



MTL951

live disconnection in hazardous areas

- BASEEFA certified for use in Zone 1 and Zone 2 to ATEX directive 94/9/EC
- Disconnects without need for prior isolation
- Use in any gas group
- Non-disruptive operation of bus systems in hazardous areas
- Reduces installation and maintenance cost
- High reliability



MTL951 Ex d e Hazardous area plug and socket connectors enable the operator to remove equipment from a power or signal line in a hazardous area, without having to isolate the supply. It also allows fieldbus equipment to be removed from the bus without having to disrupt communication with other equipment attached to that bus.

Applications include fieldbus instrumentation, standard 4–20mA runs, junction box feeds, power supply units, distribution boards and any other applications requiring power and instrument feeds in a hazardous area.

This hazardous area connector can be used in Zone 1 and Zone 2 areas and can interface with the following types of electrical protection (Ex i, Ex d, Ex e, Ex p, Ex m, Ex n) allowing the user the freedom to select the best option for their application. The IIC T4 classification permits its use in almost all gas atmospheres. The connector is suitable

for use in combustible dust atmospheres Zone 21 and 22 with dusts having a dust layer minimum ignition temperature greater than 210°C.

The enclosure thread on the socket and the gland mounting thread on the plug can be either M20 or ½" NPT. The two threads can be different and can form a thread adaptor if this is considered desirable. The cable gland must be a suitably approved Exd gland compatible with the flexible cable used.

Easy installation - the socket offers flying leads for connection to the equipment terminals. The plug has crimp connectors for the incoming cable cores.

Easy operation - spare equipment can be preassembled. When a changover is required, simply undo the plug and socket and reconnect the spare - this removes the need to dismantle cable glands, equipment covers and terminal screws.

Greater equipment protection can be afforded as the covers can remain on the equipment without exposing terminal compartments or sensitive electronic circuits to the environment when disconnecting.

Lower cost of ownership since fast connect/disconnect reduces the down time and operating cost, it can also be used to solve the problem of on-site testing. Low weight and small size removes the need for isolating switches on distribution boards or additional junction boxes, which add complexity, weight and size to a process plant or oil platform.

Ruggedly constructed in metal, the unit offers high impact resistance and can survive extreme ambient temperatures. The socket cap must be fitted as soon as possible after separation. The plug cap although not essential for safety is offered as a desirable option for environmental protection.

MTL951

HAZARDOUS AREA CONNECTORS

SPECIFICATION

ELECTRICAL

Voltage and current rating

MTL951-P-A-X (power)	110/230V AC 50/60Hz 2.5A
MTL951-P-D-X (signal)	40V DC @ 2A (ATEX version)
MTL951-P-D-X-C (signal)	32V DC @ 60mA (CSA version)

