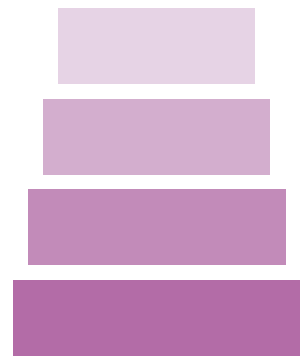


120 WAY MICRO-D CONNECTORS

- 120 way Micro-D connectors 302
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- Surface mount PCB card edge connectors 306
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120 WAY MICRO-D
CONNECTORS

Space Micro-D &
Nano-D connectors

120 WAY MICRO-D CONNECTORS

An enduring trend in the electronics industry is the continuing drive towards miniaturisation. This leads in turn to ever greater cabling densities with an ever larger number of signals required within limited space constraints. In answer to these challenges, AXON' CABLE has developed a range of 120 way Micro-D connectors. They are available as pigtailed or within assemblies but can equally be supplied as PCB connectors in either surface mount or through hole format. Connector savers are part of the range.

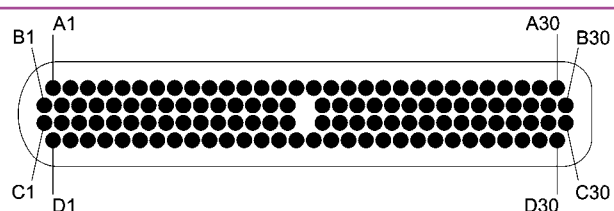
These connectors have been developed and tested for the challenging requirements of space electronics, and can be used for any applications where severe environmental conditions and high density cabling are critical. Keying hardware is an option.

AXON' can offer specific numbers of contacts for custom designed applications. Specific designs are not contained within the MIL specification but AXON's solutions remain fully compatible with the MIL-DTL-83513 standard as far as performance and construction are concerned.

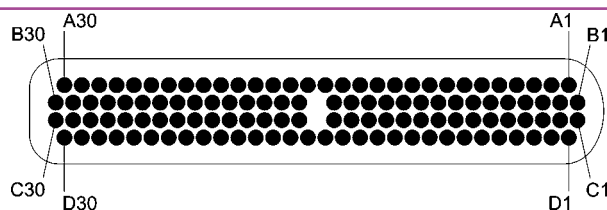


▲ 120 WAY MICRO-D CARD
EDGE CONNECTOR

► Contact arrangements



MATING FACE OF THE 120 WAY MALE CONNECTOR



MATING FACE OF THE 120 WAY FEMALE CONNECTOR

1.27 mm (.050") contact spacing.
1.27 mm (.050") spacing between two rows.

