

Certificate of Compliance

Certificate: 2627370 (203679)

Project: 70103353

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 indicator 'US'



Issued by: Siros Ghanbar-zadeh Síros Ghanbarzadeh

<u>PRODUCTS</u> CLASS - C441885 - CABLE-Hardware-For Hazardous Locations-Certified to U.S. Standards

Class II Division 1, Groups EFG; Class III Class I, Zone 1, AEx e IIC Gb; Class II, Zone 20, AEx ta IIIC Da; IP66, IP68; Type 4X (Ta = -35°C to +90°C Neoprene Seals / Ta = -60°C to +180°C Silicone Seals)

Gland Type:	CR-***				
Available Part No's.:	С	R	*	*	*
			1	В	R
			2	S	
			3		
			4		
Options:	1	Neoprene S	eals		
	2	Neoprene S	eals with Lea	ad Sheath Ca	ble Continuity Washer
	3	Silicone Sea	als		
	4	Silicone Sea	als with Lead	Sheath Cab	le Continuity Washer
	В	Brass mater	ial		
	S	316 Stainles	ss Steel mate	rial	
	R	Reducer Bo	re option		



Certificate:	2627370	Master Contra	ct: 203679
Project:	70103353	Date Issued:	2017-03-31

Gland Type:	CR-D**					
Available Part No's.:	С	R	D	*	*	
				1	В	
				2	S	
				3		
				4		
Options:	1	Neoprene Se	al			
	2	Neoprene Se	al with Lead	Sheath Cabl	e Continuity Wa	asher
	3	Silicone Seal	l			
	4	Silicone Seal	with Lead S	Sheath Cable	Continuity Was	her
	В	Brass materia	al			
	S	316 Stainless	Steel mater	ial		
Gland Type:	A*L**					
Available Part No's.:	А	*	L	*	*	
Available Falt No S	А	1	L	ж В	F	
		2		S	E	
		3		A	L	
		4		21		
Options:	1	-	al with Lead	Sheath Cab	le Continuity W	asher
1	2	Neoprene Se			5	
	3	Silicone Sea				
	4	Silicone Sea	with Lead	Sheath Cable	Continuity Was	sher
	А	Aluminum			2	
	В	Brass materi	al			
	S	316 Stainles	s Steel mater	ial		
	F	Ex e (Increas	sed Safety) a	pprovals		
	Е	Ex e (Increas				
				•		



Certificate:	2627370	Master Contract: 203679
Project:	70103353	Date Issued: 2017-03-31

