



**INFINITY** Amphenol Data/Telecom's High Speed INFINITY (4X/12X) series of connectors facilitate data speeds up to 75 Gbps total bandwidth, as required by InfiniBand™, Fibre Channel and Serial Attached SCSI Trade Associations, with superior EMI performance. INFINITY connectors are high-density, hot pluggable and meet SFF-8470 specifications. A variety of receptacles are available that will fit multiple connectors into a 1U form factor and PCI bracket. All receptacles are available with standard or RoHS compliant materials.

- InfiniBand™
- Fibre Channel
- 10Gb Ethernet
- SAS, External (Serial Attached SCSI)
- SFF-8470
- CX4

## APPLICATIONS

- Datacom Devices
- HCAs (Host Controller Adapters)
- High Speed Routers and Switches
- Storage Devices
- SANs (Storage Area Networks)
- Servers
- RAID
- XAUI

## ORDERING INFORMATION

Contact Amphenol for additional options

## Infinity Receptacle

U65 - E 04 - 1 2 1 0 - (T)

### INFINITY RECEPTACLE

#### STYLE

- B** - 2 Locating Posts and 2 or 4 Solder Posts
- E** - 2 Locating Posts and 2 or 4 Screw Mounting Holes
- F** - Belly-to-Belly (2 Locating Posts and Through-Hole Mounting)
- P** - 2 Locating/Friction Posts and 2 Screw Mounting Holes\*\*\*

#### CONNECTOR TYPE

- 04** - 4X
- 12** - 12X

#### CONTACT PLATING

- 1** - 50µ" Gold plating
- 2** - 30µ" Gold plating
- 4** - 50µ" Gold plating (RoHS Compliant)
- 5** - 30µ" Gold plating (RoHS Compliant)

#### HARDWARE OPTION

##### Lanyard Application

- 0** - Lock Plate
- 1** - One-Piece Lock Plate
- 2** - Without Lock Plate

##### Thumbscrew Application

- 0** - Standard screw (Bulk packed)
- 1** - Self-locking screw (Bulk packed)
- 2** - Without screws (Order separately)

### PACKAGING

- Blank** - Tray Packaging
- T** - Tape and Reel Packaging
- C** - Rear Cover (bulk packed)
- CT** - Rear Cover (bulk packed) with Tape and Reel Packaging

### KEYING OPTION:

- 0** - No Keying

### APPLICATION:

- 1** - Lanyard Latch - (Without arms)  
*Applications: InfiniBand™*
- 2** - Thumbscrew - (Without arms)  
*Applications: Fibre Channel / SAS / 10Gb Ethernet*
- 6** - Lanyard Latch - (With arms)  
*Applications: InfiniBand™*
- 7** - Lanyard Latch - (With arms and top mounting ear)  
*Applications: InfiniBand™*
- 8** - Thumbscrew - (With arms)  
*Applications: Fibre Channel / SAS / 10Gb Ethernet*

### INFINITY RECEPTACLE ACCESSORIES (ORDER SEPARATELY)

- U65-404-21-P** = 4X One-piece Lock Plate\*
- U65-404-60-P** = 4X Optional Rear Cover
- U65-404-61-P** = 4X Belly-To-Belly Optional Rear Cover
- U65-412-21-P** = 12X One-piece Lock Plate\*
- U65-412-60-P** = 12X Optional Rear Cover
- U65-404-40-P** = Thumbscrews (Standard)\*\*
- U65-404-41-P** = Thumbscrews (Self-locking)\*\*

### NOTES

- \* Lanyard Application Only
- \*\* Thumbscrew Application Only
- \*\*\* Thumbscrew 12X Application Only

[www.infinityconnectors.com](http://www.infinityconnectors.com)

## MATERIAL SPECIFICATIONS

<b>Plastic Insert</b>	High temperature resistant nylon; Flammability rating – UL94V-0
<b>Contacts</b>	Phosphor bronze; 50μ” [1.27μm] or 30μ” [0.76μm] gold plating over nickel on mating area and tin-lead plating over nickel (standard) or 2μ” [0.05μm] gold plating over nickel (RoHS compliant) on PCB terminations
<b>Shield</b>	Die cast; Nickel plated

