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 CML 18.0182X

Issue No: 0

Certificate history:
Issue No. 0 (2019-03-29)

Status: **Current**

Date of Issue: **2019-03-29**

Applicant: **CMP Products Limited**
Unit 36 Nelson Way,
Nelson Park East,
Cramlington,
Northumberland NE23 1WH
United Kingdom

Equipment: **Type PX** Cable Glands**

Optional accessory:

Type of Protection: **flameproof, Increased Safety, Dust protection by enclosure**

Marking:

Ex eb I Mb*/Ex db I Mb*/Ex eb IIC Gb/Ex db IIC Gb/Ex ta IIIC Da/Ex nR IIC Gc

*Aluminium alloy is not acceptable for Group I applications

-60°C to 85°C

Approved for issue on behalf of the IECEx Certification Body: H M Amos MIET

Position: Certification Manager

Signature:
(for printed version)

Date: March 3, 2019

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.

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturer:	**CMP Products Limited** Unit 36 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 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 : 2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2014-06 Edition:7.0	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 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	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/CML/ExTR19.0038/00

Quality Assessment Report:

GB/CML/QAR19.0001/00

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Type PX** series 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.

Refer to Annex for full description

SPECIFIC CONDITIONS OF USE: YES as shown below:

i. The glands when used for terminating braided cables are only suitable for fixed installations.

ii. Cables must be effectively clamped to prevent pulling or twisting. The PXB2K, PXB2KX and PXB2KW glands are to be protected from hydraulic fluids, oils, and greases when applied for Group I use.

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

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

Annex:

Certificate Annex IECEx CML 18.0182X Issue 0.pdf

Annexe to:	IECEx CML 18.0182X Issue 0
Applicant:	CMP Products Limited
Apparatus:	Type PX** Cable Glands

The Type PX** series 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.

Materials of manufacture

- Brass to BS EN 12164:2011 / BS EN 12168:2011 Grade CuZn39Pb3 (CW614N)
- Mild Steel to BS EN 10277-2:2008 Grades 220M07, 230M07 (EN1A) / 220M07Pb, 230M07Pb (EN1APb)
- Stainless Steel to BS EN 10088-3:2014 GRADES 316S11, 316S13, 316S31, 316S33, 316L
- Aluminium to BS EN 573-3:2013 / BS EN 755-1-3:2008 Grade 6082 T6, 6262 T6 BS EN 1706:2010/ BS EN 1676:2010 Grade LM25 TF (Aluminium alloy is not acceptable for Group I applications)

Note:

- IECEx SIR 13.0027X / IECEx SIR 10.0094X and IECEx ITS 17.0046X are superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by the above certificates.
- Where the above are 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.

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. 25RPX2KW.
- Alternative entry component thread forms:

