

# Installation Manual for A2FRM Cable Gland

## A2FRM Flameproof Ex d Cable Gland For Unarmoured Cables with conduit fitting

### Please read all instructions carefully before beginning the installation

CABTEK A2FRM type Cable Glands are for Indoor and Outdoor use in the appropriate Hazardous Areas with unarmoured cable. They seal on the outer jacket and give environmental protection to IP66. They are suitable for normal industrial environmental of temperature, humidity and vibration.

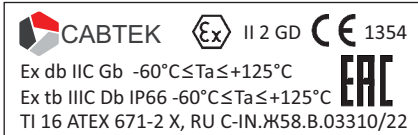
Cable Glands are made of Brass CW614N and SS316L assembled with VMQ Silicone Rubber and Nylon Substrate.

Material Compatibility under chemical corrosion or attack by aggressive substance must be considered before installation.

Cable Gland confirm to following Standards for Group II and III, Category 2 for Zone 1, 2 and category 2 for 21 & 22 for ambient temperature range  $-60^{\circ}\text{C} \leq \text{Ta} \leq +125^{\circ}\text{C}$

**Standards Applied :** EN 60079-0: 2012+A11:2013,  
EN 60079-1: 2014 &  
EN 60079-31: 2014

### Ex marking on A2FRM type Cable Glands:



### Installation Guide :

1. Installation must be carried out by a competent electrician, skilled in cable gland installation.
2. Installation should not be carried out under live conditions.
3. Once installed do not dismantle except for occasional inspection. If necessary, dismantle by reverting the installation instruction. The gland is not serviceable and spare parts are not supplied separately.
4. Parts of glands are not interchangeable with any other design. If manufacturer's parts are mixed, certification will be invalidated.
5. The female thread in the enclosure must comply with relevant standard and do not damage threads on assemblies.
6. The glands should only be used with substantially round and compact cables with correct tools.
7. Installation should only be performed by a competent person using the correct torque tools. Spanners should be used for tightening. Read all instructions before beginning installation.
8. Any modification which differs from the condition as delivered is not permitted.

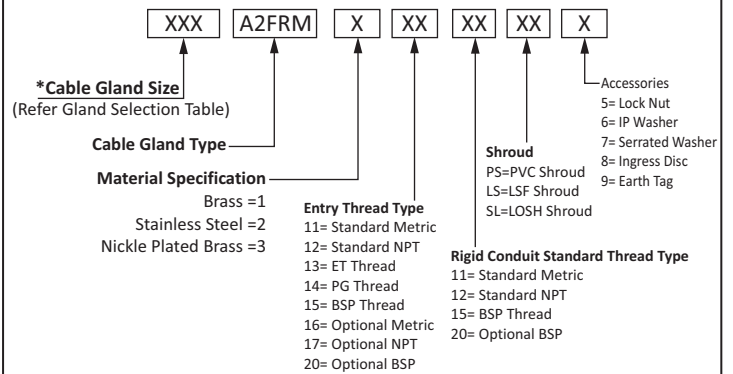
9. Accessories are available from CABTEK, as optional extras, to assist with fixing, sealing and earthing, Locknut, Earth Tag, Serrated Washer, Entry Thread (I.P.) / Sealing Washer, Shroud.

### Special Condition of Safe Use of Cable Glands:

1. The Cable Entries are only suitable for fixed installations.
2. Cable must be effectively clamped from pulling and twisting.
3. Cable Glands shall not be used in enclosure where the temperatures at the point of entry / mounting are outside the range of  $-60^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .
4. The glands should only be used with substantially round cables and tightened to the rated torque with Torque wrenches.
5. Install in accordance with requirements of EN60079-14.
6. The cable glands are provided with a sealing ring with an axial sealing height of at least 5 mm. With reference to the clearance groove, the end-user should ensure that at least five complete turns of the connector thread are made. In order to guarantee a screw depth of 8 mm, the enclosure should have a wall thickness of min. 10 mm ; if  $<10$  mm, then if necessary, use a washer when cable entries are attached to the pressure-resistant enclosure.
7. In the case of NPT connecting threads, the end-user must ensure that the necessary IP protection is guaranteed; this can be done using a suitable thread sealing agent.
8. Installation should not be carried out under live conditions.

### CABLE GLAND ORDERING DETAILS :

#### Product Code For Ordering Purpose



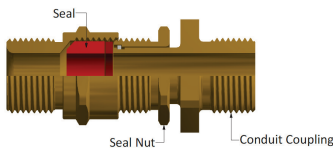
For example : 20sA2FRM31 11 11 6= A2FRM20s-M20(M)-M20(M) Nickle Plated Cable Gland with IP Washer

For cable gland technical details like Cable Gland Size, Cable diameter, thread and torque details given as below.

