

# **Certificate of Compliance**

**Certificate:** 1356011 (203679)

**Project:** 70107491

Master Contract: 203679

**Date Issued:** 2017-03-31

Issued to: Peppers Cable Glands Ltd. Stanhope Rd. Camberley Surrey, GU15 3BT UNITED KINGDOM Attention: Malcolm Perry

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.



Issued by: Siros Ghanbar-zadeh Síros Ghanbarzadeh

#### **PRODUCTS**

CLASS - C441805 - CABLE-Hardware - For Hazardous Locations CLASS - C441885 - CABLE-Hardware-For Hazardous Locations-Certified to U.S. Standards

CLASS 4418 05 - CABLE - Hardware for Hazardous Locations

Ex d IIC / Ex e IIC; IP66 IP68; Type 4X (Ta = -30°C to +90°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Class I Division 2 Groups. ABCD, Class II Groups EFG, Class III; Type 4X (Ta = -30°C to +90°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Series:	CR-*	**		
Part No's:	CR	*	*	*
		1	В	R
		2	S	
		3		
		4		



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Options:	<ul> <li>1 = Neoprene Seals</li> <li>2 = Neoprene Seals with Lead Sheath Cable Continuity Washer</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washer</li> <li>B = Brass Material</li> <li>S = Stainless Steel Material</li> <li>R = Reducer Bore option</li> </ul>		
Series: Part No's:	CR-D** CR-D * * 1 B 2 S 3 4		
Options:	<ul> <li>1 = Neoprene Seals</li> <li>2 = Neoprene Seals with Lead Sheath Cable Continuity Washer</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washer</li> <li>B = Brass Material</li> <li>S = Stainless Steel Material</li> </ul>		
Series:	E****F*		
Part No's:	E * * * * F *		
	1 W B IE R 2 X S		
	2 A B 3 A 4		
Options:	<ul> <li>4</li> <li>1 = Neoprene Seals</li> <li>2 = Neoprene Seals with Lead Sheath Cable Continuity Washer</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washer</li> <li>W = Steel Wire Armour option</li> <li>X = Woven Steel Wire Armour &amp; Steel tape Armour Option</li> <li>B = Brass material</li> <li>S = Stainless Steel Material</li> <li>A = Aluminum Material</li> <li>IE = Integral Earth</li> <li>R = Reduced Bore option</li> </ul>		



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Series: Part No's:	D****F D * * * * F 1 W B IE 2 X S 3 A 4	
Options:	<ul> <li>1 = Neoprene Seals</li> <li>2 = Neoprene Seals with Lead Sheath Cable Continuity Wash</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washe</li> <li>W = Steel Wire Armour option</li> <li>X = Woven Steel Wire Armour &amp; Steel Tape Armour option</li> <li>B = Brass material</li> <li>S = Stainless Steel Material</li> <li>A = Aluminum Material</li> <li>IE = Integral Earth</li> </ul>	
Series: Part No's:	A*L*F A * L * F 1 B 2 S 3 A 4	
Options:	<ul> <li>1 = Neoprene Seals with Lead Sheath Cable Continuity Wash</li> <li>2 = Neoprene Seals</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washe</li> <li>B = Brass Material</li> <li>S = Stainless Steel Material</li> <li>A = Aluminum Material</li> </ul>	
Series: Part No's:	A*LDS*F A * LDS * F 1 B 2 S 3 A 4	
Options:	<ul> <li>1 = Neoprene Seals with Lead Sheath Cable Continuity Wash</li> <li>2 = Neoprene Seals</li> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washe</li> <li>B = Brass Material</li> <li>S = Stainless Steel Material</li> </ul>	



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#### A = Aluminum Material

Series:	A*L	**F					
Part No's:	А	*	L	*	*	F	
		1		CM	В		
		2		CF	S		
		3			А		
		4					
Options:	1 = Neoprene Seals with Lead Sheath Cable Continuity Washer						
	2 = N	Jeoprene	e Seals				
	<ul> <li>3 = Silicone Seals</li> <li>4 = Silicone Seals with Lead Sheath Cable Continuity Washer</li> <li>CM = Conduit Male entry</li> </ul>						
					Cable Continuity Washer		
	CF =	Condui	t Female	entry			
	$\mathbf{B} = \mathbf{I}$	Brass Ma	aterial				
	S = Stainless Steel Material						

