IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx CML 19.0031X**

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Certificate history:
Issue 1 (2019-10-10)
Issue 0 (2019-04-17)

Status: **Current**

Issue No: 2

Date of Issue: 2020-01-10

Applicant: **Peppers Cable Glands Limited**
Stanhope Road
Camberley
Surrey
GU15 3BT
United Kingdom

Equipment: **Range of E*****F*, D*****F and C*****E* Cable Glands**

Optional accessory:

Type of Protection: **Flameproof "db", Increased Safety "eb", Restricted Breathing "nR", Dust Ignition "ta"**

Marking:

E*****F* & D*****F	C*****E*
Ex db IIC Gb Ex eb IIC Gb Ex ta IIIC Da Ex nR IIC Gc	Ex eb IIC Gb Ex ta IIIC Da

Approved for issue on behalf of the IECEx Certification Body: **R C Marshall**

Position: **Certification Officer**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturer: **Peppers Cable Glands Limited**
Stanhope Road
Camberley
Surrey
GU15 3BT
United Kingdom

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CML/ExTR19.0070/00 GB/CML/ExTR19.0200/00 GB/CML/ExTR19.0245/00

Quality Assessment Report:

GB/CML/QAR19.0022/01

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The E*****F*, D*****F and C*****E*, Cable Glands are intended for use with SWA/Woven Steel Wire/Steel Tape/Braid armoured cables. Each comprises a threaded entry body, elastomeric sealing ring, armour cone, clamp ring and compression cap.

Refer to Certificate Annex for full description.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Annex for Specific Conditions of Use.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following changes:

1. The recognition of minor drawing changes that do not affect the existing compliance.

Variation 2

This issue introduced the following changes:

1. To include Male and Female thread options to allow for connection of flexible or rigid conduit onto the rear end of the cable glands.
2. To change the cable gland name designation from E****F*, D****F and C****E* cable glands to E*****F*, D*****F and C*****E* Cable Glands.

Annex:

IECEx CML 19.0031X Iss. 2 Certificate Annex.pdf

Annexe to:	**IECEx CML 19.0031X Issue 2**
Applicant:	**Peppers Cable Glands Limited**
Apparatus:	**Range of E*****F*, D*****F and C*****E* Cable Glands**

Product Description

The E*****F*, D*****F and C*****E* Cable Glands are intended for use with SWA/Woven Steel Wire/Steel Tape/Braid armoured cables. Each comprises a threaded entry body, elastomeric sealing ring, armour cone, clamp ring and compression cap. The entry body is available with an optional outer deluge seal or an integral earthing clamp. D****F glands have a single flameproof seal and the E*****F* glands have a double seal arrangement of flameproof and outer IP seal with extra compression cap and skid washer to suit. C*****E* glands have only the outer IP seal arrangement. Seals are available in silicone and neoprene. Each gland type is available with an optional earth clamp arrangement on the entry body.

Glands are available in the size range 16 to 100 with ISO metric entry threads of M16 to M100 respectively. Alternative thread forms and sizes, NPT, NPSM, BSPT, BSPP, PG and ET are available. The E*****F* and D*****F glands have an ingress protection rating of IP66 and IP68 (50 m 7 days) and the C*****E* glands have an IP66 rating.

Additional assembly options are described by the following designation coding: -

E***F* / D*****F Cable Glands**

Gland Type:	E*****F*							
Available Part No's.:	E	*	*	*	*	*	F	*
		1	U	CF	A	IE		R
		2	W	CM	B			
		3	X		S			
		4						

Options	1	Neoprene Seal
	2	Neoprene Seal with Lead Sheath Cable Continuity Washer
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	U	Steel Wire Armour/Woven Steel Wire/Steel Tape/Braid
	W	Steel Wire Armour
	X	Woven Steel Wire/Steel Tape/Braid
	CF	Female thread conduit connector
	CM	Male thread conduit connector
	A	Aluminium material
	B	Brass material

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	S	316 Stainless Steel material
	IE	Integral Earth
	R	Reduced Bore

Gland Type: D*****F

Available Part No's.:

D	*	*	*	*	*	F
	1	U	CF	A	IE	
	2	W	CM	B		
	3	X		S		
	4					

Options	1	Neoprene Seal
	2	Neoprene Seal with Lead Sheath Cable Continuity Washer
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	U	Steel Wire Armour/Woven Steel Wire/Steel Tape/Braid
	W	Steel Wire Armour
	X	Woven Steel Wire/Steel Tape/Braid
	CF	Female thread conduit connector
	CM	Male thread conduit connector
	A	Aluminium material
	B	Brass material
	S	316 Stainless Steel material
	IE	Integral Earth

NOTES: - * Type 3 & 4 (silicone) seals on to 9.3mm diameter
** The D*****F gland has no outer sheath sealing, so min range is not applicable.

