

# INSTALLATION INSTRUCTION CABLE GLAND E1FU & E1FU-HT



CA-A-740-D R0-01/02/2024

Technical Data	
Type	E1FU & E1FU-HT
Ingress Protection Rating	IP 66 / IP68
Process Control System	ISO 9001:2015 & ISO/IEC 80079-34:2018
ATEX Certification No	DNV 22ATEX73142X
Code of Protection	Ex   M2   Ex   II 2G 1D CE2460, IP66/IP68
IECEx Certification No	IECEx DNV 22.0002X
Code of Protection	Ex db   Mb, Ex eb   Mb, Ex db    C Gb Ex eb    C Gb, Ex ta    C Da
Operating Temperature	-40° C to + 85° C** / -55° C to + 175° C*** (HT)
Optional Accessories	Earth Tag, Lock Nut, Serrated Washer, Entry Thread Sealing Washer, Shroud
Special Condition for Safe Use	Read Special Condition for Safe Use****

\*\* For this Temperature range : Thermoset Seal Black Colour

\*\*\* For this Temperature range : Thermoset Seal Red Colour

E1FU & E1FU-HT Cable Gland Selection Table																
Cable Gland Size	Gland Dimensions								Cable Dimensions							
	Entry Thread			Minimum Thread Length	Maximum Length	Across Flats	Across Corners	Cable Bedding Diameter	Overall Cable Diameter	Armour Range						
	Standard		Option							Direction 1		Direction 2		Direction 1		Direction 2
	Metric	NPT*	NPT*	Metric	NPT	Max	Max	Max	Min	Max	Min	Max	Min	Max	Min	Max
20S/16	M20	1/2"	3/4"	15.00	20.00	52.25	24.00	26.50	3.10	8.70	6.10	11.60	0.80	1.25	0.10	1.00
20S	M20	1/2"	3/4"	15.00	20.00	52.25	24.00	26.50	7.00	11.70	9.50	16.00	0.80	1.25	0.10	1.00
20	M20	1/2"	3/4"	15.00	20.00	52.50	31.00	34.00	10.00	14.00	12.50	21.20	0.80	1.25	0.10	1.00
25S	M25	3/4"	1"	15.00	20.50	64.00	37.50	41.25	11.00	16.00	14.10	22.00	1.25	1.60	0.10	1.00
25	M25	3/4"	1"	15.00	20.50	64.00	37.50	41.25	14.50	20.00	18.50	26.30	1.25	1.60	0.10	1.00
32	M32	1"	1-1/4"	15.00	25.50	65.50	46.00	50.50	18.50	26.40	24.00	34.00	1.60	2.00	0.10	1.00
40	M40	1-1/4"	1-1/2"	15.00	26.00	65.50	55.00	60.50	25.00	32.30	28.00	40.60	1.60	2.00	0.10	1.00
50S	M50	1-1/2"	2"	15.00	26.50	72.50	60.00	66.00	31.50	38.50	35.50	46.70	2.00	2.50	0.10	1.00
50	M50	2"	2-1/2"	15.00	27.00	73.00	70.00	77.00	36.50	44.00	40.80	53.20	2.00	2.50	0.10	1.00
63S	M63	2"	2-1/2"	15.00	27.00	73.50	75.00	82.50	42.50	50.00	45.70	59.40	2.00	2.50	0.10	1.00
63	M63	2-1/2"	3"	15.00	40.00	73.50	81.00	89.00	48.50	56.20	54.80	66.10	2.00	2.50	0.10	1.00
75S	M75	2-1/2"	3"	15.00	40.00	82.50	91.00	100.00	55.00	62.00	59.50	72.20	2.00	2.50	0.10	1.00
75	M75	3"	3-1/2"	15.00	42.00	88.50	100.00	110.00	61.50	68.00	67.00	79.50	2.50	3.15	0.10	1.00
90	M90	3-1/2"	4"	20.00	43.00	95.50	114.00	125.25	65.00	80.00	75.00	90.50	2.75	3.50	0.10	1.00

All dimensions are in millimetres (Except \* where dimensions are in inches)

## EU Declaration of Conformity in accordance with ATEX Directive 2014/34/EU.

Cabex Electrical Components on its sole responsibility declare that the E1FU & E1FU-HT products complies with the requirements of the ATEX Directive 2014/34/EU and also comply with the requirements of EN 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015 + A1:2018, EN 60079-31:2014 where applicable.

