IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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Certificate No.:	**IECEx CML 19.0062X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2024-03-22) Issue 2 (2020-07-08) Issue 1 (2019-11-14) Issue 0 (2019-08-02)
Date of Issue:	2024-10-15		

Applicant: **CMP Products Ltd**
Unit 36 Nelson Way
Nelson Park East
Cramlington
Northumberland
NE23 1WH
United Kingdom

Equipment: **TruSeal Range of Cable Glands and Plugs**

Optional accessory:

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

Marking:

Ex eb IIC Gb
Ex ta IIIC Da

Ex nR IIC Gc

-60°C ≤ Ta ≤ +105°C (*TSMe, TSXe & TSZe glands, TruSeal Plug, Mutli-Seal elastomeric sealing ring, Flat-Form elastomeric sealing ring & Multi-Seal Blanking Plugs*)

-60°C ≤ Ta ≤ +95°C *(TSPe & TSPi glands)*

IP66 IP67 IP68 (30 m for 16 hours)

IP69 IP69K

Approved for issue on behalf of the IECEx Certification Body: **Stelios Roumbedakis**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

Eurofins E&E CML Limited
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Ellesmere Port, CH65 4LZ
United Kingdom

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Date of issue: 2024-10-15 Issue No: 4

Manufacturer: **CMP Products Ltd**
Unit 36 Nelson Way, Nelson Park East, Cramlington, Northumberland, NE23 1WH
United Kingdom

Manufacturing locations: **CMP Products Ltd**
Unit 36 Nelson Way, Nelson Park East,
Cramlington, Northumberland, NE23
1WH
United Kingdom

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 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:5.0

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

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/ExTR19.0084/00 GB/CML/ExTR19.0236/00 GB/CML/ExTR19.0239/00
GB/CML/ExTR20.0086/00 GB/CML/ExTR23.0104/00 GB/CML/ExTR24.0180/00

Quality Assessment Report:

GB/CML/QAR19.0001/07

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

The TruSeal Range of Cable Glands comprises the TSMe, TSPe, TSPi, TSXe & TSZe models which allow circular and Flat-Form unarmoured cable or braided/screened cable to enter associated enclosures to which they are fitted (as defined by their coding) without compromising the explosion protection that it provides. The TruSeal Plug is to be fitted within a TruSeal Gland to provide additional IP rating when the gland is not in use.

Refer to Certificate Annex for full product description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Certificate Annex.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

This issue introduced the following changes:

1. The introduction of a slotted entry thread variant to the TSMe models to facilitate a braid termination using a locknut.

Issue 2

This issue introduced the followings changes:

1. Introduction of theTruSeal Plug Models.
2. Approval of IPX9 and IPX9(K) rating of the TruSeal Range of Cable Glands
3. Update of standard reference from IEC 60079-15:2010 Ed. 4 to IEC 60079-15:2017 Ed. 5
4. Minor Drawing Clarifications
5. Updated ExTR reference from GB/CML/ExTR19.0147/00 to GB/CML/ExTR19.0239/00

Issue 3

This issue introduced the followings changes:

1. Introduction of 25 new Multi-seal arrangements.
2. Introduction of 17 new flat form seals.
3. Addition of 8 plugs for multi-seal range to plug holes when not in use.
4. Introduction of a blue entry item for the TSPe and TSPi cable gland ranges.

Issue 4

This issue introduced the followings changes

1. Correction of type errors in the product description tables.
2. Additional specific condition of use.
3. To recognise a change to the applicant’s address.

Annex:

IECEx CML 19.0062X Issue 4 Certificate Annex.pdf

Annexe to:	**IECEx CML 19.0062X, Issue 4**
Apparatus:	**TruSeal Range of Cable Glands**
Applicant:	**CMP Products Ltd**

Description

The TruSeal Range of Cable Glands comprises the TSMe, TSPe, TSPi, TSXe & TSZe models which allow circular & Flat-Form unarmoured cable or braided/screened cable to enter associated enclosures to which they are fitted (as defined by their coding) without compromising the explosion protection that it provides. Alternatively, a TruSeal Plug can be used within one of the TruSeal Gland models above to provide Ingress Protection where the cable gland is not required. They are manufactured from the following component parts:

