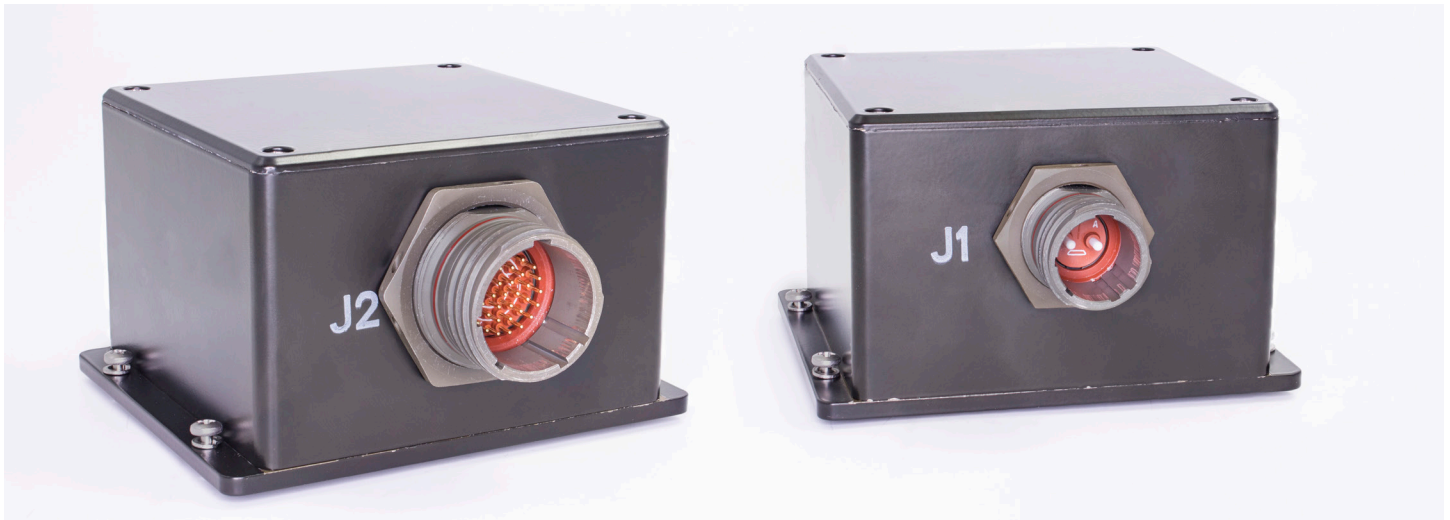


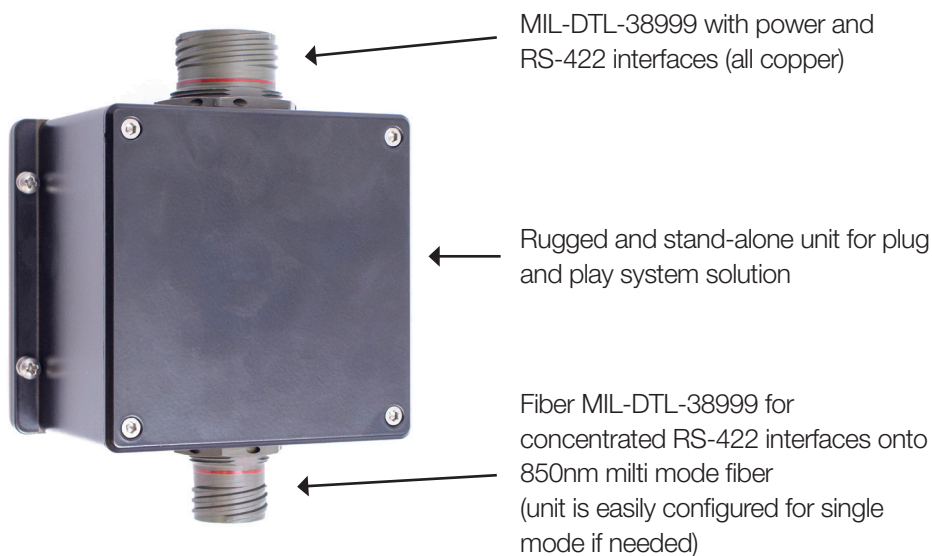
RUGGED MULTI-CHANNEL RS-422 CONCENTRATOR & EXTENDER

PDS-283

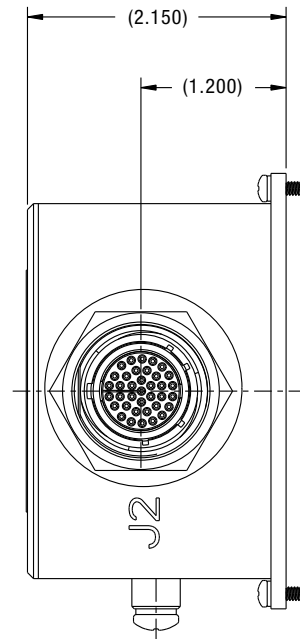
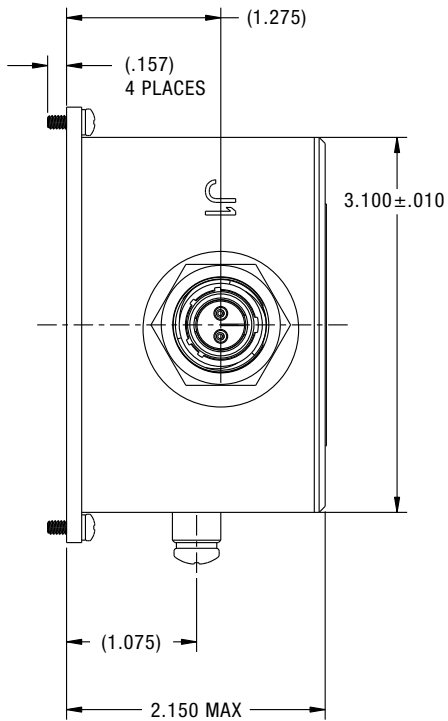
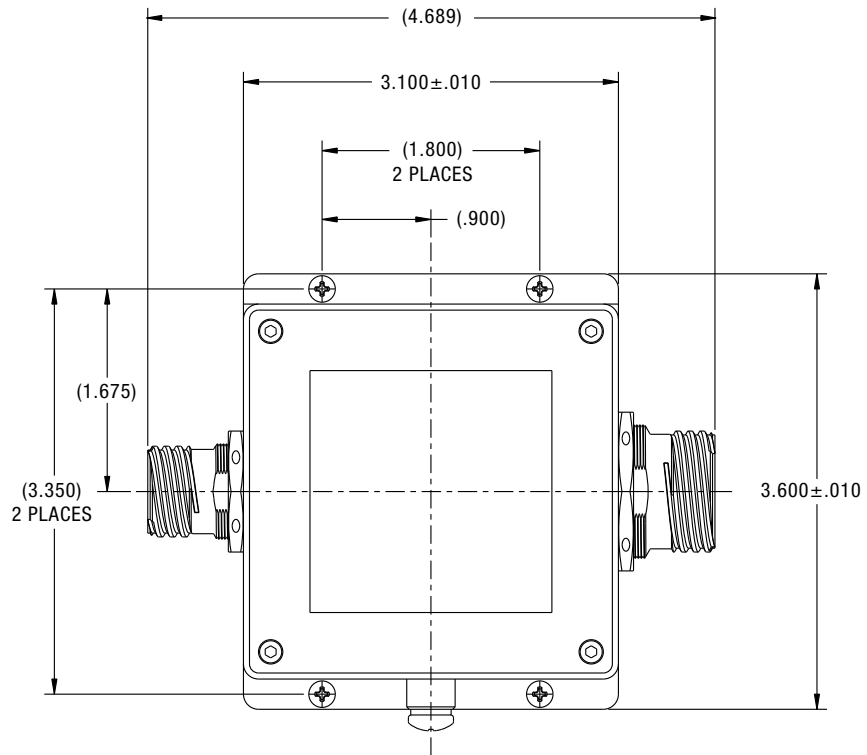