On behalf of the aforementioned company, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and statutory regulatory requirements of the above listed directives.

  
Kekin R. Trada (Ex Person).

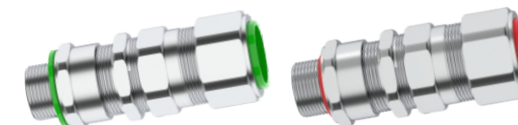
Address: Cabex Electrical Components  
Plot No 4, GIDC, Phase-2, Dared,  
Jamnagar-361004 (Gujarat) (India)

Place : Jamnagar,Gujarat,India. & Date : 01/02/2024  Notified Body : DNV Product Assurance AS

# INSTALLATION INSTRUCTION CABLE GLAND E1FU & E1FU-HT



## CABLE GLAND FOR USE WITH ALL TYPES OF ARMOUR CABLES.



E1FU

E1FU-HT

## INSTALLATION NOTES

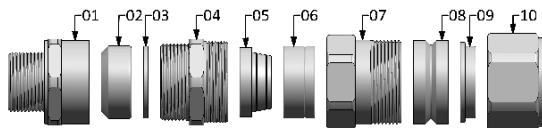
- Installation shall only be performed by a competent person (in accordance with EN/IEC 60079-14) using the correct tools, Spanners should be used for tightening. Inspection & maintenance shall be done by a competent person (in accordance with EN/IEC 60079-17 & EN/IEC 60079-14).
- Metric entry threads comply with ISO 965-1 and ISO 965-3 with a 6g for male thread & 6h for female threads tolerance as required by IEC 60079-1:2014 & NPT Threads accordance with ASME B1.20.1-2013 as per EN/IEC 60079-1. The CABEX standard metric thread pitch is 1.5mm for threads up to M75, and 2.0 mm from M90 and above. Other thread pitches from 0.70 mm to 2.00 mm available upon request.
- The interface between a cable entry device & its enclosure will required additional sealing to achieve Ingress Protection (IP) ratings higher than IP54. For Explosive Gas Atmospheres-Min IP54 and For Explosive Dust Atmospheres-Min IP6X. Parallel threads and tapered threads when using a non-threaded entry required a CABEX sealing washer or Integral O-ring face seal to maintain IP66, IP67, IP68 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 of IP66. For IP 67 & IP 68 thread seal or thread grease shall be applied on threads.
- Cable Glands are not intended to be repaired as they do not have any serviceable parts.
- For inspection if cable gland is dismantled, shall be re-assembled again as per instruction given and this inspection must be done by competent person only as per EN/IEC 60079-17.
- Ex db marked cable glands can only be supplied with Metric or NPT entry threads.
- The enclosure surface finish must be flat & smooth & any draft angles from the casting/moulding process shall have a perpendicular flat spot machined to facilitate sealing with an entry thread sealing washer or O-ring for required IP rating. The enclosure shall be enough strong to support the cable and cable gland assembly. The enclosure entries must be perpendicular.
- When enclosure having through hole it is recommended hole must be circular, free of burrs and diameter shall not be larger than 0.7mm above the nominal thread diameter of cable gland and lock nut shall be used to secure the cable gland.
- The Earth Tag should be used when it is necessary to provide earth bond connection. Earth Tag comply with category B rating as per IEC/EN 62444.

## SPECIAL CONDITION FOR SAFE USE\*\*\*\*

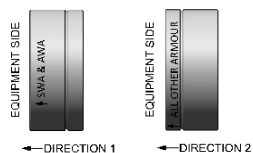
- Cable Glands are suitable for use within an operating temperature range of -40° C to +85° C when fitted with EPDM thermoset seal, Nylon Skid Washer & Nylon IP Washer.
- Cable Glands are suitable for use within an operating temperature range of -55° C to + 175° C when fitted with Silicon thermoset seal, PPS Skid Washer & Silicon O ring.
- The cable glands shall only be used with substantially round cables.
- When the cable glands are used for increased safety or dust protection in a plain hole, the hole in the enclosure must not be greater than 0.7mm above the major diameter of the male thread and the cable glands must be secured with a locknut.
- Cable gland must be installed in accordance with requirements of IEC 60079-14.
- Type CECEX-E1FU\*\* \*\* \*\* series double compression cable glands are not to be exposed to chemicals for Group I applications.