TSMe models

- Metallic entry item hexagonal in form which is threaded at both ends: one being a male metric or NPT thread used to secure the entry item to the associated enclosure; the other being for the fitting of the outer seal nut.
- Plastic finger insert which is located within the entry item which, when displaced by tightening the outer seal nut displaces the sealing ring(s).
- Elastomeric sealing rings which may be: single; dual inner; dual outer which, when displaced by the outer seal nut and finger insert secures the incoming cable, along with providing Sealing, ingress protection and cable retention.
- Outer seal nut, domed in form with a hexagonal shoulder towards its base and with a female thread which engages with the entry item and upon tightening displaces the finger insert and consequently sealing ring(s) onto the cable.

TSXe models

As the TSMe models with the following additional parts:

- Metallic EMC cone and ring which are located within the entry item to accommodate the screen or braid of the incoming cable.
- Elastomeric bore seal located between the EMC ring and finger insert.

TSZe models

- As the TSMe models with the following additional part:
- Metallic EMC spring insert located between the finger insert and entry item for the attenuation of electrical interference.

TSPe & TSPi models

- Plastic entry item hexagonal in form which is threaded at one end with a male metric or NPT thread used to secure the entry item to the associated enclosure; the other being partially threaded for the fitting of the outer seal nut and which has a moulded finger insert feature which, when displaced by the outer seal nut displaces the sealing ring(s).
- Elastomeric sealing rings which may be: single; dual inner; dual outer which, when displaced by the outer seal nut and finger insert secures the incoming cable, along with providing Sealing, ingress protection and cable retention.
- Outer seal nut, hexagonal in form with a female thread which engages with the entry item and upon tightening displaces the fingered feature and consequently sealing ring(s) onto the cable.

The cable gland and sealing ring sizes are determined by the entry thread and cable range take sizes:

Gland Size	Entry Thread		Cable outer sheath Ø					
	Standard (Metric)	Standard (NPT)	Single Seal (Min.)	Single Seal (Max.)	Dual Inner (Min.)	Dual Inner (Max.)	Dual Outer (Min.)	Dual Outer (Max.)
12	M12x1.5	1/4"	3.0	6.5	-	-	-	-
16	M16x1.5	3/8"	3.0	7.0	3.0*	7.0	6.0	10.0
20	M20x1.5	1/2"	5.0	10.0	5.0**	10.0	9.0	14.0
25	M25x1.5	3/4"	9.0	15.5	9.0	15.5	12.5	18.0
32	M32x1.5	1"	12.5	19.0	12.5	19.0	17.0	25.0
40	M40x1.5	1 1/4"	19.0	27.0	19.0	27.0	24.0	32.0
50	M50x1.5	1 ½"	22.0	32.0	22.0	32.0	28.0	38.0
63	M63x1.5	2"	28.0	39.0	28.0	39.0	37.0	48.0

All cable outer sheath dimensions in mm
* For the TSPe & TSPi size 16 gland, the minimum dual inner cable outer sheath dimension is 3.2 mm
** For the TSPe & TSPi size 20 gland, the minimum dual inner cable outer sheath dimension is 5.5 mm

TruSeal Alternative Seals

TSMe, TSZe, & TSPe, TSPi models

- **Multi-Seal elastomeric sealing rings** designed for multi core cables, for use with both plastic & metallic TruSeal range. Suitable for types of unarmoured cable or braided/screened cable requiring sealing of individual cores.
- **Flat-Form elastomeric sealing rings** for non-circular cables, for use with both plastic & metallic TruSeal range. Suitable for types of non-circular (flat-form) unarmoured cables or braided/screened cable.
- These solutions use the same cable gland sizes listed above with alternative sealing rings for cable installations. Unarmoured cable or braided/screened cable can enter associated enclosures to which they are fitted (as defined by their coding) without compromising the explosion protection that it provides.
- **Multi-Seal Blanking Plugs** are available in sizes – 2mm – 4mm – 5mm – 6mm – 7mm – 8mm – 10mm – 12mm. Multi Seal-Blanking Plugs are for use in conjunction with Multi-Seal elastomeric sealing rings, designed to seal equipment when not in use and maintain IP integrity and the concept of protection.

