

TECHNICAL DATA
CABLE GLAND TYPE : PX-REX
INGRESS PROTECTION : IP66, IP67, IP68
PROCESS CONTROL SYSTEM : ISO 9001
: ISO/IEC 80079-34:2011

EXPLOSIVE ATMOSPHERES CLASSIFICATION

ATEX CERTIFICATION No. : CML 18ATEX1325X, CML 18ATEX4317X
ATEX CERTIFICATION CODE : Ⓔ II 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, Ⓔ II 3G Ex nR IIC Gc, Ⓔ I M2 Ex db I Mb, Ex eb I Mb
UKEX CERTIFICATION No. : CML 21UKEX1214X, CML 21UKEX4215X
UKEX CERTIFICATION CODE : Ⓔ II 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, Ⓔ II 3G Ex nR IIC Gc, Ⓔ I M2 Ex db I Mb, Ex eb I Mb
IECEX CERTIFICATION No. : IECEX CML 18.0182X
IECEX CERTIFICATION CODE : Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da, Ex db I Mb, Ex eb I Mb
cCSAus CERTIFICATION No. : 2288626
cCSAus CERTIFICATION CODE : Class I Div 1&2, Groups A, B, C, D; Class II, Div 1, 2, Groups E, F, G; Class III, Div 1, 2; Class I Zone 1, NEMA 4X, Oil Resistant II AEx d IIC Gb, AEx e IIC Gb, Class I, Zone 2 AEx nR IIC Gc, Class I, Zone 20 AEx ta IIIC Da
: E161256 (Divisions)
: Class I Div 1 & 2 Groups A, B, C, and D; Class II Div 1 & 2 Groups F, and G; (Code details depends upon application, please see certificate)

cULus CERTIFICATION NO: (Excluding PX2KX)

cULus CERTIFICATION CODE: (Excluding PX2KX) : Class I Div 1 & 2 Groups A, B, C, and D; Class II Div 1 & 2 Groups F, and G; (Code details depends upon application, please see certificate)

INSTALLATION INSTRUCTIONS

1. Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.
2. The interface between a cable entry device and its associated enclosure / cable entry will require additional sealing to achieve ingress protection (IP) ratings higher than IP54. The minimum protection level is IP54 for explosive gas atmospheres and IP6X for explosive dust atmospheres. Parallel threads (and tapered threads when using a non-threaded entry) require a CMP sealing washer or integral O-ring face seal (where available) to maintain IP66, 67 and 68 (when applicable). It is the installer's responsibility to ensure the IP rating is maintained at the interface.
Note: When fitted to a threaded entry, all tapered threads will automatically provide an ingress protection rating of IP66.
A CMP earth tag should be used when it is necessary to provide an earth bond connection. CMP earth tags have been independently tested to comply with Category B rating specified in IEC 62444 (there are no ratings stated in IEC 60079-0). Ratings are shown in the associated table. CMP earth tags slip over the cable gland or accessory entry thread from inside/outside the enclosure and must be secured with a locknut (if fitted internally).
3. Metric entry threads comply with ISO 965-1 and ISO 965-3 with a 6g tolerance as required by IEC 60079-1:2014. The CMP standard metric thread pitch is 1.5mm for threads up to M7.5, and 2.0mm from M9.0 and above. Special thread pitches between 0.7 – 2.0mm are available on all products on request. See certificate for details of other thread types. NPT threads are in accordance with ASME B1.20.1-2013 gauging to CI 3.2 for external threads. For details of other thread types refer to IECEx certificate.
4. Enclosures must be strong enough to support the cable and cable gland assembly. The enclosure surface finish must be smooth and flat to facilitate sealing with an O-ring or Entry Thread Sealing Washer for the required IP rating.
5. Enclosure walls must be sufficiently strong enough to support the cable and cable gland assembly. Enclosure entries shall be perpendicular. Any draft angles from the casting/moulding process should have a perpendicular flat spot machined to facilitate sealing with an O-ring or Entry Thread Sealing Washer.
6. CMP Products recommends that when using the cable gland with a through-hole, the hole must be circular, free of burrs and the diameter no larger than 0.7mm above the thread major diameter. A suitable CMP Products locknut shall be used to secure the product. See CMP Products catalogue for locknut options.
7. Cable glands do not have any serviceable parts and are therefore not intended to be repaired.

