Installation Manual for E1FU Cable Gland

E1FU Series of Flameproof and Increased Safety Cable Glands suitable for Armoured Cables with Universal Armour Ring

Please read all instructions carefully before beginning the installation

CABTEK E1FU type Cable Glands are for Indoor and Outdoor use in the appropriate Hazardous Areas with SWA & STA cables using universal armour ring. They seal on the outer jacket and give environmental protection to IP67. They are suitable for normal industrial environmental of temperature, humidity and vibration.

Cable Glands are made of Brass CW614N/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, Category - 2 for Zone 1, 2, 21 & 22 for ambient temperature range -60°C≤Ta≤+125°C.

Standards Applied: EN IEC 60079-0: 2018
EN/IEC 60079-1: 2014
EN/IEC 60079-31: 2014/2013

Ex marking on E1FU type Cable Gland

CABTEK 20sE1FU M20 Ex II 2 GD CE 2903
Ex db IIC Gb, Ex eb IIC Gb.....
Ex tb IIIC Db IP67 .....
-60°C≤Ta≤+125°C.....
ETL22ATEX0109X, IECEx ITS 16.0041X .....
RU C-IN.Ж58.B.03310/22, Р462800/2 .....

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. 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.

7. Any modification which differs from the condition as delivered is not permitted.
8. Accessories are available from CABTEK, as optional extras, to assist with fixing, sealing and earthing, Locknut, Earth Tag, Serrated Washer, Entry Thread seal (IP), Shroud.

Special Condition of Safe Use of Cable Glands:

1. Cable Glands 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 ambient temperatures as detailed in general description.
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. 10mm; 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

XXX | XXXX | X | XX | XX | X

***Cable Gland Size** (Refer Gland Selection Table)

E1FU

Material Specification
Brass =1
Stainless Steel =2
Nickle Plated Brass =3

Entry Thread Type
11= Standard Metric
12= Standard NPT
13= ET Thread
14= PG Thread
15= BSP Thread
16= Optional Metric
17= Optional NPT
20= Optional BSP

Shroud Type
PS= PVC Shroud
LS= LSF Shroud
SL= LSOH Shroud
PC = PCP Shroud

Accessories
5= Lock Nut
6= IP Washer
7= Serrated Washer
8= Ingress Disc
9= Earth Tag

For example:
20sE1FU311PS6 = E1FU-20s-M20 Nickle Plated Cable Gland with PVC Shroud & IP Washer
20sE1FU311PS569 = E1FU-20s-M20 Nickle Plated Cable Gland Kit*
(*Kit includes PVC Shroud, Lock Nut, IP washer & Earth Tag)

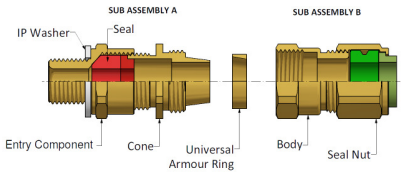
For cable gland technical details like Cable Gland Size, Cable diameter, thread and torque details given as below.

