EU Type Examination Certificate CML 18ATEX1337X Issue 0

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **Type TMCX and TMC Range of Cable Glands**

3 Manufacturer **CMP Products Ltd**

4 Address **Unit 36 Nelson Way,**
Nelson Park East,
Cramlington, NE23 1WH,
United Kingdom

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V. , Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

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 conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

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 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015+A1:2018

EN 60079-31:2014

10 The equipment shall be marked with the following:

Ex II 2G Ex db IIC Gb (TMCX)
Ex eb IIC Gb

Ex II 1D Ex ta IIIC Da

Ta: TMCX Types: -60°C to +85°C (based upon sealing compound)
TMC Types: -60°C to +130°C

R C Marshall
Certification Officer

11 Description

The TMCX range of barrier type cable glands are designed for use with flexible MC-HL type cables. Each gland comprises a male-threaded front entry component, a compound tube, a rear component, a spring ring and an outer compression nut / seal arrangement.

The compound tube is fitted such that a spigot/combination joint is formed. The compound tube contains a setting compound that affects a flameproof seal around the cable cores passing through it and is mechanically retained. The cable is additionally retained by a spring ring compressed between the two components onto the corrugated metal armour sheath.

Additional sealing is achieved by the outer nut compressing an elastomeric seal onto the cable sheath. Cable and gland combinations/specifications are tabulated on CMP drawing GA167.

The TMC range of compression type cable glands are identical to the TMCX types but with the compound tube omitted and the front-end component modified. Cable and gland combinations/specifications are tabulated on CMP drawing GA166.

Design options

Materials of manufacture:

The standard material supplied is:

Aluminium	BS EN 573-3:2013 / BS EN 755-1-3:2008 Grade 6082 T6, 6262 T6 / BS EN 1676:2010 Grade LM25 TF Aluminium will contain less than 6% magnesium

Alternate materials are:

Stainless steel	BS EN 10088-3:2014 Grades 316S11, 316S13, 316S31, 316S33, 316L
Mild steel	BS EN 10277-2:2008 Grades 220M07, 230M07 (EN1A) / 220M07Pb, 230M07Pb (EN1APb)
Brass	BS EN 12164:2011/ BS EN 12168:2011 Grade CuZn39Pb3 (CW614N) All brass manufactured component parts can be optionally nickel plated to a maximum of 0.008mm

Alternative entry component thread forms:

Metric	ISO 965-1, ISO 965-3 medium fit (6g) for external threads
ET (Conduit)	BS31:1940 (1979), Table A
PG	DIN 40430:1971
BSPP	BS2779:1986 class A full form for external threads
BSPT	BS21:1985 standard threads only as clause 5.4, gauging to clause 5.2 system A
ISO	ISO 7/1:1994, gauging to ISO 7/2 clause 6.3 for external threads
NPT	ANSI/ASME B1.20.1-2013 gauging to clause 3.2 for external threads
NPSM	ANSI/ASME B1.20.1-2013 gauging to clause 6.4 for external threads

TMCX cable glands -

Catalogue designation	Gland Size	Cable armour diameter range (mm)	Cable outer sheath diameter range (mm)	Max number of cores	Max. diameter over core of single core cable (mm) *(See note 1)*	Max. diameter of individual core of multi core cable (mm)	Max. diameter over cores of multi core cable (mm)	Metric thread size	NPT thread size
TMCX050S	050S	8.69 – 12.7	8.99 – 13.9	11	8.94	2.47	9.91	-	½"
TMCX050	050	12.95 – 17.0	11.1 – 20.0	11	11.62	3.14	12.6	M20	½"
TMCX075	075	15.0 – 23.3	17.0 – 26.3	21	16.05	3.29	17.5	M25	¾"
TMCX100	100	19.7 – 29.2	22.0 – 32.2	38	21.46	3.33	23.6	M32	1"
TMCX125	125	27.5 – 35.2	29.5 – 38.2	59	27.19	3.43	30.0	M40	1¼"
TMCX150	150	33.5 – 41.1	35.6 – 44.1	89	33.09	3.37	36.6	M50	1½"
TMCX200S	200S	38.3 – 47.1	40.1 – 50.1	115	37.03	3.34	41.0	M50	2"
TMCX200	200	45.0 – 53.0	47.2 – 56.0	115	43.29	3.91	47.9	M63	2"
TMCX250S	250S	52.1 – 58.9	52.8 – 62.0	140	48.39	3.97	53.7	M63	2½"
TMCX250	250	57.0 – 64.6	59.1 – 68.0	140	53.93	4.43	59.9	M75	2½"
TMCX300	300	64.6 – 75.3	66.6 – 79.4	140	67.71	4.75	64.3	M90	3"
TMCX350	350	73.99 – 88.5	76.0 – 97.2	140	75.13	4.69	75.7	M100	3½"
TMCX400	400	73.99 – 88.5	76.0 – 97.2	200	75.13	5.17	83.6	M115	4"

Note 1 – when installing a single conductor/core only, through the barrier.

