Technor

Solutions through technology

Reservations of failure and changes in this catalogue.

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Technor Group is an international technology group with its head office in Stavanger, and with its own operational businesses in Norway, France, UK, Italy, United Arab Emirates, Singapore and Benelux.
The Groups main markets are within Oil & Gas and Petrochemical Industries. Our products enable safe transport and application of electric signals and power in potentially explosive atmospheres. Our core competence is in the fields of electro-mechanics, instrumentation and electronics.
Equipment for use in explosive atmospheres must satisfy the requirements of international and national regulations (Atex for Europe, others IECEx, CSA, UL, Gost etc.), and each individual component of the systems must be certified in accordance with specific Ex-certification requirements.

Technor

General

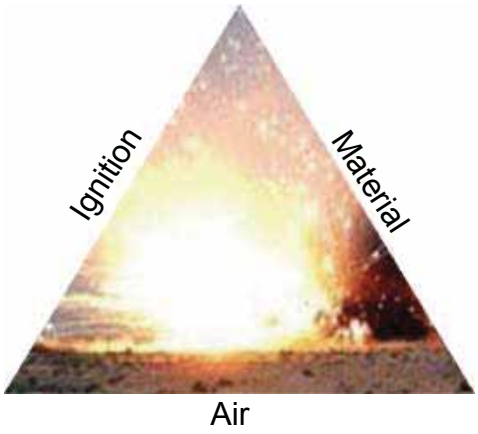
Products and Solutions

Explosion Protection

An explosive atmosphere is built up by a mixture of flammable gases, vapours, mists or dust with atmosphere air.
If the mixture (flammable substances/air) has the right ratio it can be ignited by a ignition source and create an explosion.

Factors for creating an explosion:

1. Air (or in fact oxygen in the air)
2. Flammable material (substance)
3. Ignition source



There are two main principles to avoid an explosion; primary and secondary precautions.
When an ignition source is present primary explosion protection can be achieved by:
- Using natural or forced ventilation to limit the explosive concentration
- Avoiding flammable materials (substance)
- Using inert gas in the atmosphere (e.g. Nitrogen)

If still an explosive atmosphere can be created in a area, Ignition Control is the alone way of avoiding explosion.

Type of Ignition Sources

- Hot surfaces
- Flames and hot gases
- Mechanically produced sparks
- Electrical equipment
- Transient currents
- Static electricity
- Lightning strikes
- Electromagnetic waves
- Optical radiation
- Ultrasound
- Chemical reactions
- People (indirectly)

The techniques of equipment protection for use in explosive atmospheres are just a matter of controlling (eliminating) possible ignition sources (secondary explosion protection)

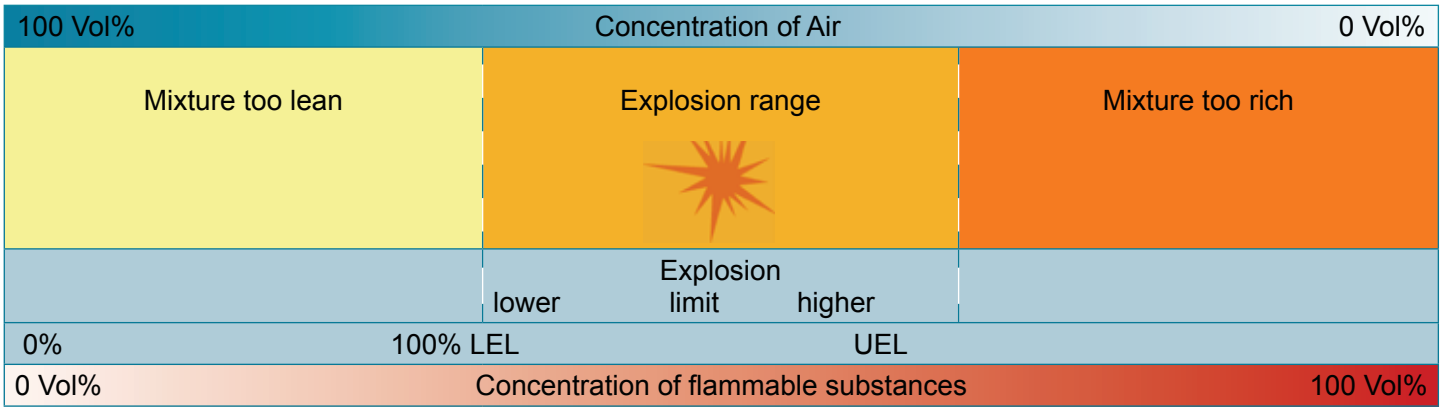
Where do we find explosive atmospheres?

- Metal surface grinding, especially aluminium dust and particles
- Oil refineries, rigs and processing plants
- Gas pipelines and distribution centres
- Printing industries, paper and textiles
- Aircraft refuelling and hangars
- Chemical processing plants
- Grain handling and storage
- Sewage treatment plants
- Surface coating industries
- Underground coalmines
- Woodworking areas
- Sugar refineries
- Vessels/ships
- Power plants

Where a potential explosive atmosphere can occur, certain safety levels need to be taken into account regarding the possible danger of an explosion in this area. The areas therefore need to be divided into zones according to presence of the flammable substances.

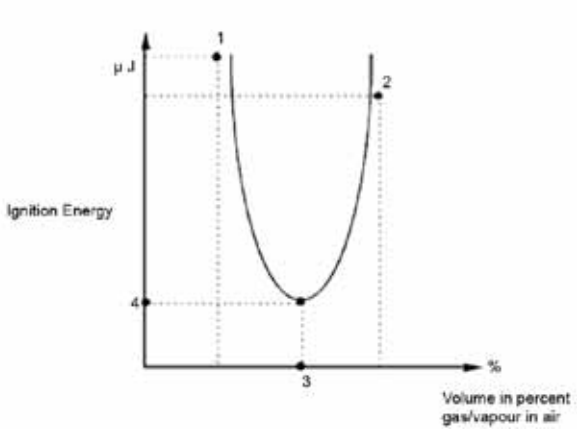
Zone 0	Zone 1	Zone 2
A place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuosly or for long periods or frequently. Explosive atmosphere for more than 1000 h/yr.	A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally. Explosive atmosphere for more than 10, but less than 1000 h/yr.	A place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but - if it does occur - will persist for a short period only. Explosive atmosphere for less than 10 h/yr
Zone 20	**Zone 21**	**Zone 22**
A place in which an explosive atmospere in the form of cloud of combustible dust in air is present continously, or for long periods or frequently.	A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.	A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, but - if it does occur - will persist for a short period only.

Examples of the criteria for the mixture of flammable substances (gas) towards air in such a way that an explosion can occur are:



Typical concentration of gases/vapours in the air where an explosion can appear (% vol. of gas in air):

	LEL	Explosion	UEL	(IEC 60079-20-1)
Methane	**4.4%**	→	**16.5%**	
Propane	**1.7%**	→	**10.6%**	
Butane	**1.4%**	→	**9.3%**	



1. LEL (**L**ower **E**xplosive **L**imit)

2. UEL (**U**pper **E**xplosive **L**imit)

3. Optimum mixture

4. MIE: Minimum Ignition Energy

Atex directive

- Product Directive 1994/9/EC
- User Directive 1999/92/EC

Equipment Directive 1994/9/EC

This directive has been mandatory in Europe from 01.07.2003, and covers the regulations concerning equipment and protective systems for use in potentially explosive atmospheres. This directive has four chapters which are subdivided into 16 articles. In each chapter it is made reference to the Annex I to XI, which include 7 modules.
For full info visit http://ec.europa.eu/enterprise/atex/internationaldevelopment.htm

Content of directive 94/9/EC		
Main part		
Chapter	Article	Heading
I	1 - 7	Scope of application, placed in service and free movement of goods
II	8 – 9	Conformity assessment procedures
III	10 – 11	CE marking of conformity
IV	12 – 16	Concluding provisions
Annexes		
I	Criteria determining the classification decision of equipment groups in categories	
II	Essential safety and health requirements for the design and construction of equipment and protective systems for use in potentially explosive atmospheres	
III	Module: EC-type examination	
IV	Module: Production Quality assurance	
V	Module: Product verification	
VI	Module: Conformity to type	
VII	Module: Product Quality assurance	
VIII	Module: Internal control of production	
IX	Module: Unit verification	
X	CE marking and contents of the EC declaration of conformity	
XI	Minimum criteria to be taken into account by member states for the notification of bodies	

Atex Directive

The directive 1994/9/EC is dividing the equipment into groups and categories.

- Equipment Group I applies for mining.
  This group is subdivided into categories M1 & M2.
- Equipment Group II applies for all others (surface) areas.
  This group is subdivided into categories 1, 2 and 3.

Note:
Equipment group III applies to dust atmospheres according to EN/IEC 60079-0

Group Mining Industries		Group Regular industries (gas + dust hazardous areas)		
Category M1	Category M2	Category 1	Category 2	Category 3
Very high level of protection (safe with 2 faults) Must remain functional under specific explosive atmosphere concentration	High level of protection (safe with 1fault) De-energized under specific explosive atmosphere concentration	Very high level of protection (safe with 2 faults)	High level of protection (safe with 1 fault)	Normal level of protection (safe during normal operation)
Marking				
I M1	I M2	II 1 G (Gas) II 1 D (Dust)	II 2 G (Gas) II 2 D (Dust)	II 3 G (Gas) II 3 D (Dust)

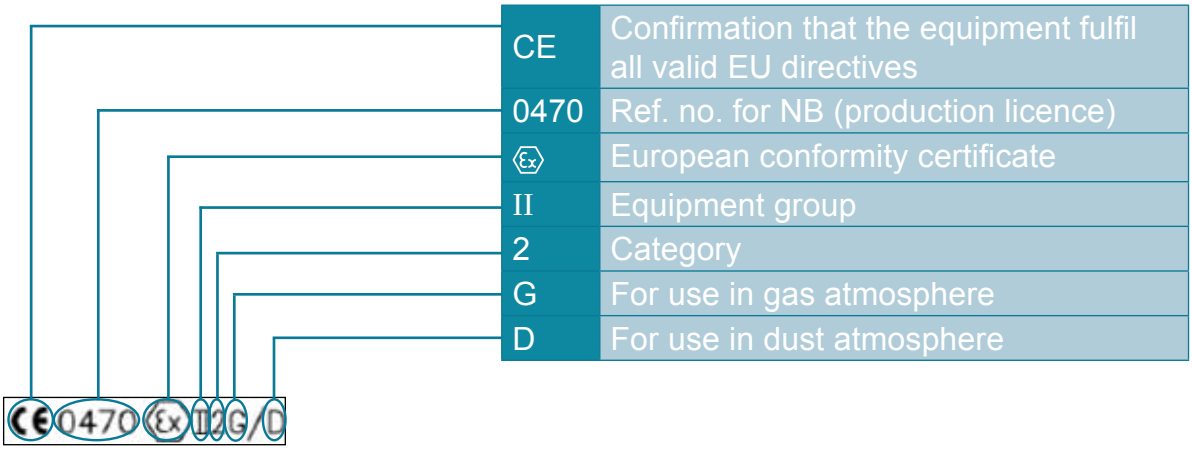
Electrical Equipment

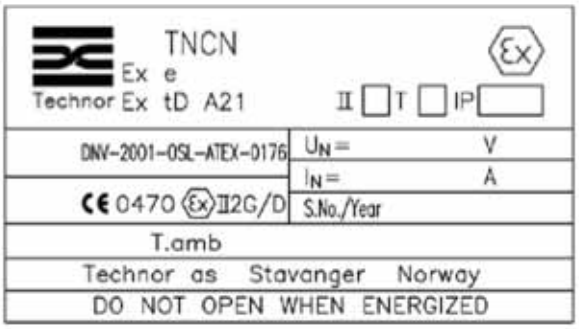
Area Zone	Equipment Category	How to comply	Production requirements
2	3	The manufacturer must evaluate the equipment according to valid standard/Directives, and create a technical file and subsequently issuing an EC D.O.C (Declaration of Conformity)	The manufacturer needs to ensure a production quality
1	2	EC-type examination certificate from NB (Notified Body, DNV, Nemko, INERIS e.g.)	The manufacturer needs to have a production quality system and obtain a Production Quality Assurance Notification from NB (Notified Body)
0	1	EC-type examination certificate from NB (Notified Body, DNV, Nemko, INERIS e.g.)	

Non-electrical equipment

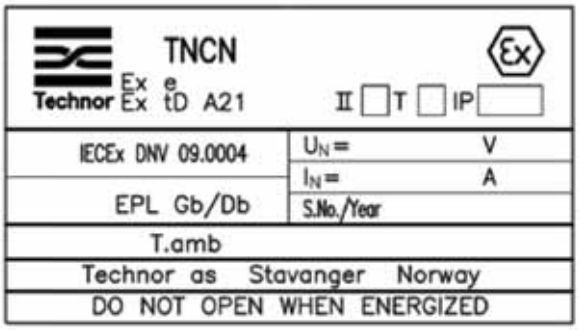
Area Zone	Equipment Category	How to be in compliance with the Atex Directive
2	3	To be verified by the manufacturer and submit a Technical File Manufacturer to issue EC D.O.C.
1	2	To be verified by manufacturer and submit technical file to NB (Nemko, DNV, INERIS e.g.) Manufacturer to issue EC D.O.C.
0	1	To be certified by NB, EC-type examination certificate from NB (Notified Body, DNV, Nemko, INERIS e.g.) Manufacturer to issue EC D.O.C.

Marking





Atex Marking



IECEx Marking

Note:
The equipment also needs to be marked with the conventional protection mode (Ex…) according to EN/IEC 60079-0 (EN/IEC 61241-0 or 60079-31 for dust atmospheres)

Operating instruction/user manual;
The operating instructions of the manufacturer must clearly define the intended use of the equipment by the operator. The minimum requirements for the operating instruction are amongst others:

- Information about safety aspects
- Installation
- Putting into service
- Use
- Assembling and dismantling
- Maintenance (servicing and emergency repair)
- Adjustment

Manufacturer's Declaration of Conformity (EC D.O.C.)

Equipment and protective systems can be placed on the market, only if marked with the CE mark and complete with operating instructions and the manufacturer's Declaration of Conformity. The CE conformity marking and the issued Declaration of Conformity confirm that the equipment complies with all requirements and assessment procedures specified in the EC Directives.

Note:
According to Directive 94/9/EC the mandatory evidence of complying with this is given in the EC D.O.C. including the operating instructions.

Atex Directive

User Directive 1999/92/EC

This directive gives the minimum requirement for improving the safety and health protection of workers potentially at risk from explosive atmospheres.

The main issues to be addressed;

- Assessment of explosion risk
- Zone classification
- Explosion protection documents
  (including requirements for personnel to do engineering, equipment selection, installation, maintenance, repair etc.)

Structure of Directive 1999/92/EC

Ruling part		
Section	Article	Heading
I	1-2	General provisions
II	3-9	Obligations of the employer
	3	Prevention of and protection against explosions
	4	Assessment of the explosion risks
	5	General obligations
	6	Duty of coordination
	7	Places where explosive atmosphere may occur
	8	Explosion protection document
	9	Special requirements for work equipment and workplaces
III	10-15	Other requirements
Annexes		
I		Classification of places where explosive atmospheres may occur 1. Places where explosive atmospheres may occur 2. Classification of hazardous places
II	A	Minimum requirements for the improvement of the safety and health protection of employees who could be endangered by explosive atmospheres 1. Organizational measures 2. Explosion protection measures
	B	Criteria for the selection of equipment and protective systems
III		Warning signs for marking areas in which explosive atmospheres can occur

For further information (Directive 1999/92/EC and user guide) please visit;
http://ec.europa.eu/employment_social/health_safety/legislation_en.htm

Marking of Hazardous places

Ignition Sources

Classification of Ignition Sources for gas and vapour

Hot Surfaces Ignition Temperature	Sparks Ignition Energy
↓	↓
Temperature Class T1 ... T6	Gas Group A C

Temperature Class

Temperature Class	Maximum Surface Temperature (at max. ambient temperature)
T1	450 °C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

Energy Classification

Minimum Ignition Energy	European Groups	USA/Canada Groups	Gas / Vapour
< 20 µ Joules	C	A	Acetylene, Carbon disulphide
< 20 µ Joules		B	Hydrogen
< 60 µ Joules	B	C	Ethyl ether, Ethylene
< 180 µ Joules	A	D	Acetone, Butane, Ethanol, Gasoline, Hexane, Methanol, Methane, Naphtha, Propane

Standards valid for

Electrical Apparatus for Explosive Gas Atmospheres		
	EN (old)	EN (current)
General requirements	EN 50 014	EN 60079-0
Flameproof enclosures “d”	EN 50 018	EN 60079-1
Pressurized enclosures “p“	EN 50 016	EN 60079-2
Powder filling “q“	EN 50 017	EN 60079-5
Oil immersion “o”	EN 50 015	EN 60079-6
Increased safety “e”	EN 50 019	EN 60079-7
Intrinsic safety “i”	EN 50 020	EN 60079-11
Type of protection “n”	EN 50 021	EN 60079-15
Encapsulation “m”	EN 50 028	EN 60079-18
Intrinsically safe systems		EN 60079-25
Electrical equipment for Zone 0	EN 50 284	EN 60079-26
Intrinsically safe field bus systems		EN 60079-27
Optical radiation “op”		EN 60079-28

Standards valid for electrical apparatus for Explosive dust atmosphere

Standard EN (IEC)	Protection name	Protection method
61241-0		General requirement for Dust equipment
61241-1/60079-31	tD	Protected by enclosures
61241-2	pD	Protected by pressurization
61241-11	iD	Protected by intrinsic safety
61241-18	mD	Protected by encapsulation

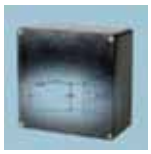
Standards valid for non-electrical equipment

Protection type	EN 13463-	Marking letter
Basic method and requirements	EN13463-1*	
Flow restricting enclosure	EN13463-2	fr
Flameproof enclosure	EN13463-3	d
Constructional safety	EN13463-5	c
Control of ignition sources	EN13463-6	b
Protected by liquid immersion	EN13463-8	k

* Will be replaced by ISO/EN 80079-36

Internal combustion engine motors

EN 1834-1	Gas, group II
EN 1834-2	Mines, group I
EN 1834-3	Dust, group II

	Marking	
Flameproof enclosures (IEC/EN 60079-1) The enclosures are constructed so that internal explosions can not be transmitted to the external atmosphere	Ex d	
Increased safety (IEC/EN 60079-7) Prevention of ignition sources by fail safe design (only simple electric components)	Ex e	
Intrinsic safety (IEC/EN 60079-11) Limitation of the energy stored in the electrical circuits category “ia” and “ib”, “simple” apparatus, “associated” apparatus, safety barriers Installation: Safety values (Uo, Io, Po, Lo, Co) and clearances	Ex ia/ib/ic	
Type n (IEC/EN 60079-15 : Zone 2) No ignition source in normal operation (no sparks, no hot surfaces)	Ex nA, Non-sparking Ex nC, Protected sparking Ex nR, Restricted breathing Ex nL, Energy limited	
Oil immersion (IEC/EN 60079-6) Electrical parts are submerged in oil	Ex o	
Pressurized apparatus (IEC/EN 60079-2) Electrical parts are purged and pressurized with a protective gas (air or inert gas) Installation: Purge and pressure control/shut down device	Ex px, Gb (to safe area) Ex py, Gb (to Gc) Ex pz, Gc (to safe area)	
Powder filling (IEC/EN 60079-5) Electrical parts are submerged in a quartz powder	Ex q	
Encapsulation (IEC/EN 60079-18) Electrical parts are encapsulated in a specific resin.	Ex ma/mb	

Equipment Protection Level

EPL (Equipment Protection Level) according to IEC/EN 60079-0 standard

Definition:
The level of protection assigned to equipment based on its likelihood of becoming a source of ignition and distinguishing the differences between explosive gas atmospheres, explosive dust atmospheres, and the explosive atmosphere in mines susceptible to firedamp.

Link between Zones, Atex categories and EPL:

Area towards Equipment

EN 60079-0			Directive 94-9-EC Product directive (Atex 100)		EN60079-10X	Directive 99/92/EC User directive (Atex 137)	
EPL	Group	Level of protection	Equipment group	Equipment category	Zones	Hazardous quantities	Extent of protective measure (Risk)
Ma	I	Very high	I	M1	N/A	Without specific methane concentration	Safe with 2 faults, rare and foreseen
Mb		High		M2		With specific methane concentration	Safe with 1 fault, foreseen
Ga	II	Very high	II	1G	0	Often/longer periods	Safe with 2 faults, rare and foreseen
Gb		High		2G	1	Occasionally	Safe with 1 fault, foreseen
Gc		Enhanced		3G	2	Rear/most likely never	Normal
Da	III	Very high		1D	20	Often/longer periods	Safe with 2 faults, rare and foreseen
Db		High		2D	21	Occasionally	Safe with 1 fault, foreseen
Dc		Enhanced		3D	22	Rear/most likely never	Normal

Why EPL (Atex categories);
Historically it has been acceptable to install equipment into specific zones based on the type of protection.

In some cases it has been shown that the type of protection may been divided into different levels of protection that can be correlated against each Zone. A better risk assessment would consider all factors. When using a risk assessment approach instead of the inflexible approach of the past linking equipment to Zones the inherent ignition risk of the equipment is clearly indicated, no matter what type of protection is used.

An example using a risk assessment approach:
Plant operators often make intuitive decisions on extending (or restricting) their Zones in order to compensate for this inflexibility. A typical example is the installation of “Zone 1 Type” navigation equipment in Zone 2 areas of offshore oil production platforms, so that the navigation equipment can remain functional even in the presence of a totally unexpected and prolonged gas release. On the other hand, it is reasonable for the owner of a remote, well secured, small pumping station to drive the pump with a “Zone 2 Type” motor, even in Zone 1, if the total amount of gas available to explode is small and the risk to life and property from such as explosion can be discounted.

The situation became more complex with the publication of the first edition of IEC 60079-26 which introduced additional requirements to be applied for equipment intended to be used in Zone 0. Prior to this, Ex ia was considered to be the only technique acceptable in Zone 0.

It has been recognized that it is beneficial to identify and mark all products according to their inherent ignition risk. This makes equipment selection easier and a risk assessment approach, more appropriate.

New marking for Ex equipment

ATEX	OLD Gas Atmosphere	New IEC 60079-0:2007/EN 60079-0:2009
Ex II 2 G	EEx/Ex d IIB T6	Ex d IIB T6 Gb or Ex db IIB T6*
Ex II 2(1) G	EEx/Ex d [ia IIC] IIB T6	Ex d [ia IIC Ga] IIB T6 Gb or Ex db [ia IIC] IIB T6*
Ex II 2 G	EEx/Ex ia IIC T4	Ex ia IIC T4 Gb or Ex ib IIC T4*
Ex II 2 G	EEx/Ex e II T4	Ex e IIC T4 Gb or Ex eb IIC T4*

ATEX	OLD Dust Atmosphere	New IEC 60079-0:2007/EN 60079-0:2009
Ex II 2 D	Ex tD A21 IP65 T120°C	Ex t IIIC T120°C Db or Ex tb IIIC T120°C*
Ex II 2(1) D	Ex tD [iaD] A21 IP65 T120°C	Ex t [ia Da] IIIC T120°C Db or Ex tb [ia] IIIC T120°C*
Ex II 1 D	Ex isD A20 IP65 T120°C	Ex ia IIIC T120°C Ga or Ex ia IIIC T120°C*

*IEC alternate marking

EPL	Ga	Gb	Gc
flameproof enclosure		db	
increased safety		eb	
intrinsic safety	ia	ib	ic
encapsulation	ma	mb	
non-sparking			nAc
protected sparking			nCc
restricted sparking			nRc
energy limited			nLc
oil immersion		ob	
pressurization		pxb pyb	pzc
powder filling		qb	

EPL	Da	Db	Dc
protected by enclosure	ta	tb	tc
intrinsic safety	ia	ib	
encapsulation	ma	mb	
pressurization		pb	pc

The Ex marking for explosive gas atmospheres and explosive dust atmospheres shall be separate and not combined:

Ex II 1 G - Ex ia IIB T4
Ex II 1 D - Ex ia IIIC T120°C

or alternatively:

Ex II 1 GD
Ex ia IIB T4 Ga
Ex ia IIIC T120°C Da

IP Degree of Protection according to EN/IEC 60529

First figure		Second figure	
0	No protection	0	No protection
1	Protected against a solid object 50 mm or greater	1	Protected against vertically dripping water
2	Protected against a solid object 12 mm or greater	2	Protected against vertically dripping water, when tilted 15 degrees
3	Protected against a solid object 2,5 mm or greater	3	Protected against water spraying at an angle up to 60 degree
4	Protected against a solid object 1 mm or greater	4	Protected against water splashing from any direction
5	Dust protected	5	Protected against jets of water from any directions
6	Dust tight	6	Protected against powerful jets of water from any directions
		7	Protected against immersion between a depth of 150 mm and 1000 mm
		8	Protected against submersion

Example IP66

IP Rating

IP - first character	NEMA Enclosure type																				IP - second character
A	1		2		3, 3X, 3S, 3SX		3R, 3RX		4, 4X		5		6		6P		12, 12K, 13				B
IP0_																					IP_0
IP1_																					IP_1
IP2_																					IP_2
IP3_																					IP_3
IP4_																					IP_4
IP5_																					IP_5
IP6_																					IP_6
																					IP_7
																					IP_8
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B			

Engineering and Customer based product development

Our engineers have a comprehensive level of experience in developing and designing Ex equipment for most applications, and hold a high level of professional competence in this field. In accordance with our vision, we wish you as our customer to receive the full benefit of this competence through working with us to find creative and cost effective solutions to your particular needs, thus increasing safety and profitability for your business. This kind of cooperation also helps to ensure effective implementation of new technology in our market sector. We call this Customer based product development. Our competitive advantage is that we can quickly implement a tailor made solution, from design straight to product certification, and deliver the product in small or large production batches.

Solutions through technology!

From Idea to Solution:

- Concept study
- Engineering
- Prototyping
- Ex certification
- Documentation
- Production
- Delivery

Technor's Engineering and Customer based activities are divided into the following categories:

Panels

Engineering and assembly of standard products

Special solutions

Mainly engineering and assembly of standard products but with some parts which need to be engineered as tailor made

Tailor made solutions

These are products or solutions are engineered and designed especially according to the customer's requirements

Panels

Engineering and building of a solution based on standard Ex components (with or without incorporation of standard industrial components), such as control panels, switch gears, motor starters etc.
Typical examples are:

- Ex d panels
- Ex e/ed panels
- Ex p
- Ex n (Zone 2 only)

Special solution

Modifying existing Ex components to be adapted to certain tailor requirements, such as: CCTV applications, Remote I/O panels, HMI applications (LCD display and PC solutions), pressurized systems, wireless measuring systems, light equipment etc. Typical examples can include:

- Ex d solutions
- Ex e/ed solutions
- Ex p
- Ex n (for Zone 2)

Tailor made solutions (are mainly OEM products/solutions)

Creating and engineering of solution totally from the very beginning.
Typical applications are communication systems including wire, fibre optical, wireless transfer, CCTV solutions, measuring systems, different types of switch/control gear, light equipment etc.

The range of OEM products are designed to meet the clients demands, and are usually used within an industry where an explosive atmosphere may be present.

If you come up with a unique product idea which is going to be used in hazardous area, we can use our long-standing competence and experience within the Ex field to ensure that you achieve your vision.

We can tailor make products using all Ex protection methods in close relationship with our clients and have them verified/certified for II 3 G/D (Zone 2/ 22), II 2 G/D (Zone 1/ 21) , II 1 G/D (Zone 0/ 20) or a combination of these. For certification we are using partners such as INERIS, DNV, Nemko, IMQ etc.

Technor can offer you more than 20 years of experience with tailor made Ex products.

This is how we can carry out a project:

- Analyse the needs and valid directives/regulations

- Develop initial ideas for the project covering the following:
  - Mechanical (including IP NEMA rating, extreme temperature range, involved materials etc)
  - Electrical
  - Method of Ex protection
  - Budget price

- Create a model of the solution - 2D or 3D format

- Generation of prototypes for validation, if necessary

- Ex certification (certificate to be issued by Notified Bodies/Certification Bodies)
  - Atex
  - IECEx
  - Gost
  - Others (North America, South America etc.)

- Creating product documentation including:
  - Production documentation
  - Production procedures
  - CE verification
  - Declaration of Conformity
  - User manual
  - Other relevant demands for equipment to be used in hazardous area

- Our client can receive the product from our production facilities as a part product or a fully functional product. These can be delivered as follows:
  - The product labelled with Technor
  - The product labelled under the name of the client (this solution requires a production license in the name of the product owner)

- The client will receive a product that meets the requirements for use in hazardous area without requiring his own competence regarding Ex or production setup for such products.

Pressurized cabinets and systems (Ex p)

A typical project schedule for a pressurized system can be as follows:

Analysing the specific requirements from the client and clarifying these with the client. This includes details such as environment conditions, material strength, physical dimensions, electrical requirements, etc. An important task at this stage is also to verify that all client's requirements can be solved within the actual Ex standards and directives.

Construction of the actual panel/cabinet according to the demands and specifications from the client.

Selecting the correct control systems according to the demands and specifications given by the client, such as required cooling, limitation in purge time, how much air/ inert gas is available etc.

At this point, any shut-down requirements need to be addressed and taken into consideration before the actual control system is selected.

When the client has approved the construction-plans, the actual panel/ cabinet can be manufactured.

Then the physical assembly of the system can start in our specialised manufacturing facility with skilled personnel, including the internal components (including possible free issue items) which are to be protected by pressurisation and the purge/
Ex p control system.

Adjusting of control system parameters so that the pressurised control system functions correctly regarding all requirements.

Fulfilling all purge and temperature tests according to the mandatory standards (EN/IEC 60079-0 and 60079-2).

Final functional test.

Creating the required documentation package, including all client requirements.

Write the user manual, as a minimum to meet the requirements in EN/IEC 60079-0 and 60079-2 and the Directive 94/9/EC.

Applying for the Certificate of Conformity.

Issuing the EC Declaration of Conformity (EC D.O.C.).

Handover (eventual FAT: Final Acceptance test) and delivery of the complete system.

TNCN

The TNCN range of 316 stainless steel Ex e enclosures are designed for use in any environment where an explosive atmosphere may be present and are especially recommended for chemical agent environments, sea-water corrosion resistance and extremes of low and high temperature.

Specifications

Material	Acid Resistant Stainless steel AISI316L
IP Rating	IP66 (IP67 and IP68 upon request)
Temperature	-40ºC to +40ºC (T5)
	-40ºC to +60ºC (T6/T4)
	Option: -50ºC to +200ºC
Approvals	
- Atex	DNV-2001-OSL-ATEX-0176
	DNV-2008-OSL-ATEX-42438U
- IECEx	IECEx DNV 09.005U
	IECEx DNV 09.004
- CSA	CSA 2036776
- Brazilian	09/UL-BRCN-0001
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-7
	EN:61241-0, 61241-1
Ex-Code	Ex e II T6/T4 / Ex [ia] IIC T6
	Ex tD A21 T85ºC - T110ºC
	Ⓔx II 2 GD and EPL Gb/Db
Cover gasket	Silicone (temp. -40ºC to +200ºC)
Surface treatment	Acidized Pickling as standard
	Electropolished as an option
Material thickness	Min. 1.5 mm (depending on the box size)
Earthing	Internal earth bar/bracket
	External earth bracket
Drain Plug	Optional
Gland Plate	Optional

Terminal box: maximum heat dissipation - number of terminals

Maximum heat dissipation	
Box type	Max. dissipated power at Tamb=40°C
121009	6 W
151510	15 W
202010	20 W
202015	20 W
302015	30 W
282815	30 W
383815	40 W
575715	90 W

The maximum dissipated power level for terminal box sizes not listed in the above table is equal to the nearest smaller size box.

Fixing dimensions

Box type	X (mm)	Y (mm)
121009		151
151510		181
202010	230	160
202015	230	160
302015	230	260
282815	310	240
383815	410	340
575715	600	530

TNCN
Range of stocked boxes

Type	A Width (cm)	B Height (cm)	C Depth (cm)	Volume (dm^3)	Weight (kg)
121009**	12	10	9	1.08	1.5
151510**	15	15	10	2.25	2.5
202010	20	20	10	4.00	3.00
202015	20	20	15	6.00	3.5
302015	30	20	15	9.00	5.0
282815	28	28	15	11.76	5.2
383815	38	38	15	21.66	8.1
575715	57	57	15	48.74	16.4

TNCN Measurement Table – range of stocked boxes.
Other sizes are available upon request. The boxes are delivered as standard with left hinged covers held to the enclosure by screws.
Quick locks, screws only, or other systems can be delivered upon request.
** No hinges – screws only

A or B Width/ Height (cm)	C Depth (cm)	M20	M25
15	10	8	6
	15	12	9
	20	16	12
	27	24	15
20	10	10	10
	15	15	15
	20	25	20
	27	35	30
30	10	15	14
	15	24	21
	20	40	28
	27	56	42
38	10	20	18
	15	30	27
	20	50	36
	27	70	54
40	10	22	18
	15	3	27
	20	55	36
	27	77	54
45	10	24	20
	15	36	30
	20	60	40
	27	84	60
57	10	32	26
	15	48	39
	20	80	52
	30	128	78
76	10	42	36
	15	63	54
	20	105	72
	27	147	108

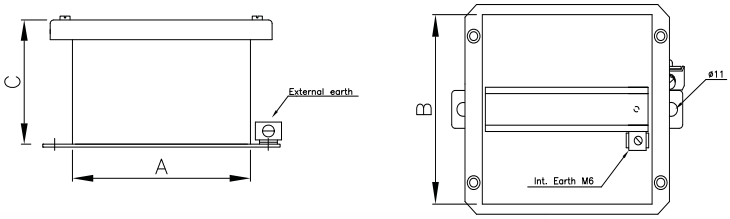
Entry Matrix

This table lists our recommendations for the maximum quantity of glands for installation in 1 face (the width column in the table) on TNCN Junction Boxes.