Contact number

Power	3
Signal	3

Contact resistance

< 3mΩ

Main cable size and connection

0.8 to 2.5mm² - crimped receptacles

'Flying' leads

1.0mm² (17AWG) rated at 300V to BS6231
Length - 1 metre

MECHANICAL

Body Material

Brass

Contact Material

Gold Plated Phosphor Bronze

Gaskets and seals

Neoprene/Silicone

Weight

Socket:	185gm
Socket with cap:	290gm
Plug:	332gm
Plug with cap:	462gm

Gland mounting thread

½" NPT or M20 Female

Enclosure/bulkhead thread

½" NPT or M20 Male

ENVIRONMENTAL

Ingress Protection Rating

IP54

Operating and storage temperature

-40°C to +70°C

Humidity

5 to 95% non-condensing

Vibration

To BS 2011:	30 to 500 Hz
To BS EN 60068:	10 to 500 Hz

Shock


To BS EN 60068 50g

Reliability

>500 operations

CERTIFICATION

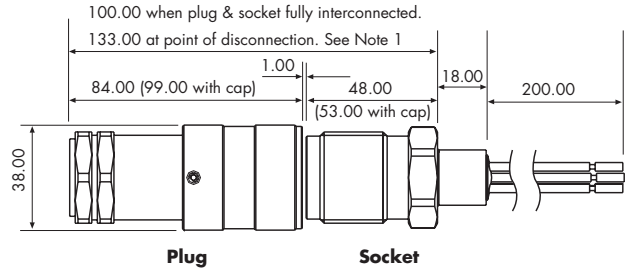
BASEEFA

BAS00ATEX2117X
 II 2G
 EEx de IIC T4
 -40° C ≤ T_{amb} ≤ +70° C

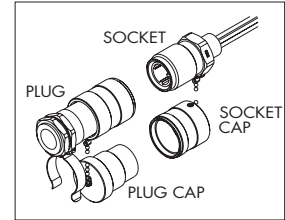
CSA

06.1793956X
 Ex de IIC T4
 -40° C ≤ T_{amb} ≤ +70° C
 IP54

DIMENSIONS (MM)



Note 1: The plug and socket must be positioned so that the plug with gland fitted can be disconnected and removed with space to manipulate the cable.



PIN ALLOCATIONS



Viewed from rear of plug and open end of socket

Power version

Pin 1	Earth
Pin 2	Live
Pin 3	Neutral

Signal version

Pin 1	Screen
Pin 2	Positive
Pin 3	Negative

Versions are 'keyed' to prevent cross connection.

Special conditions for safe use (extract from BAS00ATEX2117X and CSA 06.1793956X)

- Only the bulkhead socket may remain energised after separation. The plug must be de-energised.
- The bulkhead socket must have the socket cap fitted immediately after separation and remain fitted at all times, unless the plug and socket is installed within an enclosure affording a minimum degree of protection of IP54.
- The maximum plug/socket flamepath gap shall not be remachined to exceed 0.13mm.
- The cables permanently attached to the socket shall be suitably terminated and protected against impact.

Note: For more information to ensure a safe installation see Instruction Manual INM951 available from MTL.