Gland Type:	A****					
Available Part No's.:	Α	*	*	*	*	
		1	LDS	А	F	
		2	RDF	В	Е	
		3	RDM	S		
		4				
Options:	1	Neoprene S	Seal with Lead	Sheath Cab	le Continuity	Washer
	2	Neoprene S	Seal			
	3	Silicone Se	al			
	4	Silicone Se	al with Lead S	heath Cable	Continuity W	asher
	LDS	Fixed Doul	ole seal			
	RDF	Double sea	l with rotating	female three	ad conduit nut	
	RDM	Double sea	l with Rotating	g male threa	d conduit nut	
	А	Aluminum				
	В	Brass mate	rial			
	S	316 Stainle	ss Steel materi	al		
	F	Ex e (Incre	ased Safety) a	nd Ex t (dus	t) approvals	
	E	Ex e (Incre	ased Safety) aj	oproval only	T	
Gland Type:	A*LC***					
Gland Type: Available Part No's.:	A*LC*** A	*	LC	*	*	*
		* 1	LC	* F	* A	* F
			LC			
		1	LC	F	А	F
Available Part No's.:		1 2	LC	F	A B	F
		1 2 3 4 Neoprene S	Seal with Lead	F M	A B S	F E
Available Part No's.:	Α	1 2 3 4	Seal with Lead	F M	A B S	F E
Available Part No's.:	A 1	1 2 3 4 Neoprene S Silicone Se	Seal with Lead Seal al	F M Sheath Cab	A B S le Continuity Y	F E Washer
Available Part No's.:	A 1 2 3 4	1 2 3 4 Neoprene S Silicone Se Silicone Se	Seal with Lead Seal al al with Lead S	F M Sheath Cab	A B S le Continuity ^v Continuity W	F E Washer Vasher
Available Part No's.:	A 1 2 3	1 2 3 4 Neoprene S Silicone Se Silicone Se Silicone Se	Seal with Lead Seal al al with Lead S with fixed fen	F M Sheath Cab heath Cable nale thread c	A B S le Continuity V Continuity W onduit connect	F E Washer Vasher
Available Part No's.:	A 1 2 3 4	1 2 3 4 Neoprene S Silicone Se Silicone Se Single seal Single seal	Seal with Lead Seal al with Lead S with fixed fen with fixed ma	F M Sheath Cab heath Cable nale thread c	A B S le Continuity V Continuity W onduit connect	F E Washer Vasher
Available Part No's.:	A 1 2 3 4 F M A	1 2 3 4 Neoprene S Silicone Se Silicone Se Silicone Seal Single seal Single seal	Seal with Lead Seal al with Lead S with fixed fen with fixed ma	F M Sheath Cab heath Cable nale thread c	A B S le Continuity V Continuity W onduit connect	F E Washer Vasher
Available Part No's.:	A 1 2 3 4 F M A B	1 2 3 4 Neoprene S Silicone Se Silicone Se Silicone Seal Single seal Single seal Aluminum Brass mate	Seal with Lead Seal al al with Lead S with fixed fen with fixed mai	F M Sheath Cab heath Cable hale thread co le thread co	A B S le Continuity V Continuity W onduit connect	F E Washer Vasher
Available Part No's.:	A 1 2 3 4 F M A B S	1 2 3 4 Neoprene S Silicone Se Silicone Se Single seal Single seal Aluminum Brass mate 316 Stainle	Seal with Lead Seal al with Lead S with fixed fen with fixed ma rial ess Steel materi	F M Sheath Cab heath Cable hale thread co le thread con	A B S le Continuity V Continuity W onduit connecto aduit connecto	F E Washer Vasher
Available Part No's.:	A 1 2 3 4 F M A B S F	1 2 3 4 Neoprene S Silicone Se Silicone Se Single seal Single seal Aluminum Brass mate 316 Stainle Ex e (Incre	Seal with Lead Seal al with Lead S with fixed fen with fixed main rial sss Steel materia	F M Sheath Cable heath Cable hale thread co le thread con al ad Ex t (dust	A B S le Continuity V Continuity W onduit connecto nduit connecto t) approvals	F E Washer Vasher
Available Part No's.:	A 1 2 3 4 F M A B S	1 2 3 4 Neoprene S Silicone Se Silicone Se Single seal Single seal Aluminum Brass mate 316 Stainle Ex e (Incre	Seal with Lead Seal al with Lead S with fixed fen with fixed ma rial ess Steel materi	F M Sheath Cable heath Cable hale thread co le thread con al ad Ex t (dust	A B S le Continuity V Continuity W onduit connecto nduit connecto t) approvals	F E Washer Vasher



Certificate: Project:	2627370 7010335							Master Contra Date Issued:	
Gland Type:		A*RC***							
Available Part N	No's.:	Α	*	RC	*	*	*		
			1		F	А	F		
			2		М	В	Е		
			3			S			
			4						
Options:		1	Neoprene S	eal with Lead	Sheath Cab	le Continuity	Washer		
		2	Neoprene S	leal					
		3	Silicone Se	al					
		4	Silicone Se	al with Lead S	Sheath Cable	Continuity V	Vasher		
		F		with rotating					
		М		with rotating	male thread	conduit conne	ector		
		А	Aluminum						
		В	Brass mater						
		S		ss Steel mater					
		F		ased Safety) a					
		Е	Ex e (Incre	ased Safety) a	pproval only	,			
Gland Type:		E****F*							
Available Part I	No's.:	Ε	*	*	*	*	F	*	
			1	W	А	IE		R	
			2	Х	B				
			3		S				
			4						
Options:		1	Neoprene						
		2		Seal with L	ead Sheath	Cable Conti	inuity W	asher	
		3	Silicone S		d Sheath C	able Contin		ahan	
		4 W		Seal with Lea e Armour op			ulty wa	sher	
		X		ven Steel W		pe/Braid			
		A		n material		1			
		В	Brass mat	terial					
		S		less Steel ma	aterial				
		IE		arth option					
		R	Reduced	Bore option					