## ELECTRICAL AND ENVIRONMENTAL SPECIFICATIONS

<b>Current Rating</b>	0.5 Amps maximum/contact	<b>DWV</b>	30 VAC
<b>Contact Resistance</b>	80mΩ maximum initial	<b>Operating Temperature</b>	-40°C to +85°C
<b>Insulation Resistance</b>	1000MΩ minimum	<b>Durability</b>	250 mating cycles

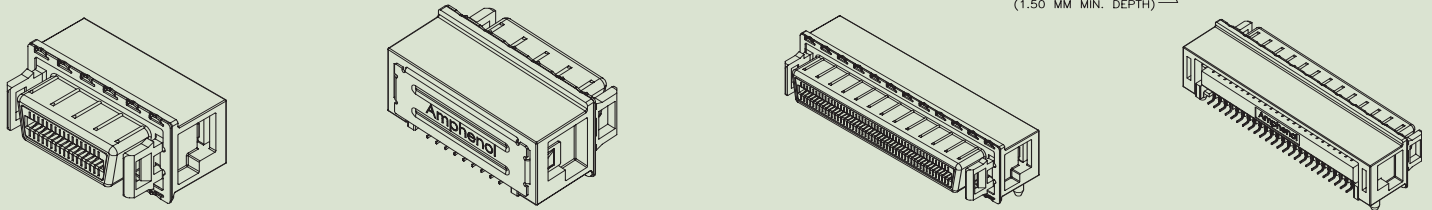
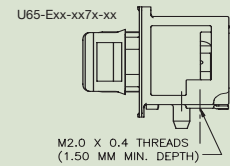
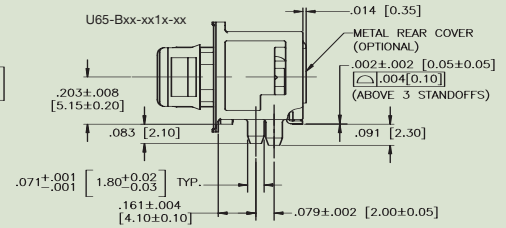
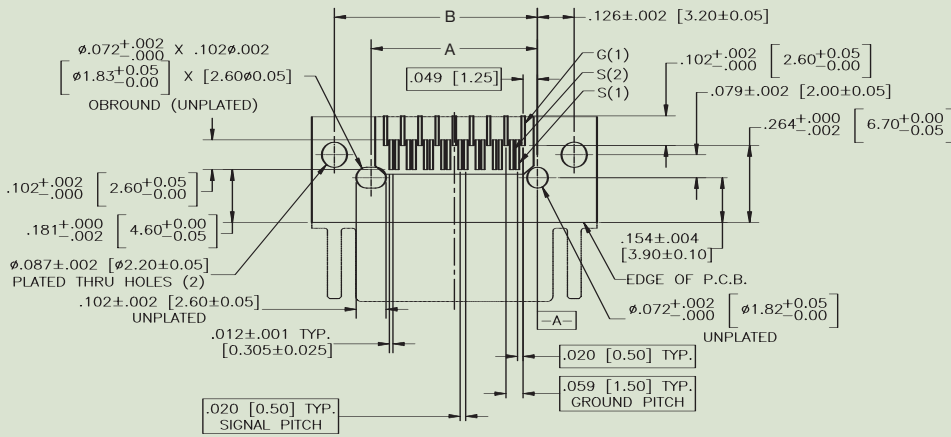
## TECHNICAL SPECIFICATIONS