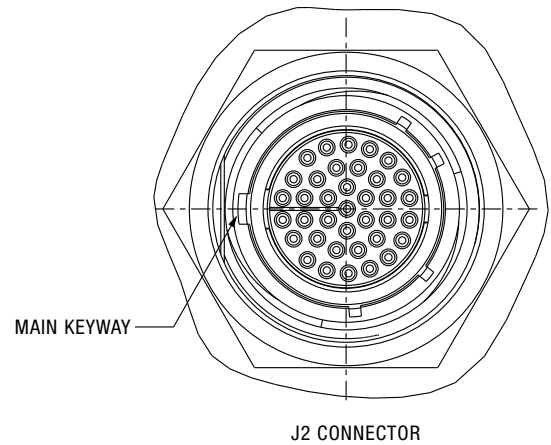
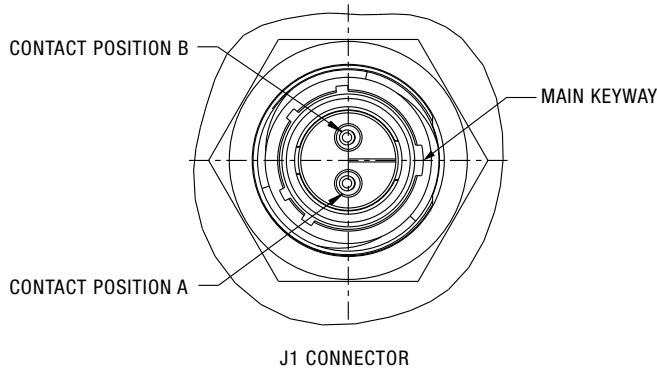
DESCRIPTION

Amphenol Military High Speed is pleased to introduce a new multi-channel RS-422 data concentrator and extender. This is a stand-alone unit with 13-32VDC power interface to the system. Its 6X bi-directional channels of RS-422 are electro-optically isolated from system interfaces and concentrated onto a single channel of 850nm multi-mode fiber optics at 1Gbps. Two units can be connected for seamless plug and play extension of the RS-422 interfaces. A separate RS-422 interface from the unit gives built-in-test and diagnostics information.