Certificate: 26273	370						Master Contr	act: 203679
Project: 70103	3353						Date Issued:	2017-03-31
Gland Type:	D****F							
Available Part No's.:	D	*	*	*	*	F		
	2	1	W	А	IE	-		
		2	Х	В				
		3		S				
		4						
Options:	1	Neoprene S	Seals					
	2			ead Sheath	Cable Contin	uity Wa	asher	
	3	Silicone Se						
	4				able Continui	ity Was	her	
	W	Steel Wire			~			
	X			ire/Steel Ta	pe/Braid			
	A	Aluminum						
	B S	Brass mate 316 Stainle		tomial				
	S IE	Integral Ea		iterial				
	IL	integrai Ea	rui opuon					
Gland Type:	C****E*							
Available Part No's.:	С	* *			*			
		1 W		Ξ	R			
		3 X						
Options:	1	Nitrile Se	S					
Options:	3	Silicone						
options	Ŵ		re Armour	option				
	Х			Wire/Steel 7	Tape/Braid			
	А		m material					
	В	Brass ma	terial					
	S	316 Stair	less Steel 1	naterial				
	IE		Earth option					
	R	Reducer	Bore option	1				
Gland Type:	CR-O***							
Available Part No's.:	С	R	0	*	*	*		
	-			1	В	R		
				3	S			
Options:	1	Neoprene Se	al					
options.	3	Silicone Sea						
	B	Brass materi						
				rial				
	S	316 Stainles		nal				
	R	Reducer Bo	re option					



Master Contract: 203679 Date Issued: 2017-03-31

Class 1 Division 2 Groups ABCD; Class II Division 1, Groups EFG; Class III Class I, Zone 1, AEx d IIC Gb / AEx e IIC Gb; Class II Zone 20 AEx ta IIIC Da; IP66, IP68; Type 4X (Ta = -60°C to +135°C)

Series: CR-C***

Gland Type:	CR-C***						
Available Part No's.:	С	R	-	С	*	*	*
					2	В	R
						S	
Options:	2	Lead Sheath	Cable Conti	nuity Washer			
•	В	Brass materi		•			
	S	316 Stainles	s Steel mater	ial			
	R	Reducer Bor	re option				
Gland Type:	CR-U**						
Available Part No's.:	С	R	-	U	*	*	
					2	В	
						S	
Options:	2	Lead Sheath	Cable Conti	nuity Washer			
-	В	Brass materi	al				
	S	316 Stainles	s Steel mater	ial			
Gland Type:	CR-X**						
Available Part No's.:	С	R	-	X	*	*	
					2	В	
						S	
Options:	2	Lead Sheath	Cable Conti	nuity Washer			
	В	Brass materi	al				
	S	316 Stainles	s Steel mater	ial			



Master Contract: 203679 Date Issued: 2017-03-31

F

Class II Division 1, Groups EFG; Class III Class I, Zone 1, AEx e IIC Gb; Class II Zone 20 AEx ta IIIC Da; IP66, IP68; Type 4X $(Ta = -60^{\circ}C \text{ to } +180^{\circ}C)$ Gland Type: A8*F Available Part No's.: Α 8 * F В S Options: В Brass material S 316 Stainless Steel material Gland Type: A8C**F С Available Part No's.: Α 8 * * F В S Μ Options: В Brass material S 316 Stainless Steel material F Female conduit connector М Male conduit connector Gland Type: E8X*F Е 8 Х * F Available Part No's.: В S Options: В Brass material S 316 Stainless Steel material Gland Type: D8X*F Х Available Part No's.: D 8 * F В S Options: В Brass material S 316 Stainless Steel material



Master Contract: 203679 Date Issued: 2017-03-31

Notes:

1. The parameters of the ranges are summarized as follows:

Gland Type	Class I Division 2	Class II Division 1	AExd IIC	AEx e IIC	AEx ta IIIC	IP66/ 68/ Type 4X	Temperature range
CR-***		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
CR-D**		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*L**		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A****		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*LC***		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
A*RC***		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
E****F*		Х		Х	Х	X	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
D****F		Х		Х	Х	Х	-35° C to $+90^{\circ}$ C (Neoprene) -60^{\circ}C to $+180^{\circ}$ C (Silicone)
C****E*		Х		Х	Х	Х	-35° C to $+90^{\circ}$ C (Neoprene) -60^{\circ}C to $+180^{\circ}$ C (Silicone)
CR-O***		Х		Х	Х	Х	-35°C to +90°C (Neoprene) -60°C to +180°C (Silicone)
CR-C***	X	Х	Х	Х	Х	Х	-60°C to +135°C
CR-U**	X	Х	Х	Х	Х	Х	-60°C to +135°C
CR-X**	X	Х	Х	Х	Х	Х	-60°C to +135°C
A8*F		Х		X	Х	X	-60°C to +180°C
A8C**F		Х		Х	Х	Х	-60°C to +180°C
E8X*F		Х		Х	Х	Х	-60°C to +180°C
D8X*F		Х		Х	Х	X	-60°C to +180°C

