



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 07ATEX1122X** Issue: **1**

4 Equipment: **TMCX and TMC Ranges of Cable Glands**

5 Applicant: **CMP Products Limited**

6 Address: Glasshouse Street
St Peters
Newcastle-upon-Tyne NE6 1BS
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013 EN 60079-1:2007* EN 60079-7:2007 EN 60079-31:2009

* Not applicable to TMC Range of Cable Glands

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

TMCX Cable Glands



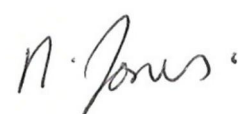
II 2 GD
Ex d IIC Gb
Ex e IIC Gb
Ex ta IIIC Da IP66

TMC Cable Glands



II 2 GD
Ex e IIC Gb
Ex ta IIIC Da IP66

Project Number 70004705


N Jones
Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 07ATEX1122X
Issue 1**

13 DESCRIPTION OF EQUIPMENT

The TMCX range of barrier type cable glands is 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 a neoprene seal onto the cable sheath.

Cable and gland combinations/specifications are tabulated on CMP drawing GA167.

Design options

- Alternative materials of manufacture:
 - Aluminium alloy to BS1474:1987 Grade 6082 or BS1490 Grade LM25 TF
 - Brass to BS2874:1986 Grade CuZn39Pb (CW614N)
 - Mild steel to BS970 Pt1:1991 Grade 220M07Pb
 - Stainless steel to BS970 Pt1:1991 Grades 316S11, 316S13, 316S31 or 316S33
- Alternative entry component thread forms:
 - Metric ISO 965-1, ISO965-3 medium fit (6g) for external threads
 - ET (Conduit) BS 31:1940 (1979), Table A
 - PG DIN 40430:1971
 - BSPP BS 2779:1973 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 7/1:1982, gauging to ISO 7/2 clause 6.3 for external threads
 - NPT ANSI/ASME B1.20.1-1983 gauging to clause 8.1 for external threads
 - NPSM ANSI/ASME B1.20.1-1983 gauging to clause 9 for external threads

The **TMC range of compression type cable glands** is 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.

Variation 1 - This variation introduced the following changes:

TMCX cable glands -

- Revise the permitted number of cores and associated cable dimensional data passing through the compound pot (aligning with the TMC2X cable gland)
- Reduction of the permitted temperature range at the point of installation from '-60°C to +100°C' to '-60°C to +85°C', the conditions of certification and specific conditions for use being revised accordingly.
- Introduction of a modified metric and NPT compound tubes.
- Introduction of a modified metric and NPT threaded entry component.
- Introduction of an alternative EPDM ingress seal for sizes 050s up to size 350
- Constructional changes to armour spacer.

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 07ATEX1122X
Issue 1**

- vii. Introduction of M115/4 NPT threaded cable gland, designated size 400, which is identical to cable gland size 350 with the exception of having a larger cable entry thread.
- viii. Clarification of the TMCX certified cable gland range.

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	-	1/2"
TMCX050	050	12.95 – 17.0	11.1 – 20.0	11	11.62	3.14	12.6	M20	1/2"
TMCX075	075	15.0 – 23.3	17.0 – 26.3	21	16.05	3.29	17.5	M25	3/4"
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	1 1/4"
TMCX150	150	33.5 – 41.1	35.6 – 44.1	89	33.09	3.37	36.6	M50	1 1/2"
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	2 1/2"
TMCX250	250	57.0 – 64.6	59.1 – 68.0	140	53.93	4.43	59.9	M75	2 1/2"
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	3 1/2"
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 -

- ix. Introduction of an alternative EPDM ingress seal for sizes 050s up to size 350.
- x. Clarification of the TMC certified cable gland cable range.

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	1/2"
TMC050	050	12.95 – 17.0	11.1 – 20.0	M20	1/2"
TMC075	075	15.0 – 23.3	17.0 – 26.3	M25	3/4"
TMC100	100	19.7 – 29.2	22.0 – 32.2	M32	1"
TMC125	125	27.5 – 35.2	29.5 – 38.2	M40	1 1/4"
TMC150	150	33.5 – 41.1	35.6 – 44.1	M50	1 1/2"
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	2 1/2"
TMC250	250	57.0 – 64.6	59.1 – 68.0	M75	2 1/2"
TMC300	300	64.6 – 75.3	66.6 – 79.4	M90	3"
TMC350	350	73.99 – 88.5	76.0 – 97.2	M100	3 1/2"
TMC400	400	73.99 – 88.5	76.0 – 97.2	M115	4"

- xi. Constructional changes to the entry component (item 1).