TMC cable glands -

Catalogue designation	Gland Size	Cable armour diameter range (mm)	Cable outer sheath diameter range (mm)	Metric thread size	NPT thread size
TMC050S	050S	8.69 – 12.7	8.99 – 13.9	M20	½"
TMC050	050	12.95 – 17.0	11.1 – 20.0	M20	½"
TMC075	075	15.0 – 23.3	17.0 – 26.3	M25	¾"
TMC100	100	19.7 – 29.2	22.0 – 32.2	M32	1"
TMC125	125	27.5 – 35.2	29.5 – 38.2	M40	1¼"
TMC150	150	33.5 – 41.1	35.6 – 44.1	M50	1½"
TMC200S	200S	38.3 – 47.1	40.1 – 50.1	M50	2"
TMC200	200	45.0 – 53.0	47.2 – 56.0	M63	2"
TMC250S	250S	52.1 – 58.9	52.8 – 62.0	M63	2½"
TMC250	250	57.0 – 64.6	59.1 – 68.0	M75	2½"

Catalogue designation	Gland Size	Cable armour diameter range (mm)	Cable outer sheath diameter range (mm)	Metric thread size	NPT thread size
TMC300	300	64.6 – 75.3	66.6 – 79.4	M90	3"
TMC350	350	73.99 – 88.5	76.0 – 97.2	M100	3½"
TMC400	400	73.99 – 88.5	76.0 – 97.2	M115	4"

Notes:

- Sira 07ATEX1122X and IECEx SIR 07.0083X is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 07ATEX1122X and IECEx SIR 07.0083X.
- Where Sira 07ATEX1122X and/or IECEx SIR 07.0083X 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.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	26 Mar 2019	R12060G/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component 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 TMCX cable glands interface O-ring seal when fitted shall have a continuous operating temperature range at least equal to -60°C to +105°C.

ii. The TMC cable glands interface O-ring seal when fitted shall have a continuous operating temperature range at least equal to -60°C to +150°C.

iii. The TMC cable glands front threaded entry item may be provided with, but not limited to, an alternative nearest equivalent recognised thread type and size to the metric thread, whilst maintaining a tolerance of fit, equal or better than, a medium fit to ISO 965-1 & ISO 965-3.
For example:
ET - BS 31:1940 (1979) Table 'A' PG - DIN 40430:1971
BSPP – BS 2779:1986 class A full form for external threads
BSPT – BS 21:1985 standard threads only as clause 5.4, gauging to clause 5.2, system A.
ISO - ISO 7/1:1994 gauging to ISO 7/2 clause 6.3 for external threads.
NPSM - ANSI/ASME B1.20.1:1983 B1.20.1-1983 gauging to clause 9 for external threads.

14 Specific Conditions of Use (Special Conditions)

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

i. The interfaces between the cable glands and their associated enclosures/cable entry cannot be defined. Therefore, it is the user's responsibility to ensure that the minimum ingress protection level (IP54 for explosive gas atmospheres and IP6X explosive dust atmospheres) is maintained at these interfaces, this can be achieved using the manufacturer's guidance, as given in the user installation manual, and reference to IEC/EN 60079-14. (Note: When fitted within threaded entries, all tapered threads, will automatically provide an ingress protection rating IP6X.).

ii. The cable glands shall only be used where the temperature, at the point of entry, is in the following ranges:
- TMCX Types: -60°C to +85°C (Based upon sealing compound)
- TMC Types: -60°C to 130°C

iii. TMCX & TMC cable glands > size 40 shall only be used on fixed installations and where the cable is effectively clamped.

iv. The TMCX cable glands comprise a flameproof labyrinth joint having length and gap dimensions which are other than those specified in EN 60079-1 and are not intended to be repaired in service.

v. The TMCX cable glands front threaded 'entry item' may be provided with, but not limited to, an alternative nearest equivalent recognised thread type and size to the metric thread, whilst maintaining a tolerance of fit, equal to or better than a medium fit to ISO 965-1 & ISO 965-3. Intended for use within existing installations only, that incorporate thread types that are no longer permitted by the current edition of EN 60079-1, but comply with the requirements of EN 50018:2000
For example:
ET - BS 31:1940 (1979) Table 'A' PG - DIN 40430:1971
BSPP – BS 2779:1986 class A full form for external threads
BSPT – BS 21:1985 standard threads only as clause 5.4, gauging to clause 5.2, system A.
ISO - ISO 7/1:1994 gauging to ISO 7/2 clause 6.3 for external threads.
NPSM - ANSI/ASME B1.20.1:1983 B1.20.1-1983 gauging to clause 9 for external threads

Certificate Annex

Certificate Number	**CML 18ATEX1337X**
Equipment	**Type TMCX and TMC Range of Cable Glands**
Manufacturer	**CMP Products Ltd**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
GA166	1 of 1	04	26 Mar 2019	TMC general arrangement
GA167	1 of 1	04	26 Mar 2019	TMCX general arrangement
SCH0270	1 of 1	04	26 Mar 2019	TMC/TMCX O ring & groove details
SCH0354	1 of 1	02	26 Mar 2019	Seal
SCH0372	1 of 1	02	26 Mar 2019	TMCX item 1 - NPT
SCH0373	1 of 1	01	26 Mar 2019	TMC/TMCX end stop
SCH0374	1 of 1	01	26 Mar 2019	TMC/TMCX Compression nut details
SCH0375	1 of 1	01	26 Mar 2019	TMCX armour spacer
SCH0376	1 of 1	01	26 Mar 2019	TMC/TMCX Body details
SCH0377	1 of 1	01	26 Mar 2019	TMC/TMCX armour compression spring
SCH0378	1 of 1	02	26 Mar 2019	TMC item 1 - NPT
SCH0380	1 of 1	01	26 Mar 2019	TMCX item 1 - Metric
SCH0382	1 of 1	00	26 Mar 2019	TMC/TMCX skid washer
SCH0394	1 of 1	01	26 Mar 2019	TMC/TMCX – (Internal) Deluge O-ring
SCH0395	1 of 1	01	26 Mar 2019	TMCX Compound tube details - NPT
SCH0396	1 of 1	01	26 Mar 2019	TMCX Compound tube details - Metric
SCH0397	1 of 1	01	26 Mar 2019	TMC item 1 - Metric
MP888	1 of 1	10	26 Mar 2019	Manufacturing tolerances