A = Aluminum Material

Ex e II; IP66; Type 4X (Ta = -35°C to +90°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Class I Division 2 Groups. ABCD, Class II Groups EFG, Class III; Type 4X (Ta = -35°C to +90°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Series:	C****	E*					
Part No's:	С	*	*	*	*	Е	*
		1	W	В	IE		R
		3	Х	S			
				А			
Options:	1 = Ne	oprene S	Seals				
-	3 = Sili	icone Se	als				
	W = St	eel Wire	e Armou	r option			
	$\mathbf{X} = \mathbf{W}$	oven Ste	el Wire	Armour	& Steel	Tape A	rmour option
	$\mathbf{B} = \mathbf{B}\mathbf{r}$	ass Mate	erial				
	S = Sta	inless St	teel Mat	erial			
	A = Al	uminum	Materia	1			
	IE = In	tegral Ea	arth				
	$\mathbf{R} = \mathbf{R}\mathbf{e}$	duced B	ore opti	on			
Series:	CR-O*	***					
Part No's:	CR-O	*	*	*			
		1	В	R			
		3	S				



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Options: 1 = Neoprene Seals 3 = Silicone Seals B = Brass material S = Stainless Steel Material R = Reduced Bore option

## Ex d IIC / Ex e IIC; IP66/IP68; Type 4X (Ta = -60°C to +135°C)

### Class I Division 2 Groups ABCD, Class II Groups EFG, Class III; Type 4X (Ta = -60°C to +135°C)

Series: Part No's:	CR-C** CR-C	** * 2	* B S	* R
Options:	B = Bra S = Stai	ss mate nless St		
Series: Part No's:	CR-U** CR-U	* 2	* B S	
Options:	$\mathbf{B} = \mathbf{Bra}$	ss mate		Continuity Washer erial
Series: Part No's:	CR-X** CR-X	* * 2	* B S	
Options:	$\mathbf{B} = \mathbf{Bra}$	ss mate		Continuity Washer erial
Series: Part No's:		* B S		
Options:	B = Bra S = Stai		rial eel Mate	erial



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#### Notes:

- 1. For the A\*L\*F, A\*LDS\*F, A\*L\*\*F, CR-\*\*\*, CR-D\*\*, E\*\*\*\*F\* and D\*\*\*\*F Series of cable glands: These glands shall not be used with Ex d IIC enclosures with a volume greater than 2000 cm<sup>3</sup>.
- 2. For the A\*L\*F, A\*LDS\*F, A\*L\*\*F, CR-\*\*\*, CR-D\*\*, CR-O\*\*\*, E\*\*\*\*F\*, D\*\*\*\*F, C\*\*\*\*E\* 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:

-35°C to +90°C for the Neoprene seal variants -60°C to +180°C for the Silicone seal variants

- 3. For the A\*L\*F, A\*LDS\*F and A\*L\*\*F Series of cable glands: The cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
- 4. For the CR-\*\*\*, CR-D\*\*, CR-O\*\*\* 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.
- 5. 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.
- 6. IEC Canadian Standards may have either tapered or non-tapered threads which comply with ISO Standards.
- 7. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation.
- 8. The product may bear one of the following CSA markings:

"CSA" - Series A\*L\*F, A\*LDS\*F, A\*L\*\*F, CR-\*\*\*, CR-D\*\*, CR-O\*\*\*, E\*\*\*\*F\*, D\*\*\*\*F, C\*\*\*\*E\*, CR-C\*\*\*, CR-U\*\*, CR-X\*\*, CR-S\*

- 9. For Class II applications, these cable glands when installed into devices which are subject to over-loading (Class II) should not be used where the surface temperature exceeds +120°C.
- 10. For Class II applications, these cable glands when installed into devices which are not subject to overloading (Class II) should not be used where the surface temperature exceeds +165°C.