UK Patent GB 2 355 348

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



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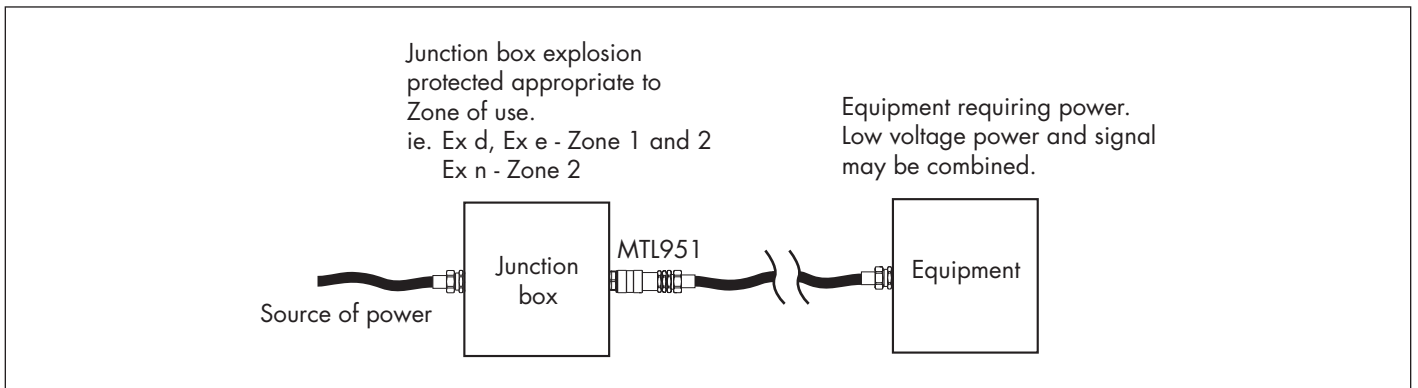
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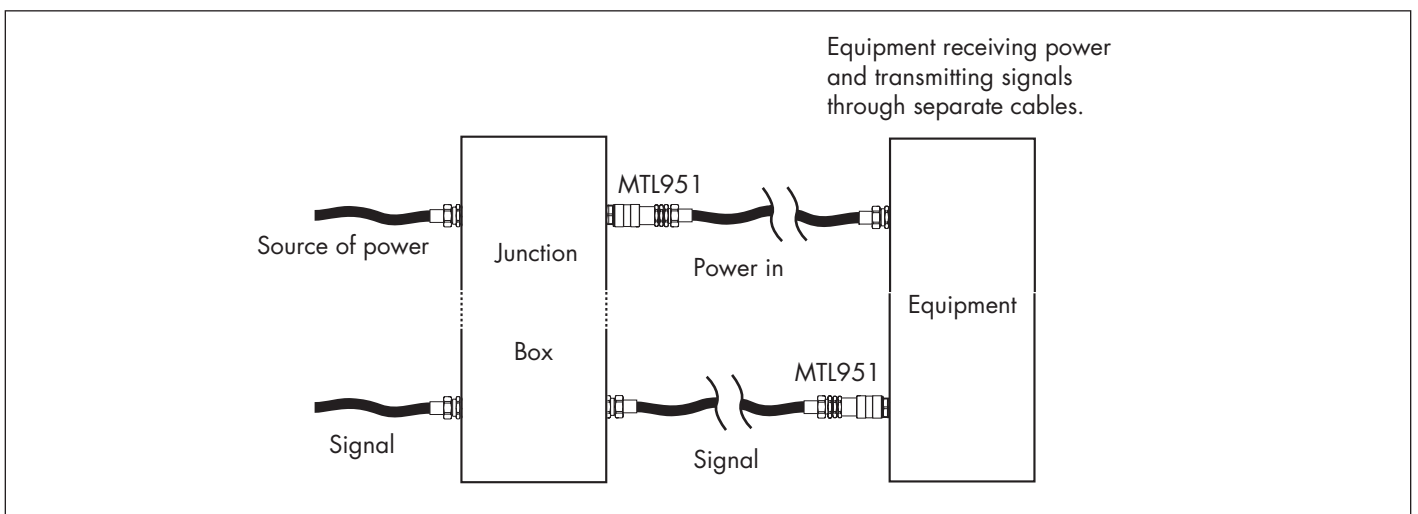
EPS951 RevD 070410