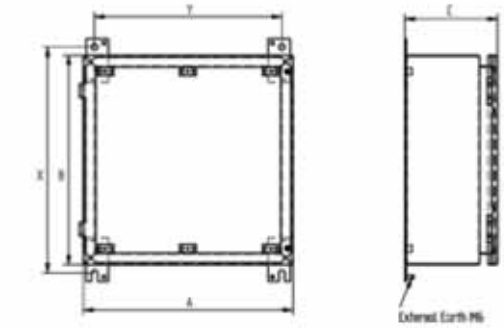
Note: Recommended quantity.
MCT-frames can be fitted in boxes with a minimum depth of 20 cm.

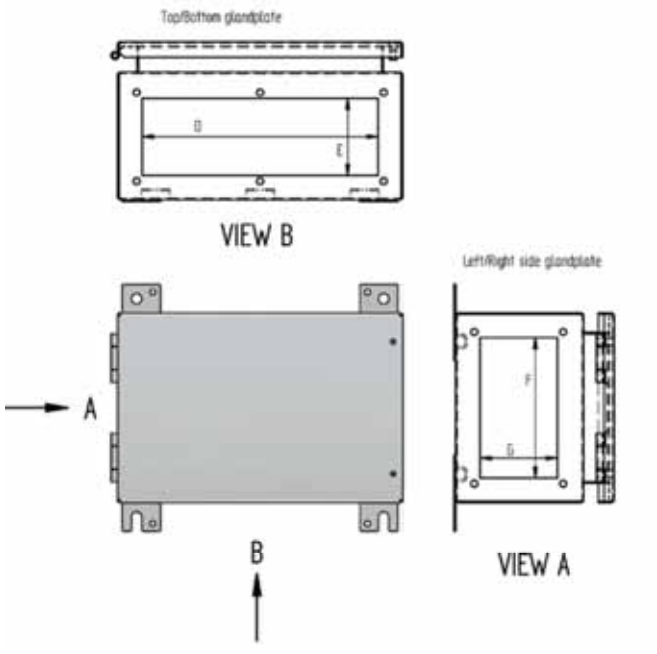
Dimensions

TNCN 121009/151509

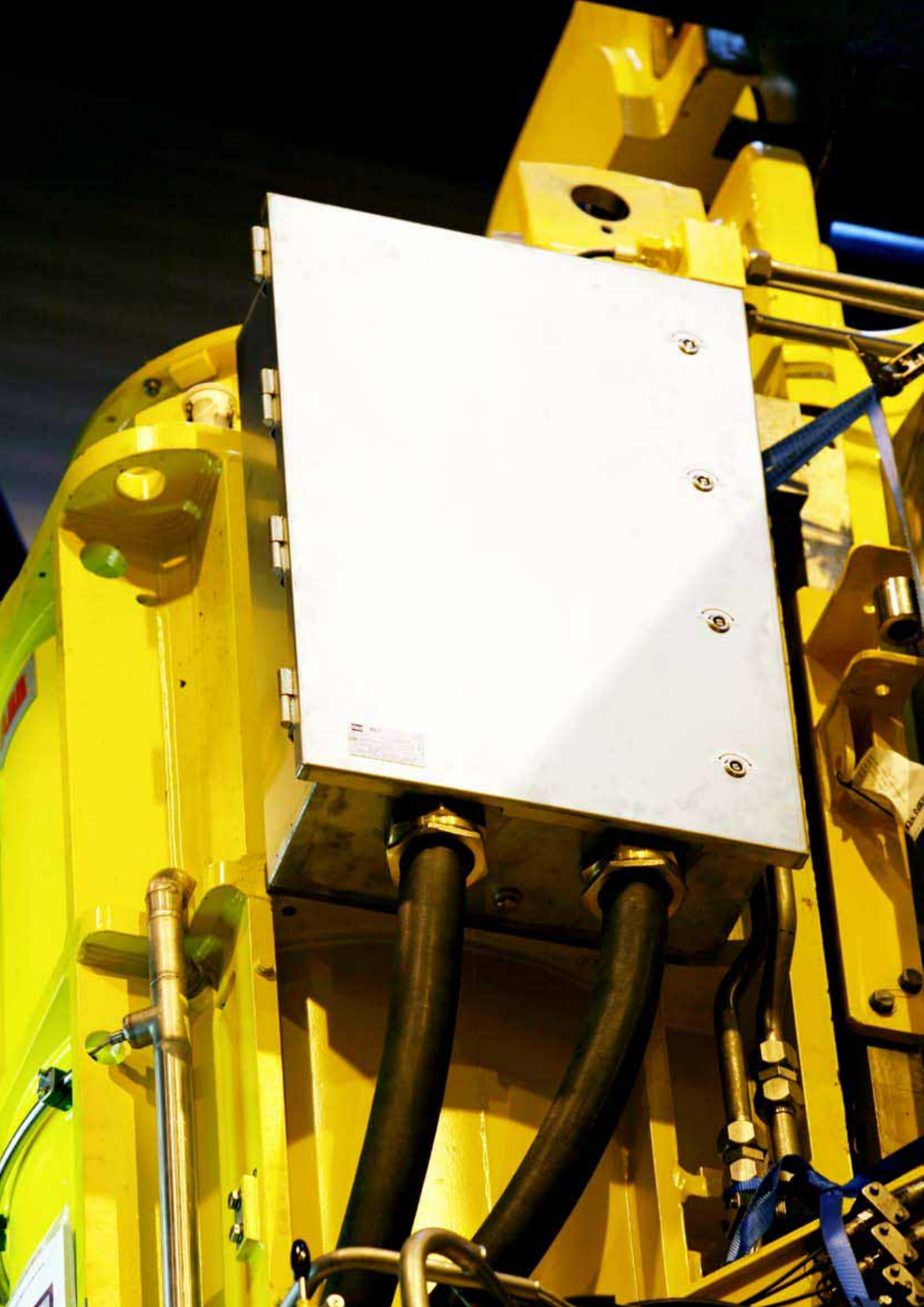


TNCN 202010-575715





Box	Top/Bottom A	Top/Bottom B	Side (L+R) C	Side (L+R) D
202010	148	36	148	81
202015	148	81	148	81
302015	248	81	148	81
282815	228	81	228	81
383815	328	81	328	81
575715	518	81	518	81



AQ/AL and AR/AL

AQ/AL and AR/AL range of copper-free aluminium Ex e enclosures are highly recommended for chemical agent environments or those with a high level of exposure to H2O, H2SO4, sea-water corrosion, low and high temperatures and other heavy duty environments.

Specifications

Material	Copper free Aluminium (Cu <0.1%)
IP Rating	IP66
Temperature	-50°C to +60°C
Approvals - Atex - GOST	 INERIS 01ATEX0005X GOST Certificate
Standards	EN/IEC: 60079-0, 60079-7, 60079-11 EN: 61241-0, 61241-1, 61241-11
Ex-code	Ex II 2 GD Ex e II T6/T5 Ex ia IIC T6/T5 Ex e ia IIC T6/T5 Ex tD A21 IP66 T85°C/T100°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Lid/Door gasket	Neoprene
Surface treatment	External polyurethane painting (RAL 6003)
Material thickness	Body and cover thickness 8 mm, or more
Earthing	Internal and external earth stud made in AISI 304 suitable for earth wire up to 35 sqmm
Drain plug	Drain and breather devices type ECR-1, ECR-2, ECR-11 (Optional)
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Quantity for entries	Maximum quantity of entries per side A/B: see table
Quantity for terminals	Bearing in mind the infinite variety of combinations available: • quantity of terminals • relevant cross section • class of temperature • ambient temperature ...we suggest using our software CALCUBOX to set up the compatible terminals strips. A free copy of CALCUBOX is usually supplied with the CD version of the Product Catalog and is also available as a download from our website.
Accessories on request	Identification label resin/trafolite made with fixing screws Identification label stainless steel AISI 304 made with fixing screws Inside anti-condensation painting Hinged Cover Stainless steel AISI 304 made. Hinges fixed by bolts Threaded holes suitable for cable glands, plugs and conduit fitting, either with metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125

Entries surface available

Box Type	Code	Entries surface available	
		Short side A	Length side B
AQ-8A HTH AL	A.4200.04	138 x 270	138 x 270
AR-8 HTH AL	A.4200.05	90 x 260	90 x 417
AR-8A HTH AL	A.4200.06	90 x 417	90 x 417
AR-8A S AL	A.4200.07	90 x 260	90 x 590
AR-8A L AL	A.4200.08	160 x 490	160 x 750

Maximum number of entries

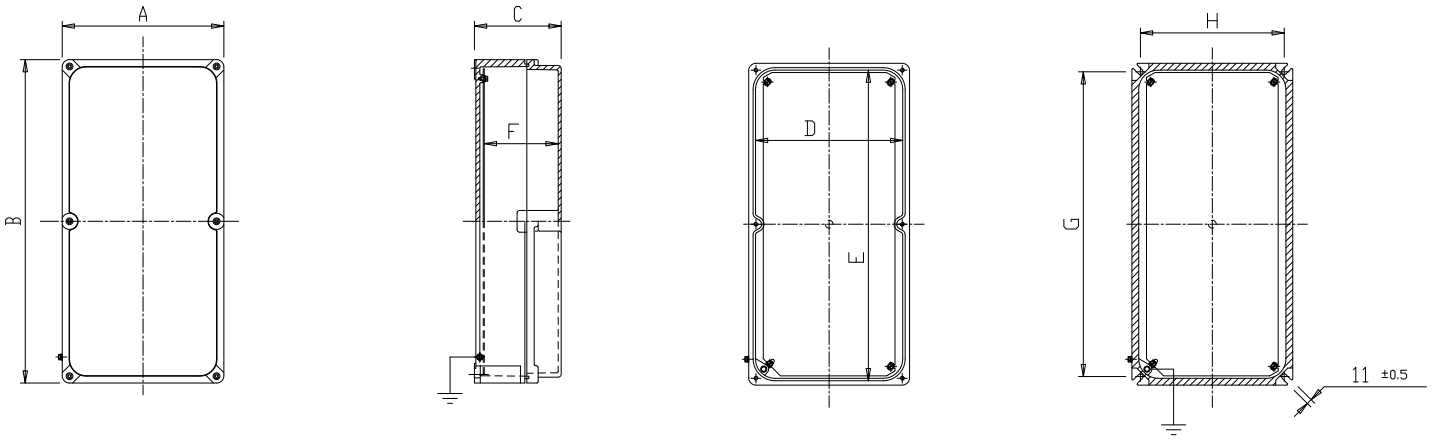
	½" M20		¾" M25		1" M32		1 ¼" M40		1 ½" M50		2" M63		2 ½" M75		3" M80	
Box Type	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
AQ-8A HTH AL	31**	31**	18*	18*	16*	16*	7	7	5	5	4	4	4	4	3	3
AR-8 HTH AL	36**	24**	20*	14*	18*	12*	7	5	6	4	5	3	4	3	4	2
AR-8A HTH AL	36**	36**	20*	20*	18*	18*	7	7	6	6	5	5	4	4	4	4
AR-8A S AL	50**	34**	28*	20*	25*	17*	10	7	8	6	7	4	6	4	6	3
AR-8A L AL	76***	48***	48***	30***	39***	24***	22*	14*	20*	12*	8	5	7	4	6	4

(*) Located on two rows
(**) Located on three rows
(***) Located on four rows

Range: Enclosures with High thickness wall (Hth)

Box Type	Code	External Dimensions			Internal Dimensions			Fixing Dimensions		Mounting Plate		Wall thickness (mm)	Weight Kg
		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Dimension (mm)	Weight Kg		
AQ-8A HTH AL	A.4200.04	332	332	178	302	302	155	315	310	294x294	1.25	12	8.00
AR-8 HTH AL	A.4200.05	330	495	171	304	455	151	470	320	270x455	1.80	12	12.40
AR-8A HTH AL	A.4200.06	495	495	171	461	461	151	470	470	432x432	3.00	12	17.30
AR-8A S AL	A.4200.07	330	660	177	302	622	150	635	305	270x622	2.70	12	16.70
AR-8A L AL	A.4200.08	580	840	205	540	800	178	810	560	500x760	10	12	36.00

Dimensions



TNUP

The TNUP range of glass fibre reinforced polyester (GRP) Ex e enclosures are suitable for petrochemical, marine and other applications where an explosive atmosphere may be present.

Specifications

Material	Glass fibre reinforced polyester (GRP)
IP Rating	IP66 according to IEC 529
Temperature	-20ºC to +40ºC (T6)
Approvals	
- Atex	DNV-2003-OSL-ATEX-0207X
- Brazilian	08/UL-BRCP-0002
Standards	EN/IEC: 60079-0, 60079-7, 60079-11 IEC: 60529
Ex-Code	Ex e II T6 Ex e[ia] IIC T6 Ⓔx II 2 G
Earthing	PE bar and/or earth terminals Earth continuity plate/ earth tag upon request
Drain Plug	Upon request
Glands	Plastic or metal, quantities according to table
Terminals	According to table
Note	**GRP Junction boxes type AR...P/AQ...P can be supplied with T.amb. -50ºC to +60ºC under certificate IMQ 08ATEX028X for II 2 G/D**

TNUP – Range of stocked boxes

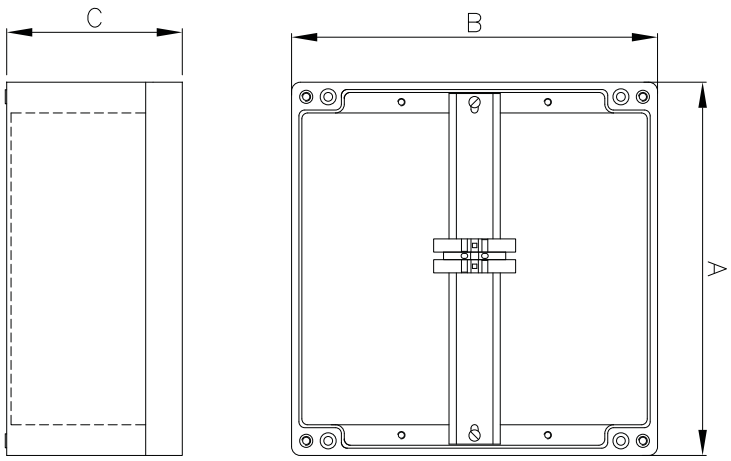
Type	A Width (mm)	B Height (mm)	C Depth (mm)	Weight (kg)	GA-Dwg.
121209	123	120	91	1.1	TNU-35-6
161609	160	160	92	1.5	TNU-36-6
252512	255	250	120	2.9	TNU-37-6
361609	360	160	92	2.5	TNU-39-6
402512	400	250	120	4.3	TNU-49-6
404117	400	405	165	6.1	TNU-40-6

The boxes are delivered with screws in lid as standard

Entry Table

Depth	Side Width	A/B M20	A/B M25	A/B M32	A/B M40
09	12	4	3	2	1
	16	6	4	2	2
	36	18	11	7	5
12	25	17	11	7	4
	40	27	17	13	6
16	40	40	27	20	16

Dimensions




SWL 4 T
MAX COMBINED 9 T
SWL 6 T
SWL 4 T

Pushbutton

The HarmAtex range of control components are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex pushbutton range features large flush, projecting or mushroom type operator heads with a choice of momentary or push-push actuation modes with plastic or metal bezels. Two contact block variants are available for 6 and 16Amp applications and the Harmatex range offers unrivalled flexibility with a modular design accommodating up to 6 contacts per operator head for 6A contacts and 3 contacts for 16A variants.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	-20°C to +80°C
Approvals	
- Atex	INERIS02ATEX9007U
- Brazilian	08/UL-BRAE-0005U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31,
	EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC 2 GD
Mounting	Panel cut-out Ø 22.5mm
	Mounting centres 30x40mm (WxH)
	Depth below head 58mm (one contact layer)
Connection	Screw clamp terminals

Rated Operational Characteristics for standard 6 A Contactblock

AC15; A 600
Ue=400 V Ie=1,8 A or
Ue=240 V Ie=3 A or
Ue=120 V Ie=6 A

DC13; Q600
Ue=400 V Ie=0.15 A or
Ue=250 V Ie=0.27 A or
Ue=125 V Ie=0.55 A

Optionally: 16 A can be used (ref. page 40)

ADD:
Head Mechanical durability (millions of operating cycles): 5
Contact Mechanical durability (millions of operating cycles): 1

Ø22 pushbutton			Lid mounting		Base mounting
Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
Pushbutton, Flush	❍ White	NO	XBW4BA11		
	● Black	NO	XBW4BA21		
	● Green	NO	XBW4BA31		
	● Red	NC	XBW4BA42		
	● Yellow	NO	XBW4BA51		
	● Blue	NO	XBW4BA61		
Pushbutton, Projecting	❍ White	NO	XBW4BL11		
	● Black	NO	XBW4BL21		
	● Green	NO	XBW4BL31		
	● Red	NC	XBW4BL42		
	● Yellow	NO	XBW4BL51		
	● Blue	NO	XBW4BL61		

Pushbutton

Rated
Operational Characteristics for standard 6A contactblock

AC15; A 600
Ue=400 V Ie=1,8 A or
Ue=240 V Ie=3 A or
Ue=120 V Ie=6 A

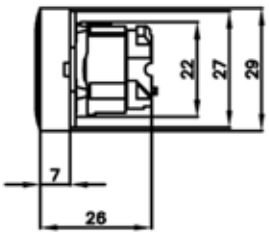
DC13; Q600
Ue=400 V Ie=0.15 A or
Ue=250 V Ie=0.27 A or
Ue=125 V Ie=0.55 A

Optionally: 16 A can be used (ref. page 40)

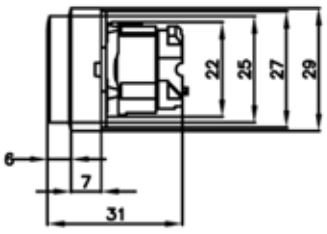
Head Mechanical durability
(millions of operating cycles): 5
Contact Mechanical durability
(millions of operating cycles): 1

Ø22 pushbutton			Lid mounting		Base mounting
Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
Pushbutton, “push-push” to release, Flush	❍ White	NO	XBW4BH011		
	● Black	NO	XBW4BH021		
	● Green	NO	XBW4BH031		
	● Red	NC	XBW4BH042		
	● Yellow	NO	XBW4BH051		
	● Blue	NO	XBW4BH061		
Pushbutton, “push-push” to release, Projecting	❍ White	NO	XBW4BH11		
	● Black	NO	XBW4BH21		
	● Green	NO	XBW4BH31		
	● Red	NC	XBW4BH42		
	● Yellow	NO	XBW4BH51		
	● Blue	NO	XBW4BH61		
Pushbutton, with coloured silicone boot, Flush	❍ White	NO	XBW4BP11S	XBW5AP11S	XBW5AP11SP
	● Black	NO	XBW4BP21S	XBW5AP21S	XBW5AP21SP
	● Green	NO	XBW4BP31S	XBW5AP31S	XBW5AP31SP
	● Red	NC	XBW4BP42S	XBW5AP42S	XBW5AP42SP
	● Yellow	NO	XBW4BP51S	XBW5AP51S	XBW5AP51SP
	● Blue	NO	XBW4BP61S	XBW5AP61S	XBW5AP61SP
Mushroom Pushbutton					
Pushbutton Ø40mm mushroom head, Spring return	❍ White	NO	XBW4BC11	XBW5AC11	XBW5AC11P
	● Black	NO	XBW4BC21	XBW5AC21	XBW5AC21P
	● Green	NO	XBW4BC31	XBW5AC31	XBW5AC31P
	● Red	NC	XBW4BC42	XBW5AC42	XBW5AC42P
	● Yellow	NO	XBW4BC51	XBW5AC51	XBW5AC51P
	● Blue	NO	XBW4BC61	XBW5AC61	XBW5AC61P

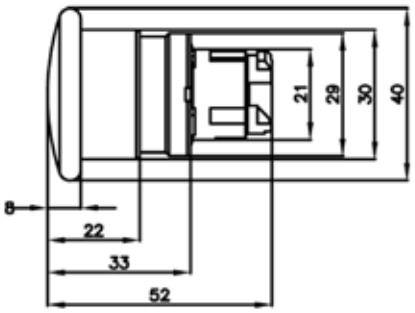
Dimensions (mm)



XBW4BA...
XBW4BH0...
XLW4BW..



XBW4BL...
XBW4BH...



XBW4BC...
XBW5AC...

Emergency Mushroom

The HarmAtex range of emergency mushroom pushbuttons are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex emergency mushroom pushbutton range is available in three operator head formats: push-pull, twist to release or key release normally supplied with one NC contact. Two contact block variants are available for 6 and 16Amp applications and the Harmatex range offers unrivalled flexibility with a modular design accommodating up to 6 contacts per operator head for 6A contacts and 3 contacts for 16A variants.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	–20°C to +80°C
Approvals	
- Atex	INERIS02ATEX9007U
- Brazilian	08/UL-BRAE-0005U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31, EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC 2 GD
Mounting	Panel cut-out Ø 22.5mm (recommended 22.4)
Mounting centres	30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals

Rated Operational Characteristics for standard 6 A contactblock

AC15; A 600
Ue=400 V Ie=1,8 A or
Ue=240 V Ie=3 A or
Ue=120 V Ie=6 A

DC13; Q600
Ue=400 V Ie=0,15 A or
Ue=250 V Ie=0,27 A or
Ue=125 V Ie=0,55 A

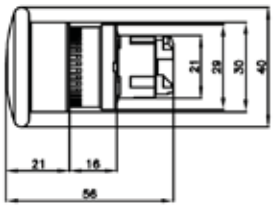
Optionally: 16 A can be used (ref. page 40)

Head Mechanical durability (millions of operating cycles): 5
Contact Mechanical durability (millions of operating cycles): 1

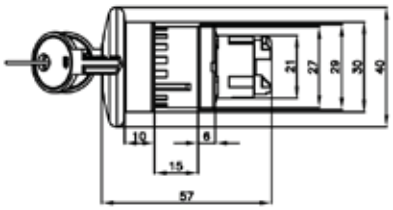
Emergency stop mushroom pushbutton			Lid mounting		Base mounting
Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
Ø40mm latching mushroom head pushbutton, "push-pull"	● Red	NC	XBW4BT42	XBW5AT42	XBW5AT42P
			XBW4BT842 w/trigger action	XBW5AT842 w/trigger action	XBW5AT842P w/trigger action
	● Black	NO	XBW4BT21		
Ø40mm latching mushroom head pushbutton, key 455	● Red	NC	XBW4BS142	XBW5AS142 (1)	XBW5AS142P
	● Black	NO	XBW4BS121		
Ø40mm latching mushroom head pushbutton, turn to release	● Red	NC	XBW4BS542	XBW5AS542 (1)	XBW5AS542P
	● Black	NO	XBW4BS521		

(1) Provided with metallic screw

Dimensions (mm)



XBW4BT...
XBW5AT...
XBW4BS5...
XBW5AS5...



XBW4BS1...
XBW5AS1...

Selector Switch

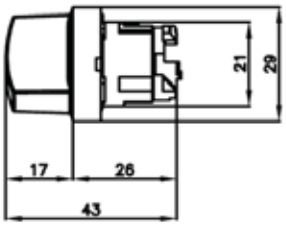
The HarmAtex range of selector switches are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex selector switch range is available in five operator head formats: standard handle, rotary handle, extended length handle, key switch and toggle switch. Each operator is available with 2 or 3 position, stay-put or spring-return actuation. Two contact block variants are available for 6 and 16Amp applications and the Harmatex Selector Switch range offers unrivalled flexibility with a modular design accommodating up to 2 contacts per position for 6A and 1 for 16A applications.

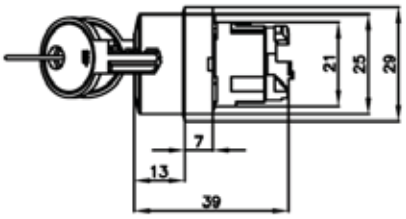
Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	–20°C to +80°C
Approvals	
- Atex	INERIS02ATEX9007U
- Brazilian	08/UL-BRAE-0005U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31, EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC 2 GD
Mounting	Panel cut-out Ø 22.5mm (recommended 22.4)
Mounting centres	30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals
Key	Key n°455 as standard, other upon request

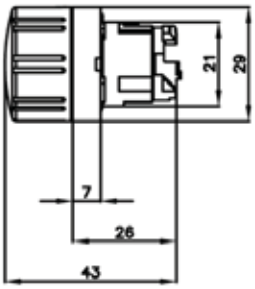
Dimensions (mm)



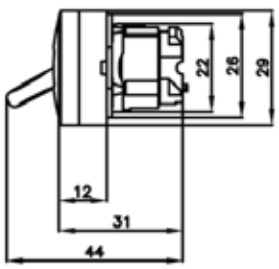
XBW4BD...
XBW5AD...



XBW4BG...
XBW5AG...



XBW4BD.9..
XBW5AD.9..



XBW4BD.8..
XBW5AD.8..

XBW4BJ...
XBW5AL...

Selector Switch

	Selector switches and key switches			Lid mounting		Base mounting
	Type	Number and type	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
Rated Operational Characteristics for standard 6 A contactblock AC15; A 600 Ue=600 V Ie=1,8 A Ue=240 V Ie=3 A Ue=120 V Ie=6 A DC13; Q600 Ue=400 V Ie=0.15 A Ue=250 V Ie=0.27 A Ue=125 V Ie= 0.55 A ***Optionally: 16 A can be used (ref. page 40)***	Selector switches with standard handle, black	2 stay put	NO	XBW4BD21	XBW5AD21	XBW5AD21P
		2 spring return	NO	XBW4BD41	XBW5AD41	XBW5AD41P
		3 stay put •	NO + NO	XBW4BD33	XBW5AD33	XBW5AD33P
		3 spring return to center •	NO + NO	XBW4BD53	XBW5AD53	XBW5AD53P
		3 spring return from left to center •	NO + NO	XBW4BD73	XBW5AD73	XBW5AD73P
		3 spring return from right to center •	NO + NO	XBW4BD83	XBW5AD83	XBW5AD83P
	Selector switches with wheel handle, black	2 stay put	NO	XBW4BD291	XBW5AD291	XBW5AD291P
		2 spring return	NO	XBW4BD491	XBW5AD491	XBW5AD491P
		3 stay put •	NO + NO	XBW4BD393	XBW5AD393	XBW5AD393P
		3 spring return to center •	NO + NO	XBW4BD593	XBW5AD593	XBW5AD593P
		3 spring return from left to center •	NO + NO	XBW4BD793	XBW5AD793	XBW5AD793P
		3 spring return from right to center •	NO + NO	XBW4BD893	XBW5AD893	XBW5AD893P
	Selector switches with long handle, black	2 stay put	NO	XBW4BJ21	XBW5AJ21	XBW5AJ21P
		2 spring return	NO	XBW4BJ41	XBW5AJ41	XBW5AJ41P
		3 stay put •	NO + NO	XBW4BJ33	XBW5AJ33	XBW5AJ33P
		3 spring return to center •	NO + NO	XBW4BJ53	XBW5AJ53	XBW5AJ53P
		3 spring return from left to center •	NO + NO	XBW4BJ73	XBW5AJ73	XBW5AJ73P
		3 spring return from right to center •	NO + NO	XBW4BJ83	XBW5AJ83	XBW5AJ83P
	Selector switches with key 455, black	2 stay put key withdrawal in left position	NO	XBW4BG21	XBW5AG21	XBW5AG21P
		2 stay put key withdrawal in both position	NO	XBW4BG41	XBW5AG41	XBW5AG41P
		2 spring return from right to left	NO	XBW4BG61	XBW5AG61	XBW5AG61P
		3 stay put, key withdrawal in 3 positions •	NO + NO	XBW4BG03	XBW5AG03	XBW5AG03P
		3 stay put, key withdrawal in center position •	NO + NO	XBW4BG33	XBW5AG33	XBW5AG33P
		3 stay put, key withdrawal in left or right position •	NO + NO	XBW4BG53	XBW5AG53	XBW5AG53P
		3 stay put, key withdrawal in left position •	NO + NO	XBW4BG93	XBW5AG93	XBW5AG93P
		3 stay put, key withdrawal in right position •	NO + NO	XBW4BG093	XBW5AG093	XBW5AG093P
		3 spring return from left to center •	NO + NO	XBW4BG13	XBW5AG13	XBW5AG13P
		3 spring return to center •	NO + NO	XBW4BG73	XBW5AG73	XBW5AG73P
		3 spring return from right to center, key withdrawal in center position •	NO + NO	XBW4BG83	XBW5AG83	XBW5AG83P
		3 spring return from right to center, key withdrawal in left position •	NO + NO	XBW4BG083	XBW5AG083	XBW5AG083P
	Toggle witches, black lever	2 stay put	NO	XBW4BD281	XBW5AD281	XBW5AD281P
		2 spring return	NO	XBW4BD481	XBW5AD481	XBW5AD481P

• This selector switch can have an extra N/C contact block on the central position.
The central N/C contact block is acting on left and right position.
Contact us for further information.

Illuminated Switch

The HarmAtex range of illuminated control components are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex illuminated control component range offers both push-button and selector switch operator heads in a choice of colours illuminated by a multi-voltage LED. Illuminated selector switches are available with 2 or 3 position stay-put or spring return actuation. Two contact block variants are available for 6 and 16Amp applications and the Harmatex Illuminated Selector Switch offers unrivalled flexibility with a modular design accommodating up to 2 contacts per position for 6A and 1 for 16A applications. Illuminated Pushbuttons can accommodate 4 contacts for 6A and 2 contacts for 16A applications.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	–20°C to +65°C
Approvals	
- Atex	INERIS04ATEX9003U, INERIS02ATEX9007U
- Brazilian	08/UL-BRAE-0005U / 08/UL-BRAE-0006U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31, EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC / Ex em II 2 GD
Mounting	Panel cut-out Ø 22.5mm (recommended 22.4)
Mounting centres	30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals

Rated Operational Characteristics for standard 6 A contactblock

AC15; A 600
Ue = 400 V Ie = 1.8 A
Ue = 240 V Ie = 3 A
Ue = 120 V Ie = 6 A

DC13; Q600
Ue = 400 V Ie = 0.15 A
Ue = 250 V Ie = 0.27 A
Ue = 125 V Ie = 0.55 A

Optionally: 16 A can be used (ref. page 40)

Integral LED – 24V to 415V AC/DC

Mechanical durability
(millions of operating cycles): 1

Service life (LED):
100,000 hours at ambient temperature

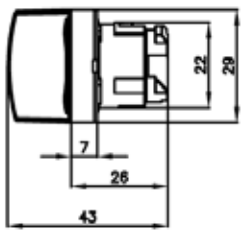
Illuminated Pushbutton		Lid mounting	
Type	Colour	Contact	Reference w/metal bezel
Illuminated Pushbutton, Flush	❍ White	NO	XLW4BW3131
	● Green	NO	XLW4BW3331
	● Red	NC	XLW4BW3432
	● Yellow	NO	XLW4BW3531
	● Blue	NO	XLW4BW3631

Illuminated Switch

Illuminated selector switch		Lead mounting	
Type	Colour	Contact	Reference w/metal bezel
Illuminated Selector, 2 positions, stay put	❍ White	NO	XLW4BK12131
	● Green	NO	XLW4BK12331
	● Red	NC	XLW4BK12432
	● Yellow	NO	XLW4BK12531
	● Blue	NO	XLW4BK12631
Illuminated Selector, 2 positions, spring return	❍ White	NO	XLW4BK14131
	● Green	NO	XLW4BK14331
	● Red	NC	XLW4BK14432
	● Yellow	NO	XLW4BK14531
	● Blue		
Illuminated Selector, 3 positions, stay put	❍ White	NO+NO	XLW4BK13133
	● Green	NO+NO	XLW4BK13333
	● Red	NO+NO	XLW4BK13433
	● Yellow	NO+NO	XLW4BK13533
	● Blue	NO+NO	XLW4BK13633
Illuminated Selector, 3 positions, spring return to centre	❍ White	NO+NO	XLW4BK15133
	● Green	NO+NO	
	● Red	NO+NO	XLW4BK15433
	● Yellow	NO+NO	XLW4BK15533
	● Blue	NO+NO	

Illuminated selector switch		Lead mounting	
Type	Colour	Contact	Reference w/metal bezel
Illuminated Selector, 3 positions, spring return left to centre	❍ White	NO+NO	XLW4BK17133
	● Green	NO+NO	XLW4BK17333
	● Red	NO+NO	XLW4BK17433
	● Yellow	NO+NO	XLW4BK17533
	● Blue	NO+NO	XLW4BK17633
Illuminated Selector, 3 positions, spring return right to centre	❍ White	NO+NO	XLW4BK18133
	● Green	NO+NO	XLW4BK18333
	● Red	NO+NO	XLW4BK18433
	● Yellow	NO+NO	XLW4BK18533
	● Blue	NO+NO	XLW4BK18633

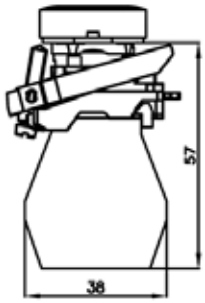
Dimensions (mm)



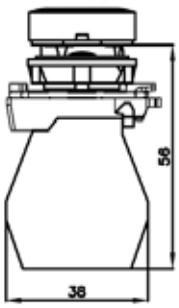
XLW4BK...

XLW4BW...

Metallic head



Metallic head



Pilot Light

The HarmAtex range of control components are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex range of pilot lights are available in a choice of colours illuminated by a multi-voltage LED offering unrivalled flexibility and a service life of100,000 hours operation at 20°c ambient.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	–20°C to +65°C
Approvals	
- Atex	INERIS04ATEX9003U
- Brazilian	08/UL-BRAE-0006U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31, EN: 61241-0, 61241-1
Ex-Code	Ex em II 2 GD
Mounting	Panel cut-out Ø 22.5mm (recommended 22.4)
Mounting centres	30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals

Pilot lights, spare parts and complementary parts

	Complet Pilot light with integral LED 24V to 415V AC/DC		Lid mounting	
	Type	**Colour**	**Reference w/metal bezel**	**Reference w/plastic bezel**
Mechanical durability (millions of operating cycles): 5 Service life (LED): 100,000 hours at ambient temperature	Integral LED multivoltage, multi current	❍ White	XLW4BV013	XLW5AV013
		● Green	XLW4BV033	XLW5AV033
		● Red	XLW4BV043	XLW5AV043
		● Yellow	XLW4BV053	XLW5AV053
		● Blue	XLW4BV063	XLW5AV063
	Pilot light with integral LED 24V to 415V AC/DC for coloured head			
	Type	Colour	Reference	
Integral LED – 24V to 250V AC/DC	Pilot light for coloured head	❍ White	ZBWV1	
		● Green	ZBWV3	
		● Red	ZBWV1	
		● Yellow	ZBWV1	
		● Blue	ZBWV1	

Contact block

The HarmAtex range of control components are suitable for use as components in all Ex e & Ex tD enclosures. The product offers a flexible control and indication solution while maintaining IP66 integrity of the enclosure.

