

TECHNICAL DATA

CABLE GLAND TYPE	: PX2KX/MF
INGRESS PROTECTION	: IP66
CABLE TYPE (S)	: TAPE ARMOUR, STRIP ARMOUR, PLIABLE WIRE
PROCESS CONTROL SYSTEM	: BS EN ISO 9001 - 2000
HAZARDOUS AREA CLASSIFICATION	
ATEX APPROVAL	: ATEX IM2 Ex d I / Ex e I (Gland), IM2 Ex d I Mb (Adaptor)
COMPLIANCE CODE	: EN 60079-0:2006, EN60079-1:2004, EN60079-7:2003
ATEX CERTIFICATION DETAIL	: SIRA06ATEX1097X / SIRA09ATEX1034U
IEC Ex CERTIFICATION DETAIL	: IEC Ex SIR 06.0044X / IEC Ex SIR 09.0024U

SPECIAL CONDITIONS FOR SAFE USE

- These Cable Glands shall not be used where the temperature at the point of mounting is below -60°C or exceeds 100°C.
- These Cable Glands are only suitable for fixed installations cables must be effectively clamped to prevent pulling or twisting

CORRECT TOOLS

Always use the correct tools, as incorrect tools will inevitably lead to mistakes, potential damage and/or personal injury. Gloves are recommended when handling and terminating cables and cable glands. Dedicated Cable Gland spanners for each cable gland size are available from CMP Products, and these are recommended for installing the product correctly. Adjustable spanners and wrenches are not recommended as there is a possibility of slippage that can lead to accidental injury or damage to surface finish. A hacksaw, or other similar tool, should be used to cut armour wires. Hacksaw blades should be checked regularly and replaced when worn, or whenever evidence that a consistent first time clean cut is no longer possible. Note, when cutting armour wires, care should be taken to avoid cutting into the inner cable sheath beneath the armour wires. Any sharp tools, instruments or knives used to cut or strip the cable sheath should be equipped with a safety blade or other safety feature consistent with the tool design and intended use. Please refer to CMP Products in sourcing tools if required, who would be happy to assist. Safety and personal protection should be given priority over all other considerations.

GENERAL INSTALLATION GUIDANCE

- BS EN 60079-10 Classification of Hazardous Areas
- BS EN 60079-14 Electrical Installations in Hazardous Areas (other than mines). Please refer to the selection guide in clause 10.4.2 for Ex d applications.
- Installation should only be carried out by a competent person, skilled in the installation of cable glands
- Care should be taken to avoid damage to entry threads or spigots when handling and installing cable glands
- Cable Gland seals are included within the cable gland when despatched from the factory. There should be no circumstances where seals need to be removed from the cable gland. Care should be taken to avoid exposure of cable gland seals to dirt, hostile substances, e.g. solvents, and other foreign bodies.
- Cable Gland components are not interchangeable with those of any other cable gland manufacturer. It is important to note that components from one manufacturer's product cannot be used in that of another, and that modification of a cable gland product will invalidate the hazardous area certification.
- The cable gland is not a user serviceable product and spare parts are not permitted to be supplied under the certification.
- Cable Glands should not be installed whilst circuits are live. Similarly, following energising of the electrical circuits, cable glands should not be dismantled or opened until the circuit has been safely de-energised.

- Note to the installer - Ensure that the spigot is the correct size for the opening in the equipment as the male and female spigots form a flamepath.

SIRA 06 ATEX 1097 X - CE 0518
ATEX IM2, Ex d I, Ex e I
IEC Ex SIR 06.0044X

GOST APPROVAL : POCC GB 05.00110
ZONE I, Ex d IIC & Ex e II
TO : 60079-0-98, 60079-1-99, 60079-14-96

SIRA 09 ATEX 1034 U IM2 Ex d I Mb
IEC Ex SIR 09.0024U Ex d I Mb

ASSEMBLY FITTING INSTRUCTIONS FOR INSTALLATION OF CMP CABLE GLAND TYPE PX2KX/MF

FOR TERMINATION OF CABLES WITH PLIABLE WIRE OR STRIP ARMOUR, AND INTENDED FOR USE IN POTENTIALLY FLAMMABLE ATMOSPHERES (HAZARDOUS AREAS), SUCH AS MINES.