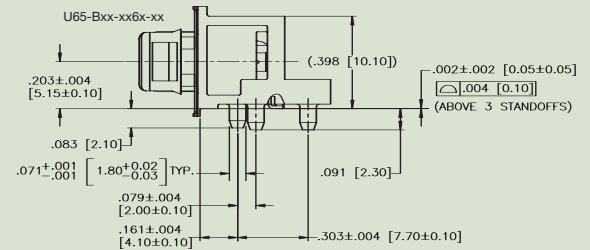
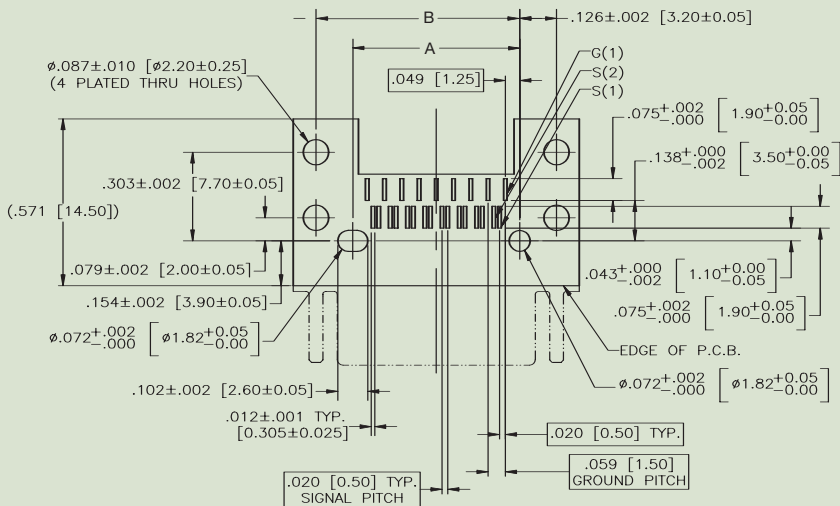
INFINITY RECEPTACLE	A	B	C	D	E	F	G	H	J
4X	0.571 [14.50]	0.823 [20.90]	0.978 [24.85]	0.894 [22.70]	0.776 [19.70]	0.571 [14.50]	0.945 [24.00]	1.169 [29.70]	1.063 [27.00]
12X	1.516 [38.50]	1.768 [44.90]	1.923 [48.85]	1.839 [46.70]	1.720 [43.70]	1.516 [38.50]	1.890 [48.00]	2.114 [53.70]	2.008 [51.00]

TOLERANCE: ± 0.005 [± 0.13]    DIMENSIONS TO BE USED AS REFERENCE ONLY    PLEASE REFER TO SALES DRAWINGS FOR DETAILED DIMENSIONS    SPECIFICATIONS SUBJECT TO CHANGE

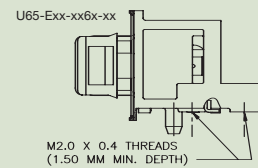
## LANYARD WITHOUT ARMS



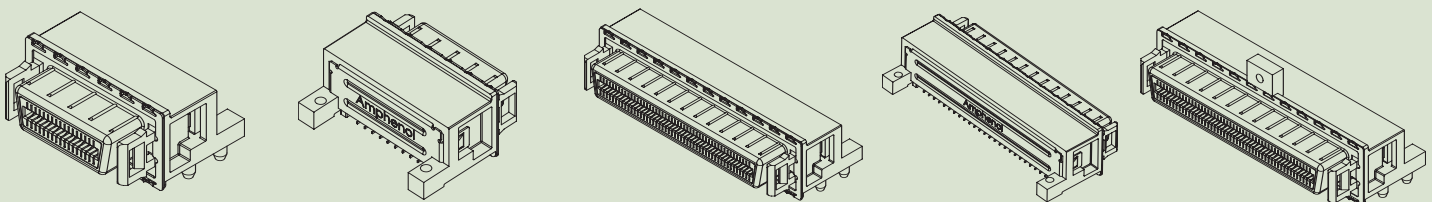
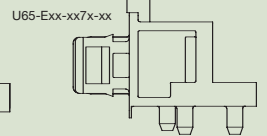
## LANYARD WITH ARMS