DIMENSIONS



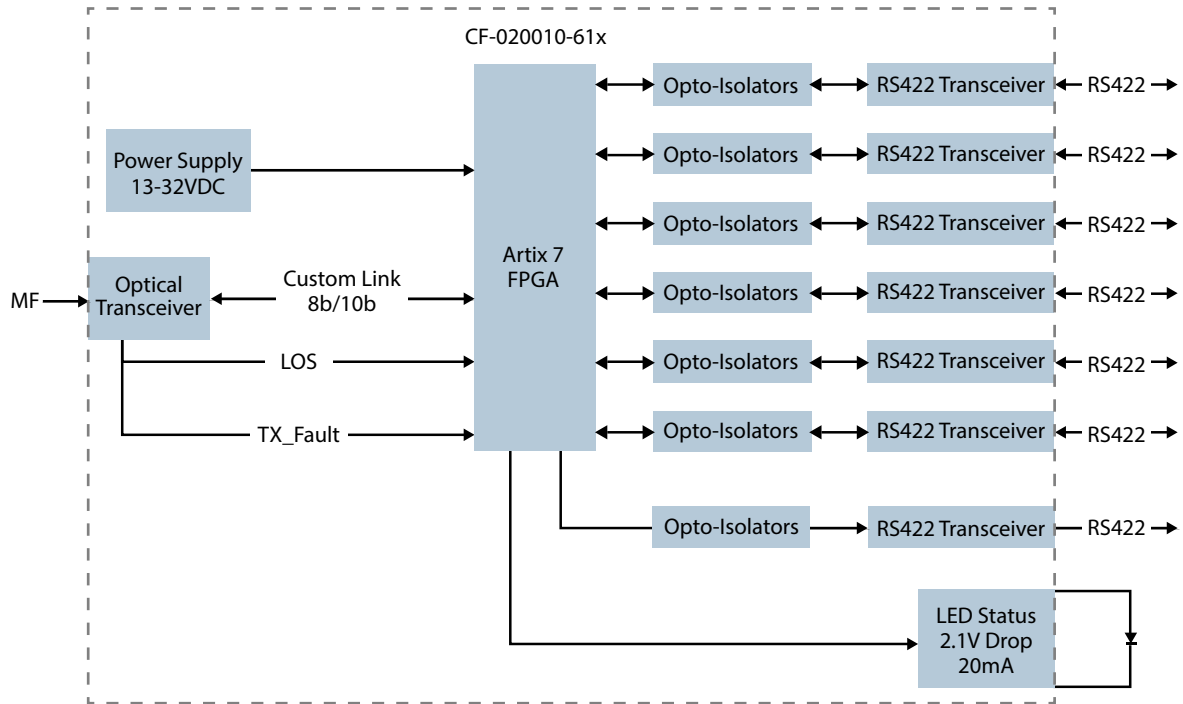


Electrical Interconnection List		
Connector	Pin	Comments
J1	A	Fiber Optic Transmitter, 850nm 1.25 Gbps
J1	B	Fiber Optic Reciever 850nm 1.25 Gbps
J2	1	Port 1 out P , RS422 Port 1 Tx Pos
J2	2	Port 1 out N , RS422 Port 1 Tx Neg
J2	3	Port 1 in P , RS422 Port 1 Rx Pos
J2	4	Port 1 in N , RS422 Port 1 Rx Neg
J2	5	Not Connected
J2	6	Port 2 out P , RS422 Port 2 Tx Pos
J2	7	Port 2 out N , RS422 Port 2 Tx Neg
J2	8	Port 2 in P , RS422 Port 2 Rx Pos
J2	9	Port 2 in N , RS422 Port 2 Rx Neg
J2	10	Not Connected
J2	11	Port 3 out P , RS422 Port 3 Tx Pos
J2	12	Port 3 out N , RS422 Port 3 Tx Neg
J2	13	Port 3 in P , RS422 Port 3 Rx Pos
J2	14	Port 3 in N , RS422 Port 3 Rx Neg
J2	15	Not Connected
J2	16	Port 4 out P , RS422 Port 4 Tx Pos
