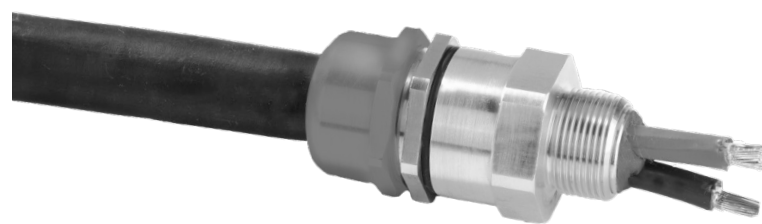




# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPE PXSS2K

FOR TERMINATION OF UNARMoured, BRAIDED CABLES AND EXTRA HARD CORD USAGE CABLES FOR USE IN HAZARDOUS LOCATIONS.

## INCORPORATING EU DECLARATION OF CONFORMITY TO DIRECTIVE [2014/34/EU]



**UL LISTED** SHIPBOARD CABLE SEALING FITTING FOR USE IN HAZARDOUS LOCATIONS 46ZM

**UL LISTED** TYPE TC CABLE SEALING FITTING FOR USE IN HAZARDOUS LOCATIONS 5PO7

### TECHNICAL DATA

**CABLE GLAND TYPE** : PXSS2K  
**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 2 GD, II 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da  
 : II 3 G Ex nR IIC Gc, Ex IM2 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 and D; Class II, Div. 2, Groups F and G; Class III, Div. 2, Type 4X; Oil Resistance III

**cULus CERTIFICATION NO:** : Class I, Zone 1 AEx d IIC Gb, AEx e IIC Gb, Class I, Zone 2 AEx nR IIC Gc, Class I, Zone 20 AEx ta IIIC Da  
**cULus CERTIFICATION CODE:** : E201187, E161256 (Divisions)  
**UL CERTIFICATION NO:** : 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)  
**UL CERTIFICATION CODE:** : E253914 (Zones)  
 : Class 1 Zone 1, AEx d II AEx e II

### INSTALLATION INSTRUCTIONS

- Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.
- 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.
- 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).
- 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 CI 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.
- 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
- Cable glands do not have any serviceable parts and are therefore not intended to be repaired.

### SPECIFIC CONDITIONS OF USE

- The glands used for terminating braided cables are only suitable for fixed installations.
- 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.
- 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.
- Connectors with metric entry threads are only suitable for Areas Classified in ZONES unless fitted with an approved Metric to NPT thread conversion adaptor.
- 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.
- 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.
- 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 10°C (50F)
- 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.
- 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.
- Before installing the connector, ensure that the connector thread form and enclosure thread form are compatible.
- Class I, Div 1, Groups ABCD is only applicable to TC-ERHL 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 Earth Tag Size	Short Circuit Ratings Symmetrical Fault Current (kA) for 1 second				
	20	25	32	40	50
20	3.06	4.06	5.40	7.20	10.40
25	4.06	5.40	7.20	10.40	14.60
32	5.40	7.20	10.40	14.60	20.80
40	7.20	10.40	14.60	20.80	29.20
50	10.40	14.60	20.80	29.20	40.80

Sealing ranges for UL Marking		
Size	Min	Max
205	6.2	12.0
20	6.5	13.9
20L	10.0	15.9
25	11.1	19.9
32	17.0	26.2
32L	20.0	27.4
40	22.0	32.1
50	29.5	38.1
50	35.6	44.0
63S	40.1	49.9
63	47.2	55.9
75S	52.8	61.9
75	59.1	67.9
90	66.6	79.3