SPECIFIC CONDITIONS OF USE

1. The glands when used for terminating braided cables are only suitable for fixed installations.
2. 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.
3. 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.
4. Connectors with metric entry threads are only suitable for Areas Classified in ZONES unless fitted with an approved Metric to NPT thread conversion adaptor.
5. Installation must be according to CEC wiring method for the types of cables that can be used in Class I, Div. 1 and 2 and Class I, Zone 1 and 2 Classified Areas, according to 60079-14 installation wiring method restrictions.
6. Installation must be according to US (NEC) wiring method for the types of cables that can be used in Class I, Div. 1 and 2 and Class I, Zone 1 and 2 Classified Areas, according to 60079-14 installation wiring method restrictions.
7. Shipboard Cables are for use on Marine Platform and or shipboards only and are subject to local authorities having jurisdiction on the installation.
8. Prior to commissioning or operation of electrical equipment in the presence of flammable materials, the sealing compound must be cured for 24 hours at a temperature of no less than 5°C (41°F) For Metric and NPT threads, the installer shall follow guidance from the NEC or CEC to ensure that the enclosure entry meets the requirements for thread engagement.
9. When the connector is supplied with metric entry threads, a CMP Entry Thread Washer should be fitted between the connector and the enclosure to prevent the ingress of moisture or dust into the enclosure. Thread tape must not be applied to the entry threads.
10. Before installing the connector, ensure that the connector thread form and enclosure thread form are compatible.
11. For guidance on mixing the RapidEx, please refer to F1320
12. Class I, Div 1 Groups ABCD is only applicable to TC-ER-HL type cables

ACCESSORIES

The following accessories are available from CMP Products, as optional extras, to assist with fixing, sealing and earthing :- Locknut, Earth Tag, Serrated Washer, Entry Thread (I.P.) Sealing Washer, Shroud

CMP Products Limited on its sole responsibility declares that the equipment referred to herein conforms to the requirements of the ATEX Directive 2014/34/EU and UK statutory requirements SI 2016 No. 1107 (as amended). This is shown in the following harmonised/designated standards;

EN IEC 60079-0: 2018, EN 60079-1: 2014, EN IEC 60079-7: 2015 + A1: 2018, EN IEC 60079-15: 2019, EN 60079-31: 2014

J. Hichens

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17th March 2020

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Approved Body: Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ



INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES PXREX

FOR TERMINATION OF CABLES WITH WIRE BRAID, TAPE ARMOUR (STA/DSTA), STRIP ARMOUR & SINGLE WIRE ARMOUR (SWA) (WITH LEAD INNER SHEATH ON PB VARIANTS). FOR USE IN EXPLOSIVE ATMOSPHERES.

CABLE GLAND TYPES PX2KREX, PX2KWREX, PX2KXREX & PB VARIANTS

INCORPORATING EU DECLARATION OF CONFORMITY TO DIRECTIVE 2014/34/EU
AND UK STATUTORY REQUIREMENTS SI 2016 No. 1107 (AS AMENDED)



