



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx SIR 06.0044X issue No.:10  
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Date of Issue: **2011-02-08** Page 1 of 5

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Issue No. 10 (2011-2-8)  
Issue No. 9 (2010-10-15)  
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Issue No. 4 (2008-3-13)  
Issue No. 3 (2007-11-13)  
Issue No. 2 (2007-6-25)  
Issue No. 1 (2007-1-23)

Applicant: **CMP Products Limited**  
Glasshouse Street  
St Peters, Newcastle-upon-Tyne  
Tyne and Wear NE6 1BS  
**United Kingdom**

Electrical Apparatus: **PX\*\* Type Range of Compound Filled Barrier Cable Glands**  
Optional accessory:

Type of Protection: **Flameproof, increased safety and dust**

Marking: **Ex d IIC/Ex e II /Ex nR II or Ex d IIC, Ex e II or  
Ex tD A21 IP66  
or  
Ex d I/Ex e I or Ex d I or Ex p I**

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings BA MIET

Position: Certification Manager

Signature:  
(for printed version)

Date:

2011-02-08

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **CMP Products Limited**  
Glasshouse Street  
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Tyne and Wear NE6 1BS  
**United Kingdom**

Manufacturing location(s):

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 electrical apparatus 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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-15 : 2005-03</b> Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate does not indicate compliance with electrical 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 Report:

GB/SIR/ExTR06.0061/00  
GB/SIR/ExTR07.0002/00  
GB/SIR/ExTR07.0042/00  
GB/SIR/ExTR07.0124/00  
GB/SIR/ExTR08.0025/00  
GB/SIR/ExTR08.0062/00  
GB/SIR/ExTR08.0126/00  
GB/SIR/ExTR09.0185/00  
GB/SIR/ExTR10.0090/00  
GB/SIR/ExTR10.0231/00  
GB/SIR/ExTR10.0317/00

#### Quality Assessment Report:

GB/SIR/QAR06.0011/00



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The PX\*\* series Type ranges of barrier cable glands consist of a male-threaded front entry component, fitted with a compound tube such that a spigot/combination joint is formed, which is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The compound tube contains a setting compound that effects a flameproof seal around the cable cores passing through it and is mechanically retained. The sealing compound can be either the EP2122 sealing material or the RapidEx resin system (PX\*\* cable glands that use the RapidEx resin system have "-REX" added to their type name. The front entry component to main body mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armour or braid is effected by a combination of the front entry component assembly and the different optional armour cone and reversible sleeve combinations within the main body being fastened together. An outer seal nut, containing an elastomeric displacement sealing ring and a Nylon 6 ferrule, threads onto the main body and effects environmental sealing onto the cable outer sheath. Cable clamping is achieved with the outer seal arrangement.

Refer to Annex for more information.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The cable gland ranges shall only be used where the temperature, at the point of entry, is in the following ranges.  
Type PX\*\* ranges of cable glands: -60°C to +100°C EP2122 compound filled.  
Type PX\*\* ranges of cable glands: -60°C to +85°C RapidEx resin filled.
2. The PX\*\* type cable glands used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
3. The PX\*\* type of cable gland entry component threads may need additional sealing to maintain the ingress protection rating as applicable to the associated equipment in which it will be attached.
4. The Type PXB2KW gland is to be protected from hydraulic fluids, oils, and greases when applied for Group I use.



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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 an alternative, outer sealing arrangement; the compression nut length and consequently body length are reduced, in addition, the internal, tapered ferrule is replaced by a flat ferrule.

**Issue 2** - this Issue introduced the following changes

1. The introduction of Ex nR II and Ex tD marking.
2. The recognition of alternative armour cone diameters.
3. The removal of the manufacturer's address from the product marking.
4. The use of the PX range of glands with pliable wire armour.