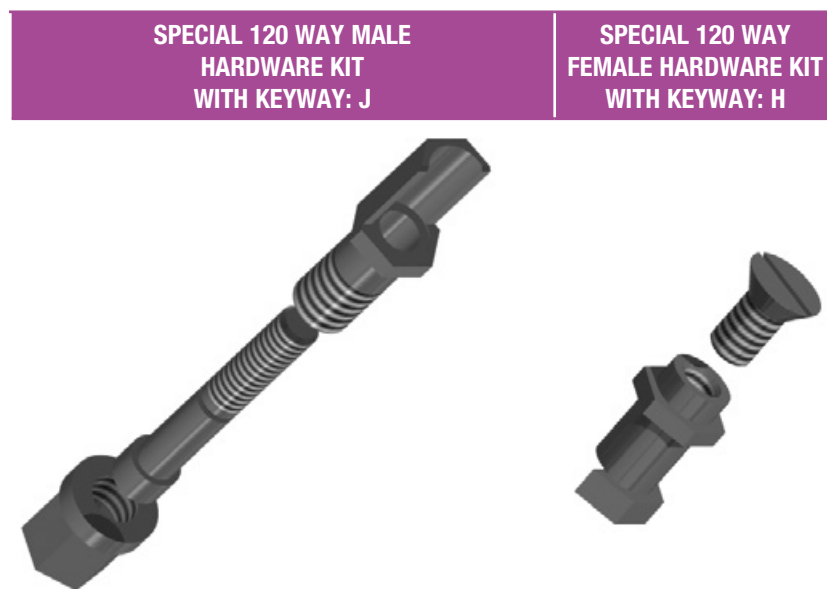
► References

DESIGNATION	REFERENCE	COMMENTS	PAGE
120 WAY PLUG CONNECTOR FOR CABLE OR ASSEMBLY	P562630	Wire, length and colour type to be defined	305
120 WAY SOCKET CONNECTOR FOR CABLE OR ASSEMBLY	P562631	Wire, length and colour type to be defined	305
120 WAY SOCKET SURFACE MOUNT PCB CONNECTOR	P562632	Can only be mated with pigtail plug	306
120 WAY PLUG BOARD STRAIGHT PCB CONNECTOR	P562633		307
120 WAY CONNECTOR SAVER	P562634		307

The AXON' 120 way Micro-D connector can be ordered with standard wires and colours (see pages 29 & 30).

For more AXON' 120 way Micro-D connectors references, please ask for our *Cables & harnesses for space applications* catalog.

► Keying Hardware



120 WAY MICRO-D
CONNECTORS

Space Micro-D &
Nano-D connectors

► Electrical & mechanical characteristics

FEATURES	SPECIFICATIONS	TEST METHODS
CURRENT RATING	2.5 A max @ 23°C	EIA-364-70
CONTACT RESISTANCE	8 mΩ max.	EIA-364-06
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc	EIA-364-21
DIELECTRIC WITHSTANDING VOLTAGE - SEA LEVEL 0 M - ALTITUDE 21 KM (70,000 FT)	250 V _{AC} 100 V _{AC}	EIA-364-20
CONTACT ENGAGING AND SEPARATION FORCE	170 g max. (6 oz) / 14 g min. (0.5 oz)	EIA-364-37
CONNECTOR MATING AND DE-MATING FORCE	283 g (10 oz) X 120	EIA-364-13
CONTACT RETENTION	2.26 kg (5 lbs) for 5 seconds min.	EIA-364-29
DURABILITY	500 mating cycles min.	EIA-364-09
TEMPERATURE RANGE	-55°C / +150°C	
VIBRATION	20 g's - No discontinuity >1μs	EIA-364-28 TEST CONDITION IV
SHOCK	50 g's - No discontinuity >1μs	EIA-364-27 TEST CONDITION E
SALT SPRAY	48 hours	EIA-364-26 TEST CONDITION B
HUMIDITY	Insulation resistance > 1MΩ	EIA-364-31 TEST METHOD IV