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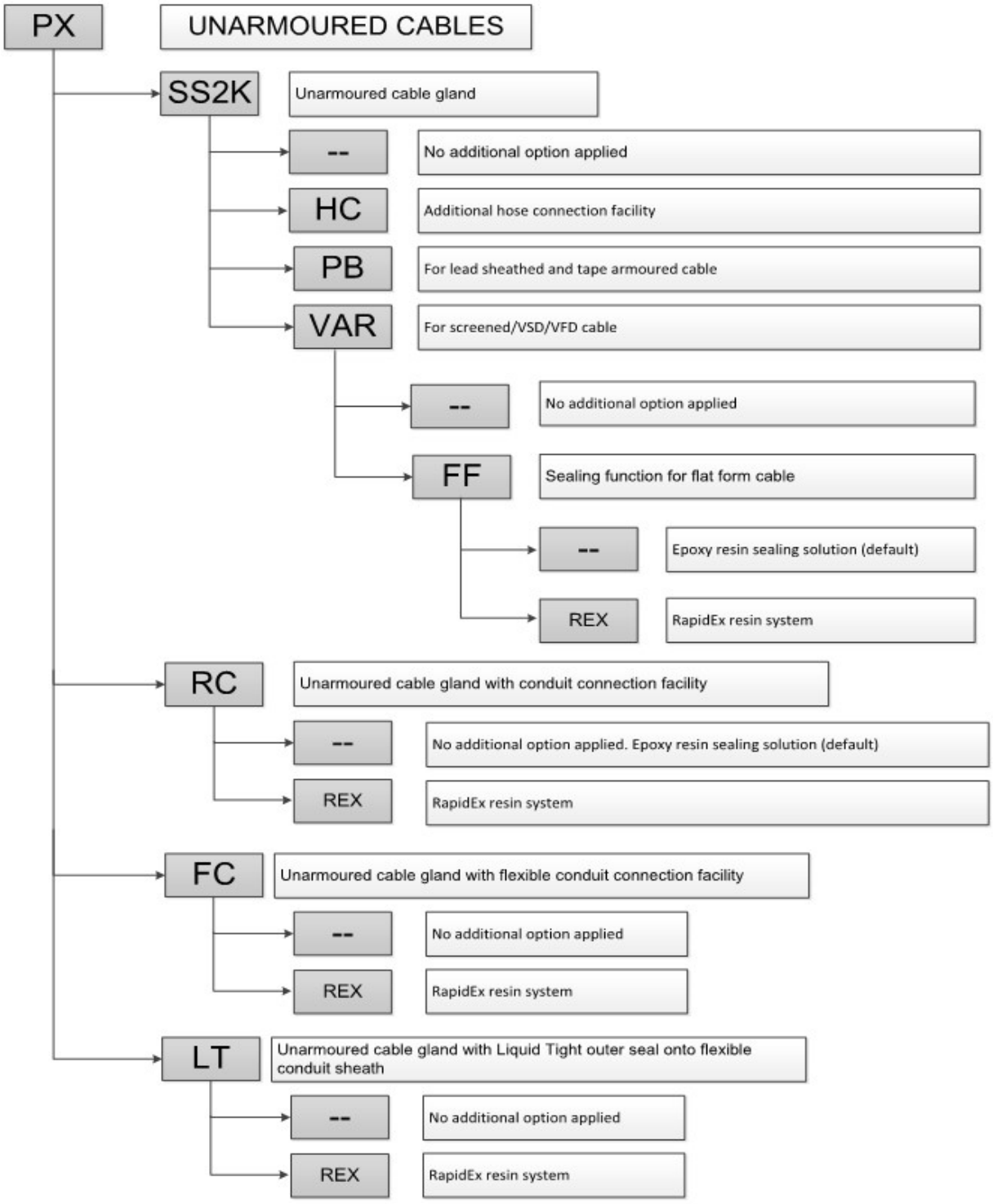
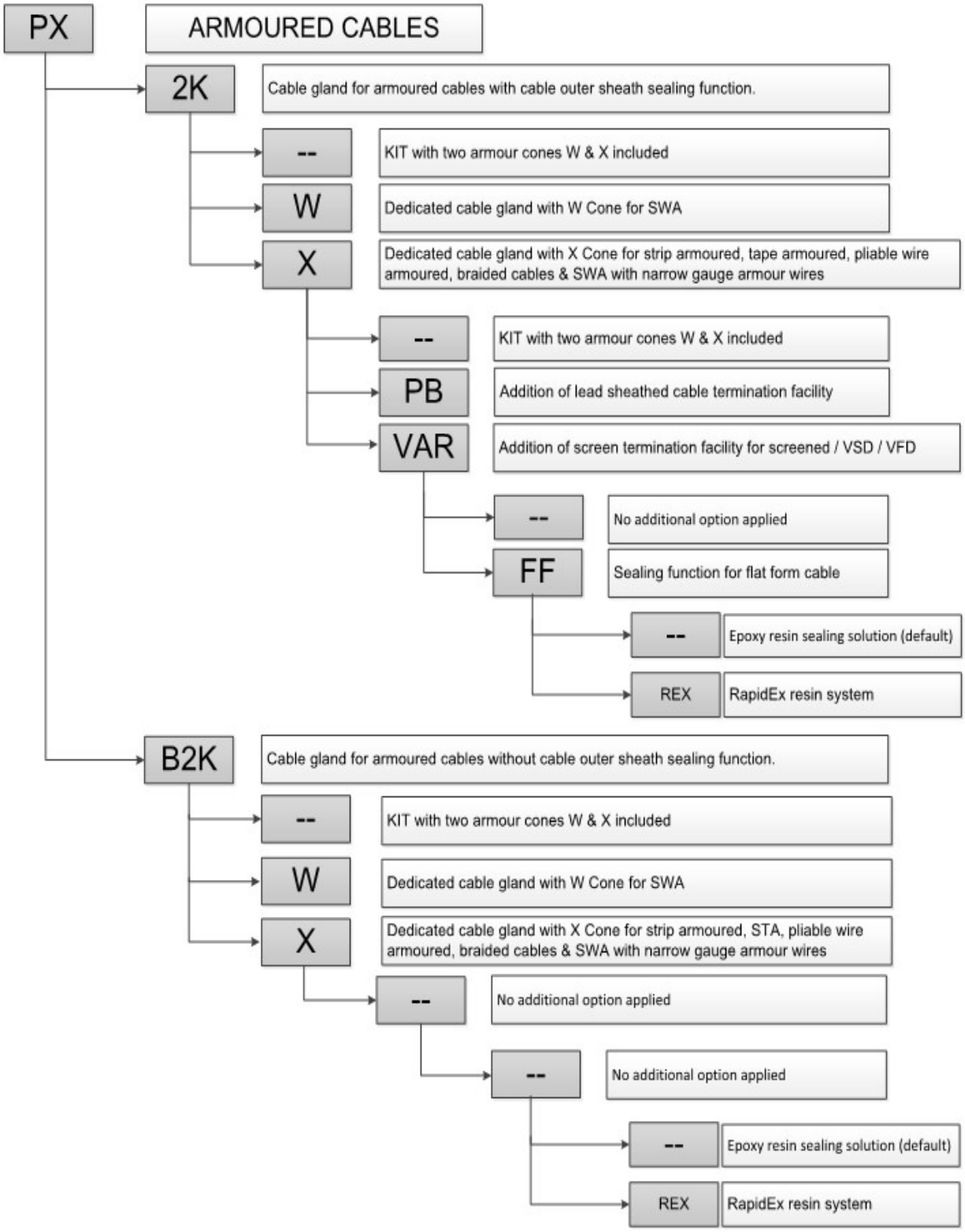
Company Reg No. 8554022 VAT No. GB163023642

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 2779:1986 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
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

- 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.
- Cable glands can be supplied with larger entry threads than those detailed, provided the hexagon bar size and across corners dimensions of the entry item also step up to that of another size detailed in this drawing pack or certificate, when selecting larger entry threads, only the entry item can be changed.
- A slower curing RapidEx resin is available in a formulation which allows slower curing for use at higher ambient installation temperatures.