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

#### AEx d IIC / AEx e IIC; IP66 IP68; Type 4X (Ta = $-60^{\circ}$ C to $+135^{\circ}$ C)

Class I Division 2 Groups ABCD, Class II Groups EFG, Class III; Type 4X (Ta = -60°C to +135°C)

Series:	CR-C***		
Part No's:	CR-C *	*	*
	2	В	R
		S	



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Options:	2 = Lead Sheath Cable Continuity Washer B = Brass material S = Stainless Steel Material R = Reduced Bore option
Series: Part No's:	CR-U** CR-U * * 2 B S
Options:	2 = Lead Sheath Cable Continuity Washer B = Brass material S = Stainless Steel Material
Series: Part No's:	CR-X** CR-X * * 2 B
Options:	2 = Lead Sheath Cable Continuity Washer B = Brass material

Notes:

- 1. For the CR-\*\*\*, CR-D\*\*, CR-O\*\*\* 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.
- 2. 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.
- 3. IEC Canadian Standards may have either tapered or non-tapered threads which comply with ISO Standards.
- 4. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation.
- 5. The product may bear one of the following CSA markings:

"CSA us, or cCSAus" - Series CR-C\*\*\*, CR-U\*\* and CR-X\*\*

6. For Class II applications, these cable glands when installed into devices which are subject to over-loading (Class II) should not be used where the surface temperature exceeds +120°C.



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#### **APPLICABLE REQUIREMENTS**

The following Standards were used as a guide in the evaluation of the products covered by this Report:

C22.2 No. 0-M1991	General Requirements - Canadian Electrical Code, Part II
CSA C22.2 No. 25-M1986	Enclosures for Use in Class II Groups E, F, and G Hazardous Locations
CSA C22.2 No. 94-M1991	Special Purpose Enclosures
CSA C22.2 no. 213-M1987	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations.
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, 4 <sup>th</sup> Ed	Electrical apparatus for explosive gas atmospheres. PART 0: General requirements.
UL 60079-1, 5 <sup>th</sup> Ed.	Electrical apparatus for explosive gas atmospheres. Part 1: Flameproof enclosures "d"
UL 60079-7, 1 <sup>st</sup> Ed.	Electrical apparatus for explosive gas atmospheres. PART 7: Increased safety "e"
UL2225, Ed. 4	Cable and Cable Fittings for Use in Hazardous (Classified) Locations
UL 50 11th Ed.	Enclosures for Electrical Equipment
UL 1203 4th Ed.	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
ISA 12.12.01: 2007	Non-incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2



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#### **MARKINGS**

The following information shall appear on the equipment in such a manner that the nameplate shall be visible after installation.

- Submittor's name or registered Trade Mark
- Model designation or equivalent
- The Hazardous Locations designation
- Hub thread Trade Size
- The product may bear one of the following CSA markings:

CSA - Series A\*L\*F, A\*LDS\*F, A\*L\*\*F, CR\*\*\*\*, E\*\*\*\*F\*, D\*\*\*\*F, C\*\*L\*\*E\*, CR-O\*\*, CR-C\*\*\*, CR-U\*\*, CR-X\*\*, CR-S\*

CSA us, or cCSAus - Series CR-C\*\*\*, CR-U\*\* and CR-X\*\*

<u>Note</u>: Jurisdictions in Canada may require these 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".



# Supplement to Certificate of Compliance

**Certificate:** 1356011 (203679)

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

		Troduct Certification History
Project	Date	Description
70107491	2017-03-31	Update CSA Report 1356011 to include revised drawing and revisions.
2666426	2013-09-30	Update to correct part numbers.
2215947	2009-11-03	Update of report 1356011 to include additional hazardous locations markings
1837294	2007-01-17	Update to report 1356011 to include new series of cable glands (based on sira reports) and modify existing cable glands
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	Feb 14 2003	Original Certification. Type A*L**F and CR-** Family/Series Cable Glands.

# **Product Certification History**