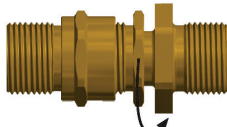
### GLAND SELECTION CHART

Size	Standard Thread Size "C"			Optional Thread			Thread Length "D"	Conduit Connection Thread "E"			Cable Dia. A		A/F	A/C	Torque (Nm)
	Metric	NPT/BSP	ET	Metric	NPT/BSP	Metric		NPT	BSP	Min.	Max.				
16	16	3/8"	9/8"	-	-	15.00	20	1/2"	1/2"	3.10	8.60	24.00	26.20	35	
20s16	20	1/2"	3/4"	25	3/4"	15.00	20	1/2"	1/2"	3.10	8.60	24.00	26.20	35	
20S	20	1/2"	3/4"	25	3/4"	15.00	20	1/2"	1/2"	6.10	11.70	24.00	26.20	35	
20	20	1/2"	3/4"	25	3/4"	15.00	20	1/2"	1/2"	6.50	13.90	27.00	29.50	35	
25	25	3/4"	1"	32	1"	15.00	25	3/4"	3/4"	11.30	19.90	36.00	39.20	45	
32	32	1"	1 1/4"	40	1 1/4"	15.00	32	1"	1"	17.00	26.20	41.00	45.00	55	
40	40	1 1/4"	1 1/2"	50	1 1/2"	15.00	40	1 1/4"	1 1/4"	23.60	32.10	50.00	55.00	60	
50S	50	1 1/2"	2"	63	2"	15.00	50	1 1/2"	1 1/2"	31.50	38.20	55.00	60.00	80	
50	50	2"	2"	63	2 1/2"	15.00	50	2 1/2"	2"	35.80	44.00	60.00	65.00	80	
63S	63	2"	2 1/2"	75	2 1/2"	15.00	63	2"	2"	41.70	50.00	70.00	75.00	95	
63	63	2 1/2"	2 1/2"	75	3"	15.00	63	2"	2 1/2"	47.50	56.00	75.00	80.00	95	
75S	75	2 1/2"	3"	90	3"	15.00	75	2 1/2"	2 1/2"	55.00	62.00	85.00	90.00	110	
75	75	3"	3"	90	3 1/2"	15.00	75	2 1/2"	2 1/2"	62.00	68.00	90.00	95.00	110	
90	90	3 1/2"	3 1/2"	100	4"	18.00	90	3"	3"	67.00	79.00	108.00	118.50	150	

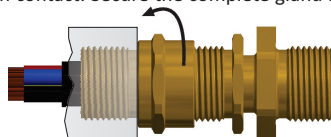
1. It is not necessary to dismantled the cable gland assembly as shown below



2. Check the seal in the entry component and it is in a relaxed state by loosening the outer seal nut



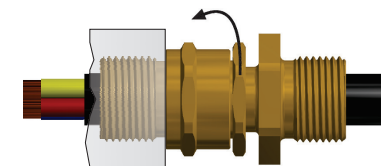
3. Fit the complete cable glands to the enclosure. Use the thread seals to maintain the IP rating of equipment and cable glands. Hand-tighten then use wrench to tighten a further. DO NOT EXCEED MAX TORQUE FOR ENCLOSURE. The surface of the enclosure should be sufficiently flat and rigid to make both the IP joint and a suitable earth connection (if required). In the case of painted enclosures, serrated washer should be fitted to break through the paint and make satisfactory earth contact. Secure the complete gland into the enclosure. the outer seal nut



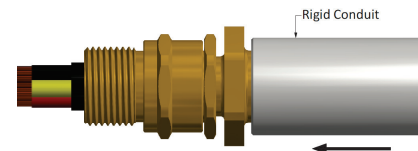
4. Determine the conductor length required to suite the equipment and prepare the cable accordingly. Remove the Outer sheath of cable as per requirement to see the insulated conductors and pass through cable gland.



5. Tighten the seal nut by hand until resistance is felt and then tighten further one full turn with spanner as instructed torque.



6. Attach the conduit to the conduit coupler and fully tighten. Ensure that the seal nut does not come loose during this process by holding it with a spanner.



### Warning:

Please study carefully these instructions before installation. These glands should not be used in any application other than those mentioned here, unless CABTEK states in writing that the product is suitable for such application. CABTEK will not take any responsibility for any damage, injury or other consequential loss caused where the glands are not installed or used according to installation instructions. This leaflet is not intended to advice on the selection of cable glands. Installation must be carried out by a competent electrician, skilled in cable gland installation. Installation should not be carried out under live conditions.

### Customer Care:

For any more information regarding please send your query to us by mail or telephone number

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