TECHNICKÁ INŠPEKCIA, a.s.

SLOVENSKÁ REPUBLIKA

[1] EU-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective System Intended for use in potentially explosive atmospheres
Directive 2014/34/EU

[3] EU-Type Examination Certificate Number: **TI16ATEX 671-3 X**

[4] Equipment or Protective System: **CABLE GLAND**
Type: E1FWFC, E1FXFC, E1FWRM, E1FXRM, E1FWRF, E1FXRF

[5] Manufacturer: **AKSHAR BRASS INDUSTRIES**

[6] Address: 4027, GIDC, Phase-III, Jamnagar-361 004, Gujarat, India

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Technická inšpekcia, a.s., Notified Body Number 1354 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report No. 671/5/2016-3.

[9] Compliance with the Essential Health and safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-31:2014

[10] If the sign "X" is placed after the certificate number, it indicate that the equipment or protective systems is subject to special condition for safe use specified in the schedule to this certificate.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

[12] The marking of the equipment or protective system shall include the following:

II 2 GD Ex db IIC Gb	**- 60°C ≤ Tamb ≤ 125°C**
Ex tb IIIC Db IP66	**- 60°C ≤ Tamb ≤ 125°C**

Technická inšpekcia, a.s.
Trnavská cesta 56
821 01 Bratislava, Slovakia
e-mail: tisr@tisr.sk
web: www.tisr.sk
Tel.: +421 2 49208 100

TECHNICKÁ INŠPEKCIA • TI • NB 1354 -5- • SLOVENSKÁ REPUBLIKA

Bratislava, May 10th, 2016

Ing. Dušan Konický
General Director

301054

CSTA3-128

NB 1354

[13] **Schedule**

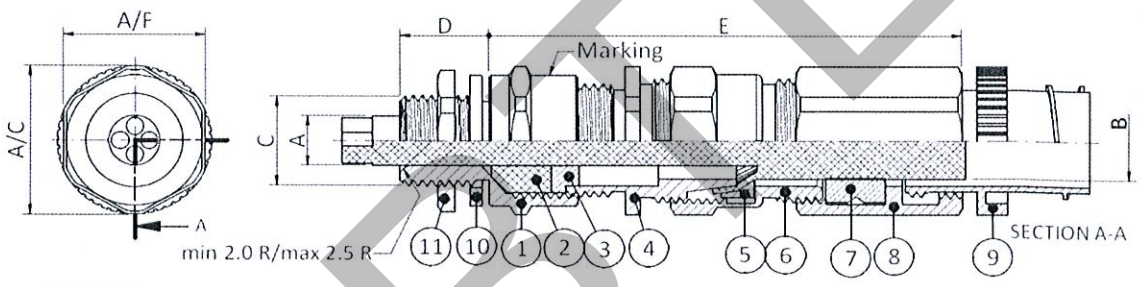
[14] **EU-Type Examination Certificate Number: TI16ATEX 671-3 X**

[15] Description of Equipment or protective system:

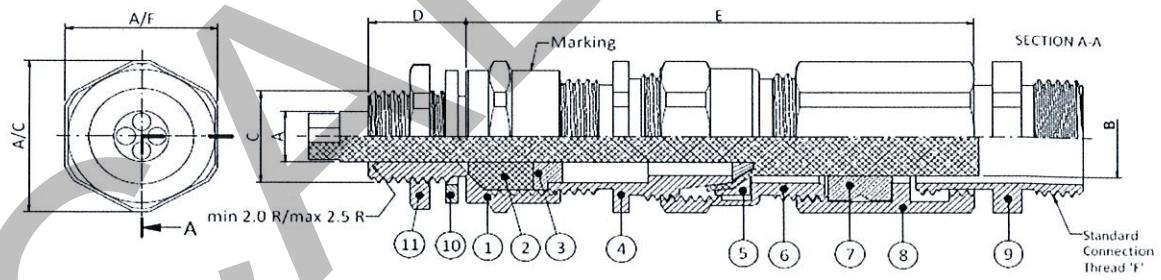
Akshar E1FWFC, E1FXFC, E1FWRM, E1FXRM, E1FWRF, E1FXRF types Cable Glands are for Indoor and Outdoor use in the appropriate Hazardous Areas with armored cable. They provide flameproof seal on the cable inner sheath and environmental seal on the cable outer sheath with environmental protection to IP66. They are suitable for normal industrial environmental of temperature, humidity and vibration.
Cable Gland confirm to following Standards for Group II and III, Category 2 for Zone 1 & 2 and Category 2 for Zone 21 & 22, for ambient temperature range -60°C≤Ta≤+125°C:
EN 60079-0: 2012+A11:2013, EN 60079-1: 2014, EN 60079-31: 2014

