

## UK Type Examination Certificate CML 21UKEX3264X Issue 2

### United Kingdom Conformity Assessment

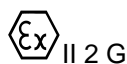
- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **TruSeal Range of Cable Glands & Plugs**
- 3 Manufacturer **CMP Products Ltd**
- 4 Address **Unit 36 Nelson Way,  
Nelson Park East, Cramlington,  
Northumberland,  
NE23 1WH, United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

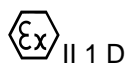
EN IEC 60079-7:2015+A1:2018

EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex eb IIC Gb



Ex ta IIIC Da

IP66 IP67 IP68 (30 m for 16 hours)

IP69 IP69K

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

Ts -60°C ≤ Ta ≤ +95°C TSPe & TSPi glands






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## **11 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.



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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 1/2"	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

#### TSMs, TSzEs, & TSPes, TSPis 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.



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### 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



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#### 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.



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#### 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

#### Variation 1

This variation introduces the following modifications:

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

#### Variation 2

This variation introduces the following modifications:

- Correction of type errors in the product description tables.
- Additional specific condition of use.
- To recognise a change to the applicant's address.



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## **12 Certificate history and evaluation reports**

<b>Issue</b>	<b>Date</b>	<b>Associated report</b>	<b>Notes</b>
0	12 July 2021	R13914BA/00	Issue of the prime certificate.
1	25 Mar 2024	R16471A/00	Introduction of variation 1
2	15 Oct 2024	R18031A/00	Introduction of variation 2

Note: Drawings that describe the equipment are listed in the Annex.

## **13 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.

## **14 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.

## Certificate Annex

**Certificate Number** CML 21UKEX3264X  
**Equipment** TruSeal Range of Cable Glands  
**Manufacturer** CMP Products Ltd



The following documents describe the equipment defined in this certificate:

### Issue 0

For drawings describing the equipment, refer to attached certificate CML 19ATEX3185X. In addition to the drawings listed on CML 19ATEX3185X, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
GA1658-3	1 of 1	1	12 Jul 2024	TSM <sub>e</sub> & TSZ <sub>e</sub> - Marking
GA1659-3	1 of 1	1	12 Jul 2024	TSX <sub>e</sub> - Marking
GA1660-3	1 of 1	1	12 Jul 2024	TSP <sub>e</sub> & TSP <sub>i</sub> - Marking

### Issue 1

Drawing No.	Sheets	Rev	Approved date	Title
GA1658	1 of 1	02	22 Mar 2024	TSM <sub>e</sub> / TMZ <sub>e</sub> General Arrangement
GA1658-2	1 of 1	2	22 Mar 2024	TSM <sub>e</sub> / TMZ <sub>e</sub> Compliance notes
GA1659	1 of 1	01	22 Mar 2024	TSX <sub>e</sub> General Arrangement
GA1659-2	1 of 1	2	22 Mar 2024	TSX <sub>e</sub> compliance notes
GA1660	1 of 1	01	22 Mar 2024	TSP <sub>e</sub> & TSP <sub>i</sub> General Arrangement
GA1660-2	1 of 1	2	22 Mar 2024	TSP <sub>e</sub> & TSP <sub>i</sub> compliance notes
SCH0653	1 of 1	00	22 Mar 2024	TruSeal Flat Form Elastomeric Sealing Ring
SCH0654	1 of 1	00	22 Mar 2024	Tru Seal Multi Cable Seal
SCH0663	1 of 1	01	22 Mar 2024	TruSeal Multi-Seal Blanking Plug

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None