**Issue 3** - this Issue introduced the following changes

1. The full range of PX\*\* series glands was allowed to be used in Group I.
2. The 'PB' designation was clarified.

**Issue 4** - this Issue introduced the following changes

1. An alternative setting compound was recognised.

**Issue 5** - this Issue introduced the following changes

1. An additional M100 size was included.

**Issue 6** - this Issue introduced the following changes:

1. The introduction of the **PXRC** range of cable glands incorporating a seal actuation nut and an outer, running coupling. The outer running coupling is retained in the seal actuation nut using the carbon steel 'C' clip to allow free running thread connection to conduit.
2. PXSS2K – alternative backnut & seal.
3. The use of alternative armour cones machined for varying armour wire diameters.
4. The inclusion of steel wire armour cable (s.w.a) in the armour cone description.
5. The inclusion of 'size-up' threads

**Issue 7** – this Issue introduced the following changes:

1. The inclusion of an alternative sealing material for the PX\*\* range of glands
2. The recognition of an alternative outer seal arrangement to allow the fitting of the PX\*\* glands to flexible conduit, including a new Special Condition For Safe use
3. The introduction of an alternative ferrule, to all glands covered by this certificate, made in the same material as the glands.

**Issue 8** – this Issue introduced the following changes:

1. To permit an alternative rear nut arrangement on the PX\*\* range. The existing PXSS2K nut being fitted to the PX\*\* range.

See additional information for more changes.



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## Additional information:

**Issue 9** – this Issue introduced the following changes:

1. The use of CMP, fast curing resin, trade name 'RapidEx', was recognised as a sealing compound employed in the construction of the compound filled barrier cable glands, products that use the RapidEx resin system have "-REX" added to their type name; the Description of Equipment was modified to recognise this change, in addition, the special condition for safe use detailing the applicable temperature ranges was amended to clarify the compound and resin types.

**Issue 10** – this Issue introduced the following changes:

1. Following appropriate re-assessment to demonstrate compliance, the originally listed standards IEC 60079-1:2003 and IEC 60079-7:2001 were replaced by IEC 60079-1:2007 and IEC 60079-7:2006 respectively.

**Annexe to:** IECEx SIR 06.0044X Issue 9  
**Applicant:** CMP Products Limited  
**Apparatus:** PX\*\* Type Range of Cable Glands



**Design options**

- The front entry component may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face with the associated enclosure. This option having the gland type designation prefixed with the letter R, e.g. 25RPX\*\*.
- Alternative materials of manufacture:  
 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  
 Aluminium alloy to BS1474:1987 Grade 6082 or BS1490 Grade LM25 TF (Not Group I)
- 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  
 BSPTBS 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  
 NPSMANSI/ASME B1.20.1-1983 gauging to clause 9 for external threads
- The use of alternative armour clamping components. The various arrangements vary the cable gland suitability for differing armour or braided type cables.
- Alternative material of manufacture of the ferrule to be the same as the gland material.
- The removal of the ATEX outer seal, nut and ferrule, along with the body component manufactured without the external mating thread. The cable gland being suitable for S.W.A armoured cables and is identified within type designation coding.
- The use of the compound tube and spacer along with the manufacture of the front entry component with a female mating thread, to couple to an alternative main body, skid washer, seal and nut. The latter replacing other component parts. This variant being identified within type designation coding.
- PXSS2K range can be fitted with the outer seal nut from the PX\*\* range as an alternative.
- PX type glands may be fitted with armour cones with alternative diameters to allow the clamping of smaller or larger armour wires
- Alternative resin based sealing compound.
- An alternative outer seal arrangement to allow the fitting of the PX\*\* glands to flexible conduit , including a new Special Condition For Safe use
- The introduction of an alternative skid washer to all glands covered by this certificate, made from the same material as the glands.
- PX2K\*\* range can be fitted with the outer seal nut assembly from the PKSS2K range as an alternative.

