DESSCRIPTION

These safety notes are relevant for the installation, use and maintenance of the cable glands series A2F, A2FPF, A2FPM, A2FCNF & E1FW... are suitable for Gas Group I & IIC For Zone 1 and 2, Dust Group IIIC for use in Zone 20, Zone 21 and Zone 22 and Conformity is obtained by the observances of the following International and European standards:

EN IEC 60079-0:2018
EN/IEC 60079-1:2014
EN/IEC 60079-7:2015+A1:2018
EN 60079-31:2014 / IEC 60079-31:2022

TECHNICAL DATA

CODE OF PROTECTION	I M2/II 2G/1D, Ex db I Mb, Ex eb I Mb, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da
IECEx Certificate No	**IECEx ITS25.0006X**
ATEX Certificate No	**ETL25ATEX0489X**
Service Temperature	-60°C to +160°C

INGRESS PROTECTION DEGREE

- Cable Glands are suitable as per EN/IEC 60529 for Ingress Protection IP66, IP67 & IP68 (3m), with “O” ring gaskets with ISO Metric Threads.
- Cable Glands with NPT Threads are suitable for IP66, IP67 & IP68 (3m) with Dow Corning Grease.

ENTRY THREADS

- Standard Entry Threads:
  - ISO METRIC ISO 262 - ISO 965 - 1 from size M16X1.5 up to M90X1.5
  - NPT ANSI B.1.20.1 1983 from size 1/2” up to 3 ½”
- Optional Entry Threads (For Ex eb Only)
  - ET(BSC), BSPP, BSPT and PG

MATERIAL

Brass CZ121: ASTM-B121
Stainless Steel 304: ASTM A 351-2006 GR. CF8
Stainless Steel 316/316L: ASTM A 743-2006 GR. CF3M

EQUPMENT IDENTIFICATION

Type of Gland: A2F, A2FPF, A2FPM, A2FCNF, E1FW
Entry Thread Size: (See Table below)
Material: (See Table below)

Ex marking on Cable Glands

ExGRIP®
Ex Cable Glands & Accessories

IECEx ITS 25.0006X and ETL25ATEX0489X
CE 2903 Ex I M2
Ex db I Mb; Ex eb I Mb
Ts: -60˚C≤Ta≤+160˚C

CE 2903 Ex II 2G/1D
Ex db IIC Gb; Ex eb IIC Gb; Ex ta IIIC Da
Ts: -60˚C≤Ta≤+160˚C

INSTALLATION

The unit’s series must be installed, in conformity to the International and European standards IEC 60079-14 & EN60079-14, by qualified and authorized personnel.

Requirement for protection mode Ex “db”

For ISO 262 threaded entries the number of engaged threads must be > 5 with a minimum length of 8mm and class of tolerance must be 6H/6g. For NPT threaded entries the number of engaged threads must be > 5. To guarantee the IP degree of protection, Dow Corning 4 Electrical Compound must be used as indicated in the picture below.

When taper thread is used, the connection shall be wrench tight. Additional holes shall not be made into flameproof enclosures. Where the threaded entry or the hole size is different to that of the cable gland, a flameproof adapter complying with 60079-1 shall be fitted which complies with thread engagement requirements.

Material of the enclosure can be aluminum, steel, stainless steel, brass or cast iron, with a wall rugosity of maximum 1.6Ra value. Cable gland can be mounted on enclosure which has a maximum draft angle of 10°

Requirement for protection mode Ex “eb” or Ex “tb”

When installed on thread entry, to guarantee the IP degree of protection, a grease type Dow Corning 4 Electrical Compound must be used as indicated in the picture below. ISO threaded adapters complying with 60079-0 may be fitted into the cable entry holes to allow the connection of the cable gland.

