CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1356011 **Master Contract:** 203679

Project: 1638021 **Date Issued:** 2005/09/12

Issued to: **Peppers Cable Glands Ltd.**

Stanhope Rd.
Camberley
Surrey, GU15 3BT
United Kingdom
Attention: Andy Cuckson

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US'

C US

Issued by: Jay R McVeigh

Authorized by: Patricia Pasemko, Operations Manager

PRODUCTS

CLASS 4418 05 - CABLE - Hardware - For Hazardous Locations
CLASS 4418 85 - CABLE-Hardware - For Hazardous Locations-Certified to U.S. Standards

CLASS 4418 05 – CABLE – Hardware For Hazardous Locations

Ex d IIC / Ex e II; IP66 IP68; Type 4X (Ta = -20°C to +85°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Ex d IIC; IP68; Type 4X (Ta = -60°C to +180°C)

The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.

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

AEx d IIC / AEx e II; IP66 IP68; Type 4X (Ta = -20°C to +85°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

AEx d IIC; IP68; Type 4X (Ta = -60°C to +180°C)

PART A:

Type A*L**F Family of cable glands, Example Part Numbers AaLbF c/d/e/f/g intended for use with unarmoured or braided cables. Sizes 16 to 100 with ISO entry threads of M16 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP, or PG entry threads.

Where:

a = Seal Code

b = Series Code and/or Body Material Code

c = Accessories or Conduit connection thread for A*LC*F

d = Plating

e = Gland Size

f = Entry Thread

g = Complete with integral entry thread seal

PART B:

Type CR-** Series of cable glands, Example Part Numbers CR-ab c d/e/f/g intended for use with an effectively filled and circular unarmoured, armoured and braided cables. Sizes 16 to 100 with ISO entry threads of M20 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP or PG entry threads.

Where:

a = Seal Code

b = Body Material

c = Reduced bore outer seal

d = Accessories

e = Plating

f = Gland Size

g = Entry Thread

PART C:

Type CR-C*** Series of compound-filled barrier cable glands, Example Part Numbers CR-Cabc d e/f/g/h intended for use with circular unarmoured, armoured and braided cables of any construction. Sizes 16 to 100 with ISO entry threads of M20 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP or PG entry threads.

Where:

a = Lead sheath cable Continuity Washer Code [2 or Blank]

b = Body Material Code [B or S]

c = Reduced bore outer seal [R or Blank]

d = Accessories

e = Plating [ZP, NP, TP or EN]

f = Gland Size [16 to 100]

g = Entry Thread [ISO Metric, NPT, NPSM, ISO Pipe Thread or PG]

h = Complete with integral entry thread seal [IS]

PART D:

Type CR-U** Series of compound-filled barrier cable glands, Example Part Numbers CR-Uab c d/e/f/g intended for use with circular unarmoured, armoured and braided/screened cables of any construction, where armour, braid or screen is terminated inside the enclosure. Sizes 16 to 100 with ISO entry threads of M20 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP or PG entry threads.

Where:

a = Lead sheath cable Continuity Washer Code [2 or Blank]

b = Body Material Code [B or S]

c = Accessories

d = Plating [ZP, NP, TP or EN]

e = Gland Size [16 to 100]

f = Entry Thread [ISO Metric, NPT, NPSM, ISO Pipe Thread or PG]

g = Complete with integral entry thread seal [IS]

PART E:

Type CR-X** Series of compound-filled barrier cable glands, Example Part Numbers CR-Xab c d/e/f/g intended for use with unarmoured, armoured and braided/screened cables of any construction or profile, where armour, braid or screen is terminated inside the enclosure. Sizes 20S to 100 with ISO entry threads of M20 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP or PG entry threads.

Where:

a = Lead sheath cable Continuity Washer Code [2 or Blank]

b = Body Material Code [B or S]

c = Accessories

d = Plating [ZP, NP, TP or EN]

e = Gland Size [20S to 100]

f = Entry Thread [ISO Metric, NPT, NPSM, ISO Pipe Thread or PG]

g = Complete with integral entry thread seal [IS]

PART F:

Type CR-S* Series of compound-filled conduit stopper boxes, Example Part Numbers CR-Sa b c/d/e/f/g intended for use with single or multiple conductors carried in conduit; or for conversion of a cable gland to an Ex d barrier gland. Sizes 20 to 100 with ISO entry threads of M20 to M100, or with the equivalent size NPT, NPSM, BSPT, BSPP or PG entry threads.

Where:

a = Body Material Code [B or S]

b = Accessories

c = Plating [ZP, NP, TP or EN]

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d = Gland Size [20 to 100]

e = Entry Thread [ISO Metric, NPT, NPSM, ISO Pipe Thread or PG]

f = Female Conduit Thread [ISO Metric, NPT, NPSM]

g = Complete with integral entry thread seal [IS]

Notes:

1. For both the A*L**F and CR** Family/Series of cable glands: These glands shall not be used with Ex d IIC enclosures with a volume greater than 2000 cm3.

2. For both the A*L**F and CR** Family/Series of cable glands: These glands shall not be used in enclosures where the temperature at the point of contact is outside the following range:

-20°C to +85°C for the Neoprene seal variants

-60°C to +180°C for the Silicone seal variants

3. For the A*L**F Family of cable glands: The cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

3.1 For the CR-** Series of cable glands: When used to terminate braided cables the cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

4. CEC C22.1, Section 18-106 Part 3, states 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.

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APPLICABLE REQUIREMENTS

CSA Standard C22.2 No. 0 M1991 General Requirements - Canadian Electrical Code, Part II

T.I.L. No E-25 Electrical Equipment for Use in Explosive Gas Atmospheres

CAN/CSA E60079-0, 2nd Ed. Electrical apparatus for explosive gas atmospheres. PART 0: General requirements.

CAN/CSA E60079-1, 2nd Ed. Electrical apparatus for explosive gas atmospheres. Part 1:

Flameproof enclosures "d"

CAN/CSA E60079-7, 2nd Ed. Electrical apparatus for explosive gas atmospheres. PART 7: Increased safety “e”.

UL 60079-0, 4th Ed Electrical apparatus for explosive gas atmospheres. PART 0: General requirements.

UL 60079-1, 5th Ed. Electrical apparatus for explosive gas atmospheres. Part 1:

Flameproof enclosures "d"

UL 60079-7, 1st Ed. Electrical apparatus for explosive gas atmospheres. PART 7: Increased safety “e”.

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Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
1638021	2005/09/12	Update to 1356011 to include Model Series CR-C, CR-U, CR-X, CR-S for CSAcus-Ex d II Group II, based on SIRA Report acceptance
1514383	2004/03/19	ALF/CR Series Cable Glands - CSA - Revisions to Cert. No. 1356011 to clarify model numbers and markings

History

1356011; February 14th, 2003; Original Certification. Type A*L**F and CR-** Family/Series Cable Glands.