

A*L*/ A*LC Industrial Cable Glands for Unarmoured Cable – ASSEMBLY INSTRUCTIONS**

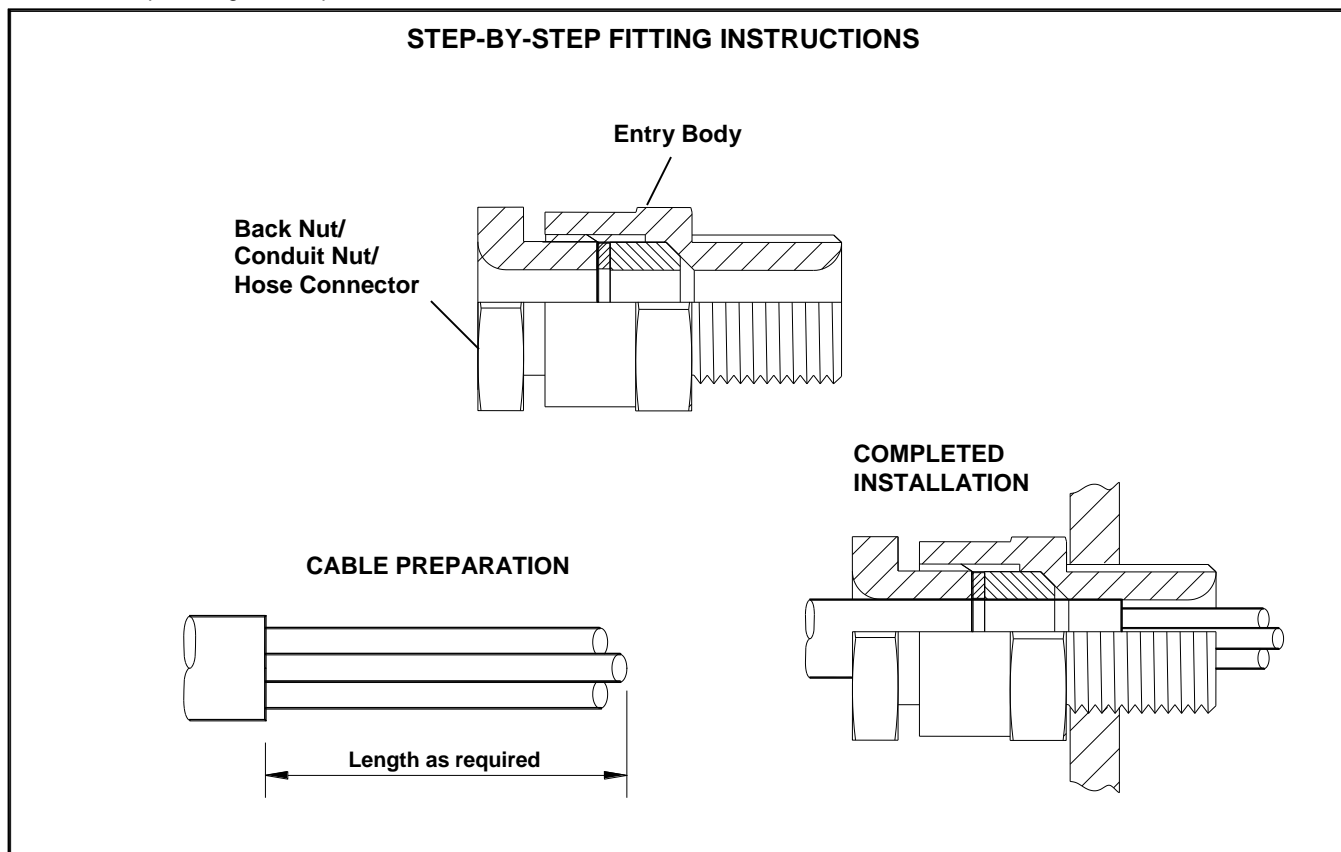
Brief Description

Peppers A*L*/A*LC** type cable glands are for outdoor use with unarmoured, braided or armoured cable where the braid or armour is to be terminated inside the enclosure. They seal on the outer jacket and give environmental protection to IP66/IP68.



Warning

Please read these instructions carefully. These products should not be used in applications except as detailed here or in our datasheets, unless confirmed in writing by Peppers. Peppers take no responsibility for any damage, injury or other consequential loss caused where products are not installed or used according to these instructions. This leaflet is not intended to advise on the selection of product. Further guidance can be found in the standards listed overleaf or the prevailing code of practice.



STEP-BY-STEP FITTING INSTRUCTIONS

- 1 Check there is no tension in the threads. It is not necessary to dismantle the gland.
- 2 Fit the complete cable gland to the enclosure allowing for any accessories such as sealing washers. Fully engage the entry thread to the enclosure, hand-tighten, then suitably secure with a wrench.
- 3 Prepare cable as required for the installation. If required, fit the shroud over the cable.
- 4 Insert cable through the cable gland. Position the cable correctly. The seal must grip the outer jacket of the cable when the cable gland is tightened.
- 5 Tighten Back Nut/Conduit Nut to the Entry Body. Ensure the seal makes full contact with cable sheath and then tighten the Back Nut/Conduit Nut by the additional turns detailed in Table 1.
Support the cable to prevent it from twisting during tightening.
- 6 (A*LCF**/A*LCM** options) Fasten mating conduit/equipment to the Conduit Nut to complete the installation.
(A*LCH** option) Push hose onto the connector and secure with a suitable hose clip to complete the installation.