The HarmAtex contact block is available for NO (normally open) and NC (normally closed) orientation and a modular design allows for unrivalled flexibility of function of the HarmAtex operator head. The contact block is available in 6 or 16 Amp variant. When 6 Amp contact blocks are used up to 6 contacts (in two rows) can be used with each operator head (maximum 4 contacts for illuminated units). When 16 Amp contact blocks are used, up to 3 contacts can be installed on each operator head (maximum 2 contacts for illuminated units.)

HarmAtex contact blocks are designed for a service life of 1 million operating cycles.

Specifications

Material	Metal and Plastic
IP Rating	IP66 according to IEC 60529
Temperature	–20°C to +80°C
Approvals	
- Atex	INERIS02ATEX9007U
- Brazilian	08/UL-BRAE-0005U
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31, EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC / II 2 GD
Mounting	Panel cut-out Ø 22.5mm (recommended 22.4)
Mounting centres	30x40mm (WxH)
Depth below head	58mm (one contact layer)
Connection	Screw clamp terminals

Standard contactblock 6 Amp, spare parts and complementary parts

Rated Operational Characteristics	Contact Block			
	Type	Contact	Reference w/metal bezel	Reference w/plastic bezel
AC15; A 600 Ue= 400 V Ie= 1,8 A Ue= 240 V Ie= 3 A Ue= 120 V Ie= 6 A DC13; Q600 Ue= 400 V Ie= 0.15 A Ue= 250 V Ie= 0.27 A Ue= 125 V Ie= 0.55 A	NO contact block for lead mounting	NO	ZBWE101	
	NC contact block for lead mounting	NC	ZBWE102	
	NO contact block for base plate mounting	NO	ZBWE1111	
	NC contact block for base plate mounting	NC	ZBWE1121	
	NO contact block with bracket	NO	ZBWZ101	ZBWZ1010
	NC contact block with bracket	NC	ZBWZ102	ZBWZ1020

Contactblock 16 Amp, spare parts and complementary parts*

Rated Operational Characteristics	Contact Block			
	Type	Contact	Reference w/metal bezel	Reference w/plastic bezel
AC15; A 600 Ue= 600 V Ie= 3.2 A Ue= 240 V Ie= 8 A Ue= 120 V Ie= 16 A DC13; Q600 Ue= 600 V Ie= 0.3 A Ue= 250 V Ie= 0.7 A Ue= 125 V Ie= 1.45 A	NO contact block for lead mounting	NO	ZBWE161	
	NC contact block for lead mounting	NC	ZBWE162	
	NO contact block for base plate mounting	NO	ZBWE1611	
	NC contact block for base plate mounting	NC	ZBWE1621	
	NO contact block with bracket	NO	ZBWZ161	ZBWZ1010
	NC contact block with bracket	NC	ZBWZ162	ZBWZ1620

*Cannot be used with push-push actuators

Components for certified Ex d enclosures

Specifications

IP Rating	IP66-67
Temperature	–50°C to +60°C
Approvals	
- Atex	IMQ09ATEX019U
Standards	EN/IEC: 60079-0, 60079-1
	EN: 61241-0, 61241-1
Ex-Code	Ex d IIC
	Ex tD A21

Pushbutton PLA

Pushbutton Operators - Modular Barrel M32 x 1.5.

Code	Type	Colour	Description	Weight (kg)
A.0276.11	PLA 10	Black	Start pushbutton operator	0.150
A.0276.12	PLA 20	Red	Stop pushbutton operator	0.150
A.0276.13	PLA 30	Green		0.150

Pushbutton PLB

Pushbutton Lockable Operators - Modular Barrel M32 x 1,5.

Code	Type	Colour	Description	Weight (kg)
A.0276.14	PLB 10	Black		0.180
A.0276.15	PLB 20	Red		0.180
A.0276.16	PLB 30	Green		0.180

Pushbutton PLF

Key Pushbutton Operator - Modular Barrel M32 x 1,5.

Code	Type	Colour	Description	Weight (kg)
A.0279.11	PLF 10-01/12	Black		0.200

Pushbutton PLC-I

Mushroom-Head Momentary Pushbutton Operator - Modular Barrel M32 x 1,5.

Code	Type	Colour	Description	Weight (kg)
A.0276.17	PLC-I	Red		0.150

Pushbutton PLC-S

Mushroom-Head Mantained Pushbutton Operator - Modular Barrel M32 x 1,5.

Code	Type	Colour	Description	Weight (kg)
A.0276.18	PLC-S	Red		0.150

Pushbutton PLC-S Lockable

Lockable Safety Guard for PLC-S: Mushroom-Head Maintained Pushbutton Operator - Modular Barrel M32 x 1,5.

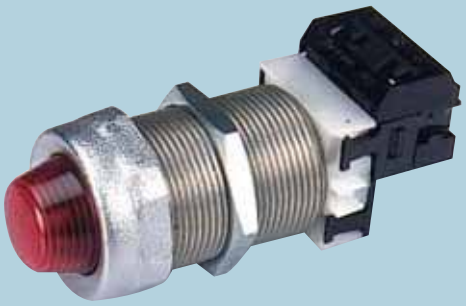
Type	Colour	Description	Weight (kg)
PLC-S Lockable	Red		0.210

Components for certified Ex d enclosures

Pilot Lamps and Relative Tubolar Lamps

Pilot Lamps Operator – Modular Barrel M32 x 1,5.

Code	Type	Colour	Description	Weight (kg)
A.0277.11	PLD 10	White		0.130
A.0277.12	PLD 20	Red		0.130
A.0277.13	PLD 30	Green		0.130
A.0277.14	PLD 40	Yellow		0.130
	PLD 50	Blue		0.130



Tubular Lamps for Pilot Lamp PLD…

Type with lamp holder BA9S: 10x28

Code	Type	Description
H.0010.72	L BA 110/130V	Incandescent Lamps with sockets BA9S – 3 W*
H.0010.73	L BA 220/260V	
H.0010.70	L BA 24/30V	
H.0010.71	L BA 48V	

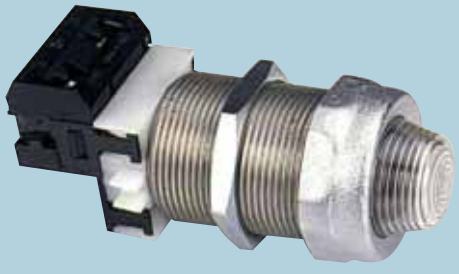
* Enclosures equipped with pilot light + incandescent lamps will have the Temperature Class = T4

LED for Pilot Lamp PLD…

Type with lamp holder BA9S: 10x28

Code	Type	Colour	Voltage
H.0013.12	LED BA9S 110V-B	White	110V
H.0013.11	LED BA9S 110V-G	Yellow	110V
H.0013.09	LED BA9S 110V-R	Red	110V
H.0013.10	LED BA9S 110V-V	Green	110V
H.0013.04	LED BA9S 12V-B	White	12V
H.0013.03	LED BA9S 12V-G	Yellow	12V
H.0013.01	LED BA9S 12V-R	Red	12V
H.0013.02	LED BA9S 12V-V	Green	12V
H.0013.16	LED BA9S 220-B	White	220V
H.0013.15	LED BA9S 220-G	Yellow	220V
H.0013.13	LED BA9S 220-R	Red	220V
H.0013.14	LED BA9S 220-V	Green	220V
H.0013.08	LED BA9S 24V-B	White	24V
H.0013.07	LED BA9S 24V-G	Yellow	24V
H.0013.05	LED BA9S 24V-R	Red	24V
H.0013.06	LED BA9S 24V-V	Green	24V

Enclosures equipped with pilot light + LED lamps will have the Temperature Class = T5/T6



Components for certified Ex d enclosures

Selector Switches (nominal current AC1-600V)

– Modular Barrel M32 x 1,5.

Code	Type	Poles	Rating A	Weight (kg)
A.0542.51	PSRC 120	1	20	0.130
A.0542.52	PSRC 220	2	20	0.160
A.0542.53	PSRC 320	3	20	0.200
A.0542.54	PSRC 420	4	20	0.200
A.0543.51	PSRC 132	1	32	0.200
A.0543.52	PSRC 232	2	32	0.200
A.0543.53	PSRC 332	3	32	0.250
A.0543.54	PSRC 432	4	32	0.250

PSRC – C

Step Switches (nominal current AC1-600V)

– Modular Barrel M32 x 1,5.

Code	Type	Poles	Rating A	Weight (kg)
A.0545.51	PSRC-C-120	1	20	0.130
A.0545.52	PSRC-C-220	2	20	0.200
A.0545.53	PSRC-C-320	3	20	0.250

PSRC – D

Change Over Switches (nominal current AC1-600V)

– Modular Barrel M32 x 1,5.

Code	Type	Poles	Rating A	Weight (kg)
A.0544.51	PSRC-D-120	1	20	0.130
A.0544.52	PSRC-D-220	2	20	0.200
A.0544.53	PSRC-D-320	3	20	0.250

Maximum 4 contact blocks for each operators

Code	Type	Description	Weight (kg)
A.0280.01	ELC - NO	NO FOR Pushbutton operator	0.006
A.0280.02	ELC - NC	NC FOR Pushbutton operator	0.006
	ELC – NC/NO	NC+NO Contact block combintation	
	ELC – NO/NC	NO+NC Contact block combination	


IB-10-0774
IB-10-0776

XAWE

The XAWE range of polyamide control stations are designed to offer a flexible, light weight and cost effective solution for 1 to 6 way control or signaling applications. It consists of modular enclosures that can accommodate 1 to 3 control or signalling operators or ammeter. Two XAWE enclosures can be combined to produce many different configurations and combinations.

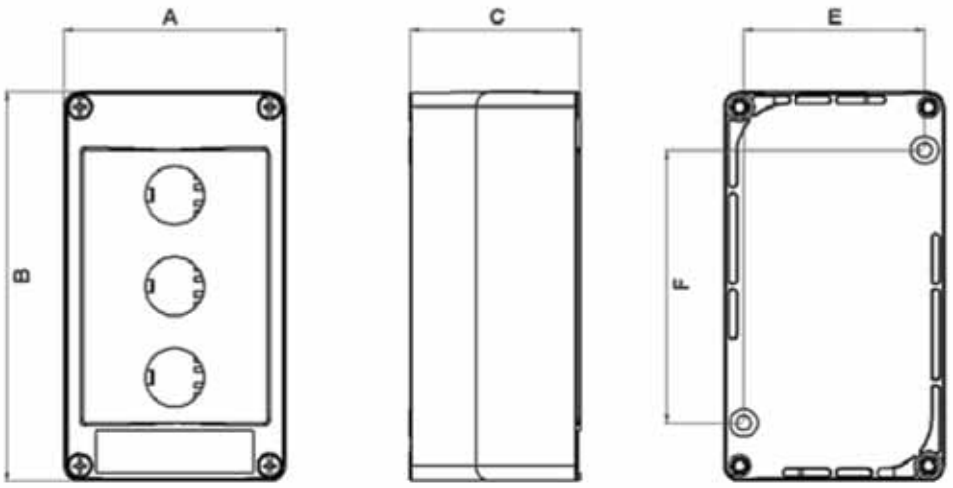
Benefits

- The XAWE base mounting design offers improved access to terminals or contact blocks for easier assembly.
- The XAWE is designed for use with Harmatex range of control components to provide market leading function and flexibility.
- The XAWE housing can incorporate an Ex ammeter.
- The XAWE features an integrated internal earth continuity plate.
- The XAWE is ready supplied with 1 off M20 and 1 off M25 polyamide Ex e cable glands.

Technical data

Material	Polyamide
IP Rating	IP 65/66
Temperature	-20°C to +40°C (50°C and 60°C depending on configuration)
Approval	
- Atex	INERIS 03ATEX0122
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ⓔx II 2 GD, T6/T4 Ex e II Ex e mb II Ex d e IIC Ex demb IIC Ex tD A21 ...or a combination of these

Dimensions



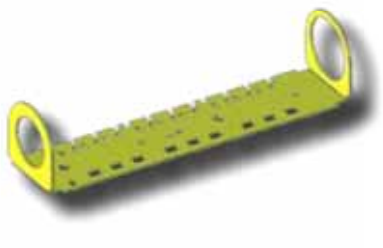
Box	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
XAWE1...	85	85	65		74 [1)]	54 [1)]
XAWE3...	150	85	65	45	54 [2)]	105 [2)]
XAWE3... + XAWE1	236	85	65	45	54 [2)]	105 [2)]

D=distance between 2 pilot lights and switches

[1)] Fixing by screw M4

[2)] Fixing by screw M5

Options



Earth continuety plate for use with armoured cable/cable gland
XAWE-PU

Interconnection coupling for assembling several boxes together
XAWE-TP

Order Information

Function	Labels (pushbutton color), contact function	Insulated box and unit
1 pushbutton, spring return	Start (green), 1NO	XAWE10
1 pushbutton, spring return	Stop (red), 1NC	XAWE11
1 mushroom pushbutton Ø40 mm, spring return	Stop (red), 1NC	XAWE16
1 mushroom pushbutton Ø40 mm, latching turn to release	Stop (red), 1NC	XAWE17
1 selector switch, 2 positions stay put	Start/Stop, 1NO	XAWE13
2 pushbuttons, spring return	Start (green), 1NO - Stop (red), 1NC	XAWE21
3 pushbutton, spring return	Forward (green), 1NO - Stop (red), 1NC	XAWE31
1 pilot light, 2 pushbuttons, spring return	Red light unit 24-415V AC/DC Start (green), 1NO - Stop (red), 1NC	XAWE34
1 ammeter		XAWE2812
Function	**Terminal functions**	**Insulated box and unit**
5 terminals	3P + N + E	XAWE9104
Function	**Cable gland (number and type)**	**Insulated box and unit**
1 pushbutton	1 cable gland M20 + 1 plug M20	XAWE101
2 pushbuttons	1 cable gland M20 + 1 plug and 1 cable gland M25 + 1 plug	XAWE302
3 pushbuttons	1 cable gland M20 + 1 plug and 1 cable gland M25 + 1 plug	XAWE303

M20 for cable Ø8 to Ø13 mm, M25 for cable Ø13 to Ø16 mm.

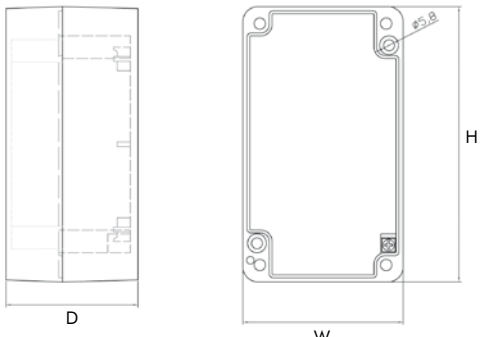
XAWG/XAWF/XAWFS

The XAWG/XAWF/XAWFS enclosures are manufactured in GRP, zinc alloy and stainless steel respectively. They are designed for use with the HARMATEX range of pushbuttons, switches and illuminated units. The combination enables our customers to customize each control station. Enclosures can be delivered in various sizes, suitable for 1 to 52 control unit cutouts in the lid. Small enclosures are standard fitted with 1 M20 entry.

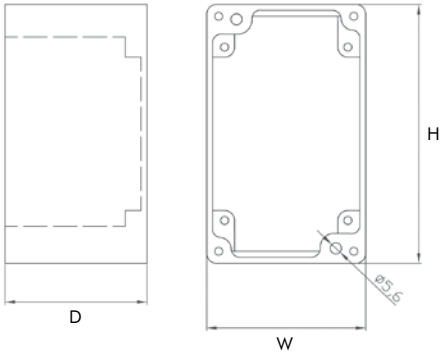
Specifications

Material	GRP, zinc alloy, stainless steel
IP Rating	IP65-66
Temperature	–20°C to +40°C (+50°C, +60°C)
Approvals	
-Atex	INERIS 03ATEX0122
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex II 2 GD, T6/T4 Ex e II Ex e mb II Ex d e IIC Ex demb IIC Ex tD A21 ...or a combination of these

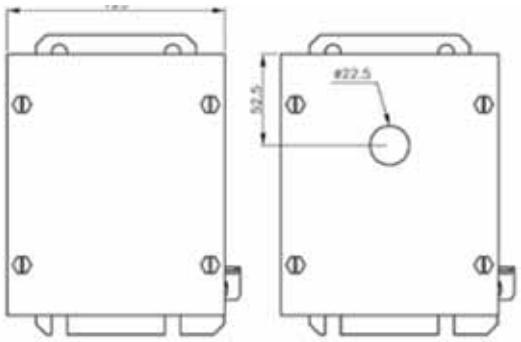
Dimensionsv



XAWG



XAWF



XAWFS

Control stations enclosures Ex e

Empty insulated enclosures (GRP)

External dimensions in mm			Max. nbr. of Ø22.2 cutout	Window for device Ø48mm	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
W	H	D					
85	146	70	1	-	XAWG201	XAWG2C	0.540
			2	-	XAWG208	XAWG2C	0.540
			-	1	XAWG208	XAWG2C	0.540
85	226	70	3	-	XAWG303	XAWG3C	0.670
			2	1	XAWG308	XAWG3C	0.670
85	281	70	4	-	XAWG504	XAWG5C	0.930
			5	-	XAWG505	XAWG5C	0.930

Empty metal enclosures (zink alloy)

External dimensions in mm			Max. nbr. of Ø22.2 cutout	Window for device Ø48mm	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
W	H	D					
80	80	77	1		XAWF101	XAWF1C	0.610
80	130	77	2		XAWF202	XAWF2C	0.820
			-	1	XAWF208	XAWF2C	0.820
80	175	77	3		XAWF303	XAWF3C	1.150
			2	1	XAWF308	XAWF3C	1.150
80	220	77	4		XAWF404	XAWF4C	1.400
80	310	77	6		XAWF606	XAWF6C	1.900

Empty stainless steel enclosures

External dimensions in mm			Max. nbr. of Ø22.2 cutout	Window for device Ø48mm	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
W	H	D					
125	110	82	1	-	XAWFS101	XAWFS1C	1.000
125	150	82	2	-	XAWFS202	XAWFS2C	1.200
			-	1	XAWFS208	-	1.200
125	195	82	3	-	XAWFS303	XAWFS3C	1.400
			2	1	XAWFS308	-	1.400
125	240	82	4	-	XAWFS404	XAWFS4C	1.600
			3	1	XAWFS408	-	1.600
125	295	82	5	-	XAWFS505	XAWFS5C	1.900
			4	1	XAWFS508	-	1.900
125	330	82	6	-	XAWFS606	XAWFS6C	2.100
			5	1	XAWFS608	-	2.100

Cable glands (maximum possible per side)

SIDE A/C			
M20	M25	M32	References
1	1	-	XAWG2...
1	1	-	XAWG3...
1	1	-	XAWG5...
1	1	1	XAWF1-FS1...
1	1	1	XAWF2-FS2...
1	1	1	XAWF3-FS3...
1	1	1	XAWF4-FS4/5...
1	1	1	XAWF6-FS6...

Junction box enclosures Ex e

Empty insulated enclosures							
External dimensions in mm W	H	D	Max. nbr. of terminal blocks to be fitted	Max terminal capacity in mm^2	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
85	146	70	10	0 to 4	XAWG9204	XAWG92C	0.450
			6	10	XAWG9210	XAWG92C	0.450
85	226	70	15	0 to 4	XAWG9304	XAWG93C	0.700
			10	10	XAWG9310	XAWG93C	0.700
85	281	70	25	0 to 4	XAWG9504	XAWG95C	0.800
			20	10	XAWG9510	XAWG95C	0.800

Empty metal enclosures							
External dimensions in mm W	H	D	Max. nbr. of Ø22,2 cutout	Max terminal capacity in mm^2	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
80	130	77	7	0 to 4	XAWF9204	XAWF92C	0.810
			-	10	XAWF9210	XAWF92C	0.810
80	175	77	15	0 to 4	XAWF9304	XAWF93C	1.150
			15	10	XAWF9310	XAWF93C	1.150
80	220	77	20	0 to 4	XAWF9404	XAWF94C	1.380
			20	10	XAWF9410	XAWF94C	1.380
80	310	77	30	0 to 4	XAWF9604	XAWF96C	1.900
			30	10	XAWF9610	XAWF96C	1.900

Empty stainless steel enclosures							
External dimensions in mm W	H	D	Max. nbr. of Ø22,2 cutout	Max terminal capacity in mm^2	Enclosure reference with cutouts	Enclosure reference witout cutouts	Weight kg
90	130	77	7	0 to 4	XAWFS9204	XAWFS92C	1.200
			-	10	XAWFS9210	-	1.200
90	175	77	15	0 to 4	XAWFS9304	XAWFS93C	1.400
			15	10	XAWFS9310	-	1.400
90	220	77	20	0 to 4	XAWFS9404	XAWFS94C	1.600
			20	10	XAWFS9410	-	1.600
90	275	77	25	0 to 4	XAWFS9504	XAWFS95C	1.900
			25	10	XAWFS9510	-	1.900
90	310	77	30	0 to 4	XAWFS9504	XAWFS96C	2.100
			30	10	XAWFS9510	-	2.100

Cable glands (maximum possible per side)			
SIDE A/C			
M20	M25	M32	References
1	1	-	XAWG92...
1	1	-	XAWG93...
1	1	-	XAWG95...
1	1	1	XAWF92-FS92...
1	1	1	XAWF93-FS93...
1	1	1	XAWF94-FS94/5...
1	1	1	XAWF96-FS96...

Cable glands (maximum possible per side)			
SIDE B/D			
M20	M25	M32	References
2	2	-	XAWG92...
4	4	-	XAWG93...
5	5	-	XAWG95...
2	1	1	XAWF92-FS92...
2	3	2	XAWF93-FS93...
5	4	3	XAWF94-FS94/5...
6	5	4	XAWF96-FS96...

Empty insulated enclosures					
	Dimensions in mm			Number of control and signaling units which can be mounted on the cover	Maximum permissible dissipation for the enclosure W
Reference	Length	Width	Height		
XAWG800	151	241	87	8	40
XAWG2526	255	250	120	15	60
XAWG2540	400	250	120	30	100
XAWG2560	600	250	120	45	170
XAWG4140	405	400	120	48	160

Metal enclosures					
	Dimensions in mm			Number of control and signaling units which can be mounted on the cover	Maximum permissible dissipation for the enclosure in W
Reference	Length	Width	Height		
XAWF2320	200	230	110	10	40
XAWF2333	330	230	110	15	85
XAWF2340	400	230	110	24	100
XAWF2360	600	230	110	34	170
XAWF3140	400	310	110	36	100
XAWF3160	600	310	110	52	170

Definition of a junction box enclosure or control station:
Calculation of the total dissipation:

1 terminal 0 to 4 mm2 = 1.2W
1 terminal 0 to 10 mm2 = 2W
1 terminal 6 to 16 mm2 = 3.5W
1 terminal 16 to 35 mm2 = 5W

1 N/O contact block = 0W
1 N/C contact block = 1W
1 led pilot light = 1.5W
1 ammeter = 1.5W

For enquiries regarding cable gland enclosures capacity, please contact our sales office.

XAWF/XAWFS

The XAWG/XAWF/XAWFS range of complete control stations are manufactured in GRP, zinc alloy or stainless steel respectively. The enclosure can accommodate 1-3 control or signaling operators or ammeter and come delivered with plastic Ex e cable glands as standard.

Specifications

Material	GRP, zinc alloy or stainless steel
IP Rating	IP65–66
Temperature	–20°C to +40°C (+50°C, +60°C)
Approvals	
- Atex	INERIS 03ATEX0122
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex II 2 GD, T6/T4 Ex e II Ex e mb II Ex d e IIC Ex demb IIC Ex tD A21 ...or a combination of these

Pushbutton Station

Function	Label (pushbutton colour) and contact function	Insulated station with insulated unit	Metal station with metal unit	Stainless steel station with metal unit
1 pushbutton with spring return	Start (green) 1 NO	XAWG10	XAWF10	XAWFS10
1 pushbutton with spring return	Stop (red) 1 NC	XAWG11	XAWF11	XAWFS11
1 pushbutton, mushroom head Ø40 mm, with spring return	Stop (red) 1 NC	XAWG16	XAWF16	XAWFS16
1 pushbutton, mushroom head Ø40 mm, latching turn to release	Stop (red) 1 NC	XAWG17	XAWF17	XAWFS17
1 selector switch 2 positions stay put	Start/Stop 1 NO	XAWG13	XAWF13	XAWFS13
2 pushbuttons with spring return	Start (green) 1 NO Stop (red) 1 NC	XAWG21	XAWF21	XAWFS21
3 pushbuttons with spring return	Forward (green) 1 NO Stop (red) 1 NC Reverse (green) 1 NO	XAWG31	XAWF31	XAWFS31
1 pilot light, 2 pushbuttons with spring return	Red light unit 24-250V AC-DC Start (green) 1 NO Stop (red) 1 NC	XAWG34	XAWF34	XAWFS34

Measurement Station

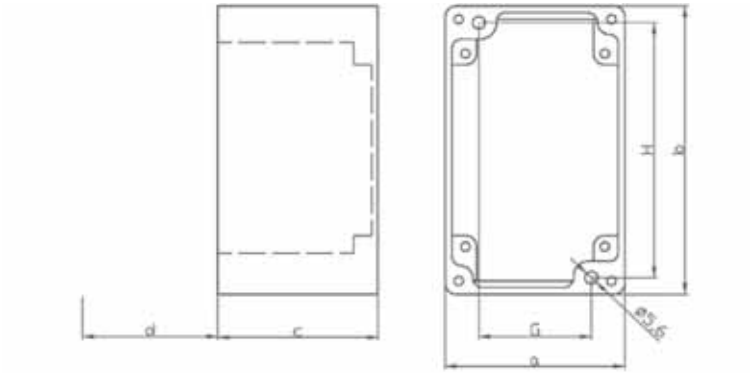
Function	Labels (pushbutton colour) and contact function	Insulated station with insulated unit	Metal station with metal unit	Stainless steel station with metal unit
1 ammeter		XAWG2812	XAWF2812	XAWFS2812
1 ammeter, 1 selector switch, 2 positions stay put	Start/Stop 1 NO	XAWG3812	XAWF3812	XAWFS3812
1 ammeter, 2 pushbuttons, spring return	Start (green) 1 NO Stop (red) 1 NC	XAWG382	XAWF482	XAWFS482

Cable gland: XAWG1... XAWG2... plastic cable gland for cable Ø 8 to 13 mm
XAWG3... plastic cable gland for cable Ø 13 to 19 mm
XAWF(S)1... XAWF(S)2... XAWF(S)3... brass cable gland for cable Ø 8.5 to 16 mm
XAWF(S)4... brass cable gland for cable Ø 12 to 20.5 mm
For control unit please see our Harmatex documentation

The ammeter is of the current transformer type, for use with a currrent transformer of 1 or 5 amp secondary (C.T. not supplied). Please state required ammeter motor scale and C.T. secondary current when ordering.

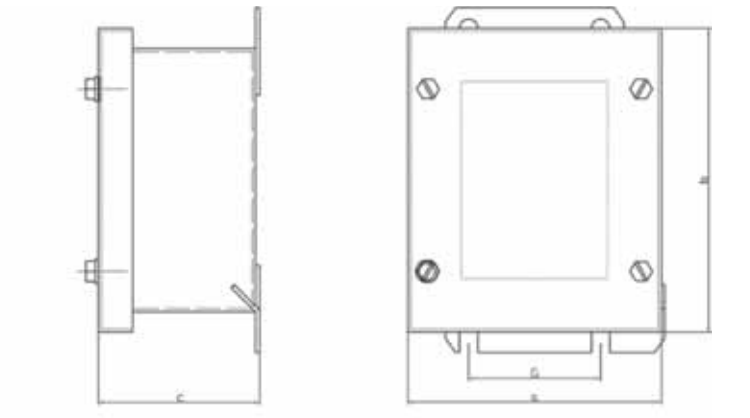
Note: For the insulated station the contact blocks are mounted in the base. For the metal stations, they are mounted on the cover.

Dimensions (mm)

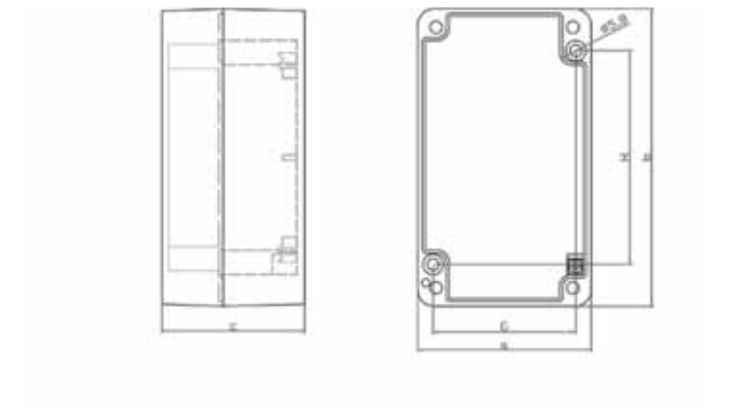


d : max 67 mm for operating head

Reference	a	b	c	G	H
XAWF1...	80	80	77	50	65
XAWF2...	80	130	77	50	115
XAWF3...	80	175	77	50	160
XAWF4...	80	220	77	50	205



Reference	a	b	c	G
XAWFS1...	125	90	75	75
XAWFS2...	125	130	75	75
XAWFS3...	125	175	75	75
XAWFS4...	125	220	75	75



Reference	a	b	c	G	H
XAWG1...	85	146	70	70	105
XAWG2...	85	146	70	70	105
XAWG3...	85	226	70	70	108

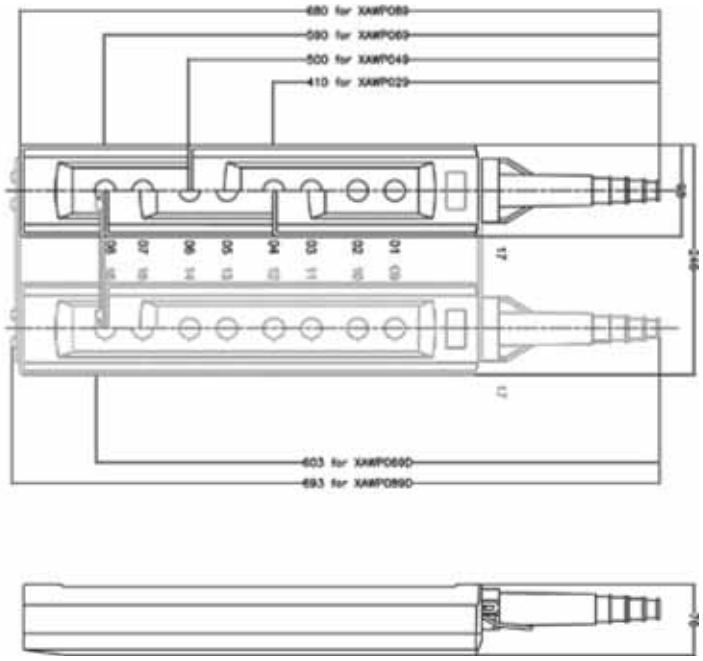
XAW-P

The XAWP range of pendant control stations is suitable for all kinds of industry but primarily used on cranes. The XAWP range is available with 2, 4, 6 or 8 pushbuttons with up to three contact blocks per operator. Custom double XAWP assemblies can be delivered to provide 12 or 16 way pendant control stations. The XAWP also features an optional double-step actuation mode for dual speed control.