TYPE TC CABLE SEALING FITTING FOR USE IN HAZARDOUS LOCATIONS 5P07

Outer Seal Tightening Guide													
Number of turns to tighten	GLAND SIZE												
	20S16	20S	20	25S	25	32	40	50S	50	63S	63	75S	75
	CABLE DIAMETER												
0.5	13.2	15.9	20.9	22.0	26.2	33.9							
1	12.5	15.3	20.0	21.2	25.4	32.9	40.4	46.7	52.8	59.2	65.9	72.1	78.5
1.5	11.9	14.7	19.0	20.4	24.6	31.9	39.0	45.4	51.4	57.7	64.6	70.6	77.2
2	11.2	14.2	18.1	19.6	23.8	30.8	37.6	44.1	50.0	56.2	63.4	69.2	75.9
2.5	10.5	13.6	17.2	18.8	23.0	29.8	36.2	42.9	48.7	54.7	62.1	67.7	74.6
3	9.8	13.0	16.2	18.0	22.2	28.8	34.8	41.6	47.3	53.2	60.9	66.3	73.3
3.5	9.2	12.4	15.3	17.2	21.4	27.8	33.5	40.3	45.9	51.6	59.6	64.8	71.9
4	8.5	11.8	14.4	16.4	20.6	26.8	32.1	39.0	44.5	50.1	58.4	63.4	70.6
4.5	7.8	11.2	13.4	15.6	19.8	25.7	30.7	37.8	43.2	48.6	57.1	61.9	69.3
5	7.1	10.7	12.5	14.8	19.0	24.7	29.3	36.5	41.8	47.1	55.9	60.5	68.0
5.5	6.5	10.1	12.0	14.0	18.2	23.7	27.9	35.2	40.4	45.6	54.6	59.0	66.7
6	5.8	9.5											

Cable Gland Selection Table

Cable Gland Size	Available Entry Threads (Alternate Metric Thread Lengths Available)					Number of Cores	Diameter Over Conductors	*Cable Bedding Diameter	Overall Cable Diameter		Armour Range				Across Flats	Across Corners	Typical Protrusion Length	Combined Ordering Reference (Brass Metric)			Shroud	Cable Gland Weight (Kgs)
	Standard		Option								Grooved Cone (X)		Stepped Cone (W)					Size	**Type	Ordering Suffix		
	Metric	Thread Length (Metric)	NPT	Thread Length (NPT)	NPT	Max	Max	Max	Min	Max	Min	Max	Max	Max								
20S16	M20	15.0	1/2"	19.9	3/4"	21	11.7	11.7	6.1	13.1	0.3	1.0	0.8	1.25	30.5	33.6	66.2	20S16	PX2KREX	1RA	PVC06	0.24
20S	M20	15.0	1/2"	19.9	3/4"	21	11.7	11.7	9.5	15.9	0.3	1.0	0.8	1.25	30.5	33.6	62.8	20S	PX2KREX	1RA	PVC06	0.23
20	M20	15.0	1/2"	19.9	3/4"	21	12.6	12.9	12.5	20.9	0.4	1.0	0.8	1.25	30.5	33.6	63.6	20	PX2KREX	1RA	PVC06	0.24
25S	M25	15.0	3/4"	20.2	1"	30	17.5	17.9	14.0	22.0	0.4	1.2	1.25	1.6	37.5	41.3	69.5	25S	PX2KREX	1RA	PVC09	0.37
25	M25	15.0	3/4"	20.2	1"	30	17.5	17.9	18.2	26.2	0.4	1.2	1.25	1.6	37.5	41.3	69.5	25	PX2KREX	1RA	PVC09	0.37
32	M32	15.0	1"	25.0	1 1/4"	50	23.6	23.9	23.7	33.9	0.4	1.2	1.6	2.0	46.0	50.6	75.3	32	PX2KREX	1RA	PVC11	0.57
40	M40	15.0	1 1/4"	25.6	1 1/2"	59	30.0	30.3	27.9	40.4	0.4	1.6	1.6	2.0	55.0	60.5	75.3	40	PX2KREX	1RA	PVC15	0.80
50S	M50	15.0	1 1/2"	26.1	2"	89	36.6	36.9	35.2	46.7	0.4	1.6	2.0	2.5	60.0	66.0	76.6	50S	PX2KREX	1RA	PVC18	0.90
50	M50	15.0	2"	26.9	2 1/2"	115	41.0	41.3	40.4	53.0	0.6	1.6	2.0	2.5	70.0	77.0	76.6	50	PX2KREX	1RA	PVC21	1.19
63S	M63	15.0	2"	26.9	2 1/2"	115	47.9	48.4	45.6	59.4	0.6	1.6	2.0	2.5	75.0	82.5	86.4	63S	PX2KREX	1RA	PVC23	1.39
63	M63	15.0	2 1/2"	39.9	3"	115	53.7	54.0	54.6	65.8	0.6	1.6	2.0	2.5	80.0	88.0	86.9	63	PX2KREX	1RA	PVC25	1.41
75S	M75	15.0	2 1/2"	39.9	3"	140	59.9	60.2	59.0	72.0	0.6	1.6	2.0	2.5	90.0	99.0	86.9	75S	PX2KREX	1RA	PVC28	2.09
75	M75	15.0	3"	41.5	3 1/2"	140	64.2	64.2	66.7	78.4	0.6	1.6	2.5	3.0	100.0	110.0	88.3	75	PX2KREX	1RA	PVC30	2.54
90	M90	24.0	3 1/2"	42.8	4"	140	75.3	75.6	76.2	90.3	0.8	1.6	3.15	4.0	115.0	126.5	102.1	90	PX2KREX	1RA	PVC32	3.71
100	M100	24.0	3 1/2"	42.8	4"	200	83.6	83.9	86.1	101.4	0.8	1.6	3.15	4.0	127.0	139.7	114.1	100	PX2KREX	1RA	LSF33	4.81

