
SPACE MICRO-D CONNECTORS

SPACE APPLICATIONS 156

MDSA RANGE

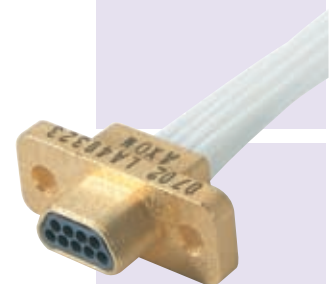
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SPACE APPLICATIONS

AXON' has been involved in numerous space approved projects such as :

- ▶ MIL-STD-1553 databus systems.
- ▶ ESCC wires and cables
 - ESCC 3901 001 : Polyimide insulated wires.
 - ESCC 3901 002 : Lightweight polyimide insulated wires.
 - ESCC 3901 012 : Radiation cross-linked ETFE insulated cables
 - ESCC 3901 013 : PTFE/polyimide insulated wires and cables.
 - ESCC 3901 018 : PTFE/polyimide insulated wires and cables
 - ESCC 3901 019 : CELLOFLON®/polyimide insulated wires.
 - ESCC 3901 021 : PTFE/polyimide insulated wires and cables.
 - ESCC 3901 024 : Abrasion resistant PTFE tape wires and cables.
 - ESCC 3902 002 : Coaxial, triaxial and symmetrical cables.
- ▶ High Speed data links (IEEE 1394, SpaceWire).
 - ESCC 3902/003 SpaceWire cable manufacturing
 - ECSS-E-50-12C SpaceWire cabling
- ▶ Very High Speed data links up to 10Gb/s on dedicated 100 Ω media low skew & low cross-talk with matched micro-D connectors.
- ▶ Power distribution systems : aluminium busbars for reduced weight and improved voltage drop.
- ▶ MIL-STD-1553 connectors (ACB1) approved to ESCC3401 079.
- ▶ Various accessories available including halorings, backshells, and special hardware.
- ▶ Custom designed cables and assemblies with specific properties, such as temperature control, low electrostatic output and radiation resistance.

AXON' has been involved in numerous space approved projects such as :

- ▶ the International Space Station for manned flights.
- ▶ various satellites programmes (LEO and GEO).
- ▶ rocket launchers such as Ariane 5.

- ▶ Approval :
ESCC 3401/029 (ESA EPPL2)



▲ CLASS 100 000 CLEAN ROOM
AXON' IS EQUIPPED WITH 2 CLEAN ROOMS



▲ ACCESSORIES



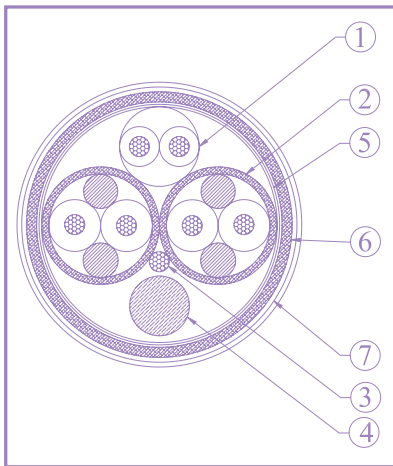
▲ ESA WIRES AND CABLES

IEEE 1394 LINKS

IEEE 1394 A used as spacecraft communication network

COMPOSITION

AXON' IEEE 1394 cable (P838566) consists of two screened twisted pairs and one unscreened twisted pair as shown in the specification. The cable has an overall shield and jacket.



▲ IEEE1394 LINK



▲ IEEE1394 CABLE

1 – One 26AWG unscreened pair

- CONDUCTOR AWG 2619
- Stranded silver plated copper alloy 2 μ m.
 - 19 x 0.102 mm strands.
 - Diameter : 0.504 mm nom.
 - Cross section : 0.15 mm² nom.
 - Resistance : 13.65 Ω /100m nom.
- DIELECTRIC : Extruded PTFE.
- Colour : Black/White.
 - Diameter : 1.00 mm nom.

2 – 2 screened pairs CRP 26 AWG - 110 Ω

- CONDUCTOR AWG 2619
- Stranded silver plated copper alloy 2 μ m.
 - 19 x 0.102 mm strands.
 - Diameter : 0.504 mm nom.
 - Cross section : 0.15 mm² nom.
 - Resistance : 13.65 Ω /100m nom.
- DIELECTRIC : CELLOFLON® (expanded PTFE).
- Colour : red-green & orange-blue.

BRAIDED SHIELD

- Material : silver plated copper 2 μ m min.
- Strand diameter : 0.079 mm.
- Diameter : 2.95 mm nom.

3 – Drain wire : AWG2619

- CONDUCTOR : same as above

4 - CELLOFLON® expanded PTFE filler

5 – 2 bonded polyimide separating tapes

6 - Braided shield

- Material : silver plated copper 2.5 μ m.
- Strand diameter : 0.127 mm.

7 - Outer jacket :

- Material : wrapped PTFE
- Colour : white.

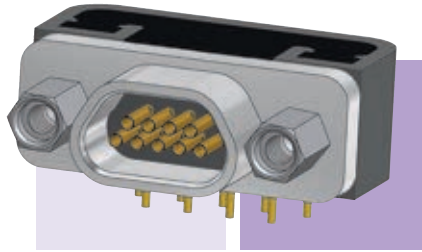
MAIN CHARACTERISTICS

- Outer Diameter : 7.15 mm max.
- Weight : 84 g/m max.
- Operating temperature : -90°C / +200°C.
- Impedance (pair CRP2619 S2) : 110 Ω +/- 10
- Voltage rating (E2619) : 600 V AC.

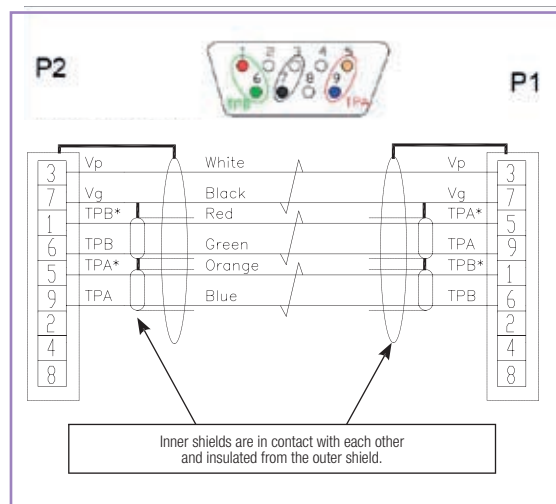
CONNECTION

There are 2 possibilities to connect the cable to the PCB:

- Direct connection with a receptacle pigtail, wires are directly soldered to the PCB.
- Special 9 way CBR connector where each line has the same electrical length to reduce the skew between one another.



▲ 9 WAY CBR CONNECTOR



▲ WIRING DIAGRAM



▲ IEEE1394 LINK