Specifications

Material	Metal, Rubber and GRP
IP Rating	IP65
Temperature	20°C to +60°C (without lighting functions) -20°C to +50°C (with lighting functions)
Approvals	
- Atex	INERIS 03ATEX0122
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, 60079-31 EN: 61241-0, 61241-1
Mounting	Assembly of components only by TECHNOR
Cable entry capacity	for Ø10 to Ø22 mm cable
Connection	Screw clamp terminals From 1 x 0.5 mm² cable to 2 x 1.5 mm² cable (with or without ferrule)
Availability	Standard version available on catalogue Special version available on request

Dimensions

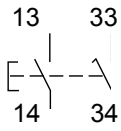
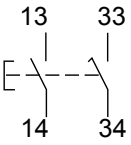
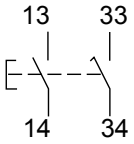


Stations

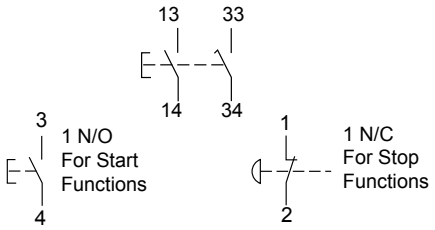
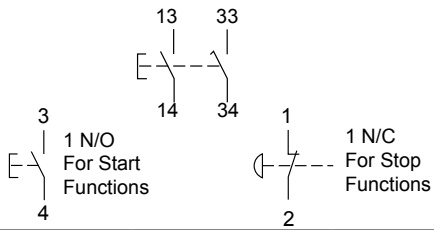
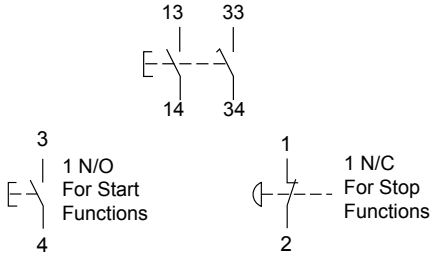
Fitted with interchangeable booted operators and cable boot suitable for Ø10 to Ø22mm				
Number of way	Function	Contact blocks mounted on each way	Reference	Weight Kg
2		1 N/O	XAWP271	0.940
		1 N/C + 1 N/O	XAWP281	1.000
4		1 N/O	XAWP471	1.290
		1 N/C + 1 N/O	XAWP481	1.400
6		1 N/O	XAWP671	1.650
		1 N/C + 1 N/O	XAWP681	1.800

Fitted with interchangeable booted pushbutton, operators with start and emergency stop functions. With labels in yellow blank and cable boot suitable for Ø10 to Ø22mm cable.					
	Number of way	Function	Contact blocks mounted on each way	Reference	Weight Kg
Fitted with interchangeable booted pushbutton, operators with start and emergency stop functions. With labels in yellow blank and cable boot suitable for Ø10 to Ø22mm cable	4	I O	1 N/O For Direction and Start Functions; 1 N/C For Stop Function	XAWP472	1.320
			1 N/C + 1 N/O For All Functions	XAWP482	1.380
	6	I O	1 N/O For Direction and Start Functions; 1 N/C For Stop Function	XAWP672	1.650
			1 N/C + 1 N/O For All Functions	XAWP682	1.690
	8	I O	1 N/O For Direction and Start Functions; 1 N/C For Stop Function	XAWP872	2.000
			1 N/C + 1 N/O For All Functions	XAWP882	2.250

Double step pushbutton stations

Fitted with “double” step mechanism on each pushbutton. Legend plate 30x40mm black or white symbols on white or black background. Cable boot suitable for Ø10 to Ø22mm				
Number of way	**Function**	**Contact blocks**	**Reference**	**Weight Kg**
2			XAWP2271	1.000
4			XAWP4271	1.400
6			XAWP6271	1.800

Double step pushbutton stations

Fitted with “double” step mechanism on each indicator. start pushbutton label I, red Ø40 Mushroom head latching to release, yellow blank label, cable boot suitable for Ø10 to Ø22mm				
Number of way	**Function**	**Contact blocks**	**Reference**	**Weight Kg**
4			XAWP4272 with standard START pushbutton	1.350
6			XAWP6272 with standard START pushbutton	1.800
8			XAWP8272 with standard START pushbutton	2.250

Accessories and spare parts

Type	Function	Reference
Empty pendant control station for mounting exclusively by TECHNOR	02 buttons	XAWP029
	04 buttons	XAWP049
	06 buttons	XAWP069
	08 buttons	XAWP089
	12 buttons	XAWP069D
	16 buttons	XAWP089D
Slow break contact block	N/O	ZBWE101
	N/C	ZBWE102
Complete booted pushbutton operator	White (W)	XAWP9411
	Black (B)	XAWP9412
	Green (G)	XAWP9413
	Red (R)	XAWP9414
Selector switches (Stayput)	2 pos. Black+NO	XBW5AD21
	3 pos. Black+2NO	XBW5AD33
Pilot light + head (-24V to 415V AC-DC)	White	XLW5AV013
	Green	XLW5AV033
	Red	XLW5AV043
	Yellow	XLW5AV053
	Blue	XLW5AV063
Blank plug		XAWZ3
Double step push-buttons (use only with ZBWE101 contact blocks)	White (W)	XAWP9421
	Black (B)	XAWP9422
Emergency Mushroom head (Ø40)	Red+NC	ZA2BS54 + ZBWE102
Emergency Mushroom head (Ø30)	Red+NC	ZA2BS44 + ZBWE102

ARROW for Double step pushbutton		ARROW for Single step pushbutton	
UP	ZBWY4953	UP	ZBWY4951
DOWN	ZBWY2956	DOWN	ZBWY2954
RIGHT	ZBWY4903	RIGHT	ZBWY4901
LEFT	ZBWY2906	LEFT	ZBWY2904
FORWARD	ZBWY4965	FORWARD	ZBWY4963
REVERSE	ZBWY2968	REVERSE	ZBWY2966
		FAST UP	ZBWY4952
		FAST DOWN	ZBWY2955
		FAST RIGHT	ZBWY4902
		FAST LEFT	ZBWY2905
		FAST FORWARD	ZBWY4964
		FAST REVERSE	ZBWY2967
		I	ZBWY4980
		O	ZBWY2931
		O - I	ZBWY2178
		I - II	ZBWY2179
		I - O - II	ZBWY2186
		EMERGENCY STOP	ZBWY2330

XAWP9411

ZBWE101

XLW5AV033

EFE

The EFE range of Control and Signaling Units is based on a standardized range of 10 different sizes of GRP (Glass fibre Reinforced Polyester) Ex e enclosure. The EFE Series can be assembled with accessories including start pushbutton, stop pushbutton with padlocking device, local-remote change-over switch, and ammeter, wired to a terminal rail inside the enclosure.

Specifications

Material	Resin GRP (Glass Fiber Reinforced Polyester)
IP Rating	IP65-66
Temperature	-50°C to 60°C
Approvals	
- Atex	INERIS 04ATEX0035
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex e II T6 IP65 T85°C Ex e II T4 IP65 T135°C Ex emb II T6 IP65 T85°C Ex emb II T4 IP65 T135°C Ex de IIC T6 IP65 T85°C Ex de IIC T4 IP65 T135°C Ex demb IIC T6 IP65 T85°C Ex demb IIC T4 IP65 T135°C Type of protection depends on what components are fitted. According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Lid / Door gasket	Silicone seal
Surface treatment	Black colour
Earthing	Earth connections are made via EEx e certified terminals
Drain plug	The enclosures can be equipped with drain and breather devices ECR-1; ECR-2 type.
Entries thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Quantity for entries	Contact our Technical Department for further information
Quantity for terminals	Contact our Technical Department for further information
Rated Voltage	690 V
Rated Current	16 A
Rated Frequency	48÷62 Hz

Note **Captive screws stainless steel made**
Available only with terminal strip installed

Note **The above control station becomes EFEX...**
if realized in Stainless steel 316L instead of GRP

Control/Signalling Units - Push Button Stations listed in the following table are “not assembled”, they are examples of the possible combinations. The maximum number of control units shown in the table is compatible with our standard labelling system (holder-label).

TYPE	DIMENSIONS [mm]	Number of Control and Signalling Units Which can be mounted on the Cover	Maximum permissible Dissipation for the Enclosures [W]
EFE 1212-CS	122x120x90	2	10
EFE 1222-CS	120x220x90	6	30
EFE 1616-CS	160x160x90	4	20
EFE 1626-CS	160x260x90	8	40
EFE 1636-CS	160x360x90	10	50
EFE 2526-CS	255x250x121	16	60
EFE 2540-CS	250x400x121	24	100
EFE 2560-CS	250x600x121	40	170
EFE 4140-CS	405x400x121	42	160

TNCC

The TNCC range of control stations / enclosures are manufactured in 316 stainless steel and designed to meet the requirements for use on and offshore, in petrochemical and marine applications and for any other industry where an explosive atmosphere may be present.

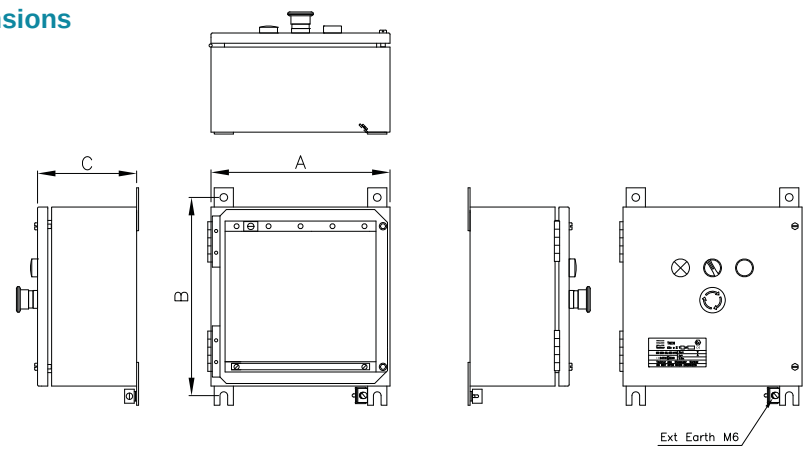
Specifications

Material	Acid resistant Stainless steel AISI316L
IP Rating	IP66 standard (67 and 68 upon request)
Temperature	-40ºC to +60ºC
Approvals	
- Atex	DNV-2003-OSL-ATEX-0042
- Brazilian	09/UL-BRCN-0004
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1
Lid/Door gasket	Neoprene (temp. -40ºC to +100ºC) Silicone (temp. -40ºC to +200ºC)
Surface treatment	Acidized Pickling as standard Electropolished as an option
Material thickness	Min. 1.5 mm (depending on the box size)
Earthing	Internal earth bar/bracket External earth bracket
Drain Plug	Optional
Other options	Ref. TNCN

TNCC Measurement Range of Stocked Boxes

Type	A Width cm	B Height cm	C Depth cm	Volume dm^3	Weight kg
121009	12	10	9	1.08	1.5
151510	15	15	10	2.25	2.5
202010	20	20	10	4.00	3.0
202015	20	20	15	6.00	3.5
204015	20	40	15	12.00	5.4
282815	28	28	15	11.76	5.2
282827	28	28	27	21.17	7.0
302015	30	20	15	9.00	5.0
383815	38	38	15	21.66	8.1
383827	38	38	27	38.99	10.3
384515	38	45	15	25.65	8.9
385715	38	57	15	32.49	10.7
575715	57	57	15	48.74	16.4
575730	57	57	30	97.47	21.4
577620	57	76	20	77.98	21.7
769520	76	95	20	13.00	32.9

Dimensions



TNUC

The TNUC range of control stations / enclosures are manufactured in GRP (Glass fibre reinforced polyester) are designed to meet the market requirements for use on- and offshore, in petrochemical and marine applications, and any other industry where an explosive atmosphere may be present.

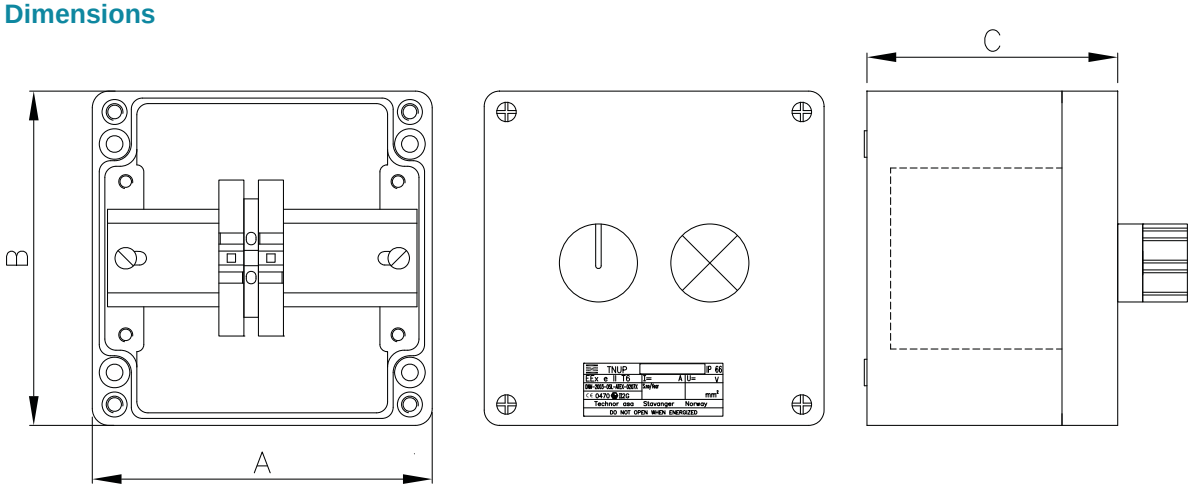
Specifications

Material	Glass fibre reinforced polyester (GRP)
IP Rating	IP66 according to IEC 529
Temperature	-20ºC to +40ºC
Approvals	
- Atex	DNV-2004-OSL-ATEX-0121
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1
Lid/Door gasket	Perbunan
Earthing	PE bar and/or earth terminals Earth continuity plate / earth tag upon request
Electrical data	Umax = 750V, Imax = 500A
Colour	Black
Cover Screws	SS316
Other options	Ref. TNUP

Measurement Table

Type	A Width [cm]	B Height [cm]	C Depth [cm]	Weight [kg]
121209	123	120	91	1.1
161609	160	160	92	1.5
252512	255	250	120	2.9
361609	360	160	92	2.5
402512	400	250	120	4.3
404120	400	405	195	6.1

Dimensions



XADW / XAEW

The XADW/XAEW range of Ex d control stations are manufactured in aluminium and can accommodate pushbutton units, pilot lights or an ammeter. The XADW / XAEW range are supplied with a brass gland as standard.

Specifications

Material	Aluminium
IP Rating	IP65–66
Temperature	–20°C to +60°C
Approvals	
- Atex	INERIS 03ATEX0145 for XADW INERIS 03ATEX0146 for XAEW
Standards	EN/IEC: 60079-0, 60079-1, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex d IIB T6 IP65/66 - T85°C for XADW Ex d IIC T6 IP65/66 - T85°C for XAEW ATEX II 2 GD
Surface treatment	RAL 7032 Painting Special painting upon request
Cable gland entry	Fitted with 1 M20 nickel-plated brass cable gland

Group IIB-T6	With flanged joint (for group IIB gases and vapours)			
	Pushbutton spring return		1 mushroom head pushbutton	1 selector switch
Function	Start	Stop	Stop	Stop-Start
Contact type	1 NO	1 NC	1 NC	1 NC
Non armoured gland version	XADW12110P11IC	XADW12111P11IC	XADW12116P11IC	XAD12113P11IC
Armoured gland version	XADW12110P14I	XADW12111P14I	XADW12116P14I	XADW12113P14I
	2 pushbuttons with spring return	3 pushbuttons with spring return	1 pilot light and 2 pushbuttons with spring return (1)	
Function	Start-Stop	Forward-Stop-Reverse	Stop -Start-Stop	
Contact type	1 NO - 1 NC	1 NO - 1 NC - 1 NO	Direct lamp - 1 NO - 1 NC	
Non armoured gland version	XADW12221P11IC	XADW13231P11IC	XADW13236P11IC	
Armoured gland version	XADW12221P14I	XADW13231P14I	XADW13236P14I	
	1 Ammeter Ø48mm (1)	1 Ammeter Ø48mm and 1 selector switch	1 Ammeter Ø48mm and 2 pushbuttons with spring return	
Function	ammeter	ammeter - Stop-Start	ammeter - Start-Stop	
Contact type	-	1 NO	1 NO - 1 NC	
Non armoured gland version	XADW1231P11IC	XADW122321P11IC	XADW132321P11IC	
Armoured gland version	XADW1231P14I	XADW122321P14I	XADW132321P14I	

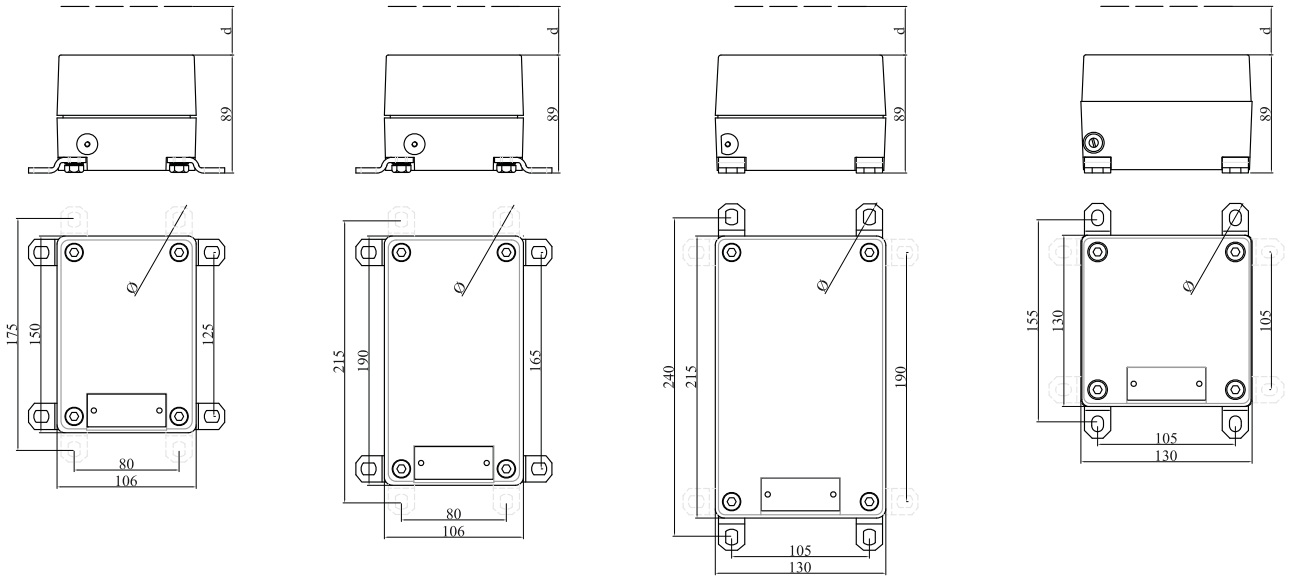
(1) available in Group IIC-T6, please contact our sale office

The ammeter may be either of the following types;

- direct fed: up to 30 A
- current transformer (not supplied): please state transformer ratio

For other combinations please check our variable enclosure pages, or contact your local retailer.

Dimensions (mm)



XADW12... XADW13... XADW22... XAEW12...

d: 67 mm max. operating heads

Ø: 4 elongated holes 9 x 12

(1): cable glans only mounted on complete station

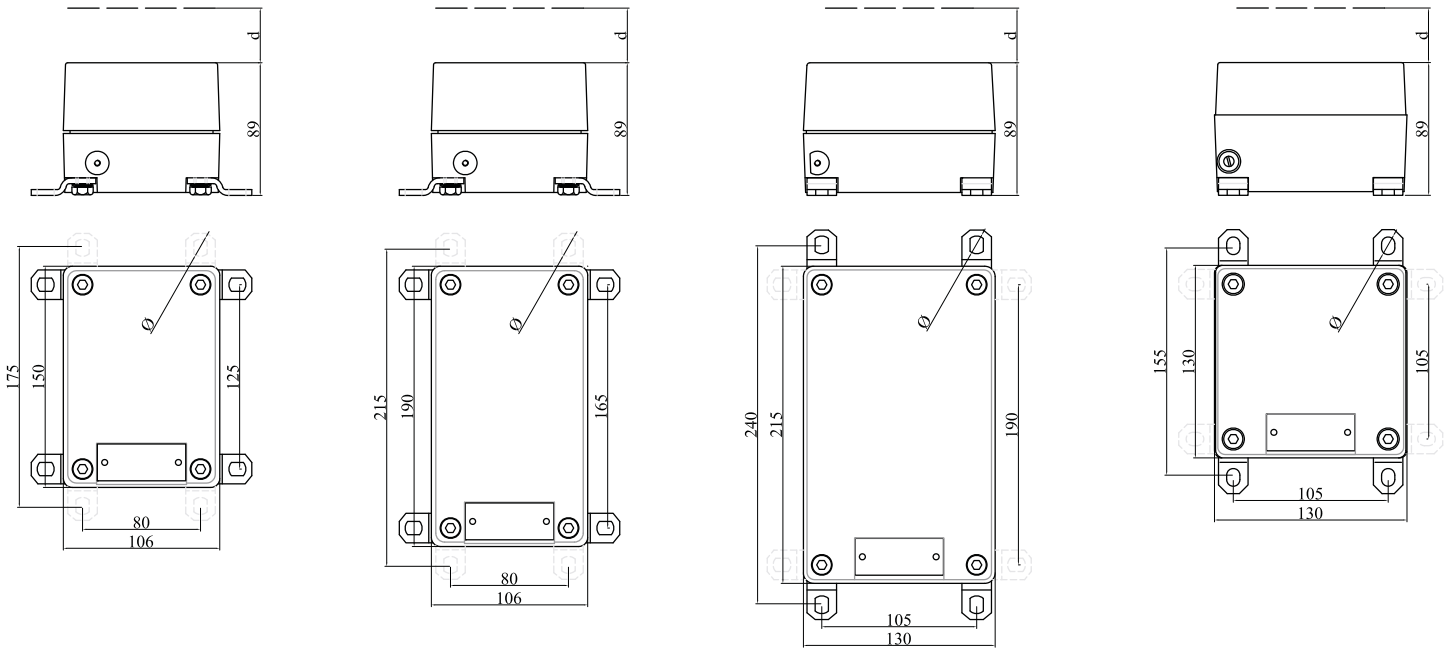
XADW / XAEW

The XADW/XAEW range of Ex d control stations are manufactured in aluminium and can accommodate pushbutton units, pilot lights or an ammeter. The XADW / XAEW range are supplied with a brass gland as standard.

Specifications

Material	Aluminium
IP Rating	IP65–66
Temperature	–20°C to +60°C
Approvals	
- Atex	INERIS 03ATEX0145 for XADW INERIS 03ATEX0146 for XAEW
Standards	EN/IEC: 60079-0, 60079-1, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex d IIB T6 IP65/66 - T85°C for XADW Ex d IIC T6 IP65/66 - T85°C for XAEW ATEX II 2 GD
Surface treatment	RAL 7032 Painting Special painting on request.

Dimensions



XADW12... XADW13... XADW22... XAEW12...

d: 67 mm max. for operating heads
Ø: 4 elongated holes 9 x 12
(1): cable gland only mounted on complete station.

Variable composition stations assembled by Technor

Group IIC-T6	With Circular joint (for group IIC gases and vapours)		
	M20 entries	Positions	Reference
1 operator or pilot light	1	A	XAEW12101
	2	A - C	XAEW12102
	2	L - M	XAEW12103
2 operators or pilot lights	1	A	XAEW12201
	2	A - C	XAEW12202
	2	L - M	XAEW12203
Single for 1 ammeter > 48mm	1	A	XAEW12301
	2	A - C	XAEW12302
	2	L - M	XAEW12303
Group IIB-T6	**With flat joint (for group IIB gases and vapours)**		
	M20 entries	**Positions**	**Reference**
1 operator or pilot light	1	A	XADW12101
	2	A - C	XADW12102
2 operators or pilot lights	1	A	XADW12201
	2	A - C	XADW12202
3 operators or pilot lights	1	A	XADW13201
	2	A - C	XADW13202
4-6 operators or pilot lights	1	A	XADW22301
	2	A - C	XADW22302
	2	L - M	XADW22303
Single for 1 ammeter 48mm	1	A	XAWD12301
	2	A - C	XAWD12302
2 way for 1 ammeter 48mm and 1 operator or pilot light	1	A	XAWD122301
	2	A - C	XAWD122302
3 way for 1 ammeter 48mm and 2 operator or pilot light	1	A	XAWD132301
	2	A - C	XAWD132302
5 way for 1 ammeter 48mm and 4 operator or pilot light	1	A	XAWD224301
	2	A - C	XAWD224302
	2	L - M	XAWD224303

The choice of operator and lights unit is made with the ZB8 products catalogue pages.
Consult your local sales office for more information or a specific quotation.

CP.../EFDCN

The CP EFDCN range of control stations are based on the features of our CP enclosure, which offers an Ex d IIC mode of protection with or without accessories (push buttons, selector switches, potentiometers, signal lamps, rotary handles, ammeters, voltmeters, fuses, etc.). Enclosures are manufactured in copper free aluminium (Cu<0.1%) and completed with threaded hubs suitable for cable glands or conduit and internal threaded devices to secure DIN/Omega normalized rails for terminal strips. Connection of cable glands or conduit does not affect the internal void, which remains available for terminals and wiring. Internal and external screws are AISI304 stainless steel. This series is custom-made to customer specifications, including quantity and type of operators. Based on the customer's needs and certificate requirements, our technical department will advise and select the most suitable CP-.../EFDCN combination or you may choose from the standard configurations listed below.

Specifications

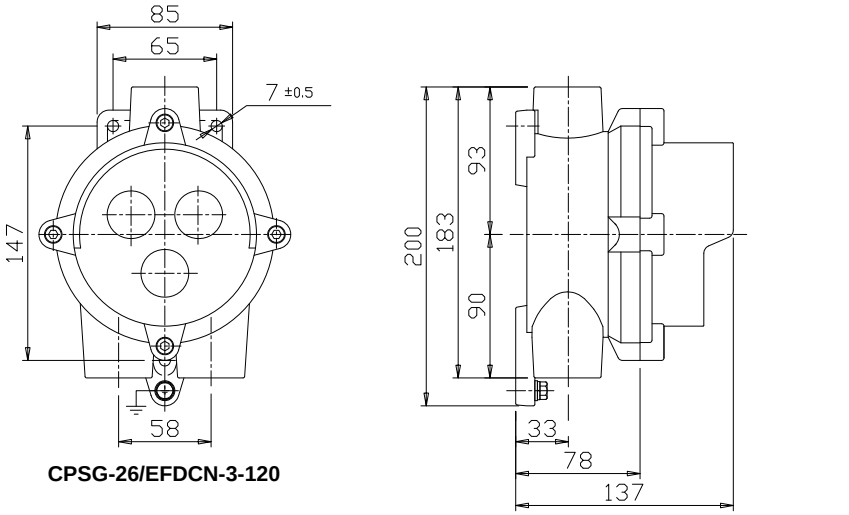
Material	Copper free Aluminium (Cu <0.1%)	
IP Rating	IP65-66	
Temperature	-35°C to 40°C for T6 / T85°C -35°C to 50°C for T5 / T100°C -35°C to 60°C for T4 / T135°C	
Approvals		
- Atex	INERIS 03ATEX0009	
- GOST	GOST Certificate	
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1	
Ex-code	CE Ex II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP65 T85°C / T100°C / T135°C according to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22	
Lid / Door gasket	O-ring made in Nitrile Rubber (NBR)	
Surface treatment	Unpainted	
Electrical characteristics	Max DC voltage	440 V
	Max AC voltage	1000 V
	Nominal frequency	50 / 60 Hz
	Max current	100 A
	Nominal incandescent lamp power	≤ 5 W
	Max. LED lamp dissipated power	≤ 3 W
Internal diameter	Available from 90 mm. to 120 mm.	
Entries position	(C) = 2, (T) = 3, ways	
Entries thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions	

This series is custom-made to customer specifications, including the number and type of operators (M32 modular barrels) required on the CP-... enclosure. Based on the customers needs and certificate requirements, our technical department will advise and select the most suitable CP-.../EFDCN combination.

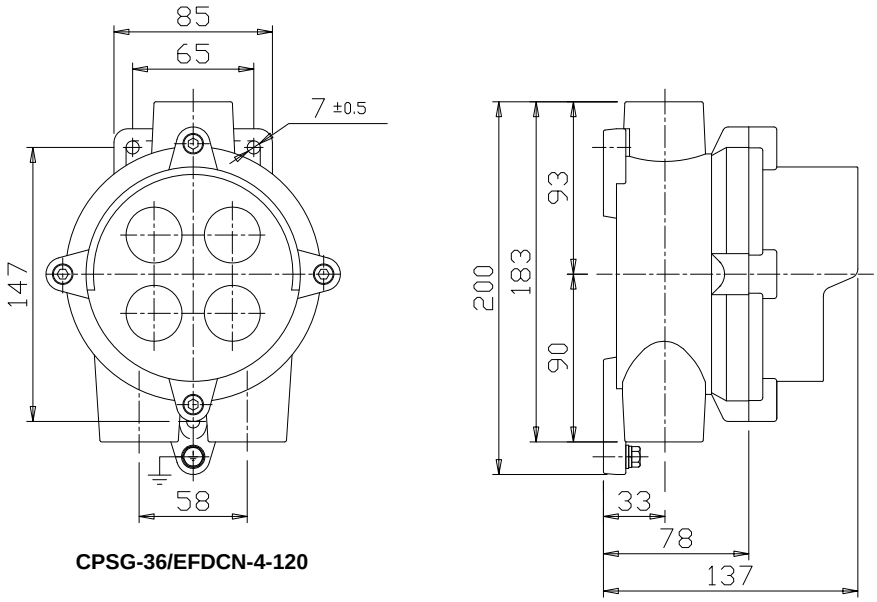
Push button stations listed in the following table are “not assembled”, they are only examples of the possible combinations.

CODE	TYPE	DESCRIPTION	ENTRIES	WEIGHT
A.0451.10	CPC-26/ EFDCN-1-90	1 Operator - enclosure 90 mm. diameter	2XM25	0.930
A.0452.50	CPSC-26/ EFDCN-1-120	1 Operator on 120 mm enclosure’s diameter	2XM25	1.330
A.0452.20	CPSC-26/ EFDCN-2-120	2 Operator on 120 mm enclosure’s diameter	2XM25	1.280
A.0452.30	CPSC-36/ EFDCN-3-120	3 Operator on 120 mm enclosure’s diameter	2XM32	1.300
A.0452.40	CPSC-36/ EFDCN-4-120	4 Operator on 120 mm enclosure’s diameter	2XM32	1.320
A.0452.50	CPSG-26/ EFDCN-1-120	1 Operator on 120 mm enclosure’s diameter	3xM25	1.500
A.0452.60	CPSG-36/ EFDCN-2-120	2 Operator on 120 mm enclosure’s diameter	3xM25	1.450
A.0452.70	CPSG-36/ EFDCN-3-120	3 Operator on 120 mm enclosure’s diameter	3xM32	1.470
A.0452.80	CPSG-36/ EFDCN-4-120	1 Operator on 120 mm enclosure’s diameter	3xM32	1.490
A.0493.01	CPC-26/EFDCN-EM	1 Emergency push botton complete with breakable glass and hummer	2xM25	1.200
A.0493.21	CPC-26/EFDCN-EM-P	1 Emergency push botton complete with breakable glass and hummer. The push button, normally open, will automatically close the circuit at the breaking of the glass.	2xM25	1.200
A.0494.01	CPC-26/EFDCN-PE	Footswitch with safety guard	2xM25	3.200

Dimensions

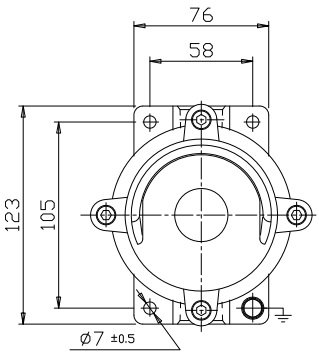


CPSG-26/EFDCN-3-120

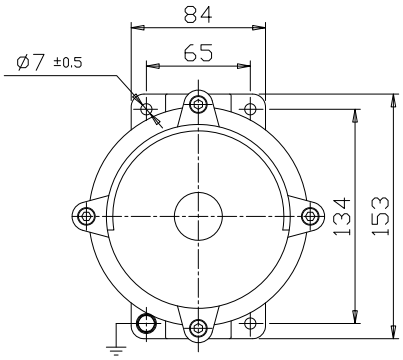


CPSG-36/EFDCN-4-120

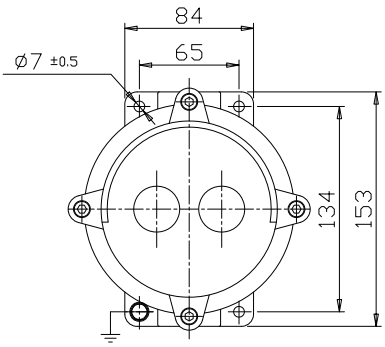
Dimensions



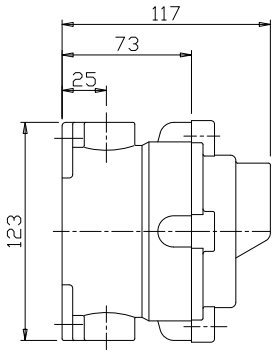
CPC-26/EFDCN-1-90

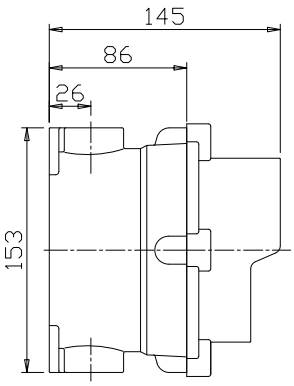


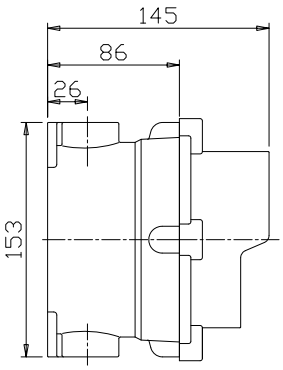
CPSC-26/EFDCN-1-120

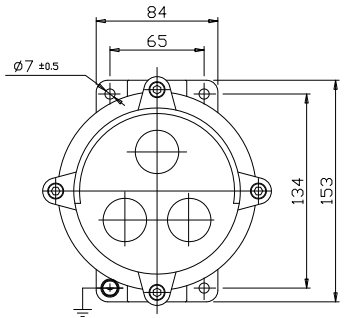


CPSC-26/EFDCN-2-120

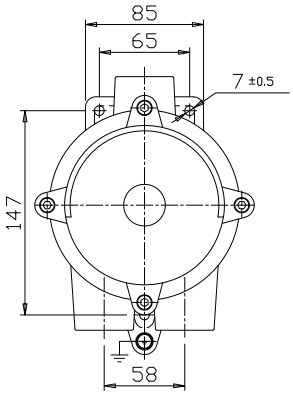








CPSC-26/EFDCN-3-120



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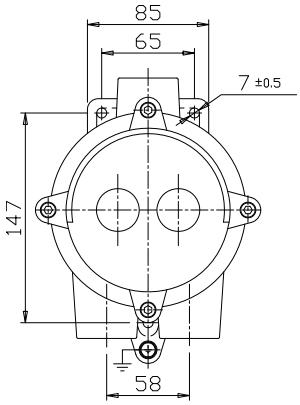
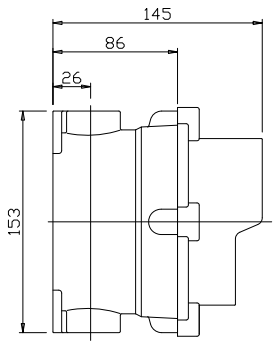
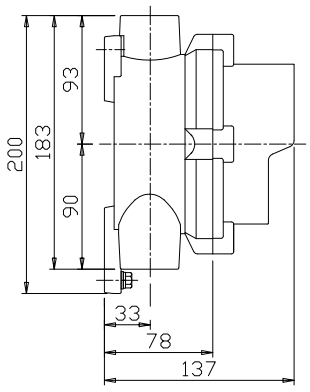
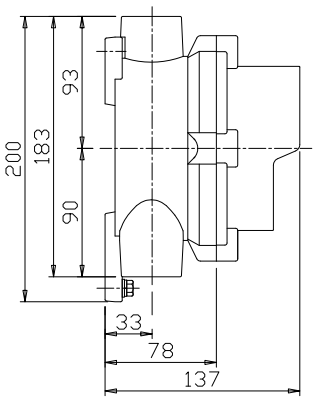


CPSG-26/EFDCN-2-120







CP.../EFSRC

The CP EFSRC range of enclosure for switches are based on the features of our CP enclosure, which offers an Ex d IIC mode of protection with or without accessories (pushbuttons, selector switches, potentiometers, signal lamps, rotary handles, ammeters, voltmeters, fuses, etc.). Enclosures are manufactured in copper free aluminium (Cu<0.1%) and completed with threaded hubs suitable for cable glands or conduit and internal threaded devices to secure DIN/Omega normalized rails for terminal strips. Connection of cable gland or conduit does not affect the internal void, which remains available for terminals and wirings. Internal and external screws are AISI304 stainless steel.