Dimensions are displayed in millimetres unless otherwise stated

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** Codes shown are for PX2K-REX glands, for PX2KW-REX or PX2KX-REX add "W" or "X" respectively, e.g. 20PX2KWREX1RA/17, 20PX2KXREX1RA/17

*Please note that the overall maximum cable bedding diameter for "PB" variants should be reduced by 1mm to allow for the inner lead sheath.



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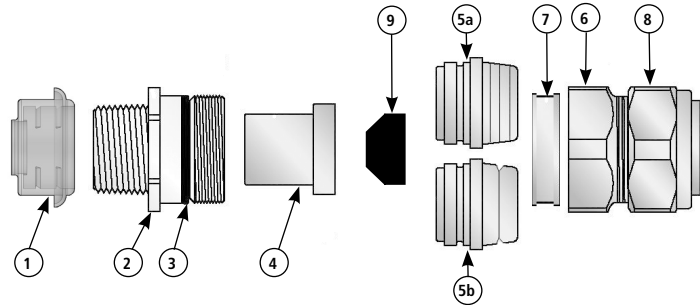
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F1402		
Certificate	Revision	Date
UKEX	0	04/21
IFS	19	10/21
ATEX / IECEx	11	04/19
CSA / cCSAus	11	-
UL	1	03/20

INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES PX2KREX, PX2KWREX, PX2KPBREX & PX2KXREX

CABLE GLAND COMPONENTS - It is not necessary to dismantle the cable gland any further than illustrated below

- 1. Thread Shield
- 2. Entry Component
- 3. Deluge "O" Ring
- 4. Compound Tube
- 5a. Grooved Armour Cone (XYZ)
- 5b. Stepped Armour Cone (W)
- 6. Body
- 7. AnyWay Clamping Ring
- 8. Outer Seal Nut Assembly
- 9. Resin Dam

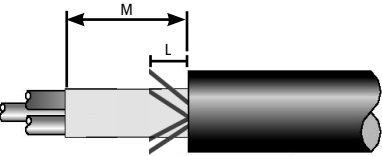


PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

1. The PX2K-REX type cable gland is supplied as a Universal Kit with two armour cones, the grooved armour cone (5a) is suitable for Strip Armour, Tape Armour and Braided Cables, and the stepped cone (5b) is suitable for Wire Armour (SWA) cables. The PX2KX-REX/S gland only has one cone (5a) and the PX2KW-REX/S only has one cone (5b). (PB Variants have an earthing device for the lead sheath).

2. Separate the gland components by removing the body and outer seal nut assembly. Pass the body and outer seal nut assembly (6),(8), and the AnyWay clamping ring (7) over the cable, outer seal nut first.