Gland Size	Standard Entry threads		Inner Sheath		Outer Sheath		Reduced Bore		Armour Dia./Thickness			
	Metric	NPT	Min	Max	Min**	Max	Min	Max	W-Wire armour	X-Braid & Tape	U-Wire Armour	U-Braid & Tape
16	M16	3/8"	3.5	8.4	8.4	13.5	4.9	10.0	0.9	0.15 – 0.35	0.8 - 1.25	0.2 - 0.8
20S	M20	½"	8.0	11.7	11.5	16.0	9.4	12.5	0.9 – 1.25	0.15 – 0.35	0.8 - 1.25	0.2 - 0.8

NOTES: - * Type 3 & 4 (silicone) seals on to 9.3mm diameter
** The D*****F gland has no outer sheath sealing, so min range is not applicable.

Gland Size	Standard Entry threads		Inner Sheath		Outer Sheath		Reduced Bore		Armour Dia./Thickness			
	Metric	NPT	Min	Max	Min**	Max	Min	Max	W-Wire armour	X-Braid & Tape	U-Wire Armour	U-Braid & Tape
20	M20	½"	6.7*	14.0	15.5	21.1	12.0	17.6	0.9 – 1.25	0.15 – 0.50	0.8 - 1.25	0.2 - 0.8
25	M25	¾"	13.0	20.0	20.3	27.4	16.8	23.9	1.25 – 1.6	0.15 – 0.50	1.25 - 1.6	0.2 - 0.8
32	M32	1"	19.0	26.3	26.7	34.0	23.2	30.5	1.6 – 2.0	0.15 – 0.55	1.6 - 2.0	0.3 - 1.2
40	M40	1 ¼"	25.0	32.2	33.0	40.6	28.6	36.2	1.6 – 2.0	0.2 – 0.6	1.6 - 2.0	0.3 - 1.2
50S	M50	1 ½"	31.5	38.2	39.4	46.7	34.8	42.4	2.0 – 2.5	0.2 – 0.6	2.0 - 2.5	0.3 - 1.6
50H	M50	1 ½"	31.5	38.2	45.7	53.2	41.1	48.5	2.0 – 2.5	0.2 – 0.6	2.0 - 2.5	0.3 - 1.6
50	M50	2"	36.5	44.1	45.7	53.2	41.1	48.5	2.0 – 2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
63S	M63	2"	42.5	50.1	52.1	59.5	47.5	54.8	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
63H	M63	2"	42.5	50.1	58.4	65.8	53.8	61.2	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
63	M63	2 ½"	49.5	56.0	58.4	65.8	53.8	61.2	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
75S	M75	2 ½"	54.5	62.0	64.8	72.2	60.2	68.0	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
75H	M75	2 ½"	54.5	62.0	71.1	78.0	66.5	73.4	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
75	M75	3"	60.5	68.0	71.1	78.0	66.5	73.4	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
80	M80	3"	62.2	72.0	77.0	84.0	71.9	79.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
80H	M80	3"	62.2	72.0	79.6	90.0	75.0	85.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
85	M85	3"	69.0	78.0	79.6	90.0	75.0	85.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
90	M90	3 ½"	74.0	84.0	88.0	96.0	82.0	91.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
90H	M90	3 ½"	74.0	84.0	92.0	102.0	87.4	97.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
100	M100	3 ½"	82.0	90.0	92.0	102.0	87.4	97.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6

Type C***E* Cable Glands**

Gland Type:	C*****E*							
Available Part No's.:	C	*	*	*	*	*	E	*
		1	U	CF	A	IE		R
		3	W	CM	B			
			X		S			

Options		
	1	Neoprene Seal
	3	Silicone Seal
	U	Steel Wire Armour/Woven Steel Wire/Steel Tape/Braid
	W	Steel Wire Armour
	X	Woven Steel Wire/Steel Tape/Braid
	CF	Female thread conduit connector
	CM	Male thread conduit connector
	A	Aluminium material
	B	Brass material
	S	316 Stainless Steel material
	IE	Integral Earth
	R	Reduced Bore

