



INSTALLATION INSTRUCTIONS FOR A2F100HC, RA2F100HC CABLE GLAND

CABLE GLAND FOR USE WITH UNARMoured AND BRAID ARMoured CABLES
INCORPORATING EU DECLARATION OF CONFORMITY TO DIRECTIVE 2014/34/EU AND UK STATUTORY REQUIREMENTS SI 2016 No. 1107 (AS AMENDED)



A2F100HC - no face seal
RA2F100HC - with face seal

TECHNICAL DATA

CABLE GLAND TYPE : A2F100HC, RA2F100HC
INGRESS PROTECTION : IP66, IP67, IP68
PROCESS CONTROL SYSTEM : ISO 9001
ISO/IEC 80079-34:2011

EXPLOSIVE ATMOSPHERES CLASSIFICATION

ATEX CERTIFICATION No : CML 18ATEX1307, CML 18ATEX4311
ATEX CERTIFICATION CODE : II 2G Ex db IIC Gb, II 2G Ex eb IIC Gb, II 1D Ex ta IIIC Da IP66, IP67, IP68
 II 3G Ex nR IIC Gc IP66, IP67, IP68 I M2 Ex db I Mb, Ex eb I Mb IP66, IP67, IP68
UKEX CERTIFICATION No : CML 21UKEX1247, CML 21UKEX4248
UKEX CERTIFICATION CODE : II 2G Ex db IIC Gb, II 2G Ex eb IIC Gb, II 1D Ex ta IIIC Da IP66, IP67, IP68
 II 3G Ex nR IIC Gc IP66, IP67, IP68 I M2 Ex db I Mb, Ex eb I Mb IP66, IP67, IP68
IECEx CERTIFICATION No : IECEx CML 18.0172
IECEx CERTIFICATION CODE : Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, Ex nR IIC Gc, Ex db I Mb, Ex eb I Mb IP66, IP67, IP68

IMPORTANT NOTES FOR INSTALLERS

- Read all instructions before beginning installation. Installation shall only be performed by competent, suitably trained personnel (in accordance with EN/IEC 60079-14) using the correct tools; spanners should be used for tightening.
- Inspection and maintenance shall only be performed by competent, suitably trained personnel (in accordance with EN/IEC 60079-14 (Initial Inspection) and EN/IEC 60079-17).
- 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 installers 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. The standard product temperature range is -60°C to +130°C. The equipment should not be used outside of this range.
- Cable glands do not have any serviceable parts and are therefore not intended to be repaired.
- Cable glands are manufactured from Brass, Nickel Plated Brass, Stainless Steel, Mild Steel or Aluminium, with Silicone seals. The end user shall consider the performance of these materials with regard to attack by aggressive substances that may be present in the hazardous area. Consideration should be given to potential degradation due to galvanic corrosion at the interface of dis-similar metallic materials.
- It is the end user's responsibility to ensure the equipment materials are suitable for their final installation location. If in doubt consult CMP Products Limited.
- Ex db marked cable glands can only be supplied with metric or NPT entry threads.
- Once installed do not dismantle except for inspection. An inspection should be conducted as per IEC / EN 60079-17 by a qualified person. After inspection the gland should be re-assembled as instructed, ensuring the outer seal nut is correctly tightened to ensure the cable is secured.
- 3/8" NPT and Aluminium Cable Glands not to be used for Group I applications.
- 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.
- 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 will need to be sufficiently strong to support the cable and cable gland assembly. Enclosure entries must 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 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.
- 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 (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).

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

None

ACCESSORIES

The following optional accessories are available to assist with fixing, sealing and earthing: Locknut, Earth Tag, Serrated Washer, Entry Thread (I.R.) 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 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015, EN 60079-15:2010, EN 60079-31:2014, BS 6121:1989, EN 62444:2013

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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

