 - 5.0mm - up to 60V RMS or DC.
- Low power:
 - 5.0mm - up to 300V RMS or DC.
 - 2.0mm - up to 60V RMS or DC.
- Signal: 2.0mm grid.

Application Tooling

- Flat-rock seating tools are required for press-fit version



Features

- Six-beam design for power contact with 3-level beam length for sequencing and reliable connection.
- Reduced mating force about 40% lower than MULTI-BEAM XLE connector.
- Integrated signal pin and guide design of each side, saving 8mm (4mm x 2) overall length.
- Offering right angle plug, right angle receptacle and vertical receptacle versions with modular design.

Material

High conductivity copper alloy and high temperature resin with RoHS compliance.

Technical Documents

- Product Specification: 108-128007.
- Application Specification: 114-128010.

MULTI-BEAM HD Part Number list

Right Angle Header	Mating Vertical Receptacle	Mating Right Angle Receptacle	Description
2204443-1	2204423-1	2204403-1	2P
2204440-1	2204420-1	2204400-1	15s+2P+2P+15S
2204442-2	2204422-2		15s+8P+8LP+8LP+15S
2204446-1		2204406-1	10S+2P+2P
2204446-2	2204426-1		15s+4P+4P
2204446-6		2204406-5	10S+9P
2204440-2	2204420-2		15s+8P+4P+15S
2204442-1	2204422-1		15s+8P+8LP+8LP+15S
2204441-1	2204421-1		15s+2P+2LP+2P+15S
2204440-7	2204420-8		15s+3P+12S
2204440-8	2204420-9		15S+3P+3P+15S
2204446-3	2204426-2		2P+15S
2204452-1	2204422-3		15S+6P+2LP+15S
2204446-8		2204406-6	4P+20S(Press-fit)
2204456-1		2204416-1	4P+20S(solder tail)

For More Information

www.te.com/products/multi-beam

TE Technical Support Center

USA:	+1 (800) 522-6752
Canada:	+1 (905) 475-6222
Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
UK:	+44 (0) 800-267666
France:	+33 (0) 1-3420-8686
Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

te.com

© 2016 TE Connectivity Ltd. family of companies. All Rights Reserved.

MULTI-BEAM XLE, MULTI-BEAM HD, TE Connectivity, TE, TE Connectivity (logo) are trademarks.

Other products, logos and company names mentioned herein may be trademarks of their respective owners.

1-1773887-1 DND 08/2016

While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.