Gland Size	Standard Entry threads		Inner Sheath	Outer Sheath		Reduced Bore		Armour Dia./Thickness			
	Metric	NPT	Max	Min	Max	Min	Max	W-Wire armour	X-Braid & Tape	U-Wire Armour	U-Braid & Tape
16	M16	3/8"	8.4	8.4	13.5	4.9	10.0	0.9	0.15 – 0.35	0.8 - 1.25	0.2 - 0.8
20S	M20	½"	11.7	11.5	16.0	9.4	12.5	0.9 – 1.25	0.15 – 0.35	0.8 - 1.25	0.2 - 0.8
20	M20	½"	14.0	15.5	21.1	12.0	17.6	0.9 – 1.25	0.15 – 0.50	0.8 - 1.25	0.2 - 0.8
25	M25	¾"	20.0	20.3	27.4	16.8	23.9	1.25 – 1.6	0.15 – 0.50	1.25 - 1.6	0.2 - 0.8
32	M32	1"	26.3	26.7	34.0	23.2	30.5	1.6 – 2.0	0.15 – 0.55	1.6 - 2.0	0.3 - 1.2
40	M40	1 ¼"	32.2	33.0	40.6	28.6	36.2	1.6 – 2.0	0.2 – 0.6	1.6 - 2.0	0.3 - 1.2
50S	M50	1 ½"	38.2	39.4	46.7	34.8	42.4	2.0 – 2.5	0.2 – 0.6	2.0 - 2.5	0.3 - 1.6
50H	M50	1 ½"	38.2	45.7	53.2	41.1	48.5	2.0 – 2.5	0.2 – 0.6	2.0 - 2.5	0.3 - 1.6
50	M50	2"	44.1	45.7	53.2	41.1	48.5	2.0 – 2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
63S	M63	2"	50.1	52.1	59.5	47.5	54.8	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6

Gland Size	Standard Entry threads		Inner Sheath	Outer Sheath		Reduced Bore		Armour Dia./Thickness			
	Metric	NPT	Max	Min	Max	Min	Max	W-Wire armour	X-Braid & Tape	U-Wire Armour	U-Braid & Tape
63H	M63	2”	50.1	58.4	65.8	53.8	61.2	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
63	M63	2 ½”	56.0	58.4	65.8	53.8	61.2	2.5	0.3 – 0.8	2.0 - 2.5	0.3 - 1.6
75S	M75	2 ½”	62.0	64.8	72.2	60.2	68.0	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
75H	M75	2 ½”	62.0	71.1	78.0	66.5	73.4	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
75	M75	3”	68.0	71.1	78.0	66.5	73.4	2.5	0.3 – 1.0	2.0 - 2.5	0.5 - 1.6
80	M80	3”	72.0	77.0	84.0	71.9	79.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
80H	M80	3”	72.0	79.6	90.0	75.0	85.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
85	M85	3”	78.0	79.6	90.0	75.0	85.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
90	M90	3 ½”	84.0	88.0	96.0	82.0	91.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
90H	M90	3 ½”	84.0	92.0	102.0	87.4	97.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6
100	M100	3 ½”	90.0	92.0	102.0	87.4	97.4	3.15	0.45 – 1.0	3.15 - 4.0	0.5 - 1.6

Design options:

1. Cable glands can be fitted with multi-clamping clamp ring for all amour types. These glands, indicated with option code “U”, are not available in aluminum material.
2. When fitted with neoprene seals the service temperature range of the glands is: -35°C to +90°C. When fitted with silicone seals the service temperature range of the glands is: -60°C to +180°C.
3. All gland types with parallel threaded entry threads may have a modified thread length of a minimum of 10 mm and be marked suitable only for ‘Ex eb’ applications.
4. All gland types with parallel threaded entry threads to be manufactured with a longer than ‘standard’ thread length to suit the end use application.
5. All gland types can be manufactured with larger than the ‘standard’ entry threads as listed within the product description.
6. All gland types with parallel threaded entry threads may optionally be modified and fitted with an O-ring seal.
7. All cable glands may be fitted with alternative component on the rear back to allow connection of conduits.

Notes:

Sira 01ATEX1271X, Sira 09ATEX1221X and IECEx SIR 07.0097X are superseded by certificates CML 19ATEX1106X, CML 19ATEX4109X and IECEx CML 19.0031X.

The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 01ATEX1271X, Sira 09ATEX1221X and IECEx 07.0097X.

Where Sira 01ATEX1271X and/or Sira 09ATEX1221X and/or IECEx SIR 07.0097X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

Conditions of Manufacture

None.

Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. The Ranges of Cable Glands shall not be used in enclosures where the temperature, at the point of contact exceeds the following temperatures.

   a) -35°C to +90°C for neoprene seal variants
   b) -60°C to 180°C for the silicone seal variants.

ii. The E*****F*, D*****F ranges of Cable Glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 meters 7 days).

iii. The C*****E* ranges of Cable Glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66.

iv. The threaded entry component threads without interface O-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:

   - parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014,
   - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of EN 60079-31:2014

v. If the cable glands only grip the cable sheath and do not clamp the armour, or if they are used to terminate unarmoured, braided or screened cables, then they shall only be used for fixed installations, hence the cables shall be effectively clamped to prevent pulling or twisting.