This series is customized to customer specifications, including the number and type of operators (M32 modular barrels) required on the enclosure. Based on the customer requirements, our technical department will advise and select the most suitable CP-.../EFSRC combination.

Specifications

Material	Copper free aluminium (Cu<0.1%)	
IP Rating	IP65-66	
Temperature	-35°C to 40°C for T6 / T85°C -35°C to 50°C for T5 / T100°C -35°C to 60°C for T4 / T135°C	
Approvals		
- Atex	INERIS 03ATEX0009	
- GOST	GOST Certificate	
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1	
Ex-code	CE Ex II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP65 T85°C / T100°C / T135°C according to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22	
Lid / Door gasket	O-ring made in Nitrile Rubber (NBR)	
Surface treatment	Unpainted	
Electrical characteristics	Max. DC voltage	440 V
	Max. AC voltage	1000 V
	Nominal frequency	50 / 60 Hz
	Max. current	100 A
	Nominal incandescent lamp power	≤ 5 W
	Max. LED lamp dissipated power	≤ 3 W
Internal diameter	90 mm.	
Entries position	(C) = 2	
Entries thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions	
Accessories on request	External polyurethane painting “Standard Cycle” Green RAL 6003	

Switches listed in the following table are “not assembled”, they are only examples of the possible combinations.

CODE	TYPE	DESCRIPTION	ENTRIES	WEIGHT
A.0451.02	CPC-26/ EFSRC-220	Rotary switch 2 poles 20 A	2XM25	1.100
A.0451.04	CPC-26/ EFSRC-420	Rotary switch 4 poles 20 A	2XM25	1.150
A.0452.04	CPC-26/ EFSRC-432	Rotary switch 4 poles 32 A	2XM25	1.300
A.0453.02	CPC-26/ EFSRC- D - 220	Change - over switch 2 poles 20 A	2XM32	1.150
A.0453.03	CPC-26/ EFSRC- D - 320	Change - over switch 3 poles 20 A	2XM32	1.200
A.0454.02	CPC-26/ EFSRC- C - 220	Step switch 2 poles 20 A	2XM25	1.150
A.0454.03	CPC-26/ EFSRC- C - 320	Step switch 3 poles 20 A	2XM25	1.300

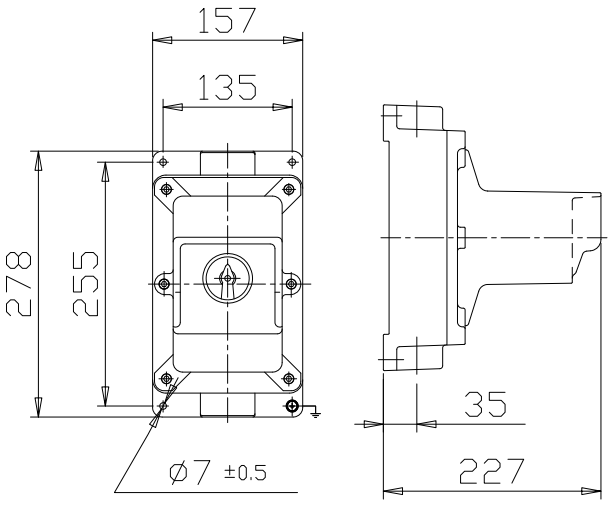
EFQL

The EFQL range of Miniature Automatic Circuit Breakers are based on our EFQL Ex d enclosure manufactured in copper free aluminium and painted according to RAL 6003. The EFQL range can be delivered with automatic circuit breakers, on-load switches and selector switches up to 63A and is suitable for use indoor or outdoor, in corrosive and hazardous areas where gases, vapours and dusts may be present.

Specifications

Material	Copper free aluminium (Cu<0.1%)
IP Rating	IP66-67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
Temperature	-30°C to 55°C
Approvals	
- Atex	INERIS 02ATEX0027X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d IIB T6 Ex tD A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Surface treatment	External polyurethane painting (RAL 6003)
Entries	No 2 Entries diam. 1" or M32
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Poles	3 Poles
Voltage	220/660V 50/60Hz
Accessories	Residual Current Device "VIGI" Auxiliary Switch "OF" Alarm Switch "SD" Shunt trip release "MX+OF" Undervoltage release "MN" Customized colours
Note	**Foreseen with electrical unit up to 63 A** **External operating handle**

Dimensions EFQL - 3



ITEM	NOTE	WEIGHT [kg]
TYPE EFQL - 3	Compatible until No. 8 steps of 9 mm. (MULTI-9)	3.250
TYPE EFQL - 4	Compatible until No. 10 steps of 9 mm. (MULTI-9)	4.600

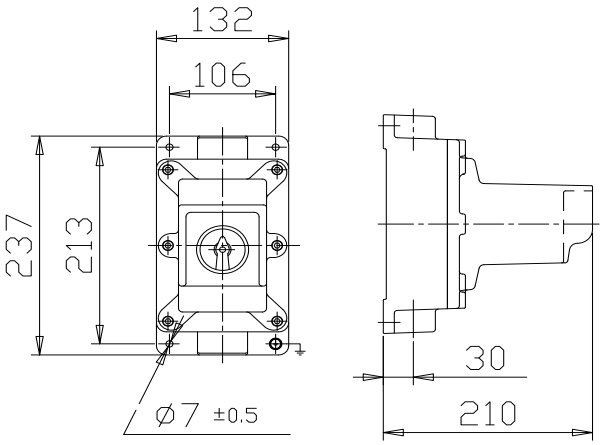
EPKMZ

The EPKMZ Motor-Protective Circuit Breakers are based on our EFQL Ex d enclosure manufactured in copper free aluminium and painted according to RAL 6003. The EPKMZ range can be delivered with automatic circuit breakers, on-load switches and selector switches up to 63A and is suitable for use indoor or outdoor, in corrosive and hazardous areas where gases, vapours and dusts may be present.

Specifications

Material	Copper-free aluminium (Cu<0.1%)
IP Rating	IP66-67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
Temperature	-30°C to 55°C
Approvals	
- Atex	INERIS 02ATEX0027X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIB T6 Ex tD A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Surface treatment	External polyurethane painting (RAL 6003)
Entries	No 2 Entries diam. 1” or M32
Standard Identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Poles	3 Poles
Voltage	220/660V 50/60Hz
Accessories	Customized colors Overload and short circuit releases
Note	**Foreseen with electrical unit up to 63 A** **External operating handle**

Dimensions EFQL - 4



EPKMZ

Item	Note	Weight [kg]
TYPE EFQL - 3	Compatible until No. 8 steps of 9 [mm] (MULTI-9)	3.250
TYPE EFQL - 4	Compatible until No. 10 steps of 9 [mm] (MULTI-9)	4.600

AC1WD/DE8BA

The AC1WD/DE8BA range of solid and robust Ex d triple-pole starters with overload relay are ideally suited for many applications. The range is available in three variants:

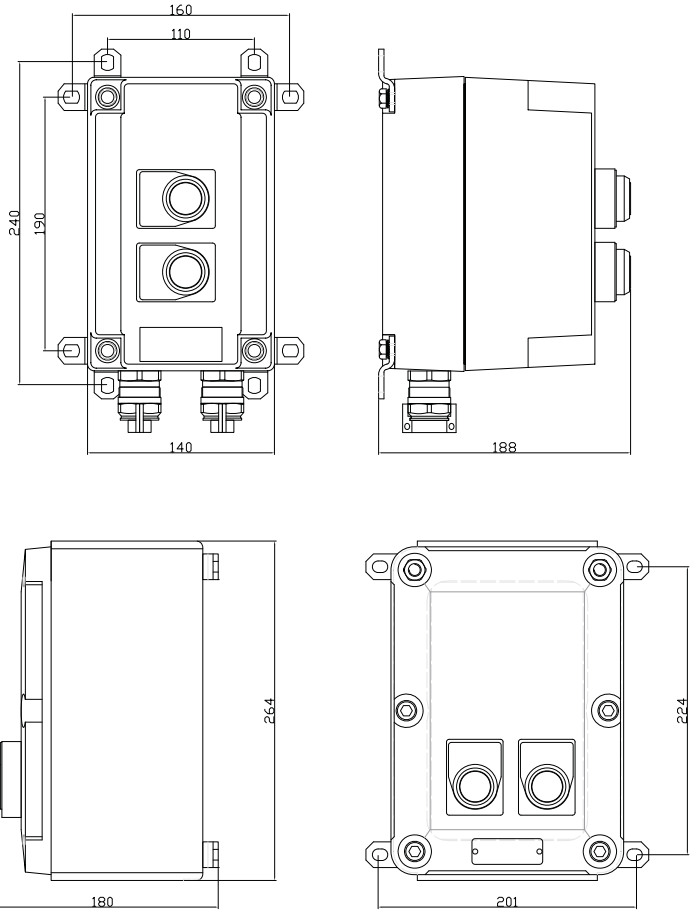
- Without isolator, without fuses
- Without isolator, with fuses
- With isolator, with fuses

A standard range of contactors, thermal relays and disconnecting switch with or without fusible door, allows a customization of starters for various applications.

Specifications

Material	Cast iron, steel
IP Rating	IP65-66
Temperature	20°C to +40°C (+50°C, +60°C)
Approvals	
- Atex	INERIS 03ATEX0121X
	INERIS 03ATEX0144X
Standards	EN/IEC: 60079-0, 60079-1, 60079-31
	EN: 61241-0, 61241-1
Ex-Code	II 2 GD - Ex d IIB
	II 2 GD - Ex d IIC

Dimensions



Triple-pole starters Ex d with overload relay without isolator, without fuse
Complete with Start and Stop pushbuttons mounted on door

Rated current A	Motor rating 230V kw	400 V kw	500V kw	Overload range A	Gas Group and temp. class	Basic reference (2)	Complete your own reference (1)	Weight without cable gland
12	.	0.37	0.75	1 to 1.6	IIB-T6	AC1WD312	•• • • •	5.00
	0.37	0.75	1.1	1.6 to 2.5				
	0.75	1.5	2	2.5 to 4				
	1.1	2.2	3	4 to 6				
	1.8	3	4	5.5 to 8	IIC-T3	DE8WH2612	•• • • •	12.00
	2.2	4	5.5	7 to 10				
	3	5.5	7.5	9 to 13				
25	4	7.5	10	12 to 18	IIB-T6	AC1WD325	•• • • •	5.50
	5.5	11	15	17 to 25				
					IIC-T3	DE8WH2625	•• • • •	12.00
40	7.5	15	18.5	23 to 32	IIB-T6	DE8BA321340	•• • • •	26.00
	11	18.5	22	30 to 40				
					IIC-T3	DE8WH2640	•• • • •	12.00
65	15	22	30	37 to 50	IIB-T6	DE8BA321365	•• • • •	26.00
	15	25	37	48 to 65				
					IIC-T3	DE8WH2665	•• • • •	12.00

Cable glands

Number and position	Number	Position		Complete your own reference (1)	Weight without cable gland
	2	A, H		P1 • • •	
	2	L, M		P2 • • •	
	3	L, M, H		P3 • • •	

		Complete your own reference (1)	Weight without cable gland
Thread ISO M20	1 F for non armoured cable with clamping module	1 I C	
	4 F for armoured câble	4 I	
	Without câble gland	5 I	
Thread ISO M25	1 F for non armoured cable with clamping module	6 I C	
	4 F for armoured cable	8 I	
	Without câble gland	9 I	

(1) When ordering, please complete your reference. Example: AC1WD321P24I

(2) This basic reference, once completed, should be followed by the information: overload relay and voltage

For other configuration (range, cable gland entries)


IB-10-0217
IB-10-0207
IB-10-0213
TNCN
3425

Level-, Detection- and Limit Switches

XUWB

The XUWB Ex d proximity detector is based on Schneider components. With a body dimension of just 30mm and standard cable lengths of 2 or 5 meters, this pre-wired detector can be used in a range of applications and processes. With a wide sensing range of 0.6 meter to 15 meters the XUWB offers a flexible detector for your application.

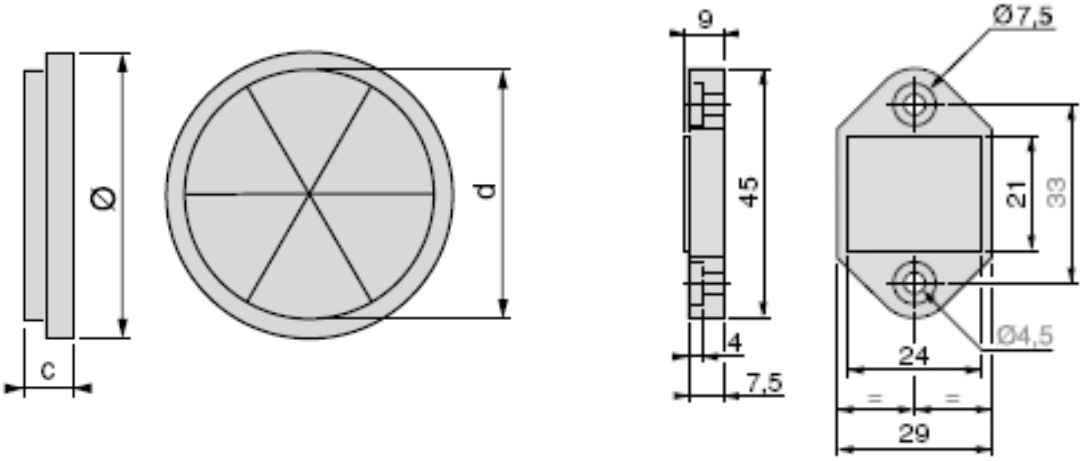
Specifications

Material	Stainless steel AISI 316L
IP Rating	IP65-67
Working Temperature	–20°C to +55°C
Storage temperature	–40°C to +70°C
Standards	EN/IEC: 60079-0, 60079-1, 60079-31
	EN: 61241-0, 61241-1
Ex-Code	II 2 GD – Ex d IIC T6 to T4
	IP 65–66 T85 to T135°C
Connection	Length: 2m (XUWB…L2)
	Length: 5 m (XUWB…L5)
Type of transmission	Infrared, except for polarized reflex (red)
Way of detection	Along case axis

Detector for DC application (static output)			
Detector type	Polarised reflex system	Reflex system	Thru-beam system
Sensing distance (Sn) (m)	2	4	15
Fixing diameter	30 mm		
Rated supply voltage	12 to 24V DC with protection against reverse polarity		
Current consumption, no-load	35 mA		
Maximum switching frequency	500 Hz		
CONTACT TYPE	PNP		
NO	XUWB9APANL2	XUWB1APANL2	XUWB2APANL2R
NC	XUWB9APBNL2	XUWB1APBNL2	XUWB2APBNL2R
Transmitter for Thru-beam	-	-	XUWB2AKSNL2T
CONTACT TYPE	NPN		
NO	XUWB9ANANL2	XUWB1ANANL2	XUWB2ANANL2R
NC	XUWB9ANBNL2	XUWB1ANBNL2	XUWB2ANBNL2R
Transmitter for Thru-beam	-	-	XUWB2AKSNL2T
For a 5 meter cable length replace L2 with L5 example: XUWB5APANL2 becomes XUWB5APANL5			

ACCESSORIES		
Reflectors	Dimensions (mm)	Reference
Standard reflector	Ø 16	XUZC16
	Ø 21	XUZC21
	Ø 31	XUZC31
	Ø 39	XUZC39
Reflector for short sensing distances	24 x 21	XUZC24

Dimensions



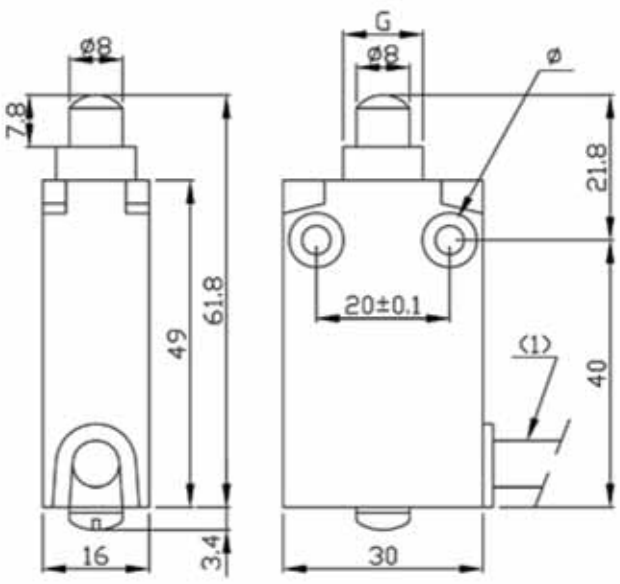
XCW

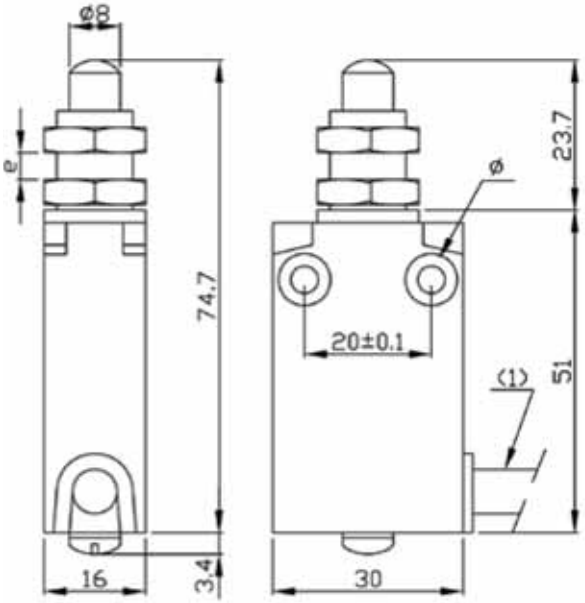
The XCW range of pre-wired Ex d limit switches offers a wide range of operator heads and cable length which affords great flexibility and a practical solution for many applications and process systems.

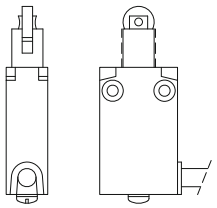
Specifications

Material (body)	Zinc Alloy (ZnAl 4 - Zamak)
IP Rating	IP66–67
Temperature	–20°C to +60°C
Approvals	
- Atex	03ATEX0083X
Standards	EN/IEC: 60079-0, 60079-1. 60079-31
	EN: 61241-0, 61241-1
Ex-Code	Ex d IIC T6 T85ºC II 2 GD
Cable type	Pre-wired cable
Cable length	Standard 1, 2, 5, 10 meters
Mechanical life	10 millions

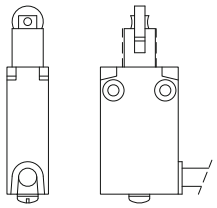
Dimensions



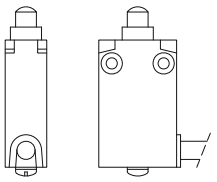




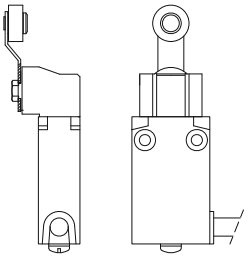
XCWA102



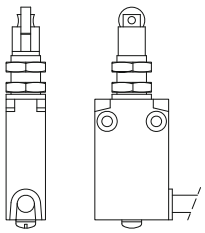
XCWA103



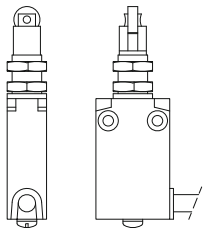
XCWA110



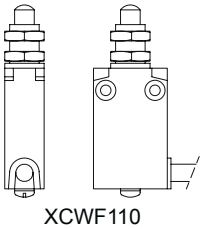
XCWA115



XCWF102



XCWF103



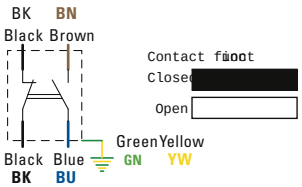
XCWF110

Limit switches Ex d – "Severe duty" compact				**XCW**
1 C/O snap action contact, pre-wired cable. Available in: 1 meter, 2 meters, 5 meters, or 10 meters.				
Description	1 m cable length	2 m cable length	5 m cable length	10 m cable length
	Fixing by the body			
Steel end plunger (1) Weight Kg	XCWA110 0.240	XCWA1102 0.250	XCWA1105 0.500	XCWA1100 0.900
Steel roller plunger for lateral cam approach (2) Weight Kg	XCWA102 0.240	XCWA1022 0.260	XCWA1025 0.500	XCWA1020 0.950
Steel roller plunger for traverse cam plunger approach (2) Weight Kg	XCWA103 0.240	XCWA1032 0.260	XCWA1035 0.500	XCWA1030 0.950
Thermoplastic roller lever (3) Rotary operation Weight Kg	XCWA115 0.250	XCWA1152 0.300	XCWA1155 0.550	XCWA1150 1.000
	Fixing by the head			
Steel end plunger (1) Weight Kg	XCWF110 0.260	XCWF1102 0.280	XCWF1105 0.550	XCWF1100 0.950
Steel roller plunger for lateral cam approach (2) Weight Kg	XCWF102 0.260	XCWF1022 0.280	XCWF1025 0.550	XCWF1100 0.950
Steel roller plunger for traverse cam approach (2) Weight Kg	XCWF103 0.260	XCWF1032 0.280	XCWF1035 0.550	XCWF1030 0.950
Roller lever (mounted by customer) for XCWA110 (4) Weight Kg	XCWZ24 0.080			

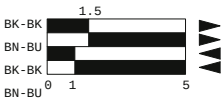
(1) Actuation on end. Speed between 0.001 and 0.5m/s.
(2) Actuation by 30° cam. Speed between 0.001 and 0.1m/s.
(3) Actuation by 30° cam. Maximum speed 1.5m/s.
(4) 1 direction of actuation by 30° cam.

Contact function

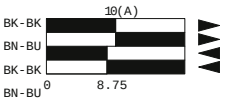
Wiring diagram



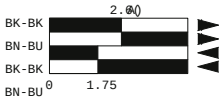
XCW•110

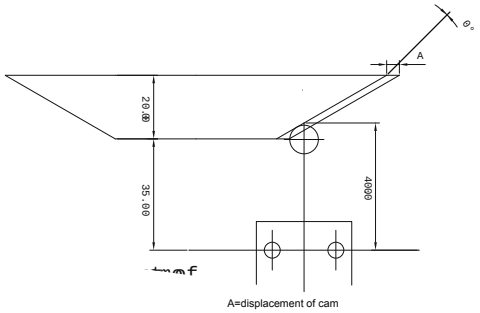


XCWZ24



XCW•102, XCW•103, XCWA115





A=displacement of cam

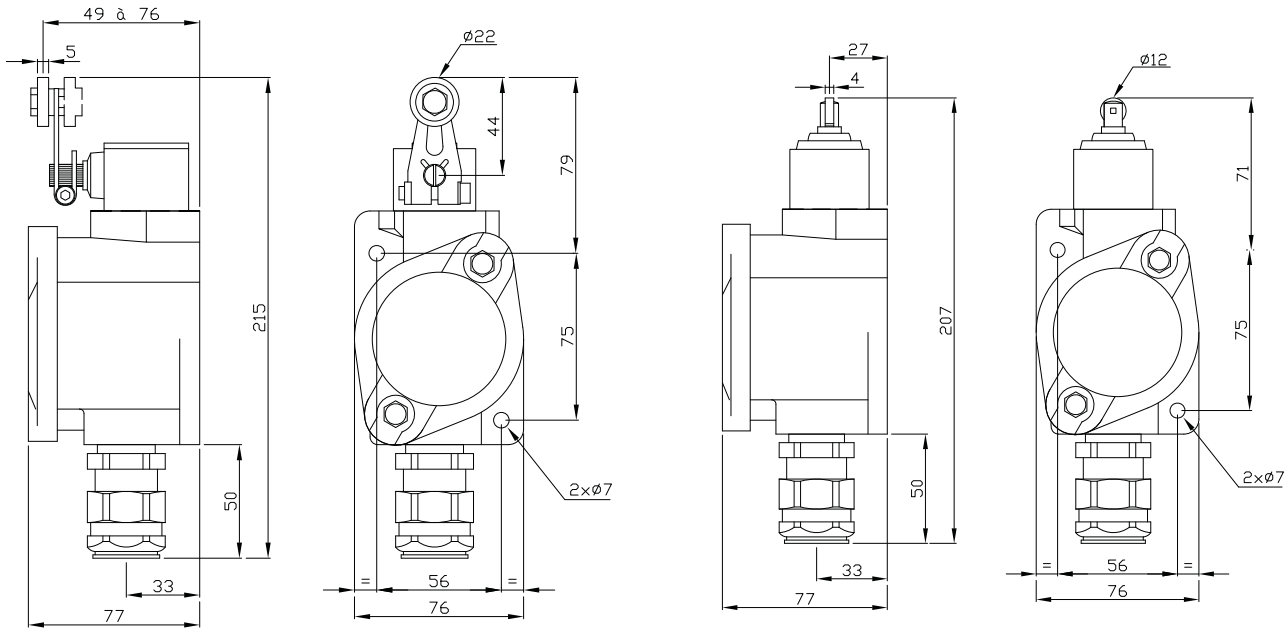
XC8

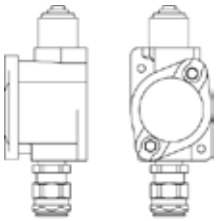
The XC8 range of limit switches is a combination of different bodies and heads. Our standard product range boasts both robust construction and cable gland entry, making the XC8 a safe and easy choice for a wide variety of customer applications. In addition, further head types are available for those customers who need a more specialized product – please contact your Technor representative for more information.

Specifications

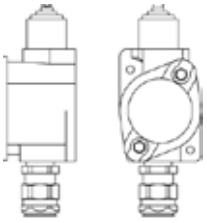
Material	Cast iron (Painted)
IP Rating	IP65–66
Temperature	–20°C to +60°C
Approvals	
- Atex	03ATEX0123
Standards	EN/IEC: 60079-0, 60079-1, 60079-31
	EN: 61241-0, 61241-1
Ex-Code	Ex d IIC T6 T85ºC II 2 GD
Cable type	Nickel-plated brass cable gland
Mechanical life	10 millions

Dimensions

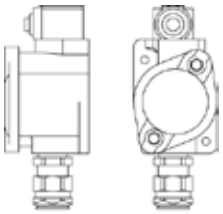




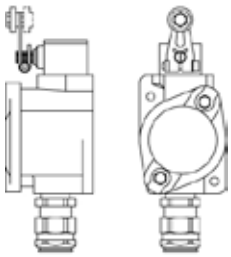
XC8-JC161P1



XC8-JC162P1



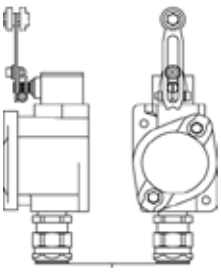
XC8-JC163P1



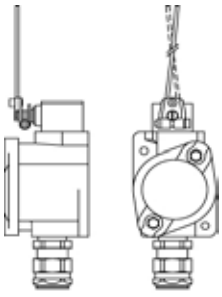
XC8JC10111P1-
XC8JC10511P1

Limit switches Ex d – “Severe duty”			XC8JC				
1 C/O snap action contact, with nickel cable gland ISO M20, Available for armoured cable or non armoured cable							
Description	Reference	With plunger heads	Complete your own reference				
Steel plunger (1)		XC8JC161P1	•		•		•
Weight 2 Kg							
Roller plunger (2)		XC8JC162P1	•		•		•
Weight 2 Kg							
Side plunger (2)		XC8JC163P1	•		•		•
Weight 2 Kg							
Heavy duty roller plunger (2)		XC8TA1P1	•		•		•
Weight 2.4 Kg							
	With rotary heads						
Delrin roller lever (3)	Actuation from left and right	XC8JC10111P1	•		•		•
Weight 2.2 Kg	Actuation from left or right (5)	XC8JC10511P1	•		•		•
Variable length (3)	Actuation from left and right	XC8JC10131P1	•		•		•
Weight 2.2 Kg	Actuation from left or right (5)	XC8JC10531P1	•		•		•
Steel rod (4)	Actuation from left and right	XC8JC10151P1	•		•		•
3 mm, length: 125 mm	Actuation from left or right (5)	XC8JC10551P1	•		•		•
Weight 2.2 Kg							
Limit switch body only	1 C/O	ZC8JC1P1	•		•		•
for plunger and rotary heads	2 C/O double pole, simultaneous	ZC8JC2P1	•		•		•
	1 C/O + 1 C/O double pole, 2 steps	ZC8JC4P1	•		•		•
Weight 2.2 Kg	1 C/O Nitrogen filled contact	ZC8JCNP1	•		•		•
Cable gland entry							
Thread ISO M20	1F for non armoured cable with clamping module		1		I		C
	4F for armoured cable		4		I		
	Without cable gland		5		I		

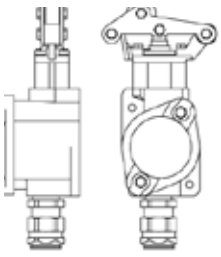
(1) Actuation on end. Maximum speed 0,5m/s.
(2) Actuation by 30° cam. Maximum speed 0,5m/s.
(3) Actuation by 30° cam. Maximum speed 1,5m/s.
(4) Actuation by cylindrical finger. Maximum speed 1,5ms.
(5) By programming the operating head.



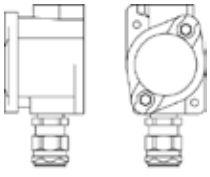
XC8JC10131P1-
XC8JC10531P1



XC8JC10151P1-
XC8JC10151P1



XC8TA1P1



Z8JC1P1-ZC8JC1P1-
ZC8JC4P1

XCKW

The XCKW range of limit switches is based on Telemecanique series of operator heads and bodies and is equipped with Ex ed Technor contact block suitable for Zone 1 use. The products are well known around the world for their reliability, design and flexibility of application. The XCKW series are supplied with fitted cable gland for ease of installation.

Specifications

Material (body)	Zink Alloy (ZnAl 4 - Zamak)
IP Rating	IP65
Temperature	-20°C to +60°C
Approvals	
- Atex	03ATEX0038X
	03ATEX0039X
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31
	EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC T6 T85ºC EX II 2 GD
Entries	ISO M20 or ISO M16
Thermal current	6A with N/O + N/C (500v)

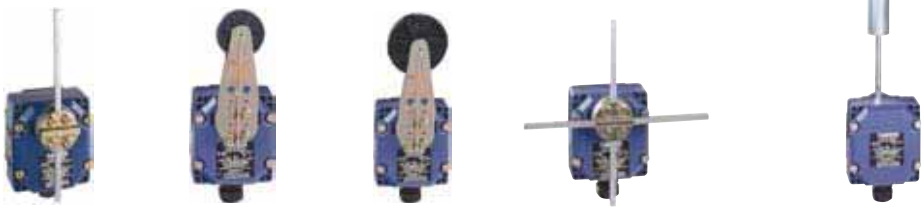
XCKWD, Compact, fixing by body (fixing centres 20mm)

Type of actuator	Metal end plunger	Booted metal end plunger	Steel roller plunger	Thermoplastic roller lever, horizontal actuation	Thermoplastic roller lever, vertical actuation
Mechanical durability (millions of operating cycles)	15		10	15	
Actuation speed	0.5 m/s			1 m/s	
Cable entry	1 entry fitted with ISO M16 cable gland for cable Ø 5 to 8 mm				
Body dimensions WxDxH (mm)	31x30x65				
N/C + N/O snap action	XCKWD2110P16	XCKWD2111P16	XCKWD2102P16	XCKWD2121P16	XCKWD2127P16
N/O + N/O snap action	XCKWD2910P16	XCKWD2911P16	XCKWD2902P16	XCKWD2921P16	XCKWD2927P16

XCKWD, Compact, fixing by body (fixing centres 20mm)

Thermoplastic roller lever, vertical or horiz. actuation	Thermoplastic roller lever	Thermoplastic roller lever Ø 50mm	Variable lenght thermoplastic roller lever	Variable lenght thermoplastic roller lever Ø 50mm	"Cat's wisker"	M18 head Metal end plunger	M18 steel roller end plunger
15	10				5	10	
1 m/s	1.5 m/s				1 m/s	0.5 m/s	
1 entry fitted with ISO M16 cable gland for cable Ø 5 to 8 mm							
31x30x65							
XCK-WD2128P16	XCK-WD2118P16	XCK-WD2139P16	XCK-WD2145P16	XCK-WD2149P16	XCK-WD2106P16	XCK-WD21H0P16	XCK-WD21H2P16
XCK-WD2928P16	XCK-WD2918P16	XCK-WD2939P16	XCK-WD2945P16	XCK-WD2949P16	XCK-WD2906P16	XCK-WD29H0P16	XCK-WD29H2P16

XCRA/B/TW, For hoisting, handling, conveyor belts (fixing centres 85x75mm)



	Rotary (lever)				Conveyor belt shift monitoring switch	
Type of actuator	Square cross levers 6mm crossed spring return position	Large roller rod lever thermoplas-tic Ø 30mm	Large roller rod lever thermoplas-tic Ø 50mm	Square cross levers 6mm crossed stay put position	Galvanized steel operating lever	Stainless steel operating lever
Mechanical durability (mil-lions of operating cycles	10				0.3	
Actuation speed	1.5m/s					
Cable entry	1 entry fitted with ISO M20 for cable Ø8 to 13mm					
Body dimensions WxHxD (mm)	85x75x95					
2 N/O + N/C snap action, actuated in each direction	XCRAW111	XCRAW121	XCRAW151	XCREW181		
N/O + N/C snap action actuated in each direction	XCRBW111	XCRBW121	XCRBW151	XCRFW171		
2 ”N/O + 2N/C” snap action					XCRTW115	XCRTW215

XCKWM, Classic, fixing by body (fixing centres 41mm)

Type of actuator	Metal end plunger	Steel roller plunger	Thermoplastic roller lever, hori-zontal actutation	Thermoplastic roller lever	”Cat’s wisker”
Mechanical durability (millions of operating cycles)	20				10
Actuation speed	0.5 m/s		1.5 m/s		0.5 m/s
Cable entry	3 entries ISO M20				
Body dimensions WxDxH (mm)	63x30x64mm				
N/C + N/O snap action	XCKWM2110H29	XCKWM2102H29	XCKWM2121H29	XCKWM2115H29	XCKWM2106H29

XCKWJ, Compact, fixing by body (fixing centres 30x60mm)

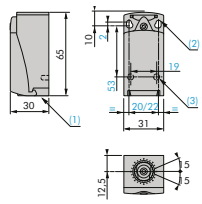
Metal end plunger	Steel roller plunger	Steel roller lever	Thermoplastic roller lever	Variable length thermoplastic roller lever	Round rod lever Ø 6mm polyamide L= 200mm
30	25	30		20	
0.5 m/s	1 m/s	1.5 m/s			
1 entry fitted ISO M20 equipped with cable gland for cable Ø 8 to 13 mm					
40x44x77					
XCKWJ2161H29	XCKWJ2167H29	XCKWJ210513H29	XCKWJ210511H29	XCKWJ210541H29	XCKWJ210559H29

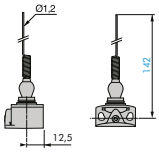
XCKWMR, For hoisting, handling, conveyor belts (fixing centres 61.5mm)

Type of actuator	Square cross levers 6mm crossed	Square cross levers 6mm crossed reversed head
Mechanical durability (millions of operating cycles)	2	
Actuation speed	1.5 m/s	
Cable entry	3 entries ISO M20	
Body dimensions WxHxD (mm)	118x59x77	
2N/C + 2N/C snap action break for make	XCKWMR54D1H29	XCKWMR54D2H29

Dimensions

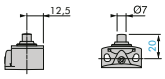
Limit switch, Compact, XCKWD (metal) - body + head



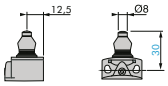


(1) ISO M16 x 1,5 for cable gland.
(2) 2 oblongs holes ø 4,3 x 6,3 mm pitch 22 mm or 2 holes ø 4,3 pitch 20 mm.
(3) 2 holes for mounting ø 3 depth 4 mm.