Cable Gland Size	Available Entry Threads (Alternate Metric Thread Lengths Available)					Number of Cores	Diameter Over Conductors	Cable Bedding Diameter	Overall Cable Diameter		Across Flats	Across Corners	Protrusion Length	Combined Ordering Reference (*Brass Metric)			Shroud	Cable Gland Weight (Kgs)				
	Standard		Option						Min	Max				Max	Max	Max			Max	Size	Type	Ordering Suffix
	Metric	Min Thread Length (Metric)	NPT	Thread Length (NPT)	NPT																	
20S/16	M20	15.0	1/2"	19.9	3/4"	21	8.6	8.6	3.1	8.6	30.0	33.0	56.3	20S16	PXSS2K	1RA	PVC06	0.20				
20S	M20	15.0	1/2"	19.9	3/4"	21	11.7	11.7	6.1	11.7	30.0	33.0	56.3	20S	PXSS2K	1RA	PVC06	0.20				
20	M20	15.0	1/2"	19.9	3/4"	21	12.6	12.9	6.5	14.0	30.0	33.0	57.4	20	PXSS2K	1RA	PVC06	0.20				
20L	M20	15.0	1/2"	19.9	3/4"	21	12.6	12.9	10.0	15.9	30.0	33.0	57.4	20L	PXSS2K	1RA	PVC06	0.20				
25	M25	15.0	3/4"	20.2	1"	30	17.5	17.9	11.1	20.0	36.0	39.6	59.0	25	PXSS2K	1RA	PVC09	0.33				
32	M32	15.0	1"	25.0	1 1/4"	38	23.6	23.9	17.0	26.3	41.0	45.1	61.6	32	PXSS2K	1RA	PVC10	0.39				
32L	M32	15.0	1"	25.0	1 1/4"	38	23.6	23.9	20.0	27.4	41.0	45.1	61.6	32L	PXSS2K	1RA	PVC10	0.39				
40	M40	15.0	1 1/4"	25.6	1 1/2"	59	30.0	30.3	22.0	32.1	50.0	55.0	63.4	40	PXSS2K	1RA	PVC13	0.56				
50S	M50	15.0	1 1/2"	26.1	2"	89	36.6	36.9	29.5	38.2	55.0	60.5	66.7	50S	PXSS2K	1RA	PVC15	0.66				
50	M50	15.0	2"	26.9	2 1/2"	115	41.0	41.3	35.6	44.0	60.0	66.0	68.7	50	PXSS2K	1RA	PVC18	0.73				
63S	M63	15.0	2"	26.9	2 1/2"	115	47.9	48.4	40.1	49.9	70.1	77.1	72.6	63S	PXSS2K	1RA	PVC21	1.07				
63	M63	15.0	2 1/2"	39.9	3"	115	53.7	54.0	47.2	55.9	75.0	82.5	71.8	63	PXSS2K	1RA	PVC23	1.06				
75S	M75	15.0	2 1/2"	39.9	3"	140	59.9	60.2	52.8	61.9	80.0	88.0	76.8	75S	PXSS2K	1RA	PVC25	1.30				
75	M75	15.0	3"	41.5	3 1/2"	140	64.2	64.2	59.1	67.9	85.0	93.5	76.8	75	PXSS2K	1RA	PVC27	1.30				
90	M90	24.0	3 1/2"	42.8	4"	140	75.3	75.6	66.6	79.4	108.0	118.8	96.3	90	PXSS2K	1RA	PVC31	3.02				
100	M100	24.0	4"	44.0	5"	200	83.6	83.9	76.0	90.9	123.0	135.3	88.2	100	PXSS2K	1RA	LSF33	4.00				

Dimensions are displayed in millimetres unless otherwise stated

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 standards:

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

*J. Hichens*

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 17th March 2020

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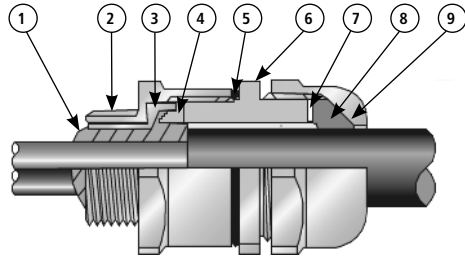
F1404		
Certificate	Revision	Date
IFS	13	03/20
ATEX / IECEX	10	03/20
CSA / cCSAus	10	01/19
UL	10	02/20



# INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES PXSS2K

## CABLE GLAND COMPONENTS

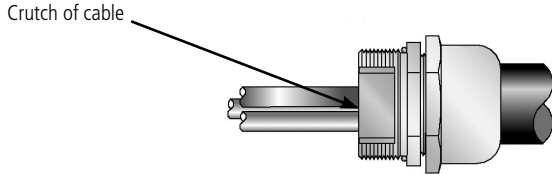
- 1. Compound
- 2. Entry Item
- 3. Compound Tube
- 4. Spacer
- 5. "O" Ring
- 6. Main Item
- 7. Skid Washer
- 8. Outer Seal
- 9. Outer Seal Nut



## PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

1. Separate the gland components by removing the main item (6) and outer seal nut assembly (7, 8, 9). Slacken the outer seal nut slightly to relax the seal and pass the main item/outer seal nut assembly over the cable, nut end first.

