Amphenol
Aerospace

CTF-4G-2

PDS-236-4

Amphenol Aerospace offers the Fiber to Copper Converter product line, a flexible, affordable, and rugged fiber copper converter system with many options available.

This Amphenol connector will transform your high speed needs to a new level. We have taken two technologies and combined them into a hybrid connector. Now you can transfer high speed data seamlessly from copper to fiber and from fiber to copper.

FIBER INTERFACE

- Jamnut or flange mount
- Shell size 13 38999; options for EPX/ARINC 400/600
- MS29504 system fiber interface; options for expanded beam/ARINC 801/MT
- 2X bi-directional interfaces
- Speeds of 1G, 2G, 4G, 10Gbps
- Interface support for 1/2/4/8G FC and 1/10GbE; option for DVI, SFDP

COPPER INTERFACE

- 2X high speed channels on 6.5 Gbps capable split pair quadrax PC tails or flex assembly
- Interfaces for power, diagnostics, and others

FEATURES

- No need for internal subsystem fiber harnesses, interconnect, or transceivers
- Utilizes copper transceivers and existing interconnect (backplane, harnessing, faceplate) for system fiber connection
- Media conversion at the connector reduces system complexity and cost
- APH Epoxy staking protects delicate fiber components for environment and assembly process

OVERALL UNIT DIMENSIONS

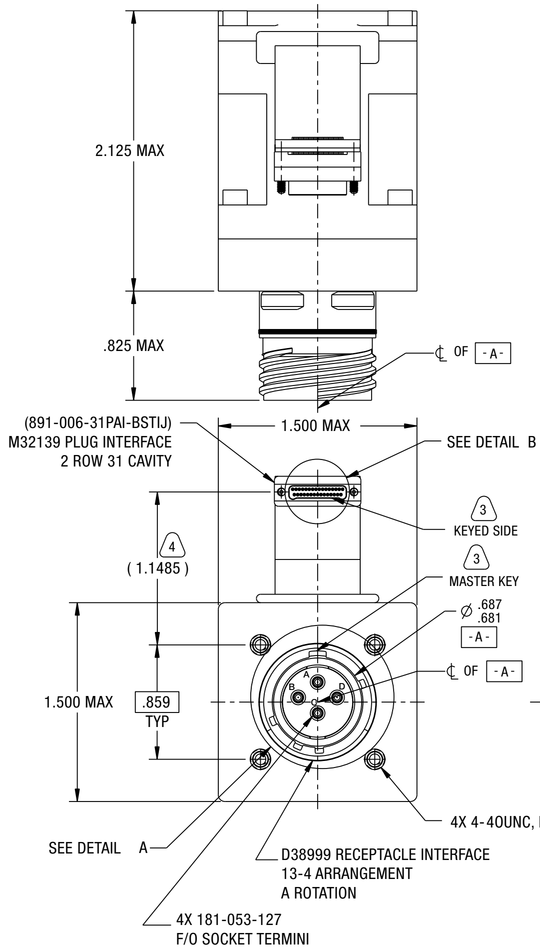
- 8 ports of Gigabit Ethernet
- Conversion of 1000BASE-T to SGMII
- Compliant with IEEE 802.3ab Ethernet Standards and Specifications
- Hermetic option available with a helium leak rate of 10-4 cc/sec

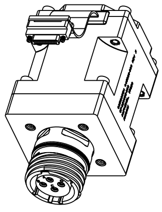
RUGGEDIZATION

- Full ruggedization for environmentals and EMI/EMP
- Interfaces for power, diagnostics, and more
- Refer to page 3 for additional details

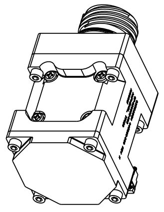
NEXT GENERATION DIGISTAK

DRAWING

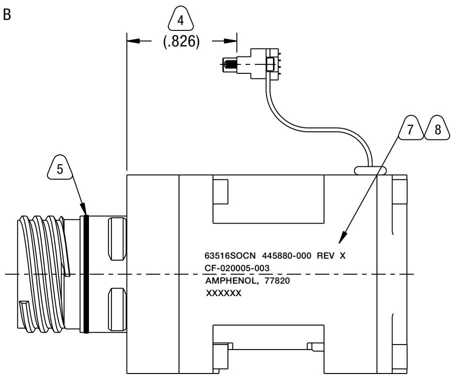


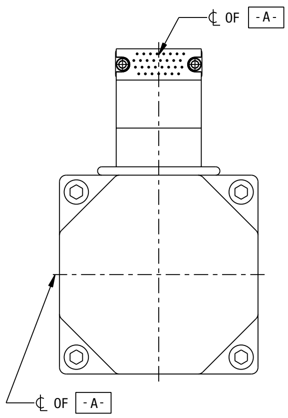


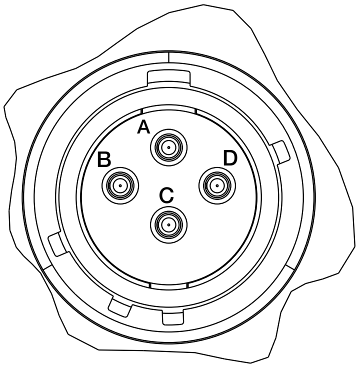
FRONT ISOMETRIC VIEW
SCALE 1.000



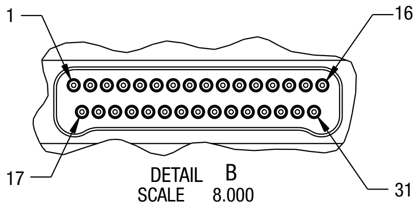
BOTTOM/REAR ISOMETRIC VIEW
SCALE 1.000







DETAIL A
SCALE 4.000



DETAIL B
SCALE 8.000

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AMPHENOL INTEGRATED ELECTRONIC PRODUCTS RUGGEDIZATION DESIGN

OVERVIEW

Amphenol integrated electronic products are designed and manufactured to our Ruggedization guidelines listed below. These guidelines ensure years of reliable operation in harsh environment applications where extreme operating temperatures, shock, vibration and corrosive atmospheres are regularly experienced

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

- <u>Sine Vibration – 10 g Peak, 5-2,000Hz</u>
  - 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.
- <u>Random Vibration - 0.005@5Hz, 0.1@15Hz, 0.1@2,000Hz</u>
  -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.

REV:11/18/2020