► Materials & finish

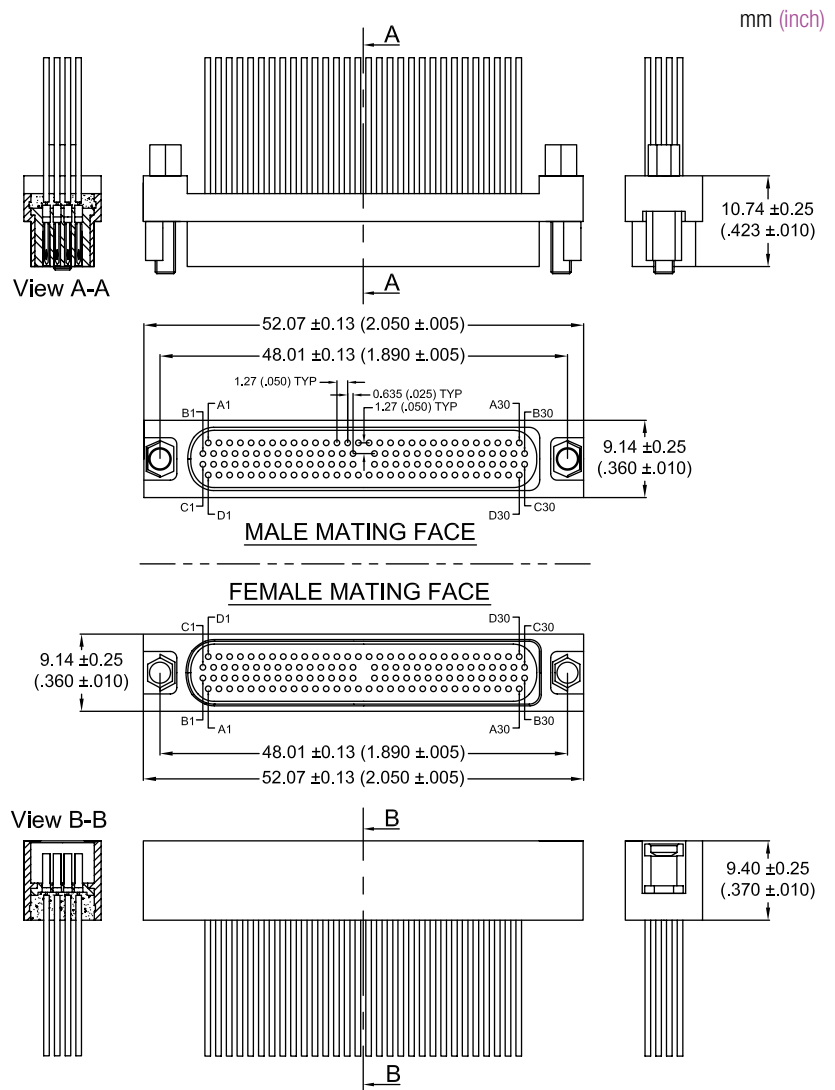
COMPONENTS	MATERIAL	FINISH
MALE CONTACT (TWIST PIN)	COPPER AND BERYLLIUM COPPER	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27μm (0.050") MIN), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290 CLASS 2 (1.27μm (0.050") TO 3.81μm (0.150"))
FEMALE CONTACT	COPPER ALLOY	
METAL SHELL	ALUMINIUM ALLOY, TYPE 6061	ELECTROLESS NICKEL PLATING IN ACCORDANCE WITH SAE-AMS2404, CLASS 4, .0005 INCH MIN.
INSERTS	LIQUID CRYSTAL POLYMER, 30% LOADED GLASS FIBRE POLYESTER, 94VO, IN ACCORDANCE WITH MIL-M-24519 (200°C)	
HARDWARE	STAINLESS STEEL, 300 SERIES	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
ENCAPSULANT	SPACE GRADE EPOXY RESIN	
UNINSULATED WIRE	AWG 2801 SOLID COPPER WIRE	GOLD PLATED IN ACCORDANCE WITH A-A-59551

► 120 way male and female connectors for cable and harnesses

Both male and female connectors can be assembled with various wire sizes in shielded and unshielded forms. High speed variants can also be produced, using controlled impedance shielded twisted pairs which allow data rates of up to 880 Mbps. For space applications, these connectors are assembled in a class 100,000 clean room, and can be terminated with ESA ESCC (European Space Agency) approved wires.



P562630
P562631



120 WAY MICRO-D
CONNECTORS

Space Micro-D &
Nano-D connectors

► Surface Mount PCB Card Edge Connectors

Surface Mount (SMT) connectors have two rows of 28 AWG gold plated leads at 0.635 mm (.025") pitch spacing to terminate to PCB's by soldering. Lugs on either side of the connector allow for mechanical clamping onto the PCB.