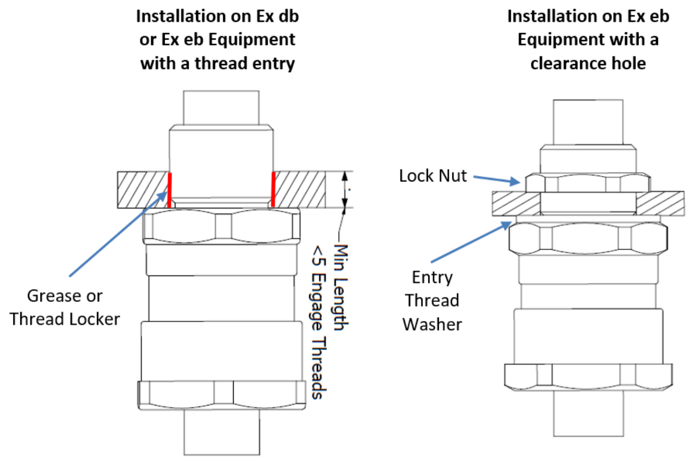
Material of the enclosure can be aluminum, steel, stainless steel or plastic but taper thread holes in plastic enclosures are not recommended because of the high stress created during sealing those threads may fracture the enclosure wall. The maximum wall rugosity of the enclosure should be 0.8 Ra and cable gland can be mounted on enclosure which have a maximum draft angle of 10°.

For not threaded holes, the diameter shall allow clearance as indicated in the table below. To guarantee the IP degree of protection a Teflon washer and a locknut must be used as indicated in the picture below.

Material of the enclosure can be aluminum, steel, stainless steel or plastic with a wall rugosity of maximum 0.8Ra value. Cable gland can be mounted on enclosures which have a maximum wall thickness of 8mm.

TOLLERANCE FOR CLEARANCE HOLE ON EX eb ENCLOSURE					
ØA (METRIC)	**ØB [mm]**	**ØA (NPT)**	**ØB [mm]**	**ØA (ET)**	**ØB [mm]**
M16x1.5	16 - 16.5	1/2" NPT	21 - 21.5	5/8"	15.8-16.4
M20x1.5	20 - 20.5	3/4"NPT	26.5 - 27	3/4"	19-19.5
M32x1.5	32 - 32.5	1" NPT	33 - 33.5	1"	25.4-26
M40x1.5	40 - 40.5	1-1/4" NPT	42 - 42.5	1-1/4"	31.75-32.5
M50x1.5	50 - 50.5	1-1/2" NPT	48 - 48.5	1-1/2"	38-38.6
M63x1.5	63 - 63.5	2" NPT	60 - 60.5	2"	50.8-60.3
M75x1.5	75 - 75.5	2-1/2" NPT	72.5 - 73	2-1/2"	63.5-64
M90x1.5	90 - 90.5	3" NPT	88.5 - 89	3"	76.2-76.8
		3-1/2" NPT	101 - 102.5	3-1/2"	

ØA (BSPP)	ØB [mm]	ØA (BSPT)	ØB [mm]	ØA (PG)	ØB [mm]
G 3/8	16.7-17.2	G 3/8	16.7-17.2	PG 9	15.2-15.7
G 1/2	21 - 21.5	G 1/2	21 - 21.5	PG 11	18.6-19.1
G 3/4	26.5 - 27	G 3/4	26.5 - 27	PG 13.5	20.4-21
G 1	33 - 33.5	G 1	33 - 33.5	PG 16	22.5-23
G 1-1/4	42 - 42.5	G 1-1/4	42 - 42.5	PG 21	28.3-28.8
G 1-1/2	48 - 48.5	G 1-1/2	48 - 48.5	PG 29	37-37.5
G 2	60 - 60.5	G 2	60 - 60.5	PG 36	47-47.5
G 2-1/2	75-75.5	G 2-1/2	75-75.5	PG 42	54-54.5
G 3	88-88.5	G 3	88-88.5	PG 48	59.3-60



MAINTENANCE

Only qualified and formed workers can allow the maintenance of cable gland according to the International standard IEC 60079-17 and European standard EN 60079-17.

We suggest always keeping the device clean to avoid the accumulation of dust over it and provide period control of the clamping cable status. For dusty areas we suggest protecting the cable gland using a shroud. Cable tightening control should be made at least once a year.

All damaged parts must be changed, and no repairing is allowed.

SPECIAL CONDITION OF SAFE USE

1. Cable Glands are only suitable for fixed installations.
2. Cables must be effectively clamped from pulling and twisting.
3. The glands should only be used with round cables and tightened to the rated torque with torque wrenches.
4. 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.
5. The rated service temperature range of the Cable Glands is -60°C ≤ Ta ≤ +160°C.
6. The Cable Glands have to be protected from hydraulic fluids, oils and greases when applied for Group I (mines) use.

SINUOS

SINUOS BRASS INTERNATIONAL PVT.LTD.