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 07ATEX1122X
 Issue 1**

TMCX and TMC cable glands -

- xii. To amend the product marking drawings to be in-line with the method and format of marking on the actual product.
- xiii. Constructional changes to the compression nut.
- xiv. Constructional changes to the main body.
- xv. A revision to the specific conditions of use with regards to the cable glands interface sealing with an associated enclosure as follows:

“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 EN 60079-14. (Note: When fitted within threaded entries, all tapered threads, will automatically provide an ingress protection rating IP6X.)”

- xvi. To remove all previous issues of the following drawings, some of which have been replaced by a new drawing number, which some also include administrative and minor technical changes, making them common to both the TMCX and TMC cable glands.

Drawing number	Replaced by
SCH0265	SCH0372
SCH0266	SCH0376
SCH0267	SCH0374
SCH0268	SCH0379
SCH0269	SCH0354
SCH0275	SCH0378

- xvii. Introduction of the following drawings into the certified document.

Drawing number
SCH0375
SCH0394
SCH0382
SCH0377
SCH0373
GA166 sheet 2*
GA167 sheet 2*

* Pictorial representation/clarification of option to have a cable gland size, manufactured with the next gland size threaded entry size. Permitting the following dimensional changes only

- Entry thread
- O-ring groove
- Bar stock size increase.

- xviii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2003, EN 61241-0:2004 and EN 61241-1:2004, were replaced by EN 60079-0:2011/A11:2013, EN 60079-1:2007, EN 60079-7:2007 and EN 60079-31: 2009, the markings in section 12 were updated accordingly.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
 Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
 Fax: +44 (0) 1244 681330
 Email: ukinfo@csagroup.org
 Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 07ATEX1122X
Issue 1**

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	23 October 2007	R59M16726A R59M17338A	The release of the prime certificate.
1	31 October 2016	R70004705A	<p>his Issue covers the following changes:</p> <ul style="list-style-type: none"> EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i> The introduction of Variation 1.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 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.).

15.2 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

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

15.4 The TMCX cable glands comprise of 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.

15.5 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.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 07ATEX1122X
Issue 1**

For example:

- ET - BS 31:1940 (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.
- NPSM - ANSI/ASME B1.20.1:1983 B1.20.1-1983 gauging to clause 9 for external threads.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 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
- 17.4 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.
- 17.5 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 - 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.
- NPSM - ANSI/ASME B1.20.1:1983 B1.20.1-1983 gauging to clause 9 for external threads.

Certificate Annexe



Certificate Number: Sira 16ATEX1234
Equipment: TMCX and TMC Ranges of Cable Glands
Applicant: CMP Products Limited

Issue 0 The drawings listed with these Issues were rationalised and have been superseded by those detailed in Issue 1.

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
GA166	1 of 1	03	06 Sep 16	TMC general arrangement
GA167	1 of 1	03	06 Sep 16	TMCX general arrangement
SCH0270	1 of 1	04	06 Sep 16	TMC/TMCX O ring & groove details
SCH0354	1 of 1	02	06 Sep 16	Seal
SCH0372	1 of 1	02	06 Sep 16	TMCX item 1 - NPT
SCH0373	1 of 1	01	06 Sep 16	TMC/TMCX end stop
SCH0374	1 of 1	01	06 Sep 16	TMC/TMCX Compression nut details
SCH0375	1 of 1	01	06 Sep 16	TMCX armour spacer
SCH0376	1 of 1	01	06 Sep 16	TMC/TMCX Body details
SCH0377	1 of 1	01	06 Sep 16	TMC/TMCX armour compression spring
SCH0378	1 of 1	02	06 Sep 16	TMC item 1 - NPT
SCH0380	1 of 1	01	06 Sep 16	TMCX item 1 - Metric
SCH0382	1 of 1	00	06 Sep 16	TMC/TMCX skid washer
SCH0394	1 of 1	01	06 Sep 16	TMC/TMCX – (Internal) Deluge O-ring
SCH0395	1 of 1	01	06 Sep 16	TMCX Compound tube details - NPT
SCH0396	1 of 1	01	06 Sep 16	TMCX Compound tube details - Metric
SCH0397	1 of 1	01	06 Sep 16	TMC item 1 - Metric
MP888	1 of 1	10	06 Sep 16	Manufacturing tolerances

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org