U65-Bxx-xx6x-xx



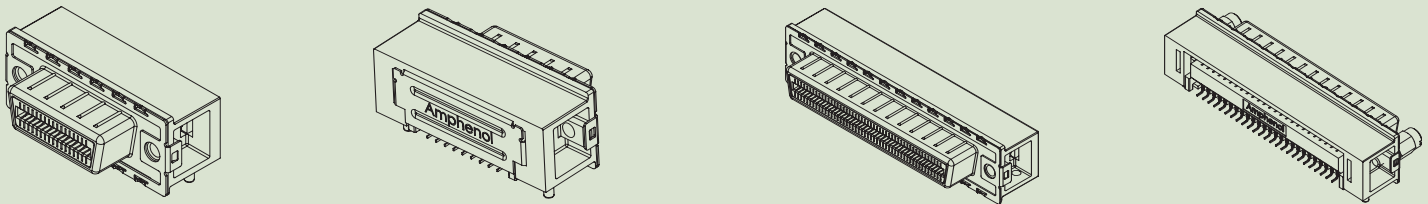
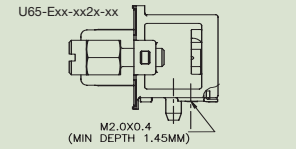
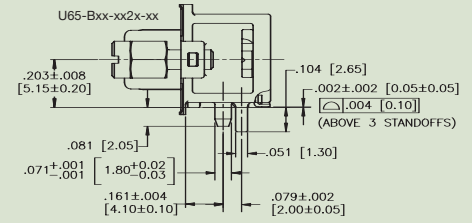
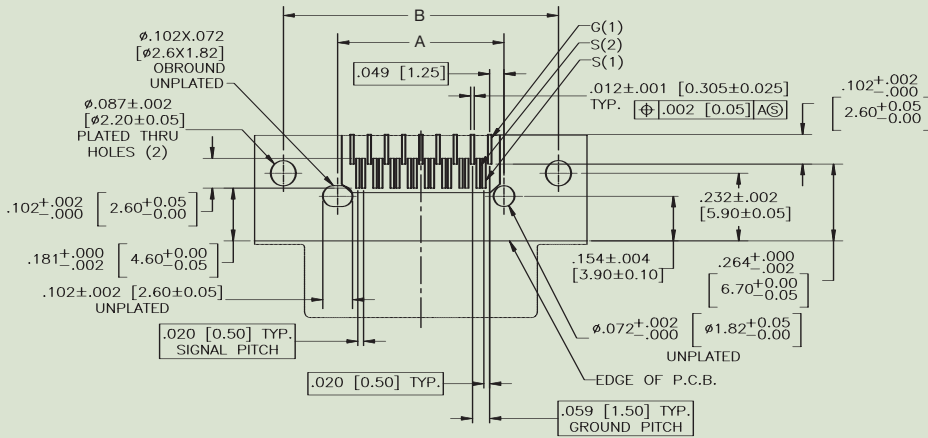
U65-Exx-xx7x-xx