J2	17	Port 4 out N , RS422 Port 4 Tx Neg
J2	18	Port 4 in P , RS422 Port 4 Rx Pos
J2	19	Port 4 in N , RS422 Port 4 Rx Neg
J2	20	Not Connected

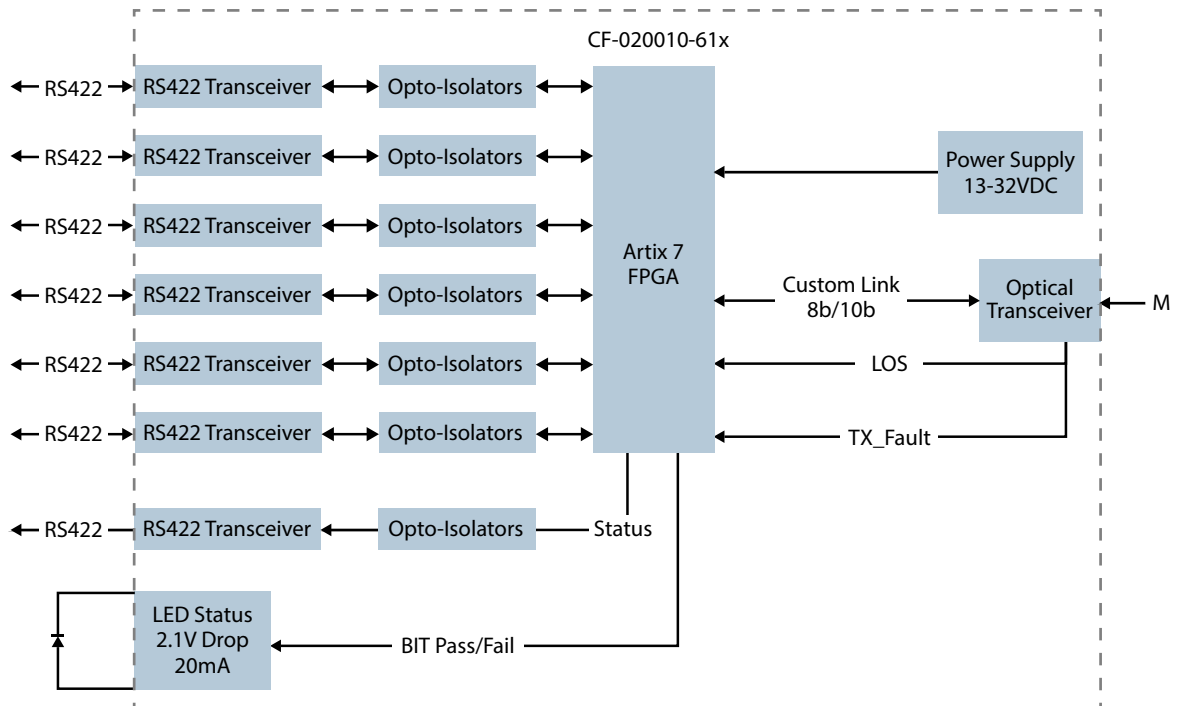
J2	21	Port 5 out P , RS422 Port 5 Tx Pos
J2	22	Port 5 out N , RS422 Port 5 Tx Neg
J2	23	Port 5 in P , RS422 Port 5 Rx Pos
J2	24	Port 5 in N , RS422 Port 5 Rx Neg
J2	25	Not Connected
J2	26	Port 6 out P , RS422 Port 6 Tx Pos
J2	27	Port 6 out N , RS422 Port 6 Tx Neg
J2	28	Port 6 in P , RS422 Port 6 Rx Pos
J2	29	Port 6 in N , RS422 Port 6 Rx Neg
J2	30	Bit out P , RS422 Bit Output
J2	31	Bit out N , RS422 Bit Output
J2	32	Bit_Led_An, Bit Led Output Anode
J2	33	Bit_Led_Ca, Bit Led Output Cathode
J2	34	Power, 13-32VDC Power Input
J2	35	Power_RTN, 13-32VDC Power Input
J2	36	Not Connected
J2	37	Not Connected