Type designation code;




PX
ARMOURED CABLES
2K
Cable gland for armoured cables with cable outer sheath sealing function.
--
KIT with two armour cones W & X included
W
Dedicated cable gland with W Cone for SWA
X
Dedicated cable gland with X Cone for strip armoured, tape armoured, pliable wire armoured, braided cables & SWA with narrow gauge armour wires
--
KIT with two armour cones W & X included
PB
Addition of lead sheathed cable termination facility
VAR
Addition of screen termination facility for screened / VSD / VFD
--
No additional option applied
FF
Sealing function for flat form cable
--
Epoxy resin sealing solution (default)
REX
RapidEx resin system
B2K
Cable gland for armoured cables without cable outer sheath sealing function.
--
KIT with two armour cones W & X included
W
Dedicated cable gland with W Cone for SWA
X
Dedicated cable gland with X Cone for strip armoured, STA, pliable wire armoured, braided cables & SWA with narrow gauge armour wires
--
No additional option applied
--
No additional option applied
--
Epoxy resin sealing solution (default)
REX
RapidEx resin system

Gland size	Entry thread	Max no. of cores (RAPIDEX)	Max. no. of cores (EP2122)	Max Ø over cores (mm)	SWA (mm)		SWA, STA, Strip armour, pliable wire armour[1] & wire braid (mm)		PXSS2K[2,3] outer seal sheath range Ø (mm)		PX**[3] outer seal sheath range Ø (mm)	
					Min	Max	Min	Max	Min	Max	Min	Max
20s/16	M20 x 1.5	21	21	12.6	0.8	1.25	0	0.8	3.1	8.7	6.1	13.2
20s	M20 x 1.5	21	21	12.6	0.8	1.25	0	0.8	6.1	11.7	9.5	15.9
20	M20 x 1.5	21	21	12.6	0.8	1.25	0	0.8	6.5	14.0	12.5	20.9
20L	M20 x 1.5	21	21	12.6	0.8	1.25	0	0.8	10.0	15.9	N/A	N/A
25s	M25 x 1.5	30	30	17.5	1.25	1.6	0	1.1	11.1	20.0	14.0	22.0
25	M25 x 1.5	30	30	17.5	1.25	1.6	0	1.1	11.1	20.0	18.2	26.2
32	M32 x 1.5	50	38	23.6	1.6	2.0	0	1.2	17.0	26.3	23.7	33.9
32L	M32 x 1.5	50	38	23.6	1.6	2.0	0	1.2	20.0	27.4	N/A	N/A
40	M40 x 1.5	59	59	30.0	1.6	2.0	0	1.2	22.0	32.1	27.9	40.4
50s	M50 x 1.5	89	89	36.6	2.0	2.5	0	1.2	29.5	38.2	35.2	46.7
50	M50 x 1.5	89	89	41.0	2.0	2.5	0	1.5	35.6	44.1	40.4	53.1
63s	M63 x 1.5	115	115	47.9	2.0	2.5	0	1.5	40.1	50.1	45.6	59.4
63	M63 x 1.5	115	115	53.7	2.0	2.5	0	1.5	47.2	56.0	54.6	65.9
75s	M75 x 1.5	140	140	59.9	2.0	2.5	0	1.5	52.8	62.0	59.0	72.1
75	M75 x 1.5	140	140	64.3	2.5	3.0	0	1.5	59.1	68.0	66.7	78.5
90	M90 x 2.0	200	200	75.3	3.0	3.5	0	1.6	66.6	79.4	76.2	90.4
100	M100 x 2.0	200	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	Entry thread 'B' version	PXSS2K seal sheath range (mm)		Other PX* seal sheath range (mm)	
			Min	Max	Min	Max
20s	M20 x 1.5	M25 x 1.5	4.0 x 6.2	6.8 x 11.7	20s	M20 x 1.5
20	M20 x 1.5	M25 x 1.5	5.7 x 8.0	8.7 x 13.5	20	M20 x 1.5

Specific Conditions of Use

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

i. The glands when used for terminating braided cables are only suitable for fixed installations.
ii. Cables must be effectively clamped to prevent pulling or twisting. The PXB2K, PXB2KX and PXB2KW glands are to be protected from hydraulic fluids, oils, and greases when applied for Group I use.
iii. When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.
iv. The PX range of cable glands with entry threads smaller than a M25 (or equivalent) size shall not be used for Group I, EPL Mb applications where there is a 'high' risk of mechanical damage.