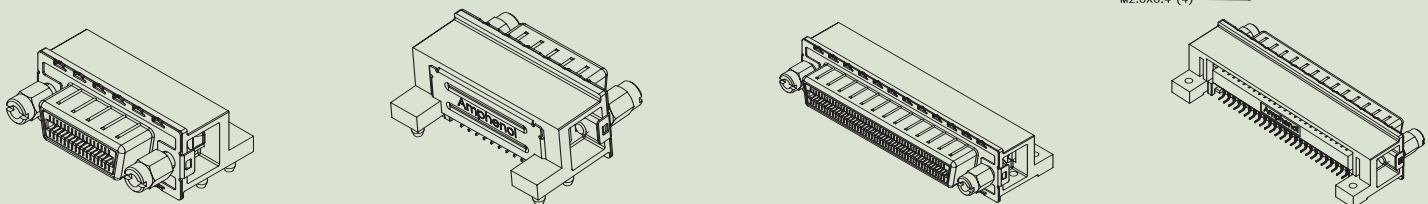
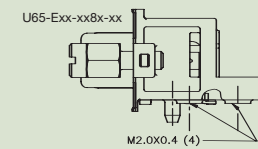
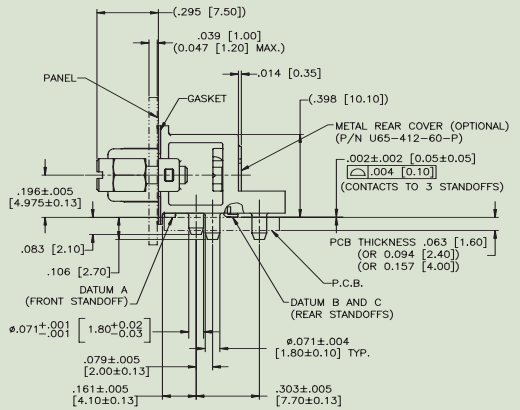
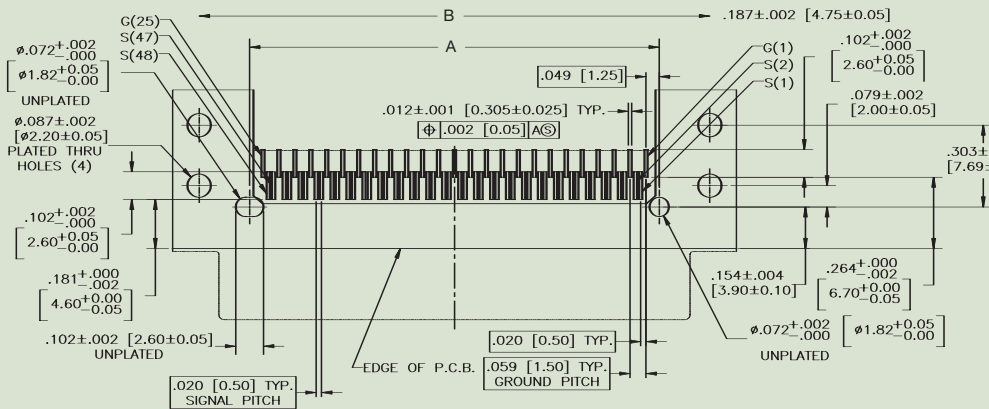
LANYARD RECEPTACLE	A	B
4X	0.571 [14.50]	0.697 [17.70]
12X	1.516 [38.50]	1.642 [41.70]

TOLERANCE:  $\pm 0.005$  [ $\pm 0.13$ ]  
 DIMENSIONS TO BE USED AS REFERENCE ONLY  
 PLEASE REFER TO SALES DRAWINGS FOR DETAILED DIMENSIONS  
 SPECIFICATIONS SUBJECT TO CHANGE

## THUMBSCREW WITHOUT ARMS



## THUMBSCREW WITH ARMS



THUMBSCREW RECEPTACLE	A	B
4X	0.571 [14.50]	0.945 [24.00]
12X	1.516 [38.50]	1.890 [48.00]

TOLERANCE: ± 0.005 [± 0.13]  
 DIMENSIONS TO BE USED AS REFERENCE ONLY  
 PLEASE REFER TO SALES DRAWINGS FOR DETAILED DIMENSIONS  
 SPECIFICATIONS SUBJECT TO CHANGE

**INFINITY** Amphenol Data/Telecom's High Speed INFINITY (4X/12X) series of plugs facilitate data speeds up to 75 Gbps total bandwidth, as required by InfiniBand™, Fibre Channel and Serial Attached SCSI Trade Associations. INFINITY plug and connector systems are high-density, hot pluggable and meet SFF-8470 specifications. Plug kits are available with a variety of cable size options as well as a unique low profile version that will allow for connection to two receptacles – one on top of the other – in a 1U form factor chassis.