BLOCK DIAGRAMS

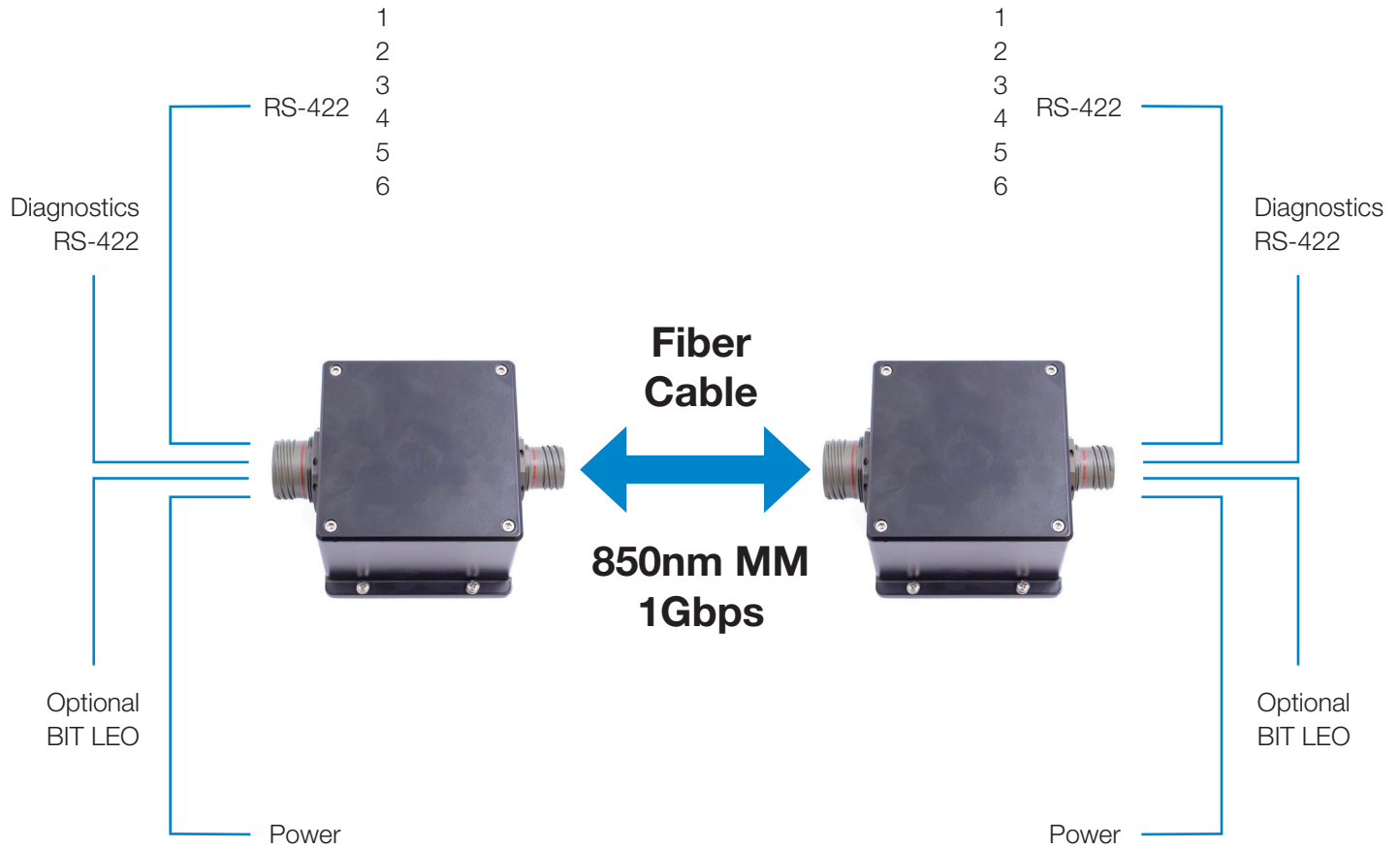
A.