► AVAILABLE VERSIONS

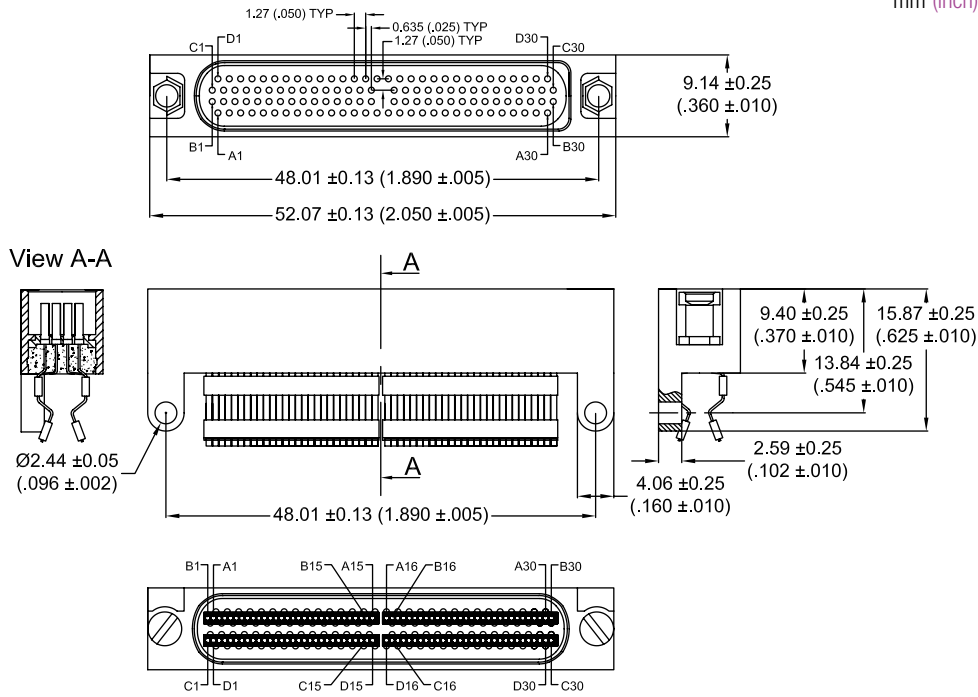
- Female style to mate with a male pigtail or assembly connector.
- Male and female styles to mate together (this option has a longer shell to retain the keying hardware system).
- Female style for panel mount.

► FEMALE SMT

to mate to a male cable connector.

P562632

mm (inch)

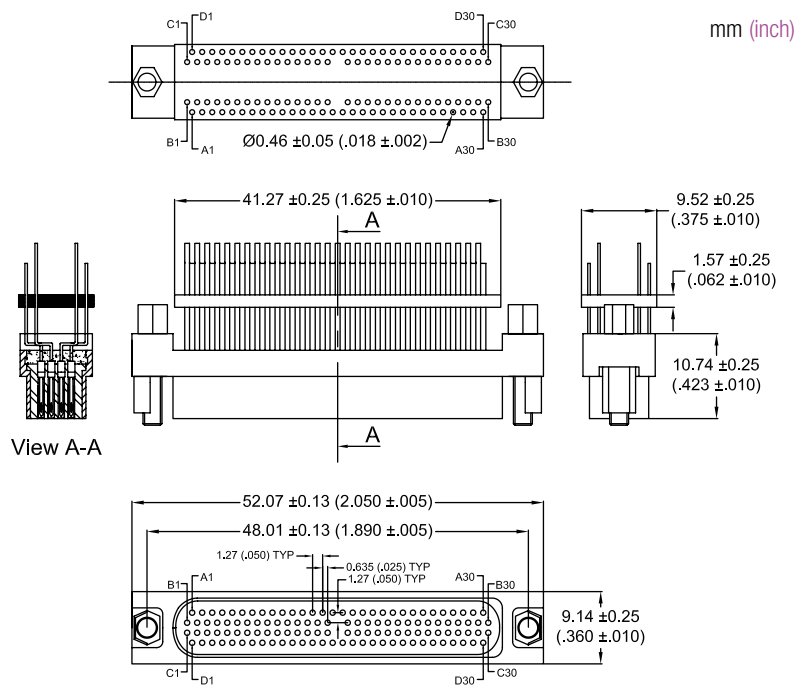


SEE CONTACT LAYOUT ON PCB PAGE 308

BS CONNECTOR

The BS version is similar to the straight PCB connector style of the MIL standard. Available in male version only.