INCORPORATING EC DECLARATION OF CONFORMITY TO DIRECTIVE 94/9/EC



I, the undersigned, hereby declare that the equipment referred to herein conforms to 94/9/EC directive.

G. I. Mood

Dr Geof Mood - Technical Director - (Authorised Person)

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CE 0518

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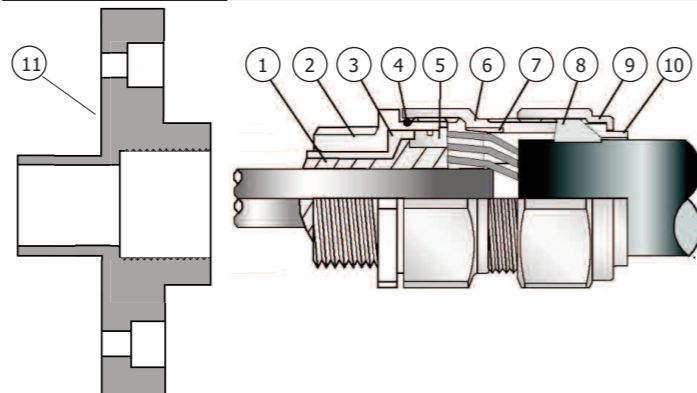


ASSEMBLY FITTING INSTRUCTIONS FOR INSTALLATION OF CABLE GLAND TYPE PX2KX/MF

The PX2KX/MF is an assembly of a PX2KX gland and an MA/FT flanged adaptor.
 CMP Type PX2KX/MF Dual Certified Flameproof (Type "d") and Increased Safety (Type "e") cable gland for use in Hazardous Areas with all types of Pliable Wire and Strip Armour cable providing a compound barrier seal around the conductors and an environmental seal on the cable outer sheath. The cable gland being suitable for use with armoured cables provides mechanical cable retention and electrical continuity via armour termination. A detachable armour cone and AnyWay universal clamping ring arrangement allows the cable to be easily disconnected from the equipment, for maintenance and change out etc, and re-connected with the same consummate ease. This feature also facilitates remote make off procedures when the termination is to be conducted in confined spaces or in areas of restricted access.

CABLE GLAND COMPONENTS

- | | |
|-------------------------------|---|
| 1. Compound (Denso type 2122) | 7. AnyWay Clamping Ring |
| 2. Entry Component 'A' | 8. Outer Seal |
| 3. Compound Tube | 9. Outer Seal Nut |
| 4. 'O' Ring | 10. Ferrule |
| 5. Grooved Armour Cone | 11. Mining Flange (MA/FT Flanged Adaptor) |
| 6. Body | |