Cable gland selection:

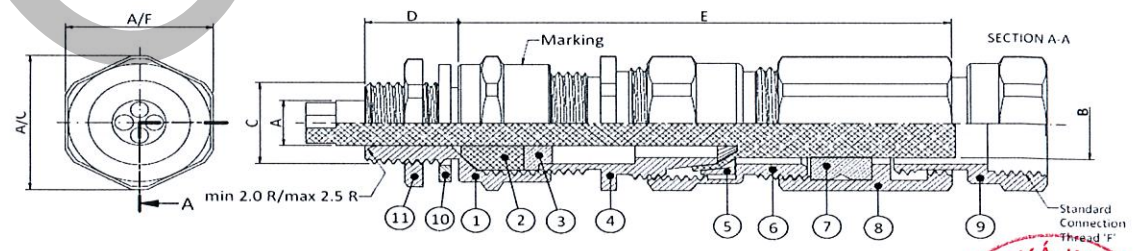
E1FFC



E1FRM



E1FRF



* Cable Gland Size	Standard Entry Thread "C"				Entry Thread Length		Entry Thread "C" Option		Armoured Wire Diameter				Cable Diameter				Standard Connection Thread 'F'			Body, Seal Nut		Protrusion Length "E"	Torque (Nm)
					Metric	NPT			for W type		for X type		Bedding Dia A		Overall Dia B					Across Flat	Across Corner		
	Metric	NPT/BSP	ET	PG	Length "D"	Length "D"	Metric	NPT	Min	Max	Min	Max	Min	Max	Min	Max	Metric	NPT	BSP (G)	A/F	A/C		
20s16	M20x1.5	1/2"	3/4"	PG 11	15.00	15.00	M25x1.5	3/4"	0.90	0.90	0.30	1.00	3.10	8.60	6.10	13.10	M20x1.5	1/2"	1/2"	24.00	26.20	76.25	35
20s	M20x1.5	1/2"	3/4"	PG 13.5	15.00	15.00	M25x1.5	3/4"	0.90	1.25	0.30	1.00	6.20	11.70	9.50	15.90	M20x1.5	1/2"	1/2"	24.00	26.20	75.00	35
20	M20x1.5	1/2"	3/4"	PG 16	15.00	15.00	M25x1.5	3/4"	0.90	1.25	0.40	1.00	6.50	13.90	12.50	20.90	M20x1.5	1/2"	1/2"	30.00	33.00	74.50	35
25	M25x1.5	3/4"	1"	PG 21	15.00	15.00	M32x1.5	1"	1.25	1.60	0.40	1.20	11.30	19.90	19.90	26.20	M25x1.5	3/4"	3/4"	36.00	39.20	91.50	45
32	M32x1.5	1"	1.1/4"	PG 29	15.00	15.00	M40x1.5	1.1/4"	1.60	2.00	0.40	1.20	17.00	26.20	23.70	33.90	M32x1.5	1"	1"	46.00	50.60	93.75	55
40	M40x1.5	1.1/4"	1.1/2"	PG 36	15.00	15.00	M50x1.5	1.1/2"	1.60	2.00	0.40	1.60	23.60	32.10	27.90	40.40	M40x1.5	1.1/4"	1.1/4"	55.00	60.00	95.50	65
50s	M50x1.5	1.1/2"	2"	PG 36	15.00	15.00	M63x1.5	2"	2.00	2.50	0.40	1.60	31.50	38.20	35.20	46.70	M50x1.5	1.1/2"	1.1/2"	60.00	65.00	96.00	80
50	M50x1.5	2"	2"	PG 42	15.00	15.00	M63x1.5	2.1/2"	2.00	2.50	0.60	1.60	35.80	44.00	40.40	53.00	M50x1.5	1.1/2"	1.1/2"	70.00	75.00	97.00	80
63s	M63x1.5	2"	2.1/2"	PG 48	15.00	15.00	M75x1.5	2.1/2"	2.00	2.50	0.60	1.60	41.70	50.00	45.60	59.40	M63x1.5	2"	2"	75.00	80.00	98.35	95
63	M63x1.5	2.1/2"	2.1/2"	-	15.00	15.00	M75x1.5	3"	2.00	2.50	0.60	1.60	47.50	56.00	54.60	65.80	M63x1.5	2"	2"	80.00	85.00	101.75	95
75s	M75x1.5	2.1/2"	3"	-	15.00	15.00	M90x1.5	3"	2.00	2.50	0.60	1.60	55.00	62.00	59.00	72.00	M75x1.5	2.1/2"	2.1/2"	90.00	95.00	106.85	110
75	M75x1.5	3"	3"	-	15.00	15.00	M90x1.5	3.1/2"	2.50	3.00	0.60	1.60	62.00	68.00	66.70	78.40	M75x1.5	2.1/2"	2.1/2"	100.00	110.00	112.00	110
90	M90x1.5	3.1/2"	3.1/2"	-	18.00	18.00	M100x1.5	4"	3.00	3.50	0.80	1.60	67.00	79.00	76.20	90.30	M90x1.5	3"	3"	112.00	122.00	140.50	150