3. Prepare the cable by stripping back the outer sheath and braid / armour to suit the equipment. Expose the braid or armour further so that it can be formed around the armour cone by cutting back the outer sheath by a length "L". This length varies slightly depending upon cable diameter, but typical values are shown below. The inner sheath should be long enough to just pass through the resin dam when installed. (Typical length of inner sheath is shown as 'M' below.) On lead sheathed cables, the lead sheath should be long enough to just pass through the armour cone when installed.



CABLE GLAND SIZE	20S/16, 20S, 20	25S, 25, 32, 40	50S, 50, 63S, 63	75S, 75, 90
CABLE STRIP LENGTH "L"	12 mm (0.472 inches)	15 mm (0.591 inches)	18 mm (0.709 inches)	20 mm (0.787inches)
CABLE BEDDING "M"	35	40	42	50

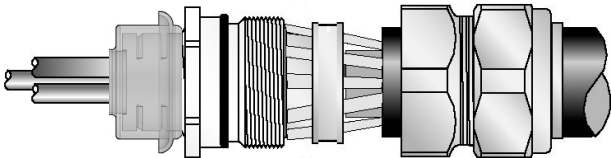
4. Remove any bedding or fillers from around the cable cores. If the cable cores have screens, these should be unravell and then twisted together to form a single core. This single core and/or any drain wires present should be sleeved with some heat shrink tubing.

Electrical tape MUST be wrapped around the tips of the cable cores. This is to ensure the cable cores are together and also to cover any sharp edges that could potentially tear the Resin Dam during installation.

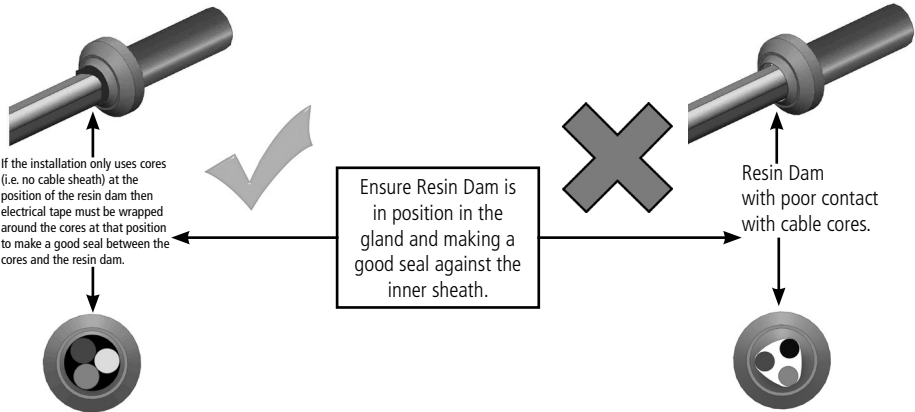


5. Insert the armour cone (5a or 5b) into the entry item (2) and pass the cable through them and the resin dam until the braid or armour contacts the cone and make sure it is evenly spaced around it. Tighten the body (6) metal to metal ensuring all threads are used to lock the braid or armour. Do not tighten the outer seal nut at this stage. (On PB variants the earthing device automatically makes contact with the lead sheath).

Fit the thread shield over the entry threads to protect them prior to installing the resin.



6. Refer to 'RapidEx Resin' assembly instructions to fill the gland Compound Tube with the required amount of resin (1). The resin should not be mixed or applied at temperatures below 5°C (40°F). If the general ambient temperature is below 5°C (40°F) please follow the instructions on CMP TDS 613 before proceeding (available on the CMP website).



Do not disassemble the gland to inspect the Resin Dam, diagrams are for representation.

7. Once the resin has cured remove the thread shield, loosen the body and remove the assembly from the entry item. Fit the entry item into the equipment.

8. Only using finger pressure, tighten the outer seal nut assembly (6)(8) until light resistance to tightening is met.

Then either use the outer seal tightening guide tape or table on the rear of the page to determine how much further to tighten the seal using a spanner (using the outer seal tightening guide is recommended).

Wrap the outer seal tightening guide tape around the cable to show the amount of spanner turns needed (as shown here). Make sure the correct side of the outer seal tightening guide tape is used depending on the cable gland size.