**Note : For IP 68 installation instruction please contact CABEX.**

CABLE GLAND COMPONENTS



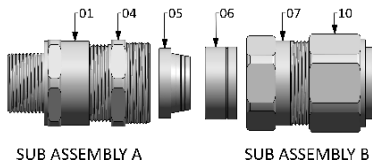
- 01 Entry Component (Sub-Assembly A)
- 02 Entry Thermoset Seal (Sub-Assembly A)
- 03 Entry Skid Washer (Sub-Assembly A)
- 04 Compression Body (Sub-Assembly A)
- 05 Detachable Armour Cone
- 06 Universal Armour Clamping Ring
- 07 Middle Body (Sub-Assembly B)
- 08 Thermoset Seal (Sub-Assembly B)
- 09 Skid Washer (Sub-Assembly B)
- 10 Compression Cap (Sub-Assembly B)



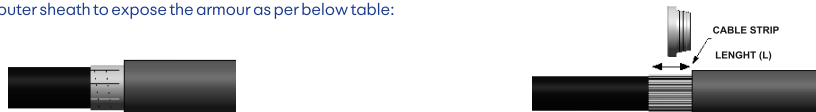
**Universal Armour Clamping Ring**  
Direction 1: For SWA & AWA  
Direction 2: For all other Armour

READ ALL INSTRUCTION CAREFULLY BEFORE INSTALLATION

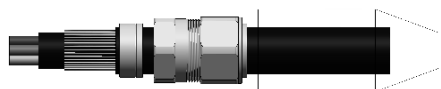
Step 1 : If required fit the Shroud over the cable outer sheath. Separate components 01 to 04 (Sub-Assembly A) from 07 to 10 (Sub-Assembly B). Now pass the Sub Assembly B (All 4 components 07,08,09,10 are not separated) & Universal Armour Clamping Ring-06 over the cable. Use appropriate Direction mark (Mentioned on Universal Armour Clamping Ring) towards the equipment side as per required Cable Wire Armours.



Step 2 : Now remove the cable outer sheath & prepare armour/braid to suit the geometry of the equipment. Remove a further outer sheath to expose the armour as per below table:

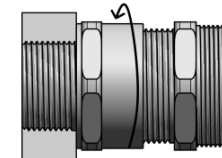


Cable Gland Size	20S/16, 20S, 20	25S,25,32,40	50S, 50, 63S, 63	75S, 75, 90
Cable Strip Length	12mm	15mm	18mm	20mm



If Applicable

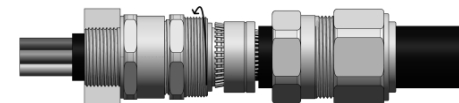
Step 3 : Ensure that Entry Thermoset seal (02) is relaxed by loosening the Compression Body-04 (Sub-Assembly A). Now fit Sub-Assembly A into the threaded equipment by screwing the Entry Component-01 or by securing it in a clearance hole using a lock nut as applicable.



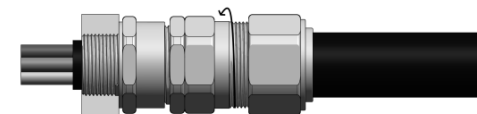
Step 4 : Insert the Detachable Armour Cone-05 in the Compression Body-04. Pass the cable through Sub-Assembly A until the armour engaged with the the Detachable Armour Cone-05. Spread the armour evenly around the Detachable Armour Cone-05.



Step 5 : Gently push the cable forward to maintain contact between the braid/armour and Detachable Armour Cone-05, tighten the Compression Body-04 until the Entry Thermoset Seal seal makes contact with the cable inner sheath till heavier resistance is felt. Tighten as per below mentioned table tightening torque.



Step 6 : Hold the Compression Body-04 with one spanner and tighten Sub-Assembly B onto Sub-Assembly A using second spanner as per below mentioned table tightening torque.



Tightening Torque Value in Nm: Metric / NPT (For E1FU & E1FU-HT)														
Gland Size	20S/16	20S	20	25S	25	32	40	50S	50	63S	63	75S	75	90
Torque	40	40	40	40	40	40	70	85	90	105	105	180	210	405

Step 7 : Tighten the outer seal Compression Cap-10 with hand until the seal is formed around the cable. Now hold Middle Body-07 with one Spanner and tighten Compression Cap-10 one & half further turn with second Spanner.