APPLICATION EXAMPLES

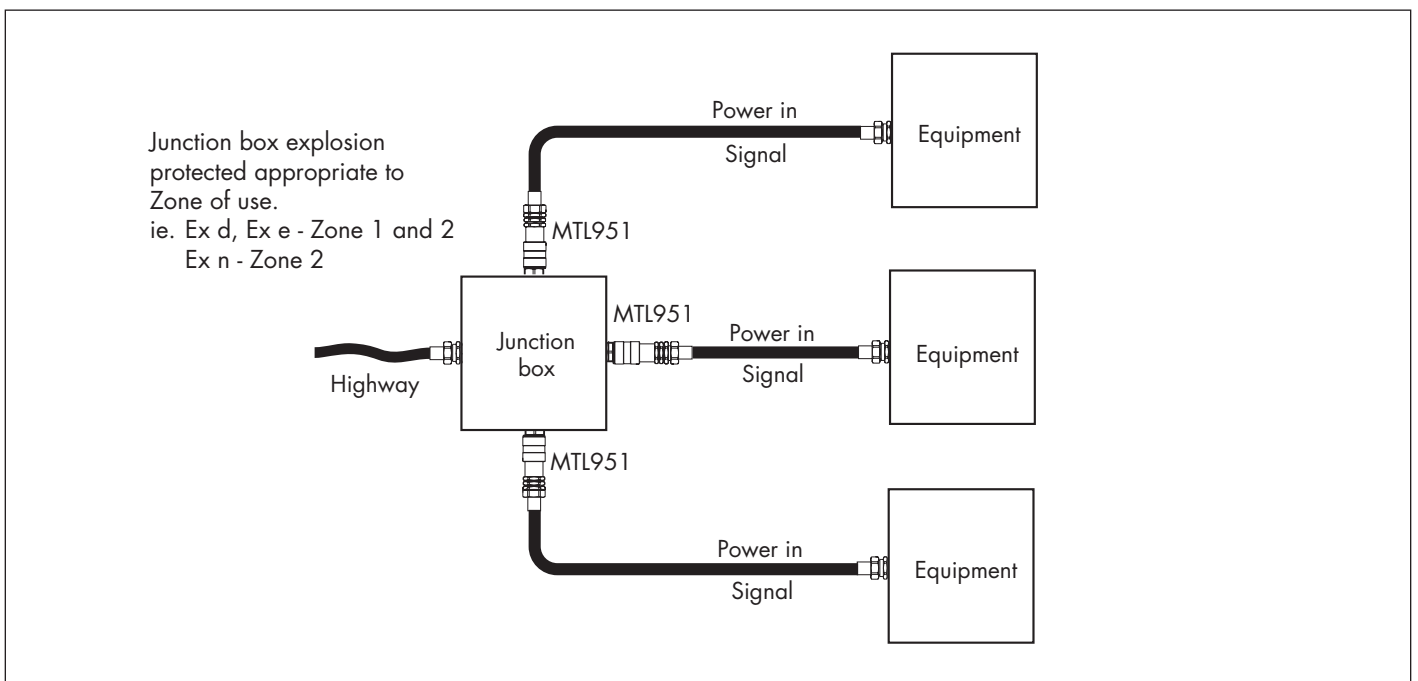
Installation of power cabling



Installation of power and signal cabling



Installation of signal bus system



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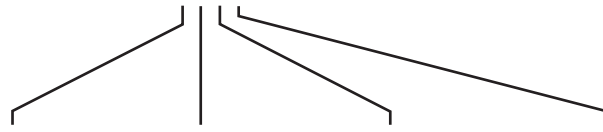
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EPS951 RevD 070410

TO ORDER, SPECIFY:

Ordering code

Key for product options: - MTL951-1-2-3-4



1 - Gender type	2 - Power variant	3 - Thread type (Note 1)	4 - Certification (plugs only)
S = socket for enclosure or bulkhead fixing	A = power	M = M20	none= ATEX certified
P = plug for cable mounting	D = signal	N = ½" NPT	C = CSA certified

Note 1: - When applied to the socket it relates to enclosure/bulkhead fixing thread.

- When applied to the plug it relates to the cable gland mounting thread.

Models available

Socket - enclosure/bulkhead mounting (including socket cap)

Product number	Description
MTL951-S-A-M	Socket for power with M20 thread
MTL951-S-A-N	Socket for power with ½"NPT thread
MTL951-S-D-M	Socket for signals with M20 thread
MTL951-S-D-N	Socket for signals with ½"NPT thread

Plug - cable mounting (plug cap optional - see accessories below)

Product number	Description
MTL951-P-A-M	Plug for power with thread for M20 gland
MTL951-P-A-N	Plug for power with thread for ½"NPT gland
MTL951-P-D-M	Plug for signals with thread for M20 gland
MTL951-P-D-N	Plug for signals with thread for ½"NPT gland
MTL951-P-D-M-C	Plug for signals with thread for M20 gland - CSA certified
MTL951-P-D-N-C	Plug for signals with thread for ½"NPT gland - CSA certified

Crimp contacts for plug (see Note 2)

Product number	Description
CP951S	Crimp plug contact for wire size 0.75-1.0mm ² (pack of 10)
CP951M	Crimp plug contact for wire size 1.01-1.5mm ² (pack of 10)
CP951L	Crimp plug contact for wire size 1.51-2.5mm ² (pack of 10)

Note 2:- The crimp contacts are not fitted in the plug. When ordering, 3 crimp contacts are required per plug.

Accessories

Product number	Description
PC951	Optional plug cap (protects against ingress of water and dirt)
CT951	Crimp tool for plug contacts

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