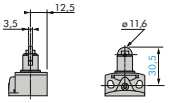
ZCE10



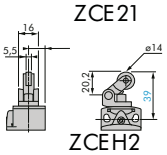
ZCE11



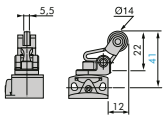
ZCE02



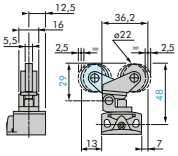
ZCE21



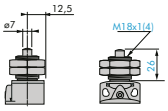
ZCE27



ZCE28

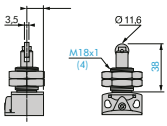


ZCEH0

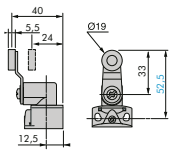


(4) Screw thickness 3,5 mm.

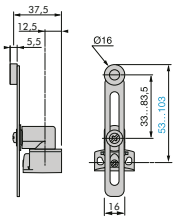
ZCEH2



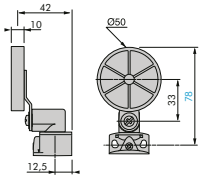
ZCE01 + ZCY18



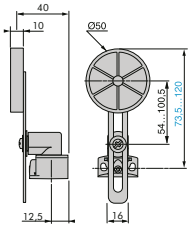
ZCE01 + ZCY45



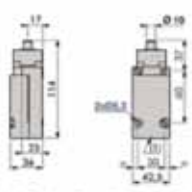
ZCE01 + ZCY39



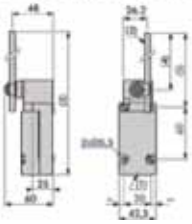
ZCE01 + ZCY49

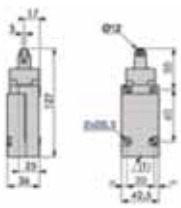


Limit switch, Classic, XCKWJ (metal)

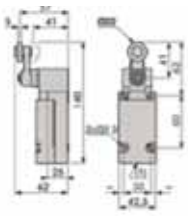


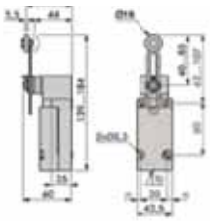
XCKWJ210559H29



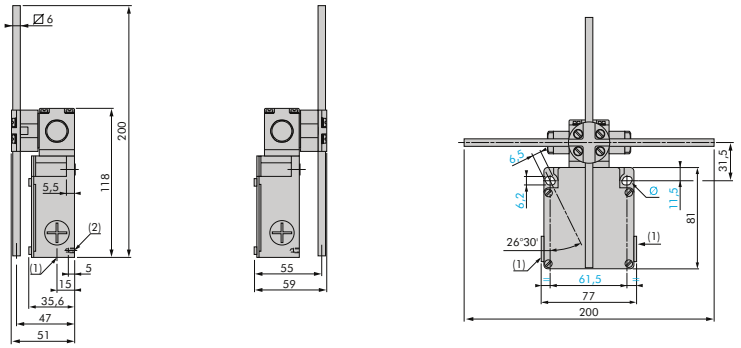


(1) ISO M20 x 1,5 for cable gland.



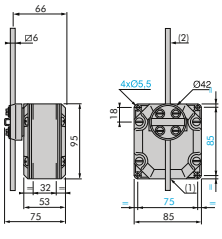


Limit switch, XCKWMR, XCRA/B/TW

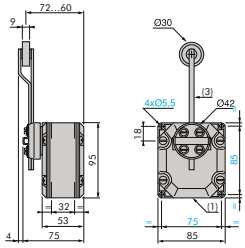


(1) 3 ISO M20 x 1,5 for cable gland.
(2) 2 centring holes ø 3,9.
ø : 2 oblongs holes 6,2 x 6,5.

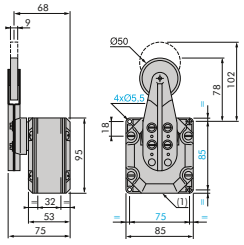
XCRAW111
XCRBW111



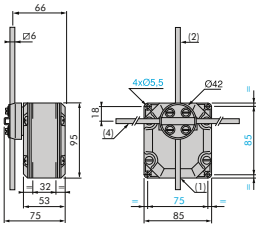
XCRAW121
XCRBW121



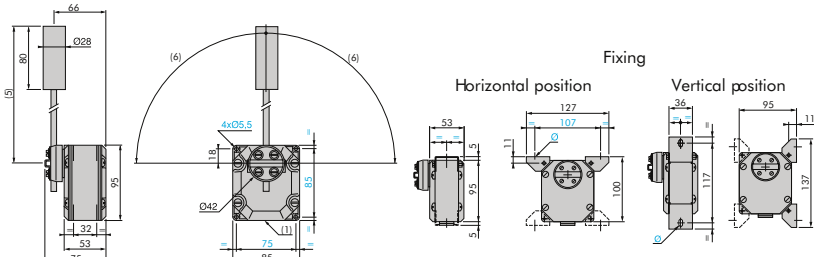
XCRAW151
XCRBW151



XCREW181
XCRFW171



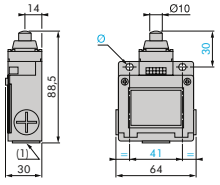
XCR TW115 / XCRTW215



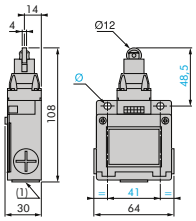
(1) ISO M20 x 1,5 for cable gland.
(2) Lever length: 200mm.
(3) Lever length + roller: 160mm.
(4) Lever length 300mm for XCRFW, 200mm for XCREW
(5) 200 maxi – 83 mini
(6) 90° maxi
Ø: 2 oblongs holes 6,2 x 6,5.

Limit switch, Classic, XCKWM (metal)

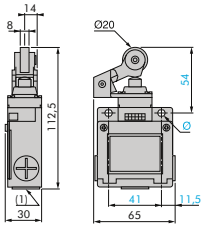
XCKWM2110H29



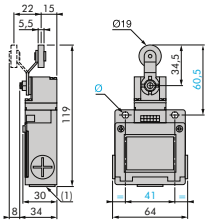
XCKWM2102H29



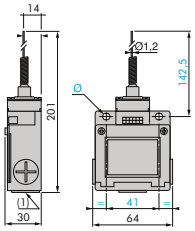
XCKWM2121H29



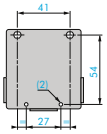
XCKWM2115H29



XCK WM2106H29



Back side



(1) 3 ISO M20 x 1,5 for cable gland.
(2) 2 x Ø 4.
Ø: 2 oblongs holes 5,2 x 6,2.

XY2WCE

The XY2WCE tripwire emergency stop is located above or close to the conveyor. In the event of a mechanical problem or overloading on the belt, the tripwire mechanism will cause the belt to stop.

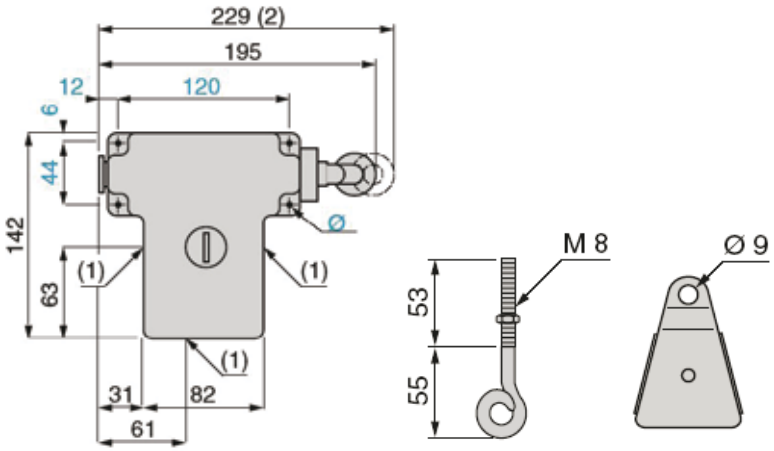
Specifications

Material (body)	Zinc Alloy (ZnAl 4 - Zamak)
IP rating	IP65
Temperature	20°C to +60°C
Approvals	
- Atex	INERIS 04ATEX0040
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC T6 IP65 / T85ºC ATEX II 2 GD
Work specifications	AC15; A300 (Ue=240V, Ie=3A) / DC13; Q300 (Ue=250V, Ie=0.27 A)
Protection	By fuse 10A gG (gl)

Wire trip emergency stop

For operating cable ut to 50m long		Latching without indicator light			
Mechanical durability (million of operating cycles)		0.01			
Connection		1 entry with ISO M20 cable gland (for cable ø 7mm to 15mm) and 2 entries fitted with blank plug			
Reset		By booted pushbutton		By key release pushbutton (key no 421)	
Operating cable length		< 50m		< 50m	
Operating cable anchoring point		To left	To right	To left	To right
References	1 N/C + N/O positive snap action	XY2W-CE2A250	XY2W-CE1A250	XY2WCE2A450	XY2WCE1A450
	2 N/C + N/O positive snap action	XY2W-CE2A270	XY2W-CE1A270	XY2WCE2A470	XY2WCE1A470

Dimensions



XPEW

The XPEW foot switch is designed to be operated by foot action so that operators can focus their hands and eyes on other tasks.

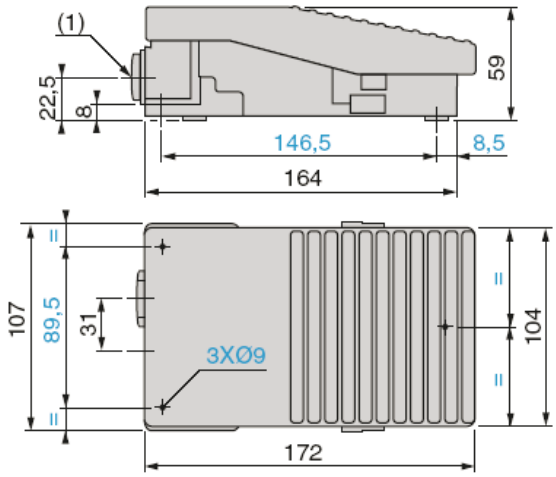
Specifications

Material	Zinc Alloy (ZnAl 4 - Zamak)
IP rating	IP66
Temperature	20°C to +60°C
Approvals	
- Atex	INERIS 04ATEX0042
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex ed IIC T6 IP65/IP66 T85ºC ATEX II 2 GD
Work specifications	AC15; A300 (Ue=240V, Ie=3A) / DC13; Q300 (Ue=250V, Ie=0.27 A)
Protection	By fuse 10A gG (gl)

Single pedal switches

Type		Single pedal switches			
Mechanical durability (million of operating cycles)		5			
Connection		1 entry fitted with PG16 cable gland (for cable ø 5mm to 13mm) and 1 fitted with blank plug			
Colour		Blue		Orange	
Contact operation		1 step	2 step	1 step	2 step
References	1 N/C + N/O positive snap action	XPEWM110	–	XPEWR110	–
	2 N/C + N/O positive snap action	XPEWM111	XPEWM211	XPEWR111	XPEWR211

Dimensions



XMLWC

The XMLWC range of pressure switches is designed for applications where it is important to control fluids in your installation. With an extensive range for pressures and fluids, XMLWC gives you control in the hazardous area. Please contact your Technor representative for more information.

Specifications

Material (body)	Zinc Alloy (ZnAl 4 - Zamak)
IP Rating	IP66
Temperature	Tfluid < +70°C or +70°C < Tfluid < +150°C
Approvals	
- Atex	INERIS 04ATEX0007
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-31 EN: 61241-0, 61241-1
Ex-Code	ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C
Connection	Screw clamp terminals 1/4” gas female
Availability	Corrosive fluids, oil, water, air

Type		**Vacuum switch with display**	**Pressure switch with display**	
Gauge		**- 1 bar**	**1 bar**	**1 bar**
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4” gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		-1…-0.14 bar	0.005…1 bar	0.005…1 bar
Fluids controlled		Oil, water, air, corrosive fluids	Oil, air	Water, corrosive fluids
Possible differential	Min. at low setting	0.13 bar	0.03 bar	0.03 bar
subtract from PH	Min. at high setting	0.14 bar	0.04 bar	0.04 bar
to give PB	Max. at high setting	0.8 bar	0.8 bar	0.8 bar
Single-pole contact N/C+N/O snap action		XMLW-CM02T2S12	XMLW-C001R2S12	XMLW-C001S2S12

XMLWC

Type		Pressure switch with display		
Gauge		4 bar	4 bar	10 bar
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		0.3…4 bar	0.3…4 bar	0.7…10 bar
Fluids controlled		Oil, water, air	Corrosive fluids	Oil, water, air
Possible differential	Min. at low setting	0.17 bar	0.17 bar	0.45 bar
subtract from PH	Min. at high setting	0.15 bar	0.15 bar	0.70 bar
to give PB	Max. at high setting	2.5 bar	2.5 bar	8 bar
Single-pole contact N/C+N/O snap action		XMLW-C004B2S12	XMLW-C004C2S12	XMLW-C010B2S12

Type		Pressure switch with display		
Gauge		10 bar	20 bar	20 bar
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		0.7…10 bar	1.3…20 bar	1.3…20 bar
Fluids controlled		Corrosive fluids	Oil, water, air	Corrosive fluids
Possible differential	Min. at low setting	0.45 bar	0.7 bar	0.7 bar
subtract from PH	Min. at high setting	0.70 bar	1 bar	1 bar
to give PB	Max. at high setting	8 bar	11 bar	11 bar
Single-pole contact N/C+N/O snap action		XMLW-C010C2S12	XMLW-C020B2S12	XMLW-C020C2S12

Type		Pressure switch with display		
Gauge			35 bar	35 bar
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)			3.5…35 bar	3.5…35 bar
Fluids controlled			Oil, water, air	Corrosive fluids
Possible differential	Min. at low setting		1 bar	1 bar
subtract from PH	Min. at high setting		1.5 bar	1.5 bar
to give PB	Max. at high setting		22 bar	22 bar
Single-pole contact N/C+N/O snap action			XMLW-C035B2S12	XMLW-C035C2S12

XMLWC

Type		Pressure switch with display		
Gauge		**70 bar**	**70 bar**	**70 bar**
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		7…70 bar	7…70 bar	7…70 bar
Fluids controlled		Oil, air	Fresh water, sea water	Corrosive fluids
Possible differential	Min. at low setting	4,5 bar	4,5 bar	4,5 bar
subtract from PH	Min. at high setting	8,9 bar	8,9 bar	8,9 bar
to give PB	Max. at high setting	60 bar	60 bar	60 bar
Single-pole contact N/C+N/O snap action		XMLW-C070D2S12	XMLW-C070E2S12	XMLW-C070N2S12

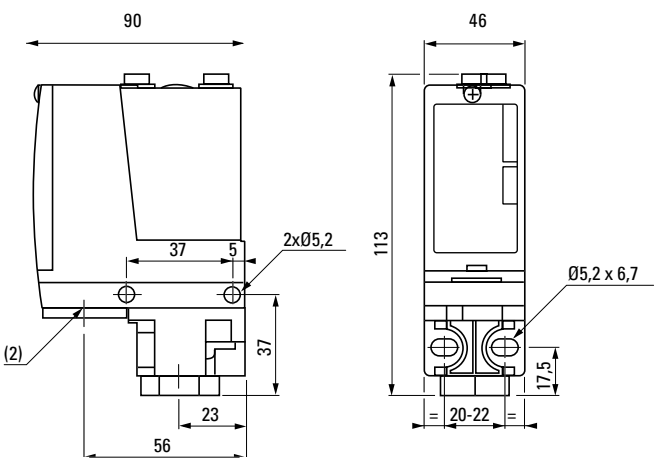
Type		Pressure switch with display		
Gauge		**160 bar**	**160 bar**	**160 bar**
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		12…160 bar	12…160 bar	12…160 bar
Fluids controlled		Oil, air	Fresh water, sea water	Corrosive fluids
Possible differential	Min. at low setting	9 bar	9 bar	9 bar
subtract from PH	Min. at high setting	21 bar	21 bar	21 bar
to give PB	Max. at high setting	110 bar	110 bar	110 bar
Single-pole contact N/C+N/O snap action		XMLW-C160D2S12	XMLW-C160E2S12	XMLW-C160N2S12

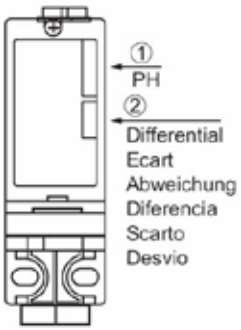
XMLWC

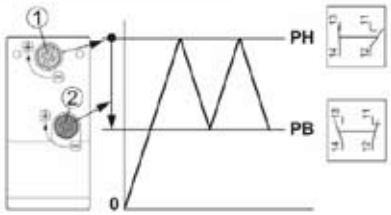
Type		Pressure switch with display		
Gauge		300 bar	300 bar	300 bar
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		22…300 bar	22…300 bar	22…300 bar
Fluids controlled		Oil, air	Fresh water, sea water	Corrosive fluids
Possible differential	Min. at low setting	16 bar	16 bar	16 bar
subtract from PH	Min. at high setting	35 bar	35 bar	35 bar
to give PB	Max. at high setting	240 bar	240 bar	240 bar
Single-pole contact N/C+N/O snap action		XMLW-C300D2S12	XMLW-C300E2S12	XMLW-C300N2S12

Type		Pressure switch with display		
Gauge		500 bar	500 bar	500 bar
Zones		1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number		INERIS 04ATEX0007		
Product labeling		ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for Tfluid < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < Tfluid < +150°C		
Hydraulic connection		1/4" gas female		
Electric connection		On terminal, entry tapped for cable ISO M20 x 1.5		
Temperature range		- 20 °C … + 60°C		
Degree of protection		IP66		
Rated operational characteristics		Ue = 250V Ie = 6A		
Protection against short-circuits		By fuse cartridge 10 A gG (gl)		
Adjustable range of switching point (PH)		30…500 bar	30…500 bar	30…500 bar
Fluids controlled		Oil, air	Fresh water, sea water	Corrosive fluids
Possible differential	Min. at low setting	19 bar	19 bar	19 bar
subtract from PH	Min. at high setting	52 bar	52 bar	52 bar
to give PB	Max. at high setting	340 bar	340 bar	340 bar
Single-pole contact N/C+N/O snap action		XMLW-C500D2S12	XMLW-C500E2S12	XMLW-C500N2S12

Dimensions







PH : HIGH SETUP POINT

PB : LOW POINT

Choose the pressure by adjusting the red screw '1' and adjust the low pressure by setting up the differential pressure with the green screw '2'.


STATIC HAZARD

TNCD

The TNCD range of enclosures are manufactured in 316 stainless steel and are designed to meet the requirements for Ex d IIC equipment in harsh environments on and offshore. Can be configured as Ex d direct entry or as an Ex de combination for indirect entry.

Specifications

Material	Acid Resistant Stainless Steel AISI 316L
IP Rating	IP66 (IP67 upon request)
Temperature	-20ºC to +40ºC (T6), Option -40ºC to +60ºC
Approvals	
- Atex	NEMKO 03ATEX263U DNV-2003-OSL-ATEX-0135
Standards	EN/IEC: 60079-0, 60079-1
Ex-Code	Ex d IIC/IIB T6 – T4 Ex de IIC/IIB T6 - T4 Ⓔx II 2 G/D or II 2(1/2)G/D
Lid gasket	Viton
Surface treatment	Glass blasted
Earthing between Ex d and Ex e/i enclosures	Through the flange assembly
Cover	With or without hinges, depending on size

Measurement table for Ex d IIC Explosion proof enclosures

TNCD							Internal dimensions		
	A	B	C	D		Ø	a	b	c
TNCD	Width (mm)	Height (mm)	Depth (mm)	Total depth	Weight kg	Window (mm)	Width (mm)	Height (mm)	Depth (mm)
191918	190	190	180	213	16	65	170	170	131
192818	190	190	180	213	22	65	170	260	131
282827	280	280	270	300	37	65/100	260	260	217
283827	280	380	270	300	49	65/100	260	360	217
383827	380	380	270	300	60	65/100	360	360	217
383838	380	380	380	410	72	65/100	360	360	327
385727	380	570	270	300	88	65/100	360	550	215
575727	570	570	270	300	125	65/100/154	550	550	213
575738	570	570	380	410	144	65/100/154	550	550	325

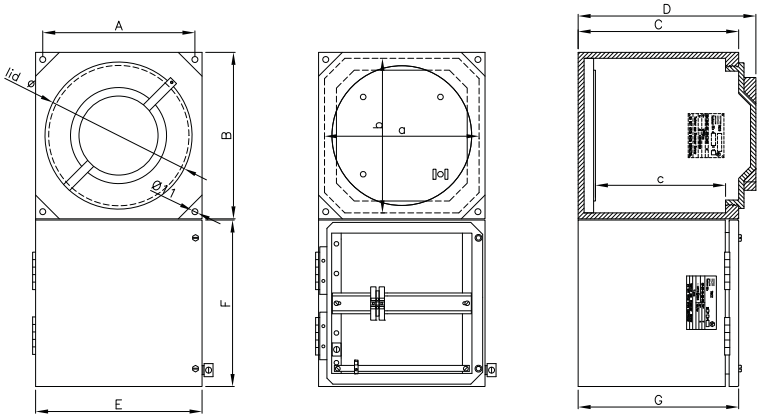
Viewing window TNCD

Viewing windows are available in the following diameters: 65mm, 100mm and 154mm. The window is placed in the centre of the lid. Windows (Ø65) can also be placed on the sides or back wall.

Range of Ex e connection boxes (optional)

TNCC	E Width (mm)	F Heigth (mm)	G Depth (mm)	Kg Weight
191918	190	190	180	3.0
281927	280	190	270	5.2
282827	280	280	270	6.6
381927	380	190	270	4.6
383827	380	380	270	10.5
571927	570	190	270	9.6
573827	570	380	270	13.4
575727	570	570	270	19.7

Dimensions



TNXCD

The TNXCD range of Ex d / de IIC enclosures are manufactured in 316 stainless steel and are designed as slim, compact, multipurpose enclosures. Typical applications include CCTV camera housing.

Specifications

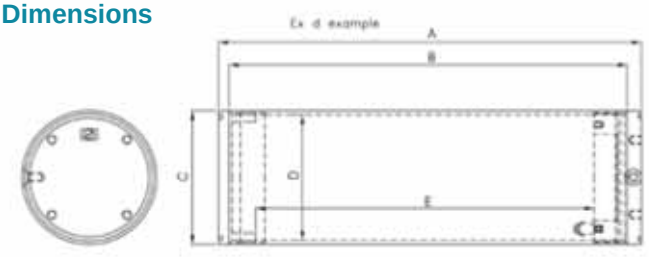
Material	Acid resistant stainless steel AISI 316L
IP Rating	IP66 (IP67 and IP68 upon request)
Temperature	Various, max: -50ºC to +60ºC
Approvals	
- Atex, Empty enclosure	DNV-2003-OSL-ATEX-0436-U
- Atex, Complete enclosure	DNV-2004-OSL-ATEX-0115
Standards	EN/IEC: 60079-0, 60079-1, 60079-7
Ex-Code empty enclosure	Ex d IIC/Ex de IIC, Ⓔx II 2 G
Earthing between Ex d and Ex e enclosure	Through the flange assembly
Entries	Ex e glands and Ex d bushings, or Ex d glands only
Gland Size Ex e	M25
Gland Size Ex d	According to specification
Bushing Ex d	Max M42, number and core size acc. to spec.

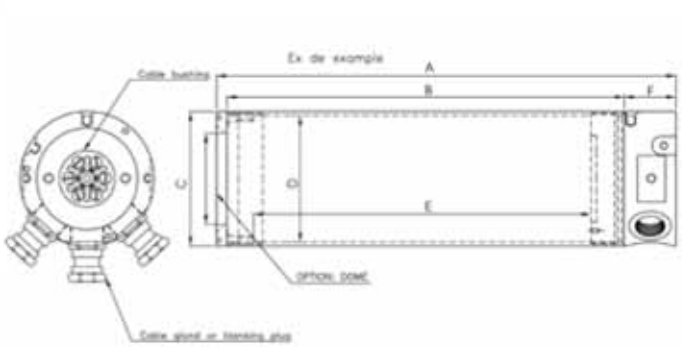
TNXCD Ex d							
	A	B	C	D		Ø	
TNXCD	Total length (mm)	Tube length (mm)	Diameter (mm)	Internal dia. (mm)	Weight (kg)	Window/Dome (mm)	Internal length
XCD1003200	217.2	193	101	95	3.3	68	148
XCD1003360	384.2	360	101	95	4.1	68	315
XCD1303100	119.5	100	132	126	4.0	95	55
XCD1303200	219.5	200	132	126	5.3	95	155
XCD1303360	379.5	360	132	126	7.0	95	315
XCD1953290	305.5	290	195	187	13.0	155	238

TNXCD Ex de							
	A	B	C	D		Ø	
TNXCD	Total length (mm)	Tube length (mm)	Diameter (mm)	Internal dia. (mm)	Weight (kg)	Window/Dome (mm)	Internal length
XCD1002200	247.7	193	100	95	3.9	68	148
XCD1002360	414.7	360	100	95	4.8	68	315
XCD1301100	161	100	130	126	5.6	95	55
XCD1301200	261	200	130	126	6.9	95	155
XCD1301360	421	360	130	126	8.6	95	315
XCD1951290	389	290	195	187	17.1	155	238

Available with window, Dome or SS316 top

Dimensions





DE8WH

The DE8WH range of Ex d IIC enclosures range comprises many standard sizes of enclosures manufactured in painted carbon steel. Can be configured as Ex d direct entry or as an Ex de combination for indirect entry. If required, several enclosures can be assembled on a frame with separate or common Ex e/i junction boxes. The enclosures can be delivered empty with U component certificate or supplied fully assembled according to client demands.

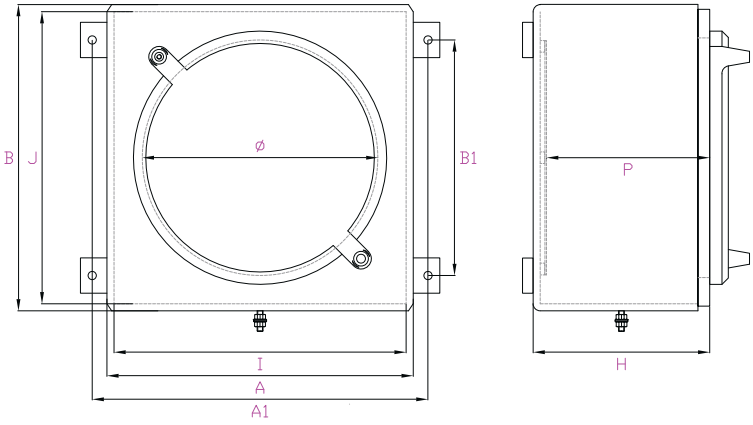
Specifications

Material	Semi-hardened steel
IP Rating	IP65-66
Temperature	–20°C to +40°C (+50°C, +60°C)
Approvals	
- Atex	INERIS 03ATEX0121X
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-11, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex d IIC or de IIB T6 to T4 IP6X - T85°C to T135°C ATEX II 2 GD or 2 (1) GD Ex d [ia] or d [ia] ia or de [ia] or de [ia] ia IIB T6 IP6X T85°C
Surface treatment	RAL 7032 Painting - Special painting on request.
Drain plug	Upon request

Measurement table for Ex d IIC Explosion proof enclosure

Reference DE8WH	Width A	Height B	Door Ø	Depth H	Useful Depth P	Fixing points A1 x B1	Diameter of fixing holes	Base plate useful surface I x J	Max. dissipation W	Weights Empty kg
DE8WH107	670	1040	550	360	317	720x800	Ø 14	646x1016	600	260
DE8WH64	670	670	550	300	257	720x552	Ø 14	646x646	330	200
DE8WH43	520	520	400	300	257	570x400	Ø 14	496x496	270	125
DE8WH32	330	330	250	300	257	380x210	Ø 14	306x306	165	65
DE8WH261	260	260	245	135	85	116x305	Ø 9	Ø 190	90	9
DE8WH26	260	260	230	135	175	116x305	Ø 9	Ø 190	90	12

Dimensions



DE1WH

The DE1WH range of Ex e enclosures are designed specifically for combination with our DE8WH range of Ex d IIC enclosures. The DE1WH can accommodate terminals for connection and lid mounted control components for control and signalling.

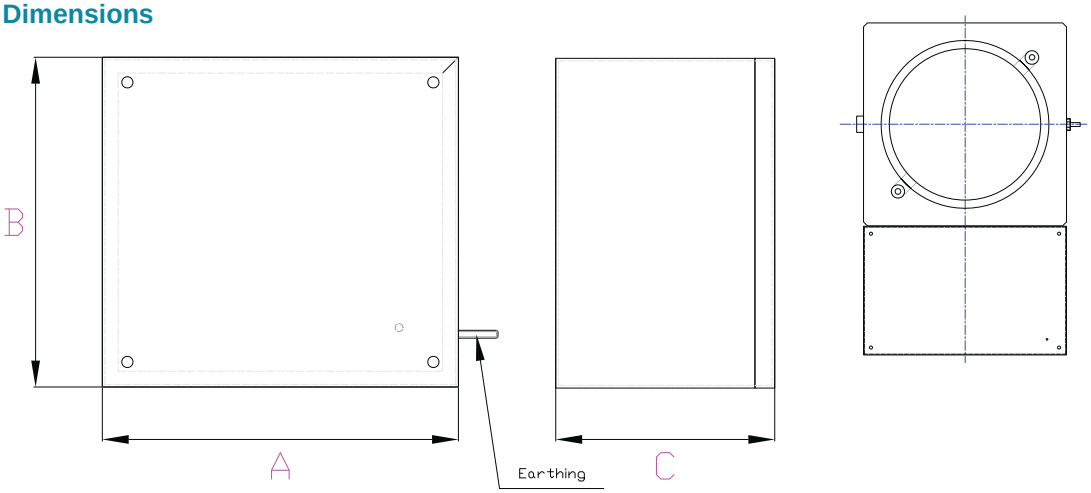
Specifications

Material	Semi-hardened steel
IP Rating	IP65-66
Temperature	–20°C to +40°C (+50°C, +60°C)
Approvals	
- Atex	INERIS 03ATEX0006
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, 60079-18, 60079-31 EN: 61241-0, 61241-1
Ex-Code	Ex e II or ed IIC or em II or emd IIC T6 to T4 IP6X - T85°C to T135°C ATEX II 2 GD
Surface treatment	RAL 7032 Painting – Special painting on request.
Drain plug	Upon request

Measurement table for Ex e IIC Increase safety enclosures: DE1WH

Reference DE1WH	Width A	Height B	Depth C	Nb of command and signal unit	Nb of Ammeter	Diameter of fixing holes	Weights empty kg
DE1WH270	270	250	230	9	2	25	6
DE1WH330	330	250	230	18	4	42	8
DE1WH520	520	330	230	40	4	72	13
DE1WH670	670	520	230	108	5	120	22

Dimensions



GUB

The GUB range of Ex d IIC enclosures are manufactured in aluminium alloy and designed for control, check, signal, automation, interruption and/or protection use. Optionally, GUB enclosure lids may be equipped with an inspection window.

