ITS-Ex Hazardous Zone Connectors

ITS-Ex Series labeling and materials

TECHNICAL OVERVIEW

Certified Uses:

- **With flammable gases and vapors with apparatus group IIC and with temperature classes T6 and T5 in zones 1 and 2**
- **With flammable dusts with apparatus group IIIC and with temperature classes T80°C and T95°C in zone 21 and 22**
- **The connectors are certified IP68 (tested at a depth of 10 meters for 30 minutes)**
- **Mechanical Durability at Ambient Temperature. No deterioration which will adversely affect the connector after 500 cycles of mating and unmating**

The Glenair ITS-Ex Hazardous Zone series of connectors is comprised of metallic bodies and shells (aluminium alloy standard, for optional materials ask to the factory) with resilient silicone rubber inserts IAW MIL-DTL-5015. Pin or socket crimp contacts are available, and male and female inserts are reversible. Cable plugs and receptacles are available to form in-line cable connections. A fixed flange mount receptacle is available for Ex d boxes and Ex e bulkhead use. Connectors are coupled with a trapezoidal double-start threaded nut retained by grub (set) screws, and form a cylindrical flamepath when mated. When disconnected, plugs and receptacles are mated to an attached, by stainless steel wire rope, protective safety cap (or blanking cap). Absence of cap voids the Ex certification. Mate plug and receptacle caps together when not in use to prevent thread damage. Both plug and receptacle cable configurations are equipped with back-end accessory threads for the attachment of mechanical cable clamps and wire mesh Kellems grip-style attachments (potting required). A third style of rear-end accessory, an industry-standard Ex-certified explosion-proof cable gland, is also available and supplied by Glenair. The Ex certified cable gland does not require potting by the customer to achieve Ex d certified performance.

ATEX / IECEx LABELS

All Glenair ITS-Ex connectors are supplied with a non-removable label contains the following information per ATEX and IECEx directives:

FOR IN-LINE CONNECTOR AND PANEL MOUNT EQUIPMENT:

ATEX Marking

CE 2460 Ex

II 2 G Ex db IIC T6, T5 Gb
II 2 D Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

IECEx Marking

Ex db IIC T6, T5 Gb
Ex tb IIIC T80°C, T95°C Db IP68
-40°C ≤ Tamb ≤ +40°C (T6, T80°C) or +55°C (T5, T95°C)

Equipment label is laser printed white on black background.

FOR PANEL MOUNT COMPONENT FIXED RECEPTACLES ONLY:

ATEX Marking

Ex

II 2 G Ex db eb IIC Gb
II 2 D Ex tb IIIC Db IP68
-40°C ≤ Tservice ≤ +100°C

IECEx Marking

Ex db eb IIC Gb
Ex tb IIIC Db IP68
-40°C ≤ Tservice ≤ +100°C

Equipment label is laser printed black on silver background.

Materials	
Item	**Material**
Hardware Body	Standard Base Material: aluminium alloy EN AW 6082-T6 UNI EN 573-3 (0.7÷1.3% Si, 0.6÷1.2% Mg, <0.2% Ti). All aluminium parts finished with a hard, scratch-resistant coating per MIL-A-8625, type III, class 2.
Insert	Silicone rubber
Cable Seal Glands	Silicone rubber
Grommet and Gasket	Silicone fire resistant rubber
O-Ring	Silicone MVQ / VMQ
Grub Screws (Set Screws)	UNI EN 10088-3, Alloy 316, stainless steel, passivated
Crimp Socket and Pin Contacts	Copper alloy ISO CuZn37Pb2/CuZn35Pb2 (OT61B/OT62A) for size AWG 16, 12 and 8 and copper alloy ISO CuTe for size 4,0. Both of them are silver plated as standard and gold plated as option.
Cement for potting	Bi-component epoxy resin (applied by the customer), flame retardant and thermally conductive, cure at room temperature for 24 hours.