## APPLICATIONS

- InfiniBand™
  - Fibre Channel
  - 10Gb Ethernet
  - SAS, External (Serial Attached SCSI)
  - SFF-8470
  - CX4
- 
- Datacom Devices
  - HCAs (Host Controller Adapters)
  - High Speed Routers and Switches
  - Storage Devices
  - SANs (Storage Area Networks)
  - Servers
  - RAID
  - XAUI

## ORDERING INFORMATION

Contact Amphenol for additional options

### Infinity Plug

U66 - N 04 - 1 1 1 0

#### INFINITY PLUG KIT

#### PLATING OPTION

- N - 50µ" Gold with PCB
- L - 30µ" Gold with PCB

#### CABLE TYPE

- 04 - 4X
- 12 - 12X

#### CABLE SIZE

- 1 - 24 AWG\*
- 2 - 26/28 AWG\*\*
- 3 - 28 AWG\*\*\*

#### KEYING OPTIONS

- 0 - All Keying slots (Standard)

#### APPLICATION

- 1 - Lanyard Latch for 24AWG wire only  
*Applications: InfiniBand™*
- 2 - Screw Lock  
*Applications: Fibre Channel / SAS / 10Gb Ethernet*
- 3 - Lanyard Latch Style - Low Profile (26/28 AWG only)  
*Applications: InfiniBand™*

#### FERRULE OPTION

- 0 - No Ferrule
- 1 - Ferrule

#### NOTES

- \* Lanyard 4X application or Thumbscrew 4X and 12X application
- \*\* Cable build-up required for 28 AWG
- \*\*\* Thumbscrew application only

[www.infinityconnectors.com](http://www.infinityconnectors.com)

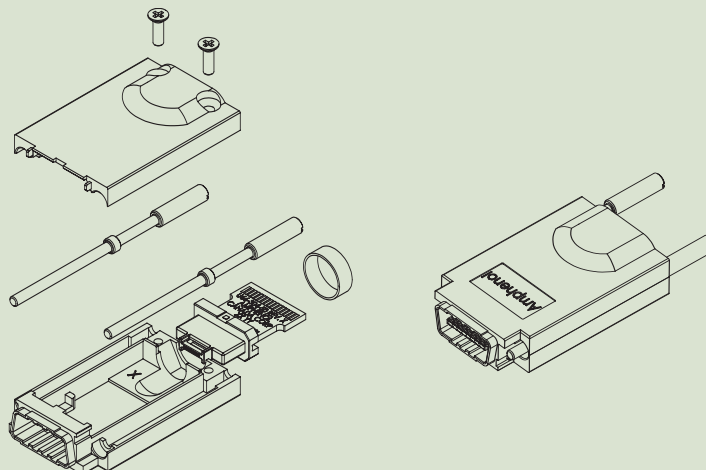
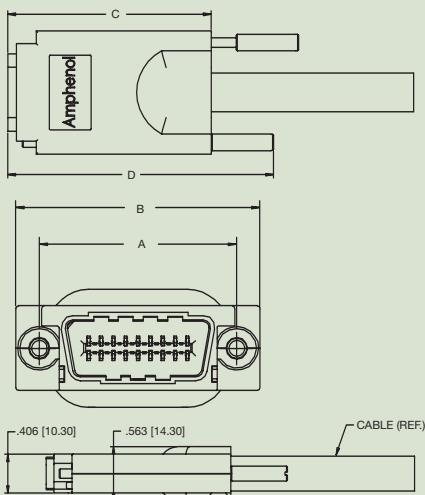
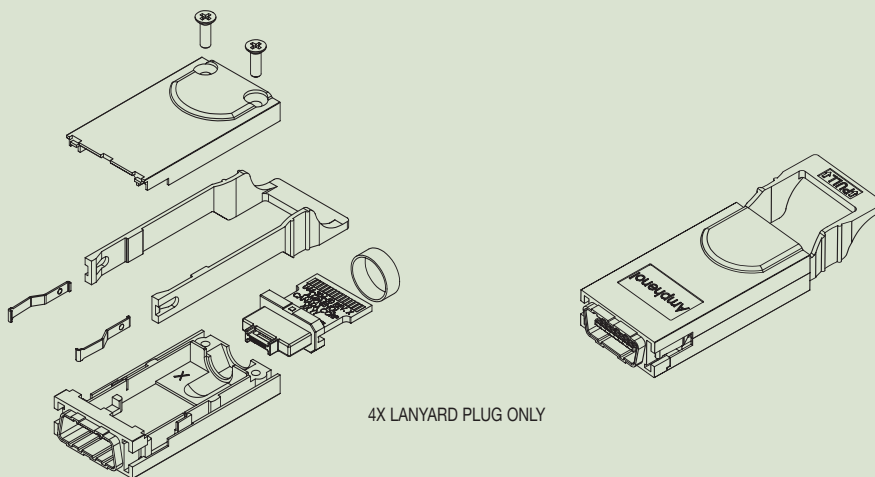
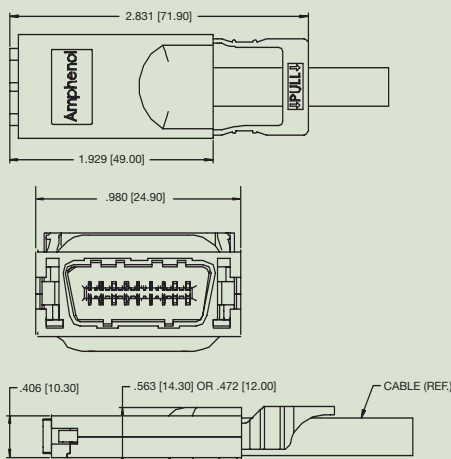
## MATERIAL SPECIFICATIONS

