

INGRESS PROTECTION

It is essential when selecting cable glands and / or accessories to ensure that the products will maintain the IP rating of the equipment and the integrity of the installation. All Peppers' products have been tested in accordance with the requirements of IEC 60529 and as such the pressure applied during the IPX8 testing is a static pressure.

Please note that clearance holes must be drilled in accordance with EN 50262 table 1 and any gland without an integral O-ring must have a suitable IP washer fitted in order to maintain greater than IP54. If in doubt about the installation please contact Peppers for installation guidance.

INTEGRAL EARTH GLANDS



Cable Glands with an integral earth connection are recommended for use with high voltage systems. The earth connection on these glands has been successfully tested in accordance with the 43kA short-circuit test specified in BS 6121, Part 5, 1992.

Ex Standards do not cover the requirements of cable glands for HV cable. BS6121 Part 5 Section 4.6.2 for non integral earth connections suggests that if the short circuit for 1 second is more than 10.4 kA we then revert to section 4.6.3 "Integral Earth Connection" where the short circuit rating for 1 second is between 26 & 43kA.

BI-METALLIC CORROSION

Bi-metallic Corrosion (or Galvanic Corrosion) is the process by which metals, when in contact with each other, oxidize or corrode. In order for Bi-metallic Corrosion to occur there are three conditions that must exist or the process of corrosion will not begin:-

- There must be two electrochemically dissimilar metals present but not necessarily in direct contact with each other.
- There must be an electrically conductive path between the two metals.
- There must be an electrolyte to allow the metal ions to conduct along the provided path from the more anodic metal to the more cathodic metal.

If any one of these three conditions does not exist, bi-metallic corrosion will not occur.

TEMPERATURE CLASSIFICATION

The equipment must be selected so that its maximum surface temperature will not reach the ignition temperature of any gas or vapour that may be present.

Generally, T-class is based on fault conditions or, at the very least, worst case normal operating conditions. When selecting equipment, the T-class must be below the auto-ignition temperature of the gas. As glands do not generate heat they are classified as passive and not subject to a T rating.

THREAD STANDARD/GUAGING

- ISO M IEC 60423, 6g fit - M16 to M75 1.5mm pitch, M80 to M130 2.0mm pitch
- NPT ANSI/ASME B1.20.1, 1983, Gauging to Clause 8
- NPSM ANSI/ASME B1.20.1, 1983, Gauging to Clause 9
- BSPT BS21, 1985 (ISO 7/1), Standard Threads Only (Clause 5.4), Gauging to Clause 5a, System A
- BSPP BS EN ISO 228-1:2003, Class A Full Form External Threads
- PG DIN 40430, 1971

INSTALLATION

Installation of cable glands intended for use in an explosive atmosphere should only be carried out by competent personnel, skilled in the installation of cable glands and in accordance with the appropriate national or international standards and/or codes of practice. Cable Glands should not be installed whilst circuits are live and should only be installed in accordance with the provided assembly instructions. Cable Gland components are not interchangeable with other manufacturers and any modification to the cable gland will invalidate the certification.

MATERIAL SPECIFICATION

Peppers use a standard range of materials and finishes that are in accordance with the following specification:-

- Brass to EN12164, EN12165 & EN12168 Grade CW614N
- Stainless Steel to EN 10088-3 Grade 316L
- Aluminium to BS EN 573-3 Grade AW6082 T6.
- Electroless Nickel Plating in accordance with BS EN ISO 4527

EMC

Terminations suitable for EMC protection can be made using armoured cables with our armour clamping glands. Following tests, Peppers has been informed by ERA Technology Ltd that our glands do not significantly reduce the ability of an enclosure to which they are attached to withstand electromagnetic interference. We conclude that the effectiveness of a cable entry in EMC terms will generally be limited by the cable, including the cable armour or screen. Braid screens are not necessarily the most effective means of EMC protection. Tape armours can give the best results. Since a Peppers cable gland makes a 360° clamp on cable armour, it will not inhibit the EMC protection of the cable entry.

The cable gland standard BS EN 50262 states that cable glands are EMC neutral. This is taken to mean that cable glands are neither affected by electro-magnetic radiation nor will cause any electro-magnetic interference in other equipment.

PEPPERS T-1000 COMPOUND

PEPPERS T-1000 COMPOUND is a hand-mixable, UL-approved, epoxy putty sealing compound that mixes easily in minutes and cures in one hour to provide water, dust and vapour-tight seals for cable fittings and electrical connectors. PEPPERS T-1000 COMPOUND is in a handy concentric putty stick form with the curing agent encapsulated in the contrasting colour base material. Its dough-like consistency eliminates drips and runs for a "no mess" application with no tools required for use. PEPPERS T-1000 COMPOUND cures to a hard rigid material that is resistant to hydrocarbons, ketones, esters and alcohols with excellent adhesion to most substrates including metals and ceramics.

PEPPERS T-1000 COMPOUND complies with the Underwriters Laboratory requirements for sealing compounds, Class I, Groups A, B, C and D; Class II, Groups E, F and G, in cable sealing fittings or lead seals for use in hazardous locations, UL File E334661. The product complies with Class I requirements following exposure to acetone, ammonium hydroxide, ethyl acetate, acetic acid, ASTM Reference Fuel C, benzene, hexane, furfural, 2-nitropropane, methanol, methylethyl ketone, ethylenedichloride and diethylether. For additional health and safety information please consult the available Material Safety Data Sheet.