Note - Cable Glands featuring Lead Sheath Option (A1L and A4L types)

To ensure that continuity is provided for the lead sheath and the installation is completed correctly the gland should be installed as follows: -

- A section of the cable outer sheath should be stripped back to expose the lead sheath. It should be stripped back in a position suitable to terminate the conductors correctly and for the internal cable gland seal to secure the cable outer sheath.
- The continuity washer within the gland should make full contact with the lead sheath of the cable.
- The gland should then be installed as per the above instructions.
- Contact Peppers for further advice if required.

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Table 1 - Installation Data and Cable Sizes (mm)

Gland Size	Back Nut Turns – Step 5	Outer Sheath	
		Min	Max
12	¼	0.9	6.0
16	2	4.0	8.4
20S	1	7.2	11.7
20	2	9.4	14.0
25	2	13.5	20.0
32	2	19.5	26.3
40	2	23.0	32.2
50S	1.5	28.1	38.2
50	2	33.1	44.1
63S	1.5	39.2	50.1
63	2	46.7	56.0
75S	2	52.1	62.0
75	2	58.0	68.0
80	1.5	62.2	72.0
85	1.5	69.0	78.0
90	1.5	74.0	84.0
100	2	82.0	90.0

Installation Guidance

Point	Advice
1	Installation should only be carried out by a competent electrician, skilled in cable gland and appropriate electrical installations.
2	NO INSTALLATION SHOULD BE CARRIED OUT UNDER LIVE CONDITIONS.
3	Threaded entries: the product can be installed directly into threaded entries. Threaded entries should comply with the relevant applicable standards and have a lead-in chamfer to allow for full engagement of the threads. Failure to provide a sufficient lead-in chamfer may lead to ingress sealing issues. A Peppers sealing washer should be used to maintain all IP ratings greater than IP54. Whilst Peppers products with tapered threads, when installed into a threaded entry, have been tested to maintain IP66 without any additional sealant, due to the differing gauging tolerances associated with the use of tapered threads it is recommended to use a non-hardening thread sealant if an IP rating higher than IP54 is required.
4	Clearance holes: these shall be no larger than 0.7mm above the nominal diameter of the external entry thread. The product should be secured with a Peppers locknut and the threads tightened to ensure the cable gland is secure. Where no integral sealing method is provided a Peppers sealing washer should be used to maintain IP ratings. A Peppers serrated washer should be used for additional installation protection. It is recommended that tapered threads are not used in clearance holes.
5	To maintain the Ingress Protection rating of the product, the entry hole must be perpendicular to the surface of the enclosure. The surface should be sufficiently flat and rigid to support the assembly and make the IP joint. The surface must be clean and dry. The product incorporates a thread run out according to general machining techniques and will not have a full form thread for the entire length and as such entry threads should have a suitable lead-in chamfer to ensure a seal is maintained. Further guidance can be found on Peppers website. It is the user's/installer's responsibility to ensure that the interface between the enclosure and cable gland is suitably sealed for the required application. Any thread sealant used shall be suitable for use in hazardous area locations, be suitable for the temperature range at the point of mounting, shall not contain evaporating solvent and cannot cause corrosion at the threaded interface when used for dissimilar materials.
6	These cable glands shall only be used for fixed installations with the cables being effectively clamped to prevent pulling or twisting.
7	Once installed do not dismantle except for routine inspection. After inspection the gland shall be re-assembled as instructed, ensuring the back nut is correctly tightened to ensure the cable is secure.
8	If required an anti-seize lubricant may be used to aid assembly and routine inspection. The lubricant should comply with the prevailing code of practice and care should be taken to ensure no lubricant comes into contact with the cable gland seals as this may impair performance.

BS EN 62444 (previously EN 50262) CABLE GLAND CLASSIFICATION

MATERIAL		MECHANICAL					ELECTRICAL PROPERTIES				EXTERNAL INFLUENCES			SEALING SYSTEM	
Metal	Non-Metallic	Composite	Without Cable Anchorage	With Cable Anchorage	Impact Category	Cable Retention (armoured cable)	Equipotential Bonding	Connection to Metallic Layers	Protective Connection to Earth	Insulation Characteristics	Ingress Protection	Temperature Range	Resistance to Salt & Sulphur Dioxide Laden Atmospheres	Single Orifice Seal	Multi-Orifice Seal
Yes	-	-	N/A	Type A	6	N/A	Yes	No	Note 1	N/A	Note 2	Note 3	Yes	Yes	N/A

Note 1

Category A

This is the minimum requirement to comply with BS EN 62444 (previously EN 50262). It is applicable in installations where the cable armouring (other than steel wire armour) is the limiting factor. It is generally applicable where the cable gland is installed into a metallic threaded entry.

Category B

This is the medium requirement to comply with BS EN 62444 (previously EN 50262). It is applicable in installations where the cable armour is steel wire armour and the system includes a high sensitivity method of secondary protection against fault currents. It is generally applicable in installations where an earth tag is used in conjunction with the cable gland.

Category C

This is the highest requirement to comply with BS EN 62444 (previously EN 50262). It is applicable in installations where the cable armour is steel wire armour and the system relies on a low sensitivity method of secondary protection against fault currents.

Note 2 - Ingress Protection: IP66 / IP68 (50 metres for 7 Days)

Note 3 - Temperature Range: -35°C to +90°C for glands fitted with Neoprene (black) seals
-60°C to +180°C for glands fitted with Silicone (white) seals