Material of cable gland:

CHEMICAL COMPOSITION OF MATERIAL																
Material : Brass CW614N or Brass CW617N or Brass EN12165																
Elements	Cu	Zn	Pb	Sn	Fe	Mn	Ni	Al	Si	P	Cd	Sb	Be	Zr	Ti	Mg
Min	57.00	36.00	2.50	-	0	0	0	0	0	0	0	0	0	0	0	0
Max	59.00	39.50	3.50	0.30	0.30	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Material : Stainless Steel 316L									
Elements	C	Mn	Si	P	S	Cr	Mo	Ni	N
Max	0.03	2.00	0.75	0.045	0.03	18.00	3.00	14.00	0.10
Min	0.0	0.0	0.0	0.0	0.0	16.00	2.00	10.00	0.0

[16] Report Number:
Inspection report No: 671/5/2016-3
Final Test Report No: 671/5/2016-3

[17] Special conditions for safe use:

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°C to + 125°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.

[18] Essential Health and Safety Requirements:
Covered by the standards listed at item 9.

TECHNICKÁ INŠPEKCIA • TI • NB 1354 - 5 - SLOVENSKÁ REPUBLIKA •

[19] Drawings and Documents:

Number	Sheet	Issue	Date	Description
Ex-E1FW/X	1 of 1	REV No. 0	05/04/2016	E1FW/X Conduit Cable Gland
IM/E1FWFC	7 pages	REV No. 00	12/04/2016	Installation Manual E1FWFC/E1FXFC
IM/E1FWRF	7 pages	REV No. 00	12/04/2016	Installation Manual E1FWRF/E1FXRF
IM/E1FWRM	7 pages	REV No. 00	12/04/2016	Installation Manual E1FWRM/E1FXRM

Technická inšpekcia, a.s.
Trnavská cesta 56
821 01 Bratislava, Slovakia
e-mail: tisr@tisr.sk
web: www.tisr.sk
Tel.: +421 2 49208 100

TECHNICKÁ INŠPEKCIA • SLOVENSKÁ REPUBLIKA • TI NB 1354 - 5 -

Bratislava, May 10th, 2016

Ing. Dušan Konický
General Director