Cable Gland Selection Table

Cable Gland Size	Hose Diameter	Available Entry Threads (Alternate Metric Thread Lengths Available)					Overall Cable Diameter		RA2F100HC Across Flats	RA2F100HC Across Corners	A2F100HC Across Flats	A2F100HC Across Corners	Protrusion Length	Combined Ordering Reference (*Brass Metric)			
		Standard		Option			Min	Max	Max	Max	Max	Max		Max	Size	Type	Ordering Suffix
		Metric	Thread Length (Metric)	NPT	Thread Length (NPT)	NPT											
16	13.0	M16	15.0	3/8"	15.3	-	3.2	8.0	24.0	26.4	24.0	26.4	50.9	16	A2F100HC13	1RA	
16	16.0	M16	15.0	3/8"	15.3	-	3.2	8.0	24.0	26.4	24.0	26.4	50.9	16	A2F100HC16	1RA	
16P	13.0	M16	15.0	-	-	-	3.2	8.0	-	-	22.0	24.2	50.7	16P	A2F100HC13	1RA	
16P	16.0	M16	15.0	-	-	-	3.2	8.0	-	-	22.0	24.2	50.7	16P	A2F100HC16	1RA	
20S16	13.0	M20	15.0	1/2"	19.9	3/4"	3.2	8.0	27.0	29.7	24.0	26.4	47.4	20S16	A2F100HC13	1RA	
20S16	16.0	M20	15.0	1/2"	19.9	3/4"	3.2	8.0	27.0	29.7	24.0	26.4	47.4	20S16	A2F100HC16	1RA	
20S16P	13.0	M20	15.0	-	-	-	3.2	8.0	-	-	22.0	24.2	48.1	20S16P	A2F100HC13	1RA	
20S16P	16.0	M20	15.0	-	-	-	3.2	8.0	-	-	22.0	24.2	48.1	20S16P	A2F100HC16	1RA	
20S	16.0	M20	15.0	1/2"	19.9	3/4"	6.5	11.2	27.0	29.7	24.0	26.4	48.1	20S	A2F100HC16	1RA	
20S	19.0	M20	15.0	1/2"	19.9	3/4"	6.5	11.2	27.0	29.7	24.0	26.4	52.1	20S	A2F100HC19	1RA	
20SP	16.0	M20	15.0	-	-	-	6.5	11.2	-	-	22.0	24.2	48.1	20SP	A2F100HC16	1RA	
20SP	19.0	M20	15.0	-	-	-	6.5	11.2	-	-	22.0	24.2	52.1	20SP	A2F100HC19	1RA	
20	16.0	M20	15.0	1/2"	19.9	3/4"	7.0	13.5	27.0	29.7	27.0	29.7	51.8	20	A2F100HC16	1RA	
20	19.0	M20	15.0	1/2"	19.9	3/4"	7.0	13.5	27.0	29.7	27.0	29.7	55.8	20	A2F100HC19	1RA	
20P	19.0	M20	15.0	-	-	-	7.0	13.5	-	-	24.0	26.4	61.4	20P	A2F100HC19	1RA	
20L	19.0	M20	15.0	1/2"	19.9	3/4"	8.7	14.0	27.0	29.7	27.0	29.7	54.3	20L	A2F100HC19	1RA	
20LP	19.0	M20	15.0	-	-	-	8.7	14.0	-	-	24.0	26.4	61.4	20LP	A2F100HC19	1RA	
25	19.0	M25	15.0	3/4"	20.2	1"	11.5	19.5	36.0	39.6	36.0	39.6	60.4	25	A2F100HC19	1RA	
25	25.0	M25	15.0	3/4"	20.2	1"	11.5	19.5	36.0	39.6	36.0	39.6	67.4	25	A2F100HC25	1RA	
25P	19.0	M25	15.0	-	-	-	11.5	19.5	-	-	32.0	35.2	69.7	25P	A2F100HC19	1RA	
25P	25.0	M25	15.0	-	-	-	11.5	19.5	-	-	32.0	35.2	76.7	25P	A2F100HC25	1RA	
25L	19.0	M25	15.0	3/4"	20.2	1"	14.0	20.0	36.0	39.6	36.0	39.6	59.9	25L	A2F100HC19	1RA	
25L	25.0	M25	15.0	3/4"	20.2	1"	14.0	20.0	36.0	39.6	36.0	39.6	66.9	25L	A2F100HC25	1RA	
25LP	19.0	M25	15.0	-	-	-	14.0	20.0	-	-	32.0	35.2	69.7	25LP	A2F100HC19	1RA	
25LP	25.0	M25	15.0	-	-	-	14.0	20.0	-	-	32.0	35.2	76.7	25LP	A2F100HC25	1RA	
32	25.0	M32	15.0	1"	25.0	1 1/4"	19.0	25.5	41.0	45.1	41.0	45.1	65.5	32	A2F100HC25	1RA	
32	32.0	M32	15.0	1"	25.0	1 1/4"	19.0	25.5	41.0	45.1	41.0	45.1	71.5	32	A2F100HC32	1RA	
32L	25.0	M32	15.0	1"	25.0	1 1/4"	20.2	26.3	41.0	45.1	41.0	45.1	65.9	32L	A2F100HC25	1RA	
32L	32.0	M32	15.0	1"	25.0	1 1/4"	20.2	26.3	41.0	45.1	41.0	45.1	71.9	32L	A2F100HC32	1RA	
40	38.0	M40	15.0	1 1/4"	25.6	1 1/2"	25.0	32.2	50.0	55.0	50.0	55.0	80.1	40	A2F100HC38	1RA	
50S	51.0	M50	15.0	1 1/2"	26.1	2"	31.0	38.2	60.0	66.0	60.0	66.0	95.4	50S	A2F100HC51	1RA	
50	51.0	M50	15.0	2"	26.9	2 1/2"	35.6	44.0	60.0	66.0	60.0	66.0	99.8	50	A2F100HC51	1RA	
63S	63.0	M63	15.0	2"	26.9	2 1/2"	41.5	49.9	75.0	82.5	75.0	82.5	113.3	63S	A2F100HC63	1RA	
63	63.0	M63	15.0	2 1/2"	39.9	3"	48.2	54.9	75.0	82.5	75.0	82.5	113.6	63	A2F100HC63	1RA	
75S	76.0	M75	15.0	2 1/2"	39.9	3"	54.0	61.9	89.9	98.9	84.0	92.4	136.9	75S	A2F100HC76	1RA	
75	76.0	M75	15.0	3"	41.5	3 1/2"	61.1	67.9	89.9	98.9	84.0	92.4	140.5	75	A2F100HC76	1RA	

