



Certificate of Compliance

Certificate: 1100772

Master Contract: 233766

Project: 2317304

Date Issued: July 28, 2011

Issued to: Prysmian Cables & Systems Limited

Components Unit
Oak Road
Wrexham, LL13 9PH
United Kingdom
Attention: Ian Humphreys

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



D. Somma

Issued by: D. Somma, C.E.T.

PRODUCTS

CLASS 4418 05 - CABLE - Hardware - For Hazardous Locations

CLASS 4418 85 - CABLE-Hardware - For Hazardous Locations-Certified to U.S. Standards

PART A:

Ex d IIC & Ex e II, CSA Enclosure Type 4x

Class I, Zone 1, AEx d IIC; Class I, Zone 1, AEx e II, NEMA Type 4x

- Cable Glands for use with steel tape armour (STA), steel wire armour(SWA), aluminium wire armour(AWA) and braided armour cables; Type E1 (EXCEL) and EXCEL plus Cable Glands, M16-M75 sizes and 1/2" to 3" NPT.

PART B:

Ex de IIC

Ex tD A21 IP66/IP68



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Class I, Zone 1, AEx de IIC

AEx tD A21, IP66/IP68

- Types A1EX, A1EXP, A2EX, A2EXP cable fittings for use with circular jacketed braid or un-armoured type cables. Sizes M16, M20, M25, M32, M40, M50, M63 and M75 metric threads; ½ in through 4.0 in NPT threads.

Notes:

PART A:

Additional marking denoting trade size, and manufacturer's information will be included.

2. These cable glands are designed for appropriate Steel Tape Armour (STA), Steel Wire Armour (SWA), Aluminum Wire Armour (AWA) and appropriate braided cable. These cables must be with extruded sealing (solid polymeric) completely surrounding the 'core' (insulation and conductor), allowing for no holes or ventilation through the inner jacket or along the cores.
3. Glands are for use with Ex d Enclosures with less than 2000 cc (2 Litres) internal volume.
4. According to CEC C22.1-98, Section 18-106 Part 3, Tapered Threads shall have 5 fully engaged threads and where non-tapered threads are used in Groups IIC there must be 8 fully engaged threads.
5. IEC Canadian Standards may have either tapered or non-tapered threads which comply to ISO Standards.
6. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation. In addition the final installation of the cable glands shall be governed by the applicable wiring method allowed by the applicable Electrical Codes having jurisdiction.

PART B:

1. The following sizes of cable glands shall only be used for fixed installations; in addition, the user/installer shall ensure that the cables are adequately clamped:

A1EX: M16, M20ss, M20s, M20, M25, M32, M40, M50, M63, M75s & M75

A1EXP: M16, M20ss, M20s, M20, M25, M32, M40, M50, M63, M75s & M75



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A2EX: M32, M40, M50, M63, M75 & M75s

A2EXP: M75s & M75

2 The PCP compression (displacement) seals used in the A1EX and A1EXP ranges of cable glands have a service temperature range of -20°C to +90°C; therefore, these glands shall only be used with equipment where the surface temperature, at the point of mounting, does not exceed this range.

3 The silicone compression (displacement) seals used in the A2EX and A2EXP ranges of cable glands have a service temperature range of -50°C to +200°C; therefore, these glands shall only be used with equipment where the surface temperature, at the point of mounting, does not exceed this range.

4 The cable glands shall not be used with flameproof enclosures of Group IIC with a volume greater than 2000 cm³.

5 Glands are for use with Ex d Enclosures with less than 2000 cc (2 Litres) internal volume.

6 According to CEC C22.1-98, Section 18-106 Part 3, Tapered Threads shall have 5 fully engaged threads and where non-tapered threads are used in Groups IIC there must be 8 fully engaged threads.

7 IEC Canadian Standards may have either tapered or non-tapered threads which comply to ISO Standards.

8 These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation. In addition the final installation of the cable glands shall be governed by the applicable wiring method allowed by the applicable Electrical Codes having jurisdiction

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No 0□10 □ General Requirements □ Canadian Electrical Code Part II.

CAN/CSA-C22.2 No 174-M1984 - Cables and Cable Glands for Use in Hazardous Locations. (Reference Only).



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- CAN/CSA-C22.2 No 18.3-04 - Conduit, Tubing and Cable Fittings
- CAN/CSA 60079-0:07 - Electrical apparatus for explosive gas atmospheres. PART 0: General requirements.
- CAN/CSA 60079-1:07 - Electrical apparatus for explosive gas atmospheres. PART 1: Construction and verification test of flameproof enclosures of electrical apparatus.
- ANSI/UL No 514B - Fittings for Conduit and Outlet Boxes
- ANSI/UL 60079-0:07 (Classified) Locations - Electrical Equipment for Use in Class I, Zone 0, 1 and 2 Hazardous
- ANSI/UL 60079-1:07 - Electrical apparatus for explosive gas atmospheres. PART 1: Construction and verification test of flameproof enclosures of electrical apparatus.
- ANSI/ISA 60079-31 -2009 - Explosive Atmospheres - Part 31: Equipment Dust Ignition Protection by Enclosure "t"
- CAN/CSA 61241-0:2006 - Electrical apparatus for use in the presence of combustible dust- Part 0
- CAN/CSA 61241-1:2004 - Electrical apparatus for use in the presence of combustible dust- Part 1

MARKINGS

The marking shall be permanently etched on the body of the equipment.

- (1) Submitter's name, trademark, or (the CSA file number adjacent the CSA Mark - optional).
- (2) Catalogue / Model designation or equivalent.
- (3) Identification of the Thread Form and Size.
- (4) The marking "SL" if the Gland has an integral seal.
- (5) Applicable Method of Protection (EX d IIC T6, Ex e II T6, Class I, Zone 1, AEx d IIC T6 or Class I, Zone 1, AEx e II T6).
- (6) Operating Ambient Temperature (-20°C to 90°C).
- (7) CSA Enclosure "Type 4X" marking; IP66/68 (were applicable).
- (8) CSA or CSACUS Monogram.
- (9) Adjacent to the CSA Monogram, the Certificate Number "1100772".
- (10) Following the Certification Number, the sign "X", indicating Special Conditions apply.

NOTE: **French Markings** for products with CSA Mark are optional.



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Jurisdictions in Canada may require markings to be also in French. It is the responsibility of the Customer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the Customer to determine this requirement and have bilingual wording added to the "Markings".