



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

Certificate No.: IECEx SIM 14.0008X Issue No: 0 Certificate history:
Issue No. 0 (2014-07-18)

Status: Current Page 1 of 3

Date of Issue: 2014-07-18

Applicant: **CMP Products Ltd**
Glasshouse Street
St Peters
NEWCASTLE UPON TYNE
NE6 1BS
United Kingdom

Electrical Apparatus: **Cable Glands Type PX****
Optional accessory:

Type of Protection: **Flameproof, Increased Safety, Restricted Breathing and Dust Protection by Enclosure**

Marking:
Ex e I Mb (Not applicable to PXRC for Gas Group I)
Ex d I Mb (Not applicable to PXRC for Gas Group I)
Ex e IIC Gb
Ex d IIC Gb
Ex nR IIC Gc
Ex ta IIIC Da
Ta = -60°C to +85°C

Approved for issue on behalf of the IECEx
Certification Body:

Geoffrey Barnier

Position:

Principal Engineer - Certification

Signature:
(for printed version)

Date:

18 July 2014

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:

Safety in Mines Testing and Research Station (Simtars)
2 Smith Street
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Manufacturer: **CMP Products Ltd**
3 Nelson Way
Nelson Park East
CRAMLINGTON
NORTHUMBERLAND
NE23 1WH
United Kingdom

Additional 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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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/ExTR13.0066/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0009/05](#)



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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 barrier 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 barrier tube is filled with a sealing material that creates a flameproof seal around the cable cores passing through it and is mechanically retained. 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 and the different optional armour cone and reversible sleeve combinations within the main body being fastened together. An outer seal nut threads onto the main body and creates an environmental seal between the gland and cable outer sheath. The outer seal nut contains an elastomeric sealing ring and a Nylon 6 ferrule.

CONDITIONS OF CERTIFICATION: YES as shown below:

The glands when used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

The PXB2KW gland is to be protected from hydraulic fluids, oils, and greases when applied for Group I use.

When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.

The PX range of cable glands with entry threads smaller than a M25 (or equivalent) size shall not be used for Group I, Category M2 applications where there is a 'high' risk of mechanical damage.

Annex:

[IECEx SIM 14.0008X-0 Annex.pdf](#)



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Design options- Cable Gland Type PX**

- 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. 25RPX2KW.
- Materials of manufacture:
Brass to EN12168:1998 Grade CuZn39Pb (CW614N)
Mild steel to BS EN 10088-3:2005 Grade 220M07Pb
Stainless steel to BS EN 10088-3:2005 Grade 316S11, 316S13, 316S31 or 316S33
Aluminium alloy not inferior to grade 6082 to EN755,1-3:1996 or LM25 to BS EN 1676:2010 (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
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 option to manufacture glands with entry threads that are one size up from the nominal quoted gland size.
- Alternative material of manufacture of the ferrule to be the same as the gland material.
- The removal of the 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 barrier 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 outer seal arrangement to allow the glands to be attached to flexible conduit.
- 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. In addition note that not all the information detailed in the table is applicable to both gland types. See individual approval drawings.

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Type designation code

PX

→ PB	=	Alternative cone assembly incorporating an additional metallic continuity diaphragm for the use with inner lead sheathed SWA and braided cables.
VAR	=	Optional metallic continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.
FF	=	Fitted with an outer seal suitable for flat form cables.
HC	=	Fitted with an alternative outer seal nut that incorporates an anchor for a flexible hose.
TA	=	Including an electrical continuity device for use with tape armoured cable.
→ -REX	=	Glands using the RapidEx resin system.
→ 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 SWA, 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.
SS2K-HC	=	As the SS2K but with an alternative seal nut that incorporates a hose connection
RC	=	Alternative manufactured front entry component attached to a fixed or running coupler (of the same construction as on the A2FRC) and skid washer. Used with unarmoured cables in conduit.
VAR	=	Optional construction where the cone and sleeve assembly is replaced by a metallic continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.