Dimensions are displayed in millimetres unless otherwise stated



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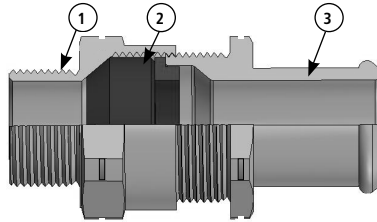
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F1510		
Certification	Revision	Date
UKEX	0	4/21
IFS	6	10/21
ATEX / IECEx	11	4/19

INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES A2F100HC, RA2F100HC

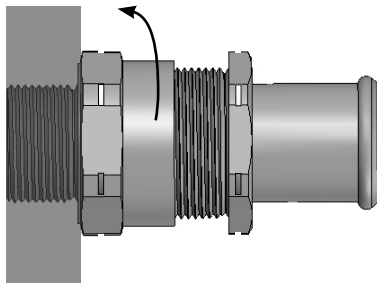
CABLE GLAND COMPONENTS - It is not necessary to dismantle the cable gland any further than illustrated below

- 1. Entry item
- 2. Seal
- 3. Seal Nut with hose connection



PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

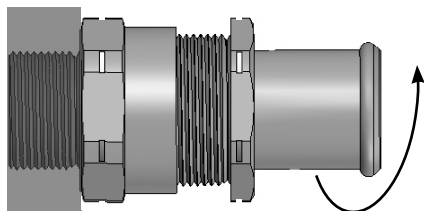
1. Fit the gland into the equipment and fully tighten the entry item (1).



2. Determine the conductor length required to suit the installation and prepare the cable accordingly, removing part of the outer sheath where required to reveal the insulated conductors.



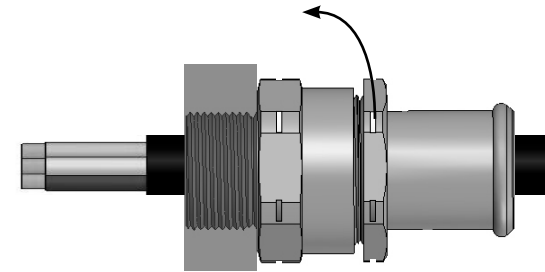
3. Slacken the seal nut (3) to relax the seal (2).



4. Pass the cable through the gland to the desired position, Only using finger pressure, tighten the outer seal nut assembly until light resistance to tightening is met.

Then either use the outer seal tightening guide tape or table below 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. Make sure the correct side of the outer seal tightening guide tape is used depending on the cable gland size.



Number of turns to tighten	Outer Seal Tightening Guide															
	GLAND SIZE															
	16/16P	20S16/20S16P	20S/20SP	20/20P	20L/20LP	25/25P	25L/25LP	32	32L	40	50S	50	63S	63	75S	75
1.0										32.2		44.0	49.6		61.9	
1.5	8.0	8.0			14.0	19.5	20.0	25.9	25.9	31.5	37.7	43.4	48.9	54.5	61.3	67.5
2.0	7.1	7.1	11.2	13.0	13.0	18.7	19.2	25.0	25.0	30.7	36.9	42.7	48.2	53.9	60.6	66.7
2.5	6.0	6.0	10.6	11.9	11.9	17.8	18.4	24.1	24.1	29.9	36.0	42.0	47.5	53.2	59.9	65.8
3.0	4.8	4.8	9.9	10.8	10.8	16.9	17.7	23.1	23.1	29.1	35.3	41.3	46.8	52.4	59.2	65.0
3.5	3.2	3.2	9.1	9.7	9.7	15.9	16.9	22.0	22.0	28.2	34.6	40.7	46.1	51.7	58.4	64.1
4.0			8.0	8.6	8.7	14.8	16.2	20.9	20.9	27.4	33.9	40.0	45.4	50.8	57.5	63.3
4.5			6.5	7.5		14.0	15.4	19.6	20.2	26.5	33.3	39.3	44.6	49.9	56.6	62.4
5.0						12.1	14.7			25.5	32.6	38.7	43.8	48.8	55.5	61.6
5.5							14.0				32.1	38.0	43.1		54.0	
6.0											31.5	37.3	42.3			
6.5											31.0	36.7	41.5			
7.0												36.0				

5. Fit a jubilee clip over the end of the hose. Attach the hose to the hose connection and tighten the jubilee clip to secure.