PLEASE READ INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTALLATION

- Separate the cable gland into Entry Components "A" and Sub-Assembly "B", noting that items 3, 5, and 7 are loose items, as shown in fig 1. Pass Sub-Assembly "B" and the AnyWay Clamping Ring (7) over the cable, seal nut (9) first.
- Determine the conductor length required and strip back cable outer sheath and armour to suit the equipment geometry. Expose the cable armour further so that it can be formed around the armour cone (5), by stripping the outer sheath to Length "L". This length may vary slightly depending upon diameter of the cable. See fig. 2 and table opposite for guidance (Tape armour should be cut into strips to facilitate fitting to the cone).
- Insert the armour cone (5) into the entry component 'A' (2) and pass the cable through these items until the armour is located around the cone – see fig. 3. (Note: This operation can be done either remotely from the equipment, or with the entry component "A" (2) and flanged adaptor (11) secured into the equipment enclosure - see also steps 8a & 8b below). Tighten the body (6) to the entry component 'A' locking the armour. Unscrew the body (6) from the entry component and withdraw the cable.
- Remove any bedding, fillers or tapes from around the conductors at point "R", in readiness for application of epoxy resin barrier compound, avoiding damage to the conductor insulation. The compound (Denso type 2122) will form the flameproof (or explosion proof) seal. It is important that the compound is correctly mixed and applied. Plastic gloves are provided for protection whilst handling the compound. Thoroughly mix the two part compound in equal proportions to a uniform colour and a soft pliable consistency.
- For Drain Wire terminations see further instructions opposite, or otherwise if no drain wires are present continue with step 6 below
- Separate the conductors and pack compound into the crutch of the cable, between and around the conductors. Bring the conductors back together, and apply the compound further around the cable conductors to a diameter sufficient to fill the armour cone and compound tube. The compound should be applied around and between the conductors to a length not exceeding that of the compound tube (3), ending in a taper (minimum length of filled compound 20mm) (fig. 4).
- Pass the compound tube (3) over the conductors and compound, and push it firmly until it is fully located with the armour cone (5) Fig. 5. Pack the compound into the compound tube (3) ensuring that it is filled completely. Remove any excess compound from all external surfaces to ensure that the components can be assembled without obstruction, and that the flameproof paths are not impaired.
- Direct make-off into Equipment
 - Secure Entry Component 'A' (2) into Mining Flange (11).
 - Secure Mining Flange (11) into the equipment.
 - Slacken the outer seal nut (9) to ensure that the seal is relaxed.
 - Carefully pass the cable assembly through the Entry Component 'A' (2) ensuring that the compound is not disturbed.
 - With the compound tube located in the Entry Component 'A' (2) tighten body item (6) into Entry component 'A' (2).
 - Using a standard spanner, tighten the Outer Seal Nut (9) onto the body (6) until it comes to an effective stop. This will occur when i. The Outer Seal has clearly engaged the cable and cannot be further tightened without the use of excessive force by the installer, or ii. The Outer Seal Nut (9) is metal to metal with the body (6) of the cable gland.
 - The connector and conductors must be left undisturbed to allow the compound to cure. At the minimum mixing temperature of 10°C (41°F) allow 24 hours for the compound to fully cure.
- Remote make-off
 - With the outer seal nut (9) slackened, to ensure that the seal is relaxed, carefully pass the Entry Component 'A' (2) over the cable assembly ensuring that the compound is not disturbed.
 - With the compound tube (3) located in the Entry Component 'A' (2) carefully tighten the Entry Component 'A' (2) and body item (6) together to complete the cable gland assembly in true alignment.
 - The connector and conductors must be left undisturbed to allow the compound to cure. At the minimum mixing temperature of 10°C (41°F) allow 24 hours for the compound to fully cure.
 - After the compound has cured, dismantle the assembly by reversing step ii. above, remove the Entry Component 'A' (2) and secure this into the mining flange which should be bolted to the equipment.
 - Ensure that the outer seal nut (9) is relaxed.
 - Carefully pass the cable assembly through the Entry Component 'A' (2).
 - With the compound tube located in the Entry Component 'A' (2) tighten body item (6) onto Entry Component 'A' (2).
 - Using a standard spanner, tighten the Outer Seal Nut (9) onto the body (6) until it comes to an effective stop. This will occur when i. The Outer Seal has clearly engaged the cable and cannot be further tightened without the use of excessive force by the installer, or ii. The Outer Seal Nut (9) is metal to metal with the body (6) of the cable gland.

This completes the termination

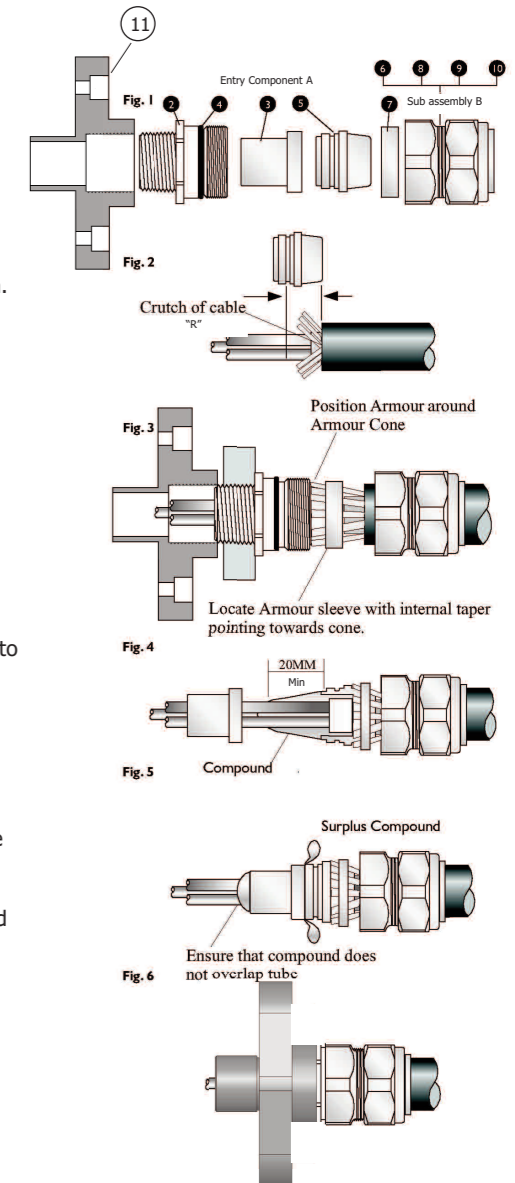
The following instructions should be followed when terminating barrier type cable glands onto cables containing Drain Wire/s.