GLAND SELECTION CHART

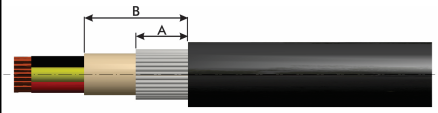
Size	Standard Thread Size "C"				Optional Thread		Thread Length "D"	Cable Dia."A"		Cable Dia."B"		Armour Range		Protrusion Length "E"	A/F	A/C	Toque (Nm)
	Metric	NPT/BSP	ET	PG	Metric	NPT/BSP		Min.	Max.	Min.	Max.	Wire Armour (W)	Strip Armour (X)				
16	16	⅜"	5/8"	PG9	-	-	15.00	3.10	8.60	6.10	13.10	0.9	0.3-1.0	68.50	24.00	26.20	25
20s16	20	½"	¾"	PG11	25	¾"	15.00	3.10	8.60	6.10	13.10	0.9	0.3-1.0	68.50	24.00	26.20	25
20S	20	½"	¾"	PG13.5	25	¾"	15.00	6.10	11.70	9.50	15.90	0.9-1.25	0.3-1.0	68.50	24.00	26.20	25
20	20	½"	¾"	PG16	25	¾"	15.00	6.50	13.90	12.50	20.90	0.9-1.25	0.4-1.0	71.65	30.00	33.00	35
25s	25	¾"	1"	PG21	32	1"	15.00	9.50	15.40	14.00	22.00	1.25-1.6	0.4-1.2	86.75	36.00	39.20	30
25	25	¾"	1"	PG21	32	1"	15.00	11.30	19.90	19.90	26.20	1.75-1.6	0.4-1.2	85.25	36.00	39.20	30
32	32	1"	1¼"	PG29	40	1¼"	15.00	17.00	26.20	23.70	33.90	1.6-2.0	0.4-1.2	89.50	46.00	50.60	35
40	40	1¼"	1½"	PG36	50	1½"	15.00	23.60	32.10	27.90	40.40	1.6-2.0	0.4-1.6	90.00	55.00	60.00	45
50S	50	1½"	2"	PG36	63	2"	15.00	31.50	38.20	35.20	46.70	2.0-2.5	0.4-1.6	89.00	60.00	65.00	60
50	50	2"	2"	PG42	63	2½"	15.00	35.80	44.00	40.40	53.00	2.0-2.5	0.6-1.6	95.00	70.00	75.00	65
63S	63	2"	2½"	PG48	75	2½"	15.00	41.70	50.00	45.60	59.40	2.0-2.5	0.6-1.6	98.00	75.00	80.00	65
63	63	2½"	2½"	-	75	3"	15.00	47.50	56.00	54.60	65.80	2.0-2.5	0.6-1.6	101.20	80.00	85.00	75
75S	75	2½"	3"	-	90	3"	15.00	55.00	62.00	59.00	72.00	2.0-2.5	0.6-1.6	109.00	90.00	95.00	80
75	75	3"	3"	-	90	3½"	15.00	62.00	68.00	66.70	78.40	2.5-3.00	0.6-1.6	113.50	100.00	110.00	80
90	90	3½"	3½"	-	100	4"	18.00	67.00	79.00	76.20	90.30	3.0-3.50	0.8-1.6	134.25	112.00	122.00	110

INSTALLATION INSTRUCTIONS FOR CABLE GLAND TYPES E1FU.

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

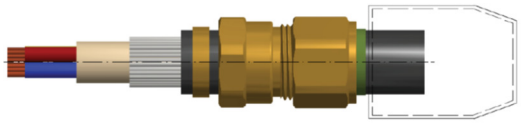


1. Prepare the cable by stripping back the cable outer sheath and armour to suit the equipment geometry. Expose the armour by stripping back the outer sheath further using the table below as a guide. If applicable remove any tapes or wrappings to expose cable inner sheath.

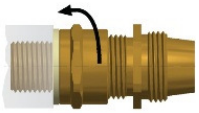


Gland Size	Cable Strip "A"	Cable Bedding "B"
16, 20s16, 20s, 20	12mm	35
25s, 25, 32, 40	15mm	40
50s,50,63s,63	18mm	42
75s to 90	20mm	50

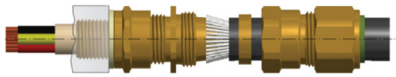
2. Separate the gland into two sub-assemblies "A & B". Ensuring that the Outer Seal Nut is relaxed, pass sub-assembly "B" over the cable outer sheath and armour followed by the Armour Ring.



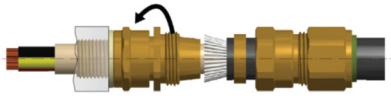
3. Ensure that the inner seal is relaxed by slackening the Main Item. Secure sub-assembly "A" into the equipment either by screwing the Entry Item into a threaded hole or by securing it in a clearance hole using a locknut as applicable.



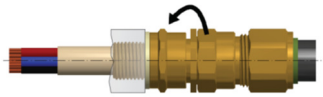
4. Locate the Armour Ring into its recess in the Main Item. Pass the cable through sub-assembly "A" until the armour engaged with the cone. Spread the armour evenly around the cone.



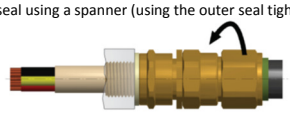
5. While continuing to push the cable forward to maintain contact between the armour and the cone, tighten the Main Item (cone) until the inner seal makes contact with the cable inner sheath (heavier resistance is felt at this point). Tighten a further full turn.



6. Hold the Main Item (2) with a spanner and tighten sub-assembly "B" onto sub-assembly "A" using a spanner until all available threads are used.



7. Only using finger pressure, tighten the outer seal nut assembly (6) until light resist-ance to tightening is met. Then either use the outer seal tightening guide tape or table on the rear of the page to determine how much further to tighten the seal using a spanner (using the outer seal tightening guide is recommended).



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.

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