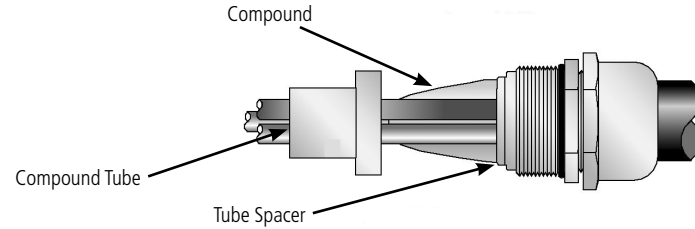
2. Strip the cable sheath by a length to suit the equipment. Position the end of the sheath in line with the main item (6) as shown below and tighten the outer seal nut enough to hold the cable in position.



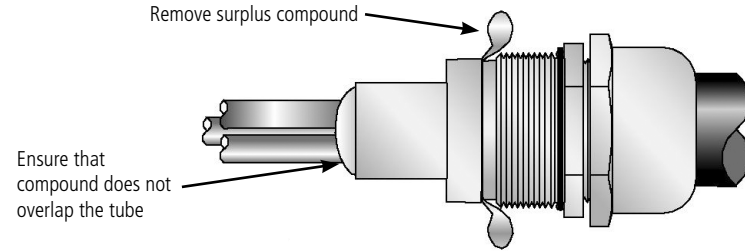
3. Remove any bedding or fillers from around the cable cores. If the cable cores have screens, these should be unravelled and then twisted together to form a single core. Wearing the protective gloves supplied, mix all of the two-part epoxy compound until it is pliable and an even colour is achieved. (Minimum mixing temperature 10°C / 50°F)

4. Fit the tube spacer (4). Separate the cable cores and apply the compound to the crutch of the cable for a distance of about 6mm and pack into place. If a drain wire is present then it should be sleeved using some heat shrink tubing which is pushed into the compound before shrinking with the application of some heat. If screens have been twisted together at stage 3, then they should be treated like a drain wire.

5. Bring the cores together again and pack more compound around them to a length and diameter sufficient to fill the compound tube (ensuring compound is packed between each of the cable cores) before ending in a taper.

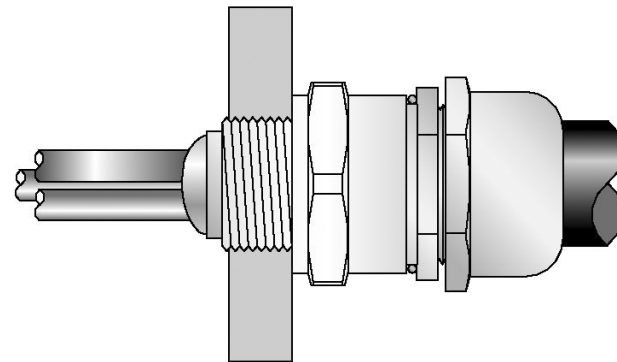


6. Pass the compound tube (3) over the conductors until the stepped end is fully located with the tube spacer (5). Pack more compound into place until the compound tube is fully filled.



7. Slightly slacken the outer seal nut. Re-install the cable assembly into the entry item making sure the compound is not disturbed and fully tighten the main item (6) onto the entry item (2). Tighten the outer seal nut (9) until it comes to an effective stop. This will occur when:

- A) The outer seal nut (9) has clearly engaged the cable and cannot be further tightened without the use of excessive force by the installer.
- B) The outer seal nut (9) is metal to metal with the main item (6).



**Do not disturb for at least 24 hours**