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

Gland size	Entry thread	Entry thread 'B' version	Max. no. of cores	Max. Ø over cores (mm)	SWA (mm)		SWA, STA, strip armour, pliable wire armour <sup>1</sup> & wire braid (mm)		PXSS2K <sup>2</sup> outer seal sheath range Ø (mm)		PX** outer seal sheath range Ø (mm)	
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
20s/16	M20 x 1.5	M25 x 1.5	34	12.6	0.9	1.00	0	1.0	3.1	8.7	6.1	11.5
20s	M20 x 1.5	M25 x 1.5	34	12.6	0.9	1.25	0	1.0	6.1	11.7	9.5	15.9
20	M20 x 1.5	M25 x 1.5	34	12.6	0.9	1.25	0	1.0	6.5	14.0	12.5	20.9

Annexe to: **IECEX SIR 06.0044X Issue 9**  
 Applicant: **CMP Products Limited**  
 Apparatus: **PX\*\* Type Range of Cable Glands**



Gland size	Entry thread	Entry thread 'B' version	Max. no. of cores	Max. Ø over cores (mm)	SWA (mm)		SWA, STA, strip armour, pliable wire armour <sup>1</sup> & wire braid (mm)		PXSS2K <sup>2</sup> outer seal sheath range Ø (mm)		PX** outer seal sheath range Ø (mm)	
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
20L	M20 x 1.5	M25 x 1.5	34	12.6	0.9	1.25	0	1.0	10.0	15.9	N/A	N/A
25s	M25 x 1.5	M32 x 1.5	80	17.5	1.25	1.6	0	1.0	11.1	20.0	14.0	22.0
25	M25 x 1.5	M32 x 1.5	80	17.5	1.25	1.6	0	1.0	11.1	20.0	18.2	26.2
32	M32 x 1.5	M40 x 1.5	115	23.6	1.6	2.0	0	1.0	17.0	26.3	23.7	33.9
32L	M32 x 1.5	M40 x 1.5	115	23.6	1.6	2.0	0	1.0	20.0	27.4	N/A	N/A
40	M40 x 1.5	M50 x 1.5	185	30.0	1.6	2.0	0	1.0	22.0	32.1	27.9	40.4
50s	M50 x 1.5	M63 x 1.5	274	36.6	2.0	2.5	0	1.0	29.5	38.2	35.2	46.7
50	M50 x 1.5	M63 x 1.5	343	41.0	2.0	2.5	0	1.0	35.6	44.1	40.4	53.1
63s	M63 x 1.5	M75 x 1.5	466	47.9	2.0	2.5	0	1.0	40.1	50.1	45.6	59.4
63	M63 x 1.5	M75 x 1.5	585	53.7	2.0	2.5	0	1.0	47.2	56.0	54.6	65.9
75s	M75 x 1.5	M90 x 2.0	727	59.9	2.0	2.5	0	1.0	52.8	62.0	59.0	72.1
75	M75 x 1.5	M90 x 2.0	837	64.3	2.5	3.0	0	1.0	59.1	68.0	66.7	78.5
90	M90 x 2.0	M100 x 2.0	1146	75.3	3.0	3.5	0	1.6	66.6	79.4	76.2	90.4
100	M100 x 2.0	M115 x 2.0	1480	85.6	3.15	4.0	0	1.6	80.0	90.9	86.1	101.5

<sup>1</sup> '2KX' and '2K' variants; see below.

<sup>2</sup> including PX\*\* fitted with alternative outer nut as shown on drawing GA273

#### Type designation code

PX



- 2KW = Fitted with single plain armour cone & reversible armour sleeve to suit SWA cables.
- 2KX = Fitted with single grooved armour cone & reversible armour sleeve to suit STA, strip armoured, pliable wire armoured and braided cables.
- 2K = Gland kit provided with 2 single armour cones (From the 2KW & 2KX) and reversible armour sleeve to suit SWA, STA, strip armoured, pliable wire armoured and braided cables.
- B2KW = Fitted with single plain armour cone & reversible armour sleeve, but has no outer seal, nut or ferrule. The body is also manufactured without the external mating thread. The cable gland is suitable for SWA cables.
- SS2K = Alternative manufactured front entry component coupled to an alternative main body, skid washer, seal and nut for use with unarmoured cables.
- 2KPB = Alternative two part cone assembly incorporating an additional metallic continuity diaphragm for the use with inner lead sheathed SWA, STA and braided cables.
- /PB = Alternative two part cone assembly incorporating an additional metallic continuity diaphragm for use with inner lead sheathed SWA and braided cables.