<b>Plastic Insert</b>	High temperature resistant nylon; Flammability rating – UL94V-0
<b>Contacts</b>	Phosphor bronze; 50μ” [1.27μm] or 30μ” [0.76μm] gold plating over nickel on contact mating area and tin-lead plating over nickel on termination area
<b>Shield</b>	Die cast; Nickel plated

## ELECTRICAL AND ENVIRONMENTAL SPECIFICATIONS

<b>Current Rating</b>	0.5 Amps maximum/contact	<b>DWV</b>	30 VAC
<b>Contact Resistance</b>	80mΩ maximum initial	<b>Operating Temperature</b>	-40°C to +85°C
<b>Insulation Resistance</b>	1000MΩ minimum	<b>Durability</b>	250 mating cycles

## TECHNICAL SPECIFICATIONS / ISOMETRIC VIEWS



THUMBSCREW PLUG	A	B	C	D
4X	0.945 [24.00]	1.169 [29.70]	1.929 [49.00]	2.620 [64.00]
12X	1.890 [48.00]	2.108 [53.54]	2.207 [56.06]	2.707 [68.76]

TOLERANCE: ± 0.005 [± 0.13]    DIMENSIONS TO BE USED AS REFERENCE ONLY    PLEASE REFER TO SALES DRAWINGS FOR DETAILED DIMENSIONS    SPECIFICATIONS SUBJECT TO CHANGE

# **HI SPEED CONNECTORS**

For more information about INFINITY (4X/12X),  
HSSDC, VHDCI, SFP or other High Speed products,  
please contact your local Amphenol Sales Representative, or contact:

Global Center of Excellence  
Amphenol Canada - Data/Telecom Products  
Phone: 416.754.5656  
Fax: 416.754.8668  
Email: [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com)  
[www.amphenolcanada.com](http://www.amphenolcanada.com)  
20 Melford Drive, Toronto ON M1B 2X6

## EUROPE

Phone: +31-30-635-8000

Fax: +31-30-637-7034

Email: [info@amphenol-nl.com](mailto:info@amphenol-nl.com)

## ASIA

Phone: +852-2699-2663

Fax: +852-2688-0974

Email: [info@amphenol.com.hk](mailto:info@amphenol.com.hk)

# **Amphenol<sup>®</sup>**

***Data / Telecom Products***

[www.amphenolcanada.com](http://www.amphenolcanada.com)