A) When Using Drain Wire/s with heat/cold shrink tubing

- Proceed with steps 1 to 6 of the installation instructions opposite, with the following additional steps.
- Apply the compound into the crutch of the cable for a distance of approximately 6mm.
- Push a 100mm minimum length of heat shrink sleeve over the Drain Wire/s to butt against the epoxy putty compound.
- Apply heat to gently shrink the sleeve evenly around the wire to extrude all air.
- Continue with step 7 of the installation instructions opposite.

B) When insulating Drain Wire/s or Screens with separate insulated connection

- Proceed with steps 1 to 6 of the installation instructions opposite, with the following additional steps.
- When cable is provided with screen wires remove a further 15mm of outer sheathing to expose the screens.
- Unravel the screen wires and twist together to form one single conductor. It may be necessary to cut out and remove some of the screen wires prior to the next step.
- Crimp or solder an insulated conductor to the screen conductor by the use of an insulated butt ferrule. The length of the insulated conductor will be determined by the distance to the point of the earth connection within the equipment.
- IMPORTANT**, there must be a minimum of 10mm of the epoxy resin compound applied both before and after the crimped connection.
- Continue with step 7 of the installation instructions opposite.



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 (0.787 inches)

Cable Gland Size	Spigot Diameter	Max. Dia. Over Conductors & Max. No. of Cores		Overall Cable Diameter		Armour Range		Across Flats	Across Corners	Ordering Reference (Brass Metric)
		Dia.	Cores	Min	Max	Min	Max	Max	Max	
20S	M20	12.6	15	9.5	15.9	0.0	7/0.45	30.5	33.3	20SPX2KX1RA/MF
20	M20	12.6	15	12.5	20.9	0.0	7/0.45	30.5	33.3	20PX2KX1RA/MF
25S	M25	17.5	29	14.0	22.0	0.0	7/0.45	37.5	40.5	25SPX2KX1RA/MF
25	M25	17.5	29	18.2	26.2	0.0	7/0.45	37.5	40.5	25PX2KX1RA/MF
32	M32	23.6	51	23.7	33.9	0.0	7/0.45	46.0	51.0	32PX2KX1RA/MF
40	M40	30.0	80	27.9	40.4	0.0	7/0.71	55.0	61.0	40PX2KX1RA/MF
50S	M50	36.6	122	35.2	46.7	0.0	7/0.45	60.0	66.5	50SPX2KX1RA/MF
50	M50	41.0	149	40.4	53.1	0.0	7/0.45	70.0	78.6	50PX2KX1RA/MF
63S	M63	47.9	205	45.6	59.4	0.0	7/0.45	75.0	83.2	63SPX2KX1RA/MF
63	M63	53.7	259	54.6	65.9	0.0	7/0.45	80.0	89.0	63PX2KX1RA/MF
75S	M75	59.8	320	59.0	72.1	0.0	7/0.45	89.0	101.6	75SPX2KX1RA/MF
75	M75	64.3	364	66.7	78.5	0.0	7/0.45	99.0	111.1	75PX2KX1RA/MF

Dimensions in millimeters

Cable Gland Selection Table