2. For the A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D** CR-O***, C****E*, D****F* and E****F* 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



Master Contract: 203679 Date Issued: 2017-03-31

3. For the A8*F, A8C**F, E8X*F and D8X*F 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:

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

- 4. For the A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D** CR-O***, C****E*, D****F*, E****F*, A8*F, A8C**F, E8X*F and D8X*F Series of cable glands: When used with unarmoured or braid armoured cable the cable entries are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
- 5. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation.
- 6. These glands are also suitable for use with Certified Marine Shipboard unarmoured cables constructed to IEEE45/ IEC600092-353 Standards (or certified equivalent), for use on Shipboards and Offshore Rigs/platforms. These glands are also suitable for use with certified Tray Cables in which accordance with US (NEC) wiring methods describing the types of cables that may be used in Class 1 Division 2 and Class I Zone 1 and 2 classified areas, in accordance with NEC and NFPA -70 installation wiring methods restrictions.
- 7. The product may bear one of the following CSA markings:

"CSA us" - Series A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D**, CR-C***, CR-U**, CR-X**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***

APPLICABLE REQUIREMENTS

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

UL 50 (12th Ed.)	Enclosures for Electrical Equipment Non-Environmental Considerations
UL 50E (1st Ed.)	Enclosures for Electrical Equipment, Environmental Considerations
UL514B Edition 6	Conduit, Tubing, and Cable Fittings
UL 1203 (5 th Ed.)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous
	(Classified) Locations
UL 2225(3 rd Edition)	Cables and Cable Glands for Use in Hazardous Locations
ANSI/UL 60079-0	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
Sixth Edition (2013)	
ANSI/UL 60079-1	Electrical Apparatus for Explosive Gas Atmospheres - Part 1: Flameproof
Sixth Edition (2009)	Enclosures "d"
ANSI/UL 60079-7	Electrical Apparatus for Explosive Gas Atmospheres - Part 7: Increased Safety "e"
Fourth Edition (2008)	
ANSI/IEC 60529:2004	Degrees of Protection Provided by Enclosures (IP Code)
ANSI/ISA-60079-31	Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure
(12.10.03)-2013	"t" (Edition 1.1)



Master Contract: 203679 Date Issued: 2017-03-31

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

Markings are permanently etched or stamped on the surface of the cable glands.

CSA Monogram or the CSA monogram with adjacent indicator "US" Manufacturer's name: Peppers Cable Glands Ltd or PEPPERS, or, the CSA Master Contract number Model code/size Product markings as per "PRODUCTS" section Ambient range Serial number or Year of manufacture: YY

Note: Where the size of the product limits the amount of marking that can be applied, the marking may be reduced with a repeat of the full marking detailed on the appropriate label and/or instructions supplied with the product. The following abbreviated markings will be permitted where necessary due to space limitations:

CSA Monogram PEPPERS MODEL CODE Hazardous Location Ratings - as applicable (may be abbreviated eg. CL I DIV 2 CL II CL III) Type 4X AEx d IIC / AEx e IIC / AEx ta IIIC (AEx d IIC markings applicable to CR barrier glands only) Size

- The product may bear one of the following CSA markings:

CSA us– Series A*L**, A*****, A*LC***, A*RC***, CR-***, CR-D**, CR-C***, CR-U**, CR-X**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***



Supplement to Certificate of Compliance

Certificate: 2627370 (203679)

Master Contract: 203679

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

Troduct Certification Instory							
Project	Date	Description					
70103353	2017-03-31	Update CSA Report 2627370 to include revised drawing and revisions.					
70013047	November 11, 2014	To permit the ranges of glands for use in Class II Division 1 Locations.					
70004629	September 29, 2014	Introduction of CR-D**, C****E*, D****F*, E****F*, A8*F, E8X*F, D8X*F and CR-O***, extension of A* range and upgrade of standards to latest editions.					
2627370	2013-07-03	Certification of cable glands A*L**F, A*LDS*F, A*L*F, CR****, CR-C***, CR-U** and CR-X** Series cable glands.					

Product Certification History