P562633

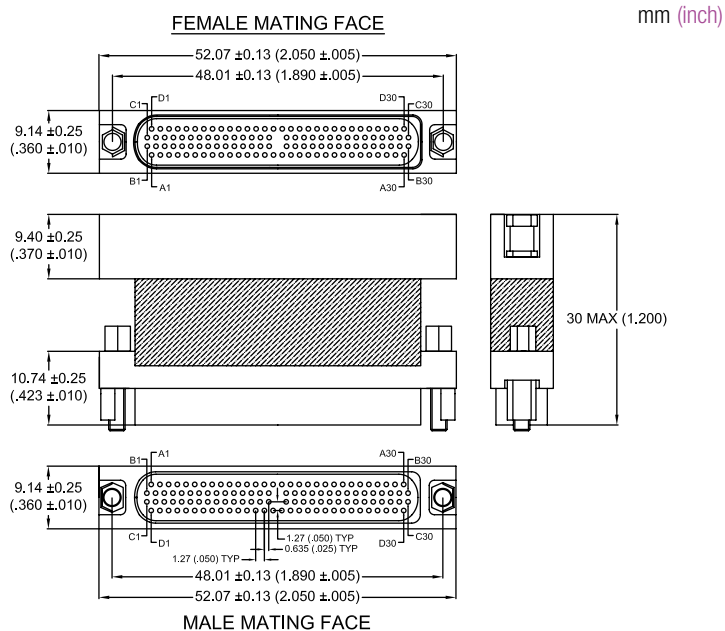


SEE CONTACT LAYOUT ON PCB PAGE 308

CONNECTOR SAVER

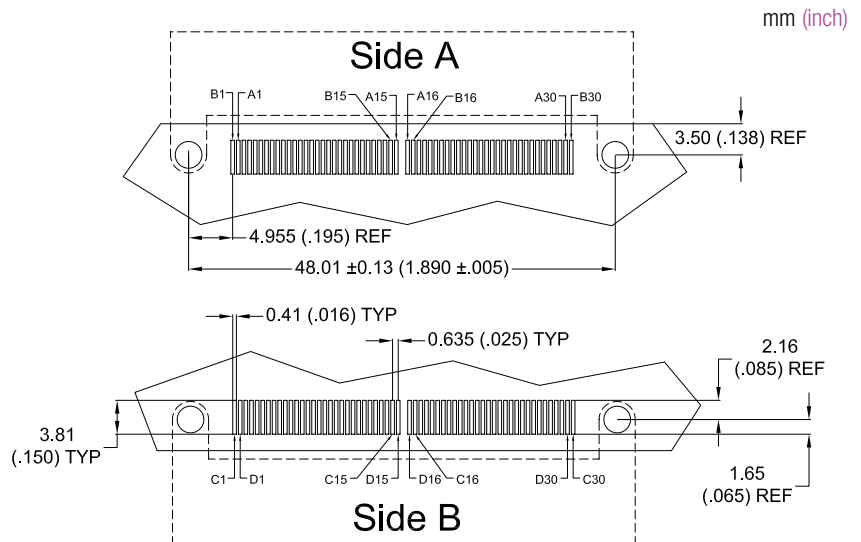
Connector savers have been developed to protect expensive equipment. Typical applications include test equipment and space-grade instruments.

P562634



► PCB layout

► FEMALE SMT (SURFACE MOUNT STYLE) CONNECTOR



► BS VERSION (MALE ONLY)