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

Gland Size	Entry Thread	Max. No. of Cores	Max. Ø over Cores (mm)	SWA (mm)		SWA, STA, strip armour, pliable wire armour ¹ and wire braid (mm)		PXSS2K ^{2,3} Outer Seal Sheath Ø (mm)		PX ^{**3} Outer Seal Sheath Ø (mm)	
				Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
20s/16	M20 x 1.5	11	12.6	0.8	1.25	0	0.8	3.1	8.7	6.1	13.2
20s	M20 x 1.5	11	12.6	0.8	1.25	0	0.8	6.1	11.7	9.5	15.9
20	M20 x 1.5	11	12.6	0.8	1.25	0	0.8	6.5	14.0	12.5	20.9
20L	M20 x 1.5	11	12.6	0.8	1.25	0	0.8	10.0	15.9	N/A	N/A
25s	M25 x 1.5	21	17.5	1.25	1.6	0	1.1	11.1	20.0	14.0	22.0
25	M25 x 1.5	21	17.5	1.25	1.6	0	1.1	11.1	20.0	18.2	26.2
32	M32 x 1.5	38	23.6	1.6	2.0	0	1.2	17.0	26.3	23.7	33.9
32L	M32 x 1.5	38	23.6	1.6	2.0	0	1.2	20.0	27.4	N/A	N/A
40	M40 x 1.5	59	30.0	1.6	2.0	0	1.2	22.0	32.1	27.9	40.4
50s	M50 x 1.5	89	36.6	2.0	2.5	0	1.5	29.5	38.2	35.2	46.7
50	M50 x 1.5	89	41.0	2.0	2.5	0	1.5	35.6	44.1	40.4	53.1
63s	M63 x 1.5	115	47.9	2.0	2.5	0	1.5	40.1	50.1	45.6	59.4
63	M63 x 1.5	115	53.7	2.0	2.5	0	1.5	47.2	56.0	54.6	65.9
75s	M75 x 1.5	140	59.9	2.0	2.5	0	1.5	52.8	62.0	59.0	72.1
75	M75 x 1.5	140	64.3	2.5	3.0	0	1.5	59.1	68.0	66.7	78.5
90	M90 x 2.0	200	75.3	3.0	3.5	0	1.6	66.6	79.4	76.2	90.4
100	M100 x 2.0	200	85.6	3.15	4.0	0	1.6	76.0	90.9	86.1	101.5

¹ '2KX' and '2K' variants; see below.

² Including PX^{**} fitted with alternative outer nut as drawing GA273.

³ Not PXRC variant.

PX^{*}-FF in these sizes only:

Gland Size	Entry Thread	PXSS2K Seal Sheath (mm)		Other PX ^{**} Seal Sheath (mm)	
		Min.	Max.	Min.	Max.
20s	M20 x 1.5	4.0 x 6.2	6.8 x 11.7	4.4 x 7.8	6.8 x 11.7
20	M20 x 1.5	5.7 x 8.0	8.7 x 13.5	4.4 x 10.9	8.7 x 16.0

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Manufacturer's documents:

Drawing No	Subject	Rev.	Date
GA352A	PX2K, PX2KW, PX2KX GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
GA353A	PXRC GA DRAWING - SIMTARS	00	21/05/2014
GA354A	PXSS2K AND PXSS2K-HC GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
SCH0322	OUTER SEAL DETAILS	00	27/09/2012
SCH0323	TYPICAL ARMOUR CLAMP DETAILS	00	27/09/2012
SCH0324	TYPICAL PX & C2K ARMOUR CLAMP DETAILS	00	27/09/2012
SCH0325	TYPICAL PX & PX-PB ARMOUR CONE	00	02/10/2012
SCH0326	PXSS2K & SS2K OUTER SEAL DETAILS	00	02/10/2012
SCH0327	PX & PXSS2K ENTRY ITEM DETAILS	00	01/10/2012

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