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 : ऒ I 2G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, II 3G Ex nR IIC Gc, ऒ 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. : 228862

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

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 IP68.

- 3. 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).
- 4. 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 M75, and 2.0mm from M90 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 Cl 3.2 for external threads. For details of other thread types refer to IECEx certificate.
- 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.
- 6. 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.
- '. 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.
- 8. Cable glands do not have any serviceable parts and are therefore not intended to be repaired.

CMP Earth Tag Size	Short Circuit Ratings Symmetrical Fault Current (kA) for 1 second
20	3.06
25	4.06
32	5.40
40	7.20
50	10.40
63	10.40
75	10.40

SPECIFIC CONDITIONS OF USE

- 1. The cable glands used for terminating braid cable are only suitable for fixed installations. Cables must be effectively clamped to prevent twisting and pulling.
- According to the CEC wiring code, connectors with metric threads are only suitable for Areas Classified in ZONES unless fitted with an approved Metric to NPT thread conversion adaptor
- 3. Wiring method for type of cables that can be used in Class I, Div. 1, 2, and Class I, Zone 1, 2, Classified Areas according to 60079-14 installation wiring method restrictions.
- 4. Shipboard Cables are for use on marine platform or shipboards only and are subject to local authorities having jurisdiction on the installation.
- i. ISO Metric-threaded entries into explosion proof equipment require:
 - a. as per NEC, 5 full threads must be engaged for gas groups C & D
 - b. as per NEC 2014. 8 full threads must be engaged for gas groups A & B
- 6. When the gland 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 threads.
- Before installing the gland, ensure that the gland thread forms and the enclosure thread form are compatible.
- 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.

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 the following

EN 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015, EN 60079-15:2015+A1:2018, EN 60079-31:2013, BS 6121:1989, EN 62444:2013

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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]





Outer Seal Tighte	Outer Seal Tightening Guide												
	GLAND SIZE												
Number of turns to tigten	20516	205	20	255	25	32	40	505	50	635	63	755	75
to tigicii	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											

	(ΔI +					A	Armour Range				Across		Combined Ordering									
Cable	(AIC	Α	vailabl			of Cores	Over Conductors	Bedding Diameter	Ca Dian		Groo		Step	ped	Flats	Corners	Typical		Reference Brass Meti		Channel	Cable Gland
Gland Size	Metric	Stand Thread Length (Metric)	NPT	Thread Length (NPT)	Option NPT	Max	Max	Max	Min	Max	Min	Max	Min		Max	Max	Protrusion Length	Size	**Type	Ordering Suffix	Shroud	Weight (Kgs)
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/17	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/17	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/17	PVC06	0.24
255	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	255	PX2KREX	1RA/17	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/17	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/17	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/17	PVC15	0.80
505	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/17	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/17	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	635	PX2KREX	1RA/17	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/17	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/17	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/17	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/17	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/17	LSF33	4.81

^{**} 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.



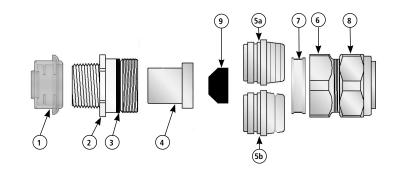
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FI402							
Certificate	Revision	Date					
IFS	17	05/19					
ATEX / IECEx	11	04/19					
CSA / cCSAus	11	-					

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

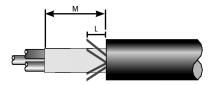
CABLE GLAND COMPONENTS - It is not necessary to dismantle the cable gland any further than illustrated below

- Thread Shield
 Entry Componen
- 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.



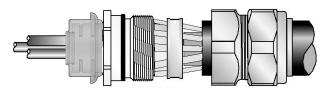
CABLE GLAND SIZE	20\$/16, 20\$, 20	255, 25, 32, 40	50S, 50, 63S, 63	75S, 75, 90
CABLE STRIP LENGTH "L"	12 mm (0.472 inches)	15 mm (0.591 inches)	18 mm (0.709 inches)	20 mm (0.787inches)
CABLE BEDDING"M"	35	40	42	50

4. Remove any bedding or fillers from around the cable cores. If the cable cores have screens, these should be unravelled 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.

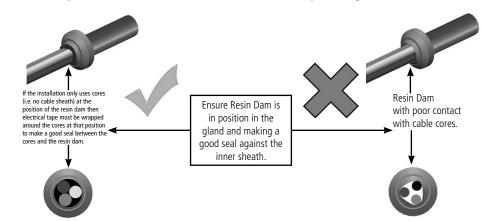
Electrical tape MUST be wrapped around the tips of the cable cores. This is to ensure the cable cores are together and also to cover any sharp edges that could potentially tear the Resin Dam during installation.

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 recomended).

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.