Specifications

Material	Copper free Aluminium (Cu<0.1%)
IP Rating	IP66
Temperature	-50°C to 55°C -30°C to 55°C with glass inspection window
Approvals	
- Atex	INERIS 00ATEX0033X IMQ 09ATEX018U
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-11, 61241-0, EN: 61241-1, 61241-11
Ex-code	Ⓔx II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP66 T85°C / T100°C / T135°C Ⓔx II 2(1) GD Ex d [ia] IIC T6 Ex tD [ia] A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Lid / Door gasket	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Drain plug	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type.
Entries thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Max. Q.ty for entries	Maximum quantity of entries per side A/B: check table's references
Max. Q.ty for terminals	Maximum quantity of terminals per size in sqmm: check table's references
Accessories on request	External polyurethane painting "Standard Cycle" Green RAL 6003 External polyurethane customized painting
Main Applications	GUB…- Lighting / Power Distribution Panel (QADL) GUB-…EMH…Instruments Housing GUB-QL…

Note

Bearing in mind the inifinite of combinations between:

- **quantity of terminals,**
- **relevant cross section,**
- **class of temperature,**
- **ambient temperature**

... we suggest using our software CALCUBOX to set up the compatible terminals strips and entries.
A free copy of CALCUBOX is usually supplied with the CD version of the product Catalogue and is also available as a download from our website.

GUB

Items Table

TYPE	CODE	A	B	C	D	F	G	ØH	I	L	M	Weight Kg	P	R	AA	EE
GUB 01	A.0244.10	169	169	152	139	62	105	125	150	150	7	3.620	-	-	-	-
GUB 02	A.0245.10	190	190	164	160	63	113	144	170	170	8	4.720	-	-	-	-
GUB 03	A.0246.10	210	210	179	180	78	127	167	190	190	8	5.950	-	-	-	-
GUB 04	A.0247.10	232	281	206	202	97	152	183	210	260	8	8.900	-	-	-	-
GUB 05	A.0248.10	257	298	222	227	106	163	206	235	275	8	11.860	-	-	-	-
GUB 06	A.0249.10	293	329	248	259	140	203	242	270	305	10	15.750	-	-	-	-

Maximum quantity of entries per sides A/B Conduit Entries (one row)

Type	GUB 01	GUB 02	GUB 03	GUB 04	GUB 05	GUB 06
M20 ½”	3/3	3/3	4/4	4/5	4/5	5/6
M25 ¾”	2/2	2/2	4/4	4/5	4/5	4/5
M32 1”	2/2	2/2	3/3	3/4	3/4	4/4
M50 1 ½”	1/1	1/1	2/2	2/3	2/3	2/3
M63 2”	1/1	1/1	1/1	2/2	2/2	2/3
M75 2 ½”	-	-	1/1	1/2	2/2	2/2
M80 3”	-	-	-	1/1	1/2	1/2
4”	-	-	-	-	1/1	1/1

Maximum quantity of entries per sides A/B Cable Glands Entries (two row)

Type	GUB 01	GUB 02	GUB 03	GUB 04	GUB 05	GUB 06
M20 ½”	3/3	5/5	5/5	5/7	7/9	7/9
M25 ¾”	3/3	5/5	5/5	5/7	7/9	7/9
M32 1”	2/2	3/3	3/3	5/5	5/7	5/7
M50 1 ½”	1/1	2/2	2/2	2/3	2/3	3/5
M63 2”	1/1	1/1	1/1	2/2	2/2	3/2
M75 2 ½”	-	-	1/1	1/2	2/2	2/2
M80 3”	-	-	-	1/1	1/2	1/2
4”	-	-	-	-	1/1	1/1

Indicative maximum quantity of terminals per Size in square mm.

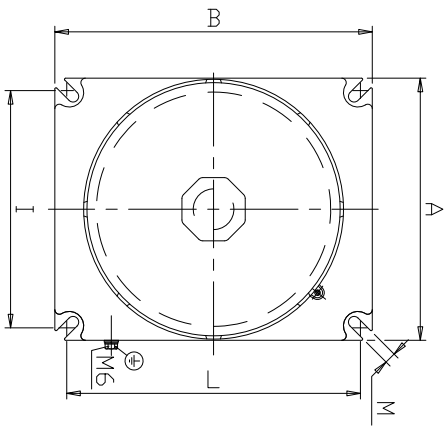
(For specific quantity contact our sales service)

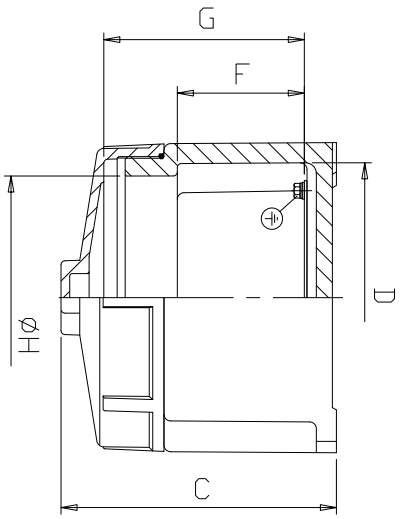
Type mm²	GUB 01	GUB 02	GUB 03	GUB 04	GUB 05	GUB 06
2.5	18	22	25	40	46	58
4	17	21	25	40	46	58
6	14	17	19	22	34	42
10	11	13	15	17	19	34
16	9	10	12	14	16	19
25	5	6	8	9	10	12
35	-	6	8	9	10	12
50	-	5	6	8	8	11
70	-	-	-	-	5	8
120	-	-	-	-	4	6
185	-	-	-	-	-	5

GUB-...Lighting/power distribution panels (QADL)

GUB…Series of Enclosures, in combination with MCB circuit breakers series MULTI-9 Merlin Gerin brand of Schneider Electric, are suitable for building “Customized” Lighting/Power Distribution Panels and Heat Tracing panels. These customized Lighting/ Power distribution panels are used, indoor or outdoor, in corrosive and hazardous locations due to the presence of gases, vapours and dusts.

Dimensions





GUB-QL

The GUB-QL range of Ex d IIC enclosures are manufactured in Copper free Aluminium (Cu <0.1%) and designed for control, check, signal, automation, interruption and/or protection use. The GUB-QL range of enclosures featured a unique design which allows accessories such as pushbuttons, pilot lamps and selector switches to be mounted in the lid.

Specifications

Material	Copper free Aluminium (Cu <0.1%)
IP Rating	IP66
Temperature	-50°C to 55°C
Approvals	
- Atex	INERIS 00ATEX0033X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-11, 61241-0, EN: 61241-1, 61241-11
Ex-code	Ⓔx II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP66 T85°C/T100°C/T135°C Ⓔx II 2(1) GD Ex d [ia] IIC T6 Ex tD [ia] A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Lid / Door gasket	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Drain plug	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type.
Entries thread	Metric pitch 1.5, NPT
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Quantity for entries	Maximum quantity of entries per side A/B: check table's references
Quantity for terminals	Maximum quantity of terminals per size in sqmm: check table's references
Accessories on Request	External polyurethane painting "Standard Cycle" Green RAL 6003 External polyurethane customized painting

Note

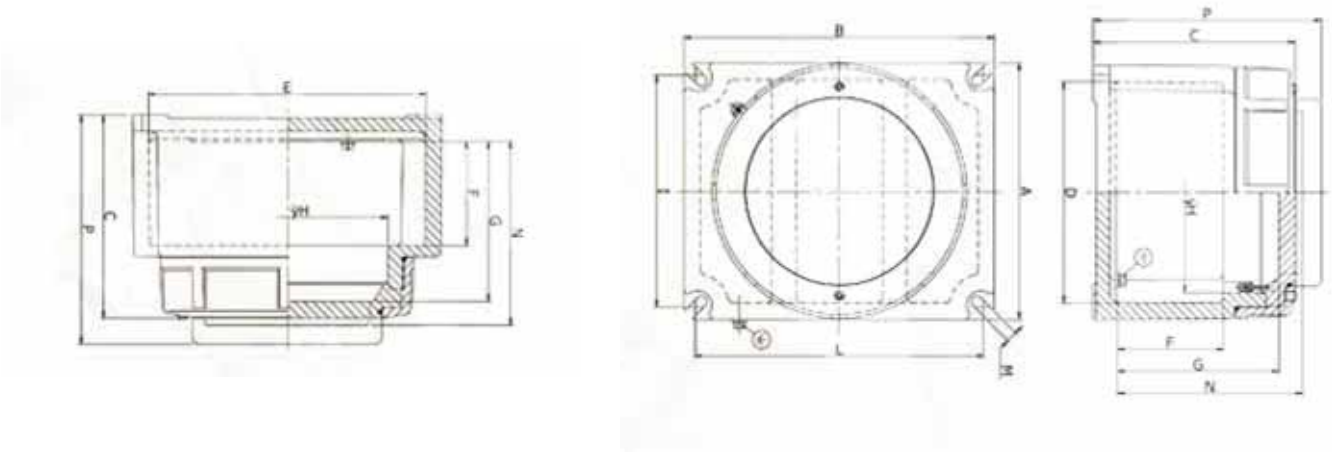
Bearing in mind the endless of combinations between: quantity of terminals, relevant cross section, class of temperature, ambient temperature... we suggest using our software CALCUBOX to set up the compatible terminals strips and entries. A free copy of CALCUBOX is usually supplied with the CD Catalogue and is also available as a download from our website.

GUB-QL

TYPE	Maximun M32 Devices	REFERENCE / QUOTE												
		A	B	C	D	E	F	G	H	I	L	M	N	P
GUB-QL 02	3	190	190	139	160	160	63	104	144	170	170	8	143	179
GUB-QL 03	4	210	210	160	180	180	78	119	167	190	190	8	139	174
GUB-QL 06	10	293	329	235	259	295	140	195	242	305	270	10	/	/

NB. The Enclosures are equipped with an inside thermostat that, when evironment temperature is rangin from -25°C to -50°C, assure an internal temperature of -25°C min. Instead, when inside temperature goes over 40°C the thermostat must cut out the circuit tension.

Dimensions



CP

The CP range of Ex d IIC enclosures are designed as junction boxes or instrumentation. The CP enclosures are manufactured in Copper free Aluminium (Cu <0.1%), completed with threaded hubs suitable for cable glands or conduit entry and internal threaded devices to secure DIN/Omega normalized rails for terminal strips. Connection of cable glands or conduit does not affect the internal void, which remains available for terminals and wiring. Internal and external screws are in AISI304 stainless steel.

Specifications

Material	Copper free Aluminium (Cu <0.1%)	
IP Rating	IP65-66	
Temperature	-35°C to +40°C for T6 / T85°C -35°C to +50°C for T5 / T100°C -35°C to +60°C for T4 / T135°C	
Approvals		
- Atex	INERIS 03ATEX0009	
- GOST	GOST Certificate	
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1	
Ex-code	Ⓔx II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP65 T85°C / T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2 & Zone 21 / Zone 22	
Lid / Door gasket	O-ring made in Nitrile Rubber (NBR)	
Surface treatment	External polyurethane painting (RAL 6003)	
Electrical characteristics	Max DC voltage	440 V
	Max AC voltage	1000 V
	Nominal frequency	50 / 60 Hz
	Max current	100 A
Internal diameter	Available from 90 mm to 120 mm	
Entries position	(C) = 2, (T) = 3, (X) = 4 ways	
Entries thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
Standard identification	Identification nameplate is made of high resistance self-adhesive polyester with thermal transfer inscriptions	
Accessories upon request	External polyurethane painting “Standard Cycle” Green RAL 6003	

Code	Type	Internal Diameter [mm]	Entries Number	Entries Configuration	Entries Diameter Ø	Weight [kg]
A.0213.02	CPC- 26	90	2	C	¾" UNI-6125	0.88
A.0213.22	CPC- 26	90	2	C	¾" NPT	
A.0213.20	CPC- 26	90	2	C	M25 metric x 1.5	0.88
A.0213.06	CPT- 26	90	3	T	¾" UNI-6125	0.88
A.0213.26	CPT- 26	90	3	T	¾" NPT	
A.0213.60	CPT- 26	90	3	T	M25 metric x 1.5	0.88
A.0213.08	CPX- 26	90	4	X	¾" UNI-6125	0.88
A.0213.28	CPX- 26	90	4	X	¾" NPT	
A.0213.80	CPX- 26	90	4	X	M25 metric x 1.5	0.88
A.0212.01	CPSC- 26	120	2	C	¾" UNI-6125	1.27
A.0212.21	CPSC- 26	120	2	C	¾" NPT	
A.0212.20	CPSC- 26	120	2	C	M25 metric x 1.5	1.27
A.0212.05	CPST- 26	120	3	T	¾" UNI-6125	1.27
A.0212.26	CPST- 26	120	3	T	¾" NPT	
A.0212.25	CPST- 26	120	3	T	M25 metric x 1.5	1.27
A.0212.07	CPSX- 26	120	4	X	¾" UNI-6125	1.27
A.0212.27	CPSX- 26	120	4	X	¾" NPT	
A.0212.70	CPSX- 26	120	4	X	M25 metric x 1.5	1.27
A.0214.01	CPSG- 26	120	3		¾" UNI-6125	1.27
A.0214.21	CPSG- 26	120	3		¾" NPT	
A.0214.10	CPSG- 26	120	3		M25 metric x 1.5	1.27
A.0212.02	CPSC- 36	120	2	C	1" UNI-6125	1.27
A.0212.42	CPSC- 36	120	2	C	1" NPT	
A.0212.32	CPSC- 36	120	2	C	M32 metric x 1.5	1.27
A.0212.06	CPST- 36	120	3	T	1" UNI-6125	1.27
A.0212.36	CPST- 36	120	3	T	1" NPT	
A.0212.62	CPST- 36	120	3	T	M32 metric x 1.5	1.27
A.0212.08	CPSX- 36	120	4	X	1" UNI-6125	1.27
A.0212.38	CPSX- 36	120	4	X	1" NPT	
A.0212.72	CPSX- 36	120	4	X	M32 metric x 1.5	1.27
A.0215.01	CPSG- 36	120	3		1" UNI-6125	1.27
A.0215.31	CPSG- 36	120	3		1" NPT	
A.0215.32	CPSG- 36	120	3		M32 metric x 1.5	1.27

CPX-26, CPT-26, CPC-26

Cross section [sqmm]	Quantity/connection per terminal	Features
2.5	6/2	screw/screw
4	6/2	screw/screw
6	6/2	screw/screw

340/SP

Terminal strip type **Suitable for 3 cables 3 wires 4 sqmm : Ph # N # E**

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11546820	4	3	Spring	Grey	L	Entrelec	Phase
12546822	4	3	Spring	Blue	N	Entrelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entrelec	Earth

440/SP

Terminal strip type **Suitable for 4 cables 3 wires 4 sqmm : Ph # N # E**

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11547923	4	4	Spring	Grey	L	Entrelec	Phase
12547925	4	4	Spring	Blue	N	Entrelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entrelec	Earth

CPSX-26, CPSG-26

Cross section [sqmm]	Quantity / connection per terminal	Features
2,5	12/2	Screw/screw
4	12/2	Screw/screw
6	10/2	Screw/screw
10	6/2	Screw/screw
16	6/2	Screw/screw

Terminal strip type — **340/THPN**
Suitable for 3 cables 5 wires 4 sqmm :
Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11546820	4	3	Spring	Grey	L1	Entrelec	Phase
11546820	4	3	Spring	Grey	L2	Entrelec	Phase
11546820	4	3	Spring	Grey	L3	Entrelec	Phase
12546822	4	3	Spring	Blue	N	Entrelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entrelec	Earth

Terminal strip type — **440/THPN**
Suitable for 4 cables 5 wires 4 sqmm :
Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11547923	4	4	Spring	Grey	L1	Entrelec	Phase
11547923	4	4	Spring	Grey	L2	Entrelec	Phase
11547923	4	4	Spring	Grey	L3	Entrelec	Phase
12547925	4	4	Spring	Blue	N	Entrelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entrelec	Earth

CPST-36, CPSG-36

Cross section [sqmm]	Quantity / connection per terminal	Features
2,5	12/2	Screw/screw
4	12/2	Screw/screw
6	10/2	Screw/screw
10	6/2	Screw/screw
16	6/2	Screw/screw

Terminal strip type — **340/THPN**
Suitable for 3 cables 5 wires 4 sqmm :
Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11546820	4	3	Spring	Grey	L1	Entrelec	Phase
11546820	4	3	Spring	Grey	L2	Entrelec	Phase
11546820	4	3	Spring	Grey	L3	Entrelec	Phase
12546822	4	3	Spring	Blue	N	Entrelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entrelec	Earth

Terminal strip type — **440/THPN**
Suitable for 4 cables 5 wires 4 sqmm :
Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11547923	4	4	Spring	Grey	L1	Entrelec	Phase
11547923	4	4	Spring	Grey	L2	Entrelec	Phase
11547923	4	4	Spring	Grey	L3	Entrelec	Phase
12547925	4	4	Spring	Blue	N	Entrelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entrelec	Earth

Cross section [sqmm]	Quantity / connection per terminal	Features
2,5	12/2	Screw/screw
4	12/2	Screw/screw
6	10/2	Screw/screw

Terminal strip type — **340/THPN**

Suitable for 3 cables 5 wires 4 sqmm : Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11546820	4	3	Spring	Grey	L1	Entrelec	Phase
11546820	4	3	Spring	Grey	L2	Entrelec	Phase
11546820	4	3	Spring	Grey	L3	Entrelec	Phase
12546822	4	3	Spring	Blue	N	Entrelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entrelec	Earth

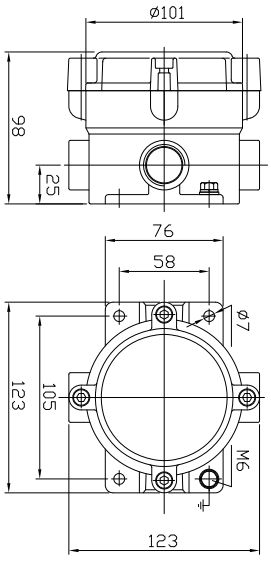
Terminal strip type — **440/THPN**

Suitable for 4 cables 5 wires 4 sqmm : Ph # N # E

Construction

Terminal type	sqmm	Connection per terminal	Features	Colour	Label	Manufacturer	function
11547923	4	4	Spring	Grey	L1	Entrelec	Phase
11547923	4	4	Spring	Grey	L2	Entrelec	Phase
11547923	4	4	Spring	Grey	L3	Entrelec	Phase
12547925	4	4	Spring	Blue	N	Entrelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entrelec	Earth

Dimensions (mm)



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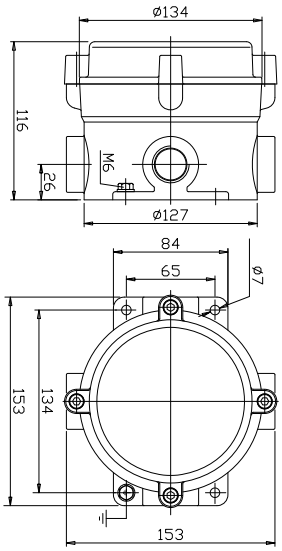
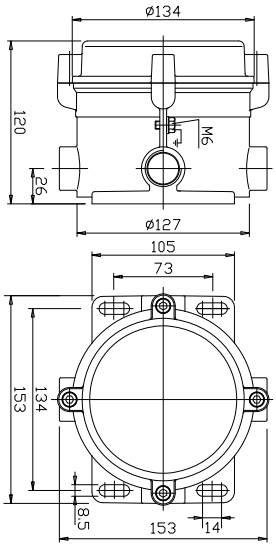
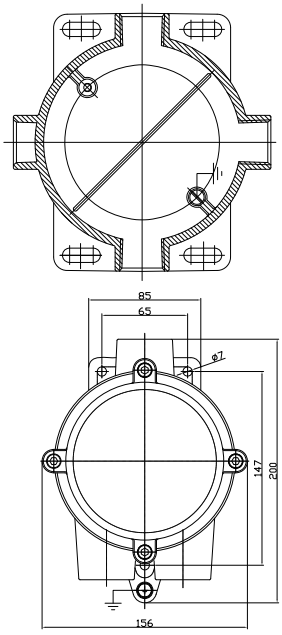


CPS-..36



CPS-..26



CPS-G-26
CPS-G-36

INNER VIEW CPS-..26

TNBCD

The TNBCD range of enclosures are manufactured in 316 stainless steel and are designed to meet the requirements for Ex d IIB equipment in harsh environments on and offshore. Can be configured as Ex d direct entry or as an Ex de combination for indirect entry.

Specifications

Material	Acid Resistant Stainless Steel AISI 316L
IP Rating	IP66 (IP67 and IP68 upon request)
Temperature	–20ºC to +50ºC (T6) Option -50ºC to +60ºC
Approvals	
- Atex	NEMKO 03ATEX264U DNV-2003-OSL-ATEX-0136
Standards	IEC/EN: 60079-0, 60079-1
Ex-Code	Ex d IIC/IIB T6 – T4 Ex II 2 G/D or II 2(1/2)G/D
Lid gasket	Viton
Surface treatment	Glass blasted
Earthing between Ex d and Ex e/i enclosures	Through the flange assembly
Cover	With or without hinges, depending on size

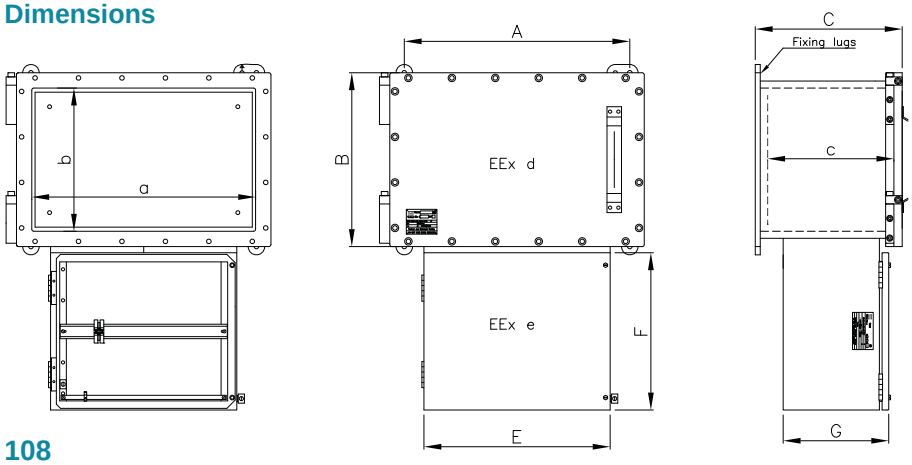
Range of for Ex d IIB Explosion proof enclosures

TNBCD							Internal dimensions		
TNBCD	A Width (fixing) (mm)	B Height (fixing) (mm)	C Depth (mm)	Weight Kg	Ø Window (mm)	# Window (mm)	a Wide (mm)	b Height (mm)	c Depth (mm)
262531	230	290	315	48	65/100	120x80	226	216	265
323321	360	300	215	57	65/100	120x80	286	296	165
453535	420	390	355	95	65/100/154	120x80	416	316	305
573835	545	420	355	122	65/100/154	120x80	541	346	305

Measurement table for Ex e connection boxes (optional)

TNCC				
	E (mm)	F (mm)	G (mm)	Weight (kg)
202025	200	200	255	3.8
252015	250	200	155	4.1
383821	380	380	255	9.2
453825	450	380	255	11.0

Dimensions



DE8BC

The DE8BC range of Ex d IIB enclosures range comprises many standard sizes of enclosures manufactured in painted carbon steel or 316 stainless steel. Can be configured as Ex d direct entry or as an Ex de combination for indirect entry. If required, several enclosures can be assembled on a frame with separate or common Ex e/i junction boxes. The enclosures can be delivered empty with U component certificate or supplied fully assembled according to client demands.

Specifications

Material Semi-hardened steel or stainless steel
IP Rating IP65–66
Temperature –20°C to +40°C (+50°C, +60°C)
Approvals
- Atex INERIS 03ATEX0005X
INERIS 09ATEX9017U

Standards EN/IEC: 60079-0, 60079-1, 60079-7, 60079-11, 60079-31
EN: 61241-0, 61241-1

Ex-Code Ex d IIB or de IIB T6 to T4 IP6X +40°C T85°C to T135°C
ATEX II 2 GD or 2 (1) GD
Ex d [ia] or d [ia] ia or de [ia] or de [ia] ia IIB T6 IP6X T85°C

Surface treatment RAL 7032 Painting (standard for Semi-hardened steel - Special painting upon request.

Drain plug Upon request

Measurement table for DE8BC, Ex d IIB Explosion proof enclosure

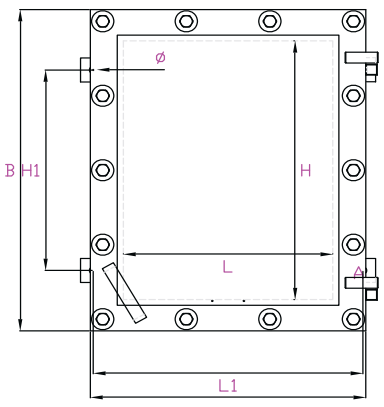
Reference DE8BC	Width A	Height B	Depth C	Useful Depth C1	Fixing points H1 x L1	Diameter of fixing holes	Base plate useful surface H x L	Max. dissipation W	Weights empty kg
DE8BC32	334	434	240	166	234x326	Ø 12	300x200	260	51
DE8BC351	354	474	240	166	274x346	Ø 12	350x225	200	61
DE8BC43	434	534	290	226	334x526	Ø 12	400x300	300	86
DE8BC44	544	544	295	226	334x526	Ø 12	400x400	380	113
DE8BC54	544	644	305	226	414x526	Ø 20	500x400	410	139
DE8BC64	544	744	310	226	514x526	Ø 20	600x400	470	154
DE8BC75	664	864	320	231	614x630	Ø 20	700x500	590	260
DE8BC86	764	964	365	271	714x734	Ø 20	800x600	600	370
DE8BC107	864	1164	380	251	908x868	Ø 20	1000x700	800	530
DE8BC108	864	1164	425	300	908x868	Ø 20	1000x700	800	580
DE8BC148	940	1590	510	425	1200x900	Ø 20	1450x800	1500	1100

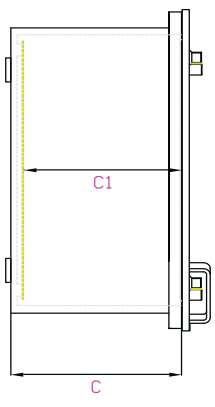
Windows for DE8BC

References	Dimensions
REG 100 x 50*	100 x 50
REG 100 x 100*	100 x 100
REG 200 x 45*	200 x 45
REG 235 x 75*	235 x 75
REG D45	ø 45
REG D60	ø 60
REG D150	ø 150

*Horizontal arrangement as standard

Dimensions

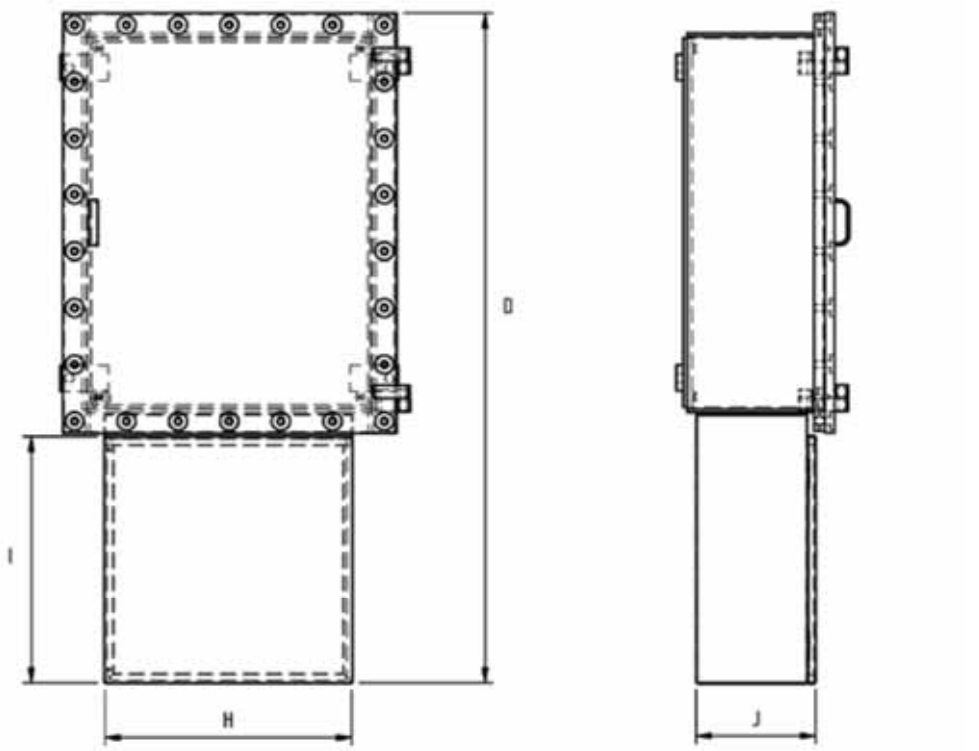




Dimensions for DE8BC, Ex d enclosures with enclosed Ex e box

Type	Type Ex e box TNCN/TNCC*	D	H	I	J	No. of M42x1,5 holes
DE8BC32	TNCC252515	701	250	250	158	4
DE8BC351	TNCC252515	744	250	250	158	4
DE8BC43	TNCC303020	854	300	300	208	8
DE8BC44	TNCC453820	939	450	380	208	12
DE8BC54	TNCC453820	1039	450	380	208	12
DE8BC64	TNCC453820	1139	450	380	208	12
DE8BC75	TNCC453820	1250	450	380	208	12
DE8BC86	TNCC575727	1539	570	570	274	24
DE8BC107	TNCC575727	1740	570	570	274	24
DE8BC108	TNCC575727	1742	570	570	274	24
DE8BC148	TNCC767635	2358	760	760	357	44

* SS316, Stainless steel



EJB

The EJB range of Ex d IIB / IIB+H2 enclosures are manufactured Copper free Aluminium (Cu <0.1%) and designed for control, check, signal, automation, interruption and/or protection use.

Specifications

Material	Copper-free aluminium (Cu <0.1%)
IP Rating	IP66-67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
Temperature	-50°C to 55°C -50°C to 40°C with intrinsically safe elements “ia” or “ib”
Approvals	
- Atex	INERIS 00ATEX0021X IMQ 09ATEX018U
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-11, 61241-0, EN: 61241-1, 61241-11
Ex-code	Ⓔx II 2 GD Ex d IIB T6/T5/T4/T3 Ex d IIB+H_2 T6/T5/T4/T3 Ex tD A21 IP66 T85°C/T100°C/T135°C/T200°C Ⓔx II 2(1) GD Ex d [ia] IIB T6 Ex d [ia] IIB+H_2 T6 Ex tD [ia] A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Surface treatment	External polyurethane painting (RAL 6003)
Drain plug	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type
Entries thread	Metric pitch 1.5, NPT
Standard identification	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
Quantity for entries	Maximum quantity of entries per side A/B: check table’s references
Quantity for terminals	Maximum quantity of terminals per size in sqmm check table’s references
Accessories on Request	Painted Polyurethane finish (standard) RAL 6003 colours External polyurethane customized painting
Main Applications	EJB…- Instruments Housing (Windows) EJB…- Moulded Case Circuit Breakers (MCCB) EJB…- On Load Switches (I) EJB…- Fuse On Load Switches (IF) EJB…- Lighting / Power Distribution Panel (QADL) EJB…- Motor Control Starter (TTB) EJB…- Reverse Motor Control Starter (ITB) EJB…- Star Delta Motor Control Starter (STB)

Note

Bearing in mind the infinite number of combinations between:

- **quantity of terminals,**
- **relevant cross section,**
- **class of temperature,**
- **ambient temperature**

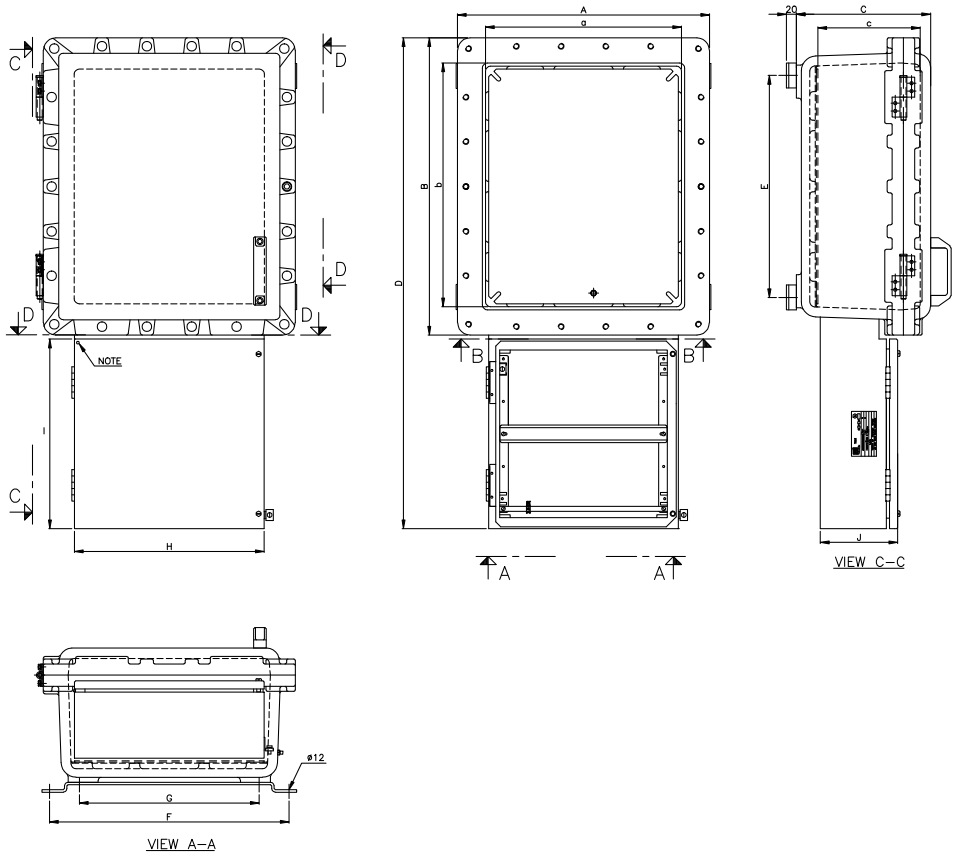
... we suggest using our software CALCUBOX to set up the compatible terminals strips and entries. A free copy of CALCUBOX is usually supplied together with the CD version of this product Catalogue is also available to download from our website.