Multi-Seal Elastomeric Sealing Rings

Part Number	Number of Holes	Cable Diameter (Max)	
16MS1	2	4.00	
16MS2	3	2.00	
20MS1	2	5.00	
20MS2	3	4.00	
20MS3	4	4.00	
20MS4	6	3.50	
25MS1	2	6.00	
25MS2	2	7.00	
25MS3	2	8.00	
25MS4	3	6.00	
25MS5	3	7.00	
25MS6	4	5.00	
25MS7	4	6.00	
25MS8	5	4.00	
25MS9	5	5.00	
25MS10	4	6.50	
32MS1	3	10.20	
32MS2	3	1x 6.80	2x 10.20
32MS3	3	1x 7.60	2x 11.70
32MS4	4	8.00	
32MS5	6	6.00	
32MS6	8	4.00	
32MS7	8	5.00	
40MS1	3	1x 10.20	2x 11.70
40MS2	4	10.00	

All Multi-Seal dimensions in mm

Flat-Form Elastomeric Sealing Rings

Part Number	Number of Holes	Cable Dimensions	
		Major (Max)	Minor (Max)
16FF1	1	8.20	5.00
16FF2	1	10.00	6.00
20FF1	1	8.20	5.00
20FF2	1	10.30	6.00
20FF3	1	11.90	6.25
20FF4	1	13.50	7.00
20FF5	1	11.30	8.30
25FF1	2	10.30	6.00
25FF2	1	12.40	6.50
25FF3	1	12.40	8.80
25FF4	1	13.20	5.20
25FF5	1	13.80	7.20
25FF6	1	15.00	5.00
25FF7	1	15.90	7.70
25FF8	1	10.00	4.00
32FF1	1	17.10	10.00
40FF1	1	19.40	10.00

Design Options

The front threaded entry item may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face of the associated enclosure.

The front threaded entry item may be manufactured with any larger entry thread form size from the sizes certified.

The front threaded entry item may be manufactured with an alternative nearest equivalent recognized thread type and size to the metric thread sizes certified.

The TruSeal Range of Cable Glands may be supplied with a Transit Disc.

Materials of manufacture:

The TSMe, TSZe & TSXe Cable Gland ranges are manufactured in brass, stainless steel & mild steel. All brass manufactured component parts can be optionally nickel plated. All mild steel manufactured components can be optionally zinc plated.

The TSPe, TSPi Cable Gland ranges & Multi-Seal Blanking Plugs are manufactured in Polyamide.

The TruSeal Plug & all types of elastomeric sealing rings are manufactured in Silicone Rubber.

Examples of alternative entry component thread forms:

ET (Conduit)
PG
BSPP
BSPT
ISO
NPSM
NPT

TruSeal Plug Models

There are three model types (A, B and C), that are suitable for the different sealing arrangements within the cable gland range, shown in the table below.

Gland Size	TruSeal Plug Model
12	A
16S / 16DI	B
16	C
20S / 20DI	B
20	C
25S / 25DI	B
25	C
32S / 32DI	B
32	C
40S / 40DI	B
40	C
50S / 50DI	B
50	C
63S / 63DI	B
63	C

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. The conditions of manufacture have been updated as below: The M12 and 1/4" NPT cable glands (TSPe and TSPi) are not available with a blue entry item.

Specific Conditions of Use

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

i. The TruSeal TSPe & TSPi M12 & M16 Cable Glands have been tested to a mechanical impact of 4J and therefore shall only be installed where the risk of mechanical impact is low.

ii. The TruSeal TSPe & TSPi M16, & M20 Cable Glands with a blue entry item have been tested to a mechanical impact of 4J and therefore shall only be installed where the risk of mechanical impact is low.

iii. The TruSeal Range of Cable Glands are only suitable for fixed installations. The end user shall provide suitable additional clamping of the cable to ensure that pulling is not transmitted to the terminations.

iv. When a TruSeal M12 TSPe Cable Gland is installed where its service temperature exceeds +75°C, it shall be mounted such that it is adequately protected against the risk of mechanical impact.

v. For TSPe & TSPi sizes M40, M50 & M63 - Under certain extreme circumstances may be a potential electrostatic charging hazard, clean only with a damp cloth.