B.



SYSTEM BLOCK DIAGRAM



ORDERING GUIDE

Part Number	Description
CF-020010-61X	Rugged Multi-Channel RS422 Concentrator and Extender, OD CAD Plating
CF-02EA00-02X	Rugged Multi-Channel RS422 Concentrator and Extender, Durmalon Plating

To complete part number, first X represents key rotation (N, A, B, C, D, E)

TECH SPECS

Rugged RS-422 Concentrator

Power	13V-32-V DC power interface; 5 Watts Max
Copper RS-422	6 fully compliant optically isolated interfaces for concentration; 1 fully compliant optically isolated interface for built-in-test and diagnostics
Ethernet Fiber Connectivity	1 transmitter; 1 receiver 850nm multi-mode 1Gbps transmitter/receiver Min power output -4dBm; Max receiver sensitivity -20dBm

Temperature

- Operating Temperature - Thermal Cycles between -40°C and 85°C while device is operating
- Temperature is measured at chassis housing or card edge
- Storage Temperature - Thermal Cycles between -55°C and 125°C

Humidity

- Operating Humidity – Humidity cycle between 0-100% non-condensing humidity while device is operating
- Storage Humidity – Humidity cycle between 0-100% condensing humidity

Sealing

- Sealing can be optionally provided at the MIL-DTL-38999 interface with up to 10-5 cc/sec performance

Fluids Susceptibility

- MIL-DTL-38999 receptacle interface per EIA-364-10E

Vibration & Shock

- Sine Vibration – 10 g Peak, 5-2,000Hz
 - Based on a sine sweep duration of 10 minutes per axis in each of three mutually perpendicular axes. May be displacement limited from 5 to 44 Hz, depending on specific test.
- Random Vibration - 0.005@5Hz, 0.1@15Hz, 0.1@2,000Hz
 - 60 minutes per axis, in each of three mutually perpendicular axes.
- 40 G Peak Shock Cycle
 - Three hits in each axis, both directions, ½ sine and terminal-peak saw tooth, Total 36 hits.

Altitude

- -1,500 to 60,000 ft Altitude Testing w/ Rapid Depressurization

Electromagnetic Compatibility

- Designed to comply with MIL-STD-461E

Printed Circuit Board Assemblies

- Conformal Coat
 - Amphenol performs Conformal Coating to both sides of printed circuit board assemblies using HUMISEAL IB31 in accordance with IPC-610, Class 3.
- Printed Circuit Board Rigidity
 - Amphenol printed circuit boards are fabricated in accordance with IPC-6012, Class 3.
- Printed Circuit Board Fabrication
 - Amphenol printed circuit boards acceptance criteria is in accordance with IPC-610, Class 3.

Reliability Predictions (MTBF)

Amphenol can perform Mean Time Between Failure (MTBF) reliability analysis in full compliance with MIL-HDBK-217F-1 Parts Count Prediction and MIL-HDBK-217F-1 Parts Stress Analysis Prediction. We can also perform reliability analyses in full compliance of ANSI/VITA 51.1 if it is required or preferred over the later method.

Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all connectors.

AMPHENOL is a registered trademark of Amphenol Corporation. ©2016 Amphenol Corporation REV:12/2/2016