Measurement table for Ex d IIB Explosion proof enclosures

TYPE	A	B	C	D	E	F	G	a	b	c	Mounting plate	No. of M42x1,5 holes	Weight incl. Ex e connection box
EJB 5	300	480	232	686,5	350	300	185	209	391,5	181.5	200x385	2	24 kg
EJB 6	408	483	238	775	355	390	280	310	384	185	300x380	4	38 kg
EJB 8	365	634	634	1026	495	340	225	261	531	205.5	250x520	4	42.5 kg
EJB 9	467	535	535	921.5	410	440	340	363	431	205	350x420	5	48 kg
EJB 10	368	755	755	1139	580	330	205	252	639.5	248	240x620	4	55 kg
EJB 11	505	596	596	984	445	480	360	393	488.5	205	380x470	5	61.5 kg
EJB 12	455	805	805	1267	640	425	285	335	690	243	325x675	8	82 kg
EJB 13	607	832	832	1244	630	580	405	499	723	236	470x690	6	116 kg
EJB 13A	607	832	832	1244	630	580	405	499	723	322	470x690	12	135 kg

Measurement table for Ex e connection boxes

TNCN/TNCC				
Type	H	I	J	Corresponding EJB enclosure
191915	190	190	150	EJB5
282815	280	280	155	EJB6
283815	280	380	155	EJB8/EJB10
383815	380	380	155	EJB9/EJB11
354520	350	450	205	EJB12
504015	500	400	155	EJB13
504020	500	400	205	EJB13A



EJB

EJB...Instruments Housing (Windows)
EJB lids may be equipped with inspection windows made of tempered glass. The EJB can accommodate square, rectangular and circular windows and the relative size and position is shown in the reference table. EJB instrument housing enclosures are designed to order to customer specification.

EJB...Moulded Case Automatic Circuit Breakers (MCCB)
EJB range enclosures are compatible with any type of MCCB (Moulded Case Circuit Breakers) when used in accordance with relevant EN/IEC standards.

EJB... On Load Swicthes (I)
EJB range of enclosures are suitable for use as an Ex d low voltage switchboard, in accordance with the heat dissipation listed in the relevant certificates.

EJB... Fuse/On-Load Switches (IF)
EJB range of enclosures are suitable for the accommodation and use of Fuses Switches, in accordance with the heat dissipation listed in the relevant certificates.

EJB...Lighting/Power Distribution Panels (QADL)
EJB range of enclosures are suitable for use as an Ex d low voltage switchboard for lighting & power distribution, in accordance with the heat dissipation listed in the relevant certificates.

EJB... Motor Control Starter (TTB)
EJB range of enclosures is suitable for use to accommodate a DOL Motor Starter. EJB starter panels are designed to your specification – please contact your Technor representative for more information.

EJB... Reverse Motor Control Starter (ITB)
EJB range of enclosures is suitable to accommodate a reversing motor control starter. EJB starter panels are designed to your specification – please contact your Technor representative for more information.

EJB... Star Delta Motor Control Starter (ITB)
EJB range of enclosures is suitable for use to accommodate a Star-Delta motor control starter. EJB starter panels are designed to your specification – please contact your Technor representative for more information.

EJB

EJB…/WIN is a customer oriented Instrument Housing based on the feature of EJB…Series of Enclosures that is suitable to build Ex d low voltage switchboards, in accordance with the heat dissipation listed in the relevant certificates.

The control, check, signal, automation, interruption and/or protection units EJB. /. -. Series are constituted by Enclosures with Ex d IIB or Ex d IIB+H_2 mode of protection and can be completed with accessories such as: push buttons type PLA, PLC-I, PLC-S, PLF; rotary actuators type PSRC; potentiometers; pilot lamps type PLD; rotary actuators type SRC-1/2, SRC-10/11/12; reset device type PLC-R; etc., containing electric and/or electronic equipment and terminals for the link to the outside circuits.

EJB. /. -. Series Lids may be equipped with inspection windows made by tempered glass. The disposition and number of the windows may change in base to their dimensions and the windows may have square, rectangular, circular shape as specified in the relative table reference.

Customized Instrument Housing named EJB…/WIN is suitable for indoor or outdoor use and in locations considered corrosive and hazardous due to the presence of gases, vapours and dusts…

Maximum quantity of entries per sides A/B

Type	EJB 2	EJB 3	EJB 4	EJB 5	EJB 6	EJB 8	EJB 9	EJB 10	EJB 11	EJB 12	EJB 13	EJB 13a
M20 / ½"	9/7	14/7	14/9	27/13	24/18	35/16	27/24	57/21	32/27	61/28	48/32	81/54
M25 / ¾"	9/5	7/3	7/4	14/7	14/10	29/13	24/18	46/18	21/27	40/18	27/18	54/36
M32 / 1"	4/3	6/3	6/4	12/5	12/9	16/17	12/10	29/10	14/12	32/16	23/16	35/24
M50 / 1 ½"	3/2	4/2	4/3	5/2	5/4	7/3	9/9	14/5	6/5	16/7	9/6	18/10
M63 / 2"	2/1	3/1	3/2	4/2	4/3	6/2	4/4	12/4	5/4	12/5	8/5	14/9
M75 / 2 ½"	-	-	-	3/1	3/2	4/2	3/3	5/2	4/3	6/3	6/4	6/4
M80 / 3"	-	-	-	2/1	2/2	3/1	2/2	4/1	3/2	4/2	5/3	5/3
4"	-	-	-	1/1	1/1	2/1	2/2	3/1	2/2	3/1	3/2	5/3

If only one side of the box with entries, the above mentioned quantities may be increased (for cable glands only) with previous check of Italsmea

Indicative maximum quantity of terminals per Size in mm² (For specific quantity contact our sales service)

Size [mm²]	EJB 2	EJB 3	EJB 4	EJB 5	EJB 6	EJB 8	EJB 9	EJB 10	EJB 11	EJB 12	EJB 13	EJB 13a
2.5	48	84	84	96	96	134	96	100	100	180	180	180
4	48	42	84	96	96	134	96	100	100	180	180	180
6	40	36	68	80	80	90	80	80	80	90	90	90
10	32	26	52	60	60	64	60	60	60	108	108	108
16	-	22	44	48	48	58	48	48	46	90	90	90
25	-	10	16	32	18	36	26	36	36	46	70	70
35	-	10	16	16	18	36	26	36	36	18	70	70
50	-	6	12	12	14	14	16	14	25	12	37	37
70	-	-	-	10	10	10	12	12	18	12	20	20
120	-	-	-	-	8	8	8	8	12	12	17	17
185	-	-	-	-	-	-	-	-	-	8	14	14

EJB

Items

TYPE	CODE	A	B	C	D	E	F	G	H	I	L	M	N	ØP	R	Weight [kg]	AA	EE
EJB 2	A.0259.10	298	238	174	230	168	95	135	205	140	250	280	9	M6	20	10.07	12	160 x 220
EJB 3	A.0260.10	412	238	177	340	167	85	136	330	150	250	280	9	M8	20	13.40	18	155 x 330
EJB 3a	A.0260.13	412	238	199	340	167	85	158	330	150	250	280	9	M8	20	13.50	9	155 x 330
EJB 4	A.0261.10	418	302	175	335	220	90	132	300	190	300	320	9	M8	20	17.50	20	210 x 325
EJB 5	A.0262.10	480	300	232	392	209	125	182	350	185	300	320	9	M8	20	20.50	22	200 x 385
EJB 6	A.0263.10	483	408	238	387	310	130	186	355	280	390	420	9	M8	20	33.00	28	300 x 380
EJB 8	A.0265.10	634	365	254	530	262	140	204	495	225	340	370	9	M8	20	36.05	36	250 x 520
EJB 9	A.0266.10	535	468	257	426	363	140	204	410	340	440	470	12	M10	20	40.00	34	350 x 420
EJB 10	A.0267.10	750	366	292	630	250	185	234	580	205	330	360	12	M10	20	48.50	34	240 x 620
EJB 11	A.0268.10	596	505	267	483	394	130	204	445	360	480	510	12	M10	20	53.3	44	380 x 470
EJB 12	A.0269.10	805	455	310	690	335	170	243	640	285	425	450	14	M12	20	73.00	54	325 x 675
EJB 13	A.0270.10	832	607	314	723	500	115	236	630	405	580	620	14	M12	20	106.00	76	470 x 690
EJB 13A	A.0270.13	832	607	400	723	500	205	322	630	405	580	620	14	M12	20	124.00	76	470 x 690

*ref. drawing on page 118

NB The Enclosures are equipped with an inside thermostat that, when evironment temperature is ranging from -25°C to -50°C, assure an internal temperature of -25°C min. Alternatively, when inside temperature goes over 40°C the thermostat must cut out the circuit tension.

AA = Max quantity of M32x1,5 Push Botton, Pilot Lamp, Selector Swich Operators, that can be installed on the boxes cover.

EE = Internal mounting plate dimension in mm.

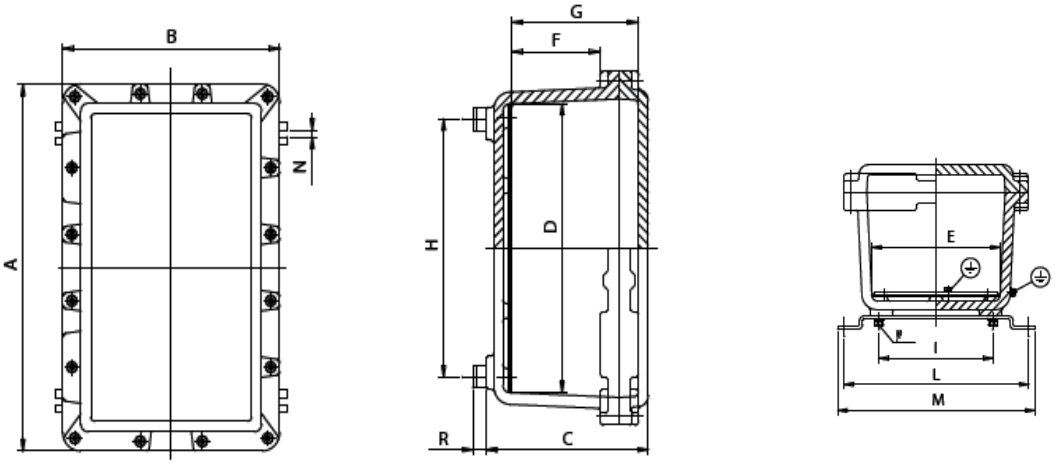
EJB…/WIN…Series Instruments Housing

Code P.0263.26	Code P.0263.25	Code P.0263.19	Code P.0263.17
B = Window on cover, applicable glass dim. 40x70 mm.	C = Window on cover, applicable glass dim. 40x200 mm.	D = Window on cover, applicable glass dime. 100x270 mm.	E = Window on cover, applicable glass dim. 175x380 mm.

Compatible Round Window								
Ø mm	70	85	100	120	150	170	190	230
CODE	P.0263.44	P.0263.42	P.0263.41	P.0263.39	P.0263.38	P.0263.37	P.0263.36	P.0263.35

Other window with customized dimensions are available on request when compatible with certificates

Dimensions



TNDLD (Fiber)

The TNDLDF range of fibre optic line bushings are designed as components for use in all Ex de enclosures to pass connection between the Ex d and Ex e compartment in combination Ex de enclosures. The TNDLDF is manufactured to order and can accommodate multiple fibre cores or a combination or fibre, wire conductor and coaxial cables.

Specifications

Material	Acid resistant Stainless steel AISI 316L
Temperature TNDLD/TNDLDC/ TNDLDE	-20ºC to +76ºC
Approvals	
- Atex	NEMKO-01-ATEX-471U
- IECEx	IECEx NEM 09.0012U
Standards	EN/IEC: 60079-0, 60079-1
Ex-Code	Ex d II C Ex II 2 G and EPL Gb
Surface treatment	Machine treaded
Rated voltage	Max 1000V
Options	Other lengths, colours and connectors upon request

Note: **Spesial conditions according to IEC/EN 60079-28 may apply for Zone 1/Gb**

Ex d Fibre bushings, -20ºC - +76ºC					
Type	Number of fibres	Fibre type	Thread size	Fibre length in mm Ex e / Ex d	Connector
TNDLDF 1X62.5/125	1	62.5/125	M24	750/750	ST
TNDLDF 2X62.5/125	2	62.5/125	M24	750/750	ST
TNDLDF 4X62.5/125	4	62.5/125	M24	750/750	ST

Ex d Multi fibre / line bushings, -20ºC - +76ºC								
Type	Number of fibres	Fibre type	Thread size	Fibre/wire length in mm Ex e/Ex d	Connector	Number of cores	Wire size mm²	Rated current A with T-amb 60ºC
TNDLDF 4X62.5/ 125+10x0.75	4	62.5/ 125	M42	750/750	ST	10	0.75	9
TNDLDF 4X62.5/ 125+10x1.5	4	62.5/ 125	M42	750/750	ST	10	1.5	14

TNDLD

The TNDLD range of line bushings are designed as components for use in all Ex de enclosures to pass connection between the Ex d and Ex e compartment in combination Ex de enclosures. The TNDLD is available in a wide range of standard configurations and can also be manufactured to order for custom or hybrid bushing requirements.

Specifications

Material Acid resistant Stainless steel AISI 316L

Temperature TNDLD/TNDLDC/ TNDLDE -40ºC to 110ºC

Approvals

- Atex NEMKO-01-ATEX-471U
- IECEx IECEx NEM 09.0012U

Standards EN/IEC: 60079-0, 60079-1

Ex-Code Ex d II C

Ex II 2 G and EPL Gb

Surface treatment Machine treaded

Rated voltage Max 1000V

Colour Standard black or blue wires

Type of wire Radox 125 halogen free 1250

Options Other lengths and colours upon request

Type	Number of cores	Wire size mm²	Thread size	Wire lenght in mm Ex e / Ex d	Rated current A with T-amb 60ºC
TNDLD 4x0,75	4	0,75	M24	1000/1000	12
TNDLD 6x0,75	6	0,75	M24	1000/1000	11
TNDLD 12x0,75	12	0,75	M42	1000/1000	8
TNDLD 16x0,75	16	0,75	M42	1000/1000	8
TNDLD 21x0,75	21	0,75	M42	1000/1000	7
TNDLD 4X1,5	4	1,5	M24	1000/1000	19
TNDLD 6X1,5	6	1,5	M42	1000/1000	16
TNDLD 12X1,5	12	1,5	M42	1000/1000	13
TNDLD 16X1,5	16	1,5	M42	1000/1000	12
TNDLD 20X1,5	20	1,5	M42	1000/1000	11
TNDLD 4X2,5	4	2,5	M24	1000/1000	26
TNDLD 6X2,5	6	2,5	M42	1000/1000	23
TNDLD 12X2,5	12	2,5	M42	1000/1000	18
TNDLD 6x4	6	4	M42	1000/1000	31
TNDLD 6X6	6	6	M42	1000/1000	41
TNDLD 9X6	9	6	M42	1000/1000	37
TNDLD 3X10	3	10	M42	1000/1000	73
TNDLD 6X10	6	10	M42	1000/1000	59
TNDLD 3X16	3	16	M42	1000/1000	97
TNDLD 6X16	6	16	M42	1000/1000	79
TNDLD 3X25	3	25	M42	1000/1000	129
TNDLD 3X35	3	35	M42	1000/1000	163
TNDLD 3X50	3	50	M42	1000/1000	205
TNDLD 1X70	1	70	M42	1000/1000	372
TNDLD 1X95	1	95	M42	1000/1000	448
TNDLD 1X120	1	120	M42	1000/1000	523
TNDLD 1X185	1	185	M42	1000/1000	682

Ex d Line bushings blue, 1000V, -40ºC - +110ºC					
Type	Number of cores	Wire size mm²	Thread size	Wire lenght in mm Ex e / Ex d	Rated current A with T-amb 60ºC
TNDLD 6x0,75B	6	0,75	M24	1000/1000	11
TNDLD 16x0,75B	16	0,75	M42	1000/1000	8
TNDLD 21X0,75B	21	0,75	M42	1000/1000	7
TNDLD 4X1,5B	4	1,5	M24	1000/1000	19
TNDLD 6X1,5B	6	1,5	M42	1000/1000	16
TNDLD12X1,5B	12	1,5	M42	1000/1000	13
TNDLD 20X1,5B	20	1,5	M42	1000/1000	11

TNDLDE (Coax)

The TNDLDE range of line bushings are designed as components for use in all Ex de enclosures to pass connection between the Ex d and Ex e compartment in combination Ex de enclosures. The TNDLDE is designed to accommodate coaxial cables such as RG179 (50Ω) or can be manufactured to order for custom or hybrid bushing requirements.

Technical Data Construction

Centre conductor	Copper 2.25mm diameter
Dielectric	REX (Polyethylene cross-linked) 7.25mm diameter
Outer conductor	Copper, Silver plated, braid, 95%, 8.15mm diameter
Jacket	RADOX (LSFH), RAL 9005 – bk 10.3mm ±0.1
Print	HUBER+SUHNER GX 07272 50W (PA no.)

Electrical Data

Impedance	50W ±2
Max. Operating frequency	2 GHz
Capacitance	101 pF/m
Velocity of signal propagation	66 %
Signal delay	5.03 ns/m
Insulation resistance	>1 x 108MWm
Min. screening effectiveness	>41 dB (up to 2 GHz)
Max. operating voltage	5 kVrms (at sea level)
Test voltage	10 kVrms (50Hz/1 min)

Mechanical Data

Weight	16.1 kg/100 m	
Min. bending radius	Static	55 mm
	Dynamic	154 mm

Environmental Data

Temperature range	-40ºC to 110º

Ex d Coax bushings, 50W, -40°C- +110°C											
Type	Number of coax	Coax type	Thread size	Coax length in mm Ex e/Ex d							
TNDLDE1x50	1	RG213U, 50Ω	M24	1000/1000							
TNDLDE2x50	2	RG213U, 50Ω	M24	1000/1000							
Ex d Multi fibre / Coax / line bushings, -20°C- +76°C											
Type	Number of fibers	Fiber type	Thread size	Conductor length in mm Ex e/Ex d	Connec-tor	Number of Coax	Coax type	Number of cores	Core size	Rated current [A] @Tamb 60°C	
TNDLDF 2x62.5/125+ 10x0.75+2x50	2	62.5/125	M42	750/750	ST	2	RG213U, 50W	10	0.75	9	

TNCNP

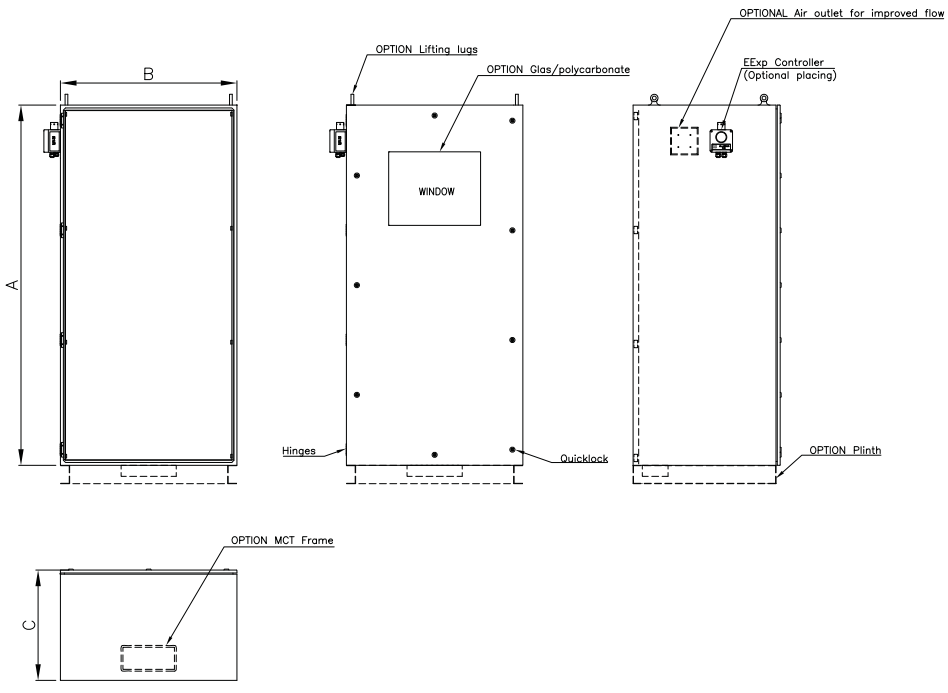
The TNCNP range of Ex p pressurized systems are designed and purpose built according to each client's requirements. The equipment allows for use of standard (non-Ex) electrical components in zone 1 and 2. Technor delivers a variety of turn-key solutions with enclosures made in Acid Resistant 316 Stainless Steel complete with purge control apparatus, testing and certification.

Specifications

Material	Acid resistant stainless steel AISI 316L
IP Rating	IP66-67*
Temperature	-40ºC to +60ºC
Approvals	
- Atex, Complete enclosures	DNV-2003-OSL-ATEX-0028
- Atex, Empty enclosures	DNV-2003-OSL-ATEX-0027U
Standards	EN/IEC: 60079-0, 60079-2
Ex-Code	Ex p II Ⓔx II 2 G
Lid/Door gasket	Neoprene (temp. -40ºC to +100ºC) Silicone (temp. -40ºC to +200ºC)
Surface treatment	Acidized as standard Electro polished as option

* Without Ex p control unit: IP66-67
With Ex p control unit fitted: IP65

Dimensions



ELB F-351

The ELB F-351 electronic purge controller is for use with Technor TNCNP Ex p pressurized systems.

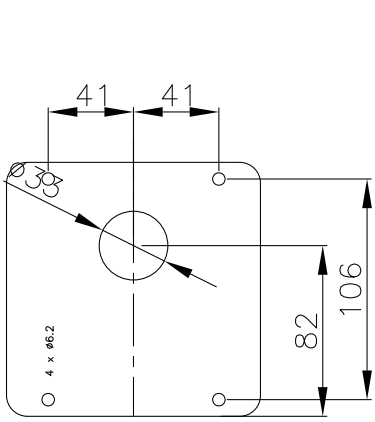
Specifications

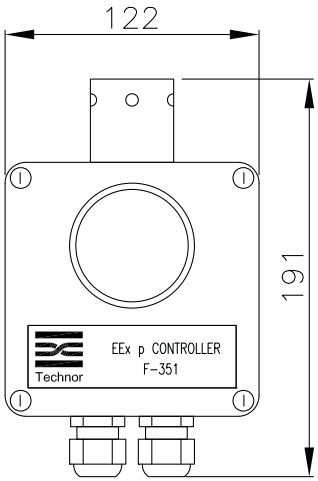
Material	GRP, epoxy resin, black
IP Rating	IP65
Operating temperature	-30ºC to +60ºC, without condensation
Approvals	
- Atex	TÜV 02ATEX1801
Standards	EN/IEC: 60079-0, 60079-1, 60079-2, 60079-7, 60079-11, 60079-18 EN954-1
Ex-code	Ex e mb ia[ia][px] IIvC T4
Dimensions	122mm x 122mm x 90mm
Measure range	0-25 mbar
Security class	Duo-tec technology. Fail safe, meets AK4 (according to EN954-1, cat.3)

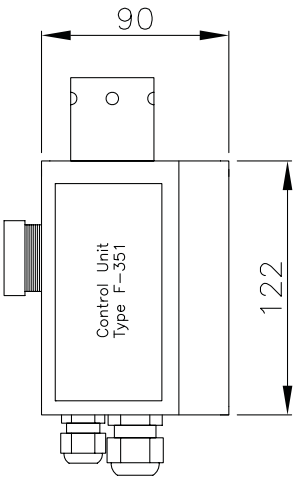
Electrical Specifications

Current consumption	30mA at 230VAC/ 60mA at 115VAC/ 300mA at 24VAC/ 200mA at 24VDC
Mains Voltage	12VDC, 24VDC, 24VAC, 115VAC, 230VAC, 48…62 Hz
Contact load	C: U = 250VAC, I = 12,0A/ cos j = 1
	4xEx cable glands 2xM16 for cable d = 4.5 – 10mm, 2xM20 for cable d = 7-13mm
Intrinsic Safe Connector (5pole)	Intrinsic safe connector for external temperature and pressure sensor F-470, remote unit F-411 or bypass-keyswitch f-480

Dimensions








ARCTIC LADY

TNFCD/TNFAD/TNFCDM

The TNFCD range of flashing beacons are designed to withstand harsh offshore environments. They are suitable for areas where an explosive atmosphere may be present and the need for warning is required. TNFCD flashing beacons are available as Ex de indirect entry, Ex d direct entry or as Non-Ex. Special applications can be designed upon request.

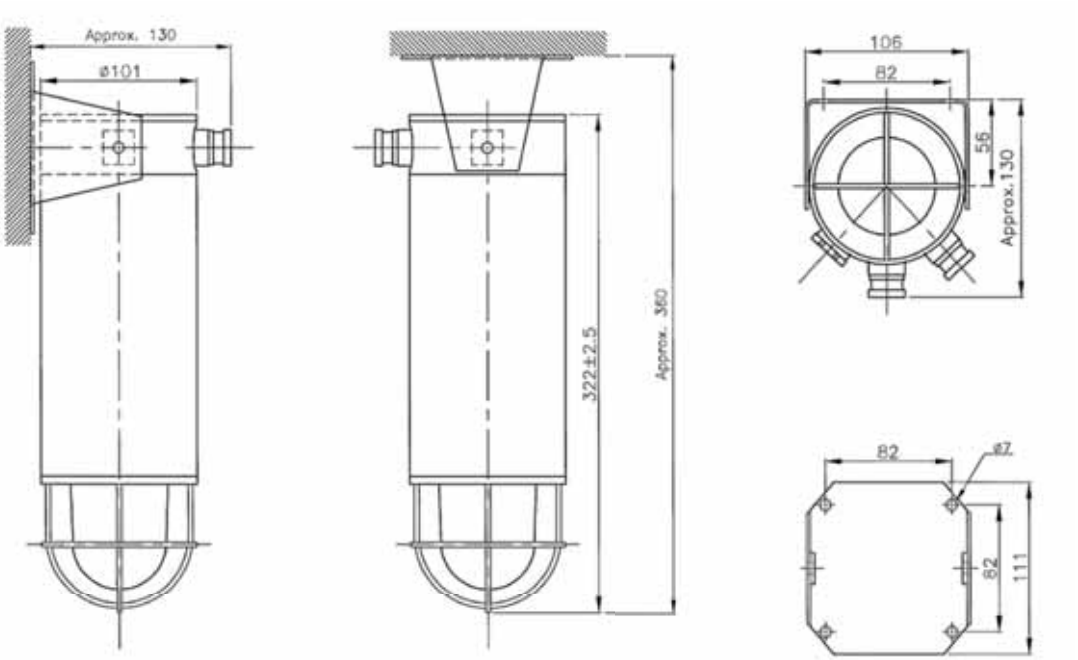
Specifications

Material	
TNFCD/TNFCDM	Acid resistant Stainless steel AISI 316L
TNFAD	Seawater resistant aluminium
IP Rating	IP66 (IP67 upon request)
Temperature	-50ºC / +60ºC
Approvals	
- Atex	NEMKO 01ATEX430
Standards	EN/IEC: 60079-0, 60079-1, 60079-7
Ex-Code	Ex d IIC T4 or Ex de IIC T4, ⟨Ex⟩ II 2 G/D
Surface treatment	SS316 Acidized
Earthing	Inside and outside
Cable entry TNFCD/TNFAD	Standard M25
Cable entry TNFCDM	Standard M25, M20 or flying lead upon request
Real humidity	100%
Dome colours	Red, yellow, Blue, Green, Orange, Clear
Flash frequency	1 Hz
Flash energy	
TNFCD/TNFAD	10 joule
TNFCDM	5 joule
Weight	
TNFCD	5.1 Kg
TNFAD	2.5 Kg
TNFCDM	2.5 Kg

Electrical data TNFCD/TNFAD				
Rated Voltage	220-254 VAC	110-120 VAC	24-48VDC	
Voltage Range	±10%	±10%	±20%	
Rated current	110mA	220mA	24VDC: 670mA	48VDC: 330mA
Power consumption	24VA	24VA	16VA	
Frequency	50/60 Hz	50/60 Hz		
Typical start current	>1A in max 1msec.			
Triggering	Direct, Telephone, 24-48VDC, Fail safe			
Fuse	1-2 A time-lag fuse is recommended			
Siren card for acoustic warning	8W, 20W or 25W for Ex loudspeaker (8 ohm, 20 ohm or 100V line)			

Electrical data TNFCDM				
Rated Voltage	220-254VAC	110-127VAC	24VDC	48VDC
Voltage Range	190 – 272VAC	±20%	±20%	±20%
Power consumption	100mA		380mA	200mA
Triggering	Direct			
Typical start current	1A in max 1msec			

Dimensions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ø101
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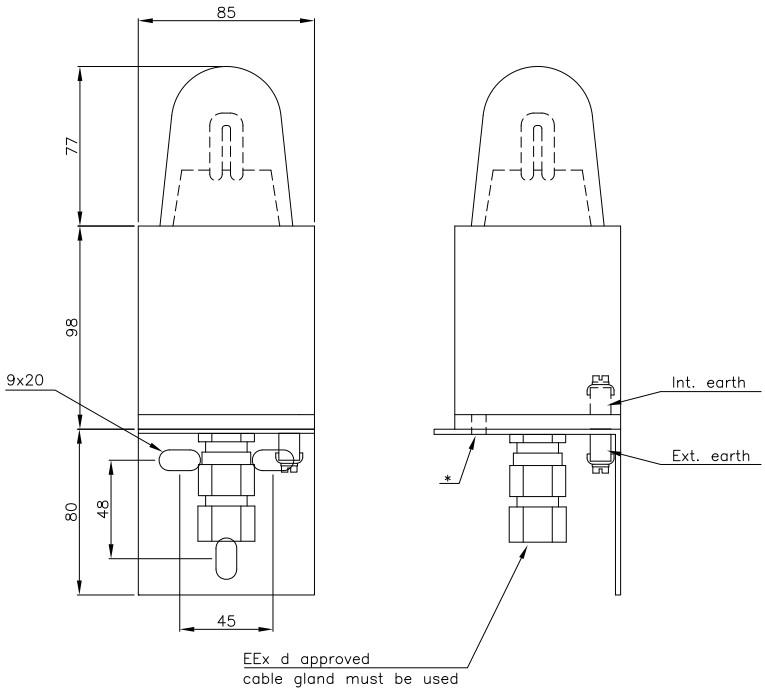
Approx. 360
106
82
56
Approx.130
82
ø7
82
111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cable gland must be used

EVde-ROT 4 Series

Copper free Aluminium signaling fixtures with rotating light, painted RAL 6003, with 2 off M25 entries as standard. Evde-ROT-4 is available in the following colours: blue / orange / red / green / yellow / transparent.

Specifications

Material	Copper-free aluminium (Cu <0.1%)
Temperature	-50°C to 60°C
IP Rating	IP65-66
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C Ex de IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 & 2 and Zone 21 & 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	Lamp included
Lamps Wattage	25W
Ballast	N.A.
Rated operation voltage (UE)	12Vac / 24Vac / 48Vac / 110Vac / 230Vac / 240Vac 12Vdc / 24Vdc / 48Vdc
Frequency	50/60 Hz
Accessories	Customized colours
Note	**Continuous Running**

Signalling lighting fixtures with rotating light

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Transparent	12V cc	220x516	8.500	45
EVde-ROT-4	Transparent	24V cc	220x516	8.500	45
EVde-ROT-4	Transparent	48V cc	220x516	8.500	45
EVde-ROT-4	Transparent	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Transparent	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Transparent	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Transparent	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Transparent	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Transparent	240V ac 50-60Hz	220x516	8.500	25

EVde-ROT 4 Series

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Blue	12V cc	220x516	8.500	45
EVde-ROT-4	Blue	24V cc	220x516	8.500	45
EVde-ROT-4	Blue	48V cc	220x516	8.500	45
EVde-ROT-4	Blue	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Blue	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Blue	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Blue	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Blue	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Blue	240V ac 50-60Hz	220x516	8.500	25

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Orange	12V cc	220x516	8.500	45
EVde-ROT-4	Orange	24V cc	220x516	8.500	45
EVde-ROT-4	Orange	48V cc	220x516	8.500	45
EVde-ROT-4	Orange	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Orange	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Orange	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Orange	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Orange	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Orange	240V ac 50-60Hz	220x516	8.500	25

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Red	12V cc	220x516	8.500	45
EVde-ROT-4	Red	24V cc	220x516	8.500	45
EVde-ROT-4	Red	48V cc	220x516	8.500	45
EVde-ROT-4	Red	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Red	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Red	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Red	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Red	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Red	240V ac 50-60Hz	220x516	8.500	25

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Green	12V cc	220x516	8.500	45
EVde-ROT-4	Green	24V cc	220x516	8.500	45
EVde-ROT-4	Green	48V cc	220x516	8.500	45
EVde-ROT-4	Green	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Green	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Green	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Green	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Green	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Green	240V ac 50-60Hz	220x516	8.500	25

Type	Colour	Voltage	Dimensions	Weight kg	Power (W)
EVde-ROT-4	Yellow	12V cc	220x516	8.500	45
EVde-ROT-4	Yellow	24V cc	220x516	8.500	45
EVde-ROT-4	Yellow	48V cc	220x516	8.500	45
EVde-ROT-4	Yellow	12V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Yellow	24V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Yellow	48V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Yellow	110V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Yellow	230V ac 50-60Hz	220x516	8.500	25
EVde-ROT-4	Yellow	240V ac 50-60Hz	220x516	8.500	25

EVde-XN / EVde-MXN / EVcc-MXN Series

Signaling luminaire with flashing light and Fresnel lens manufactured in a Copper free Aluminium body, painted RAL 6003 with 2 off M25 entries as standard. EVde-XN is available in different colours and voltages.

Specifications

Material	Copper-free aluminium (Cu<0.1%)
Temperature	-50°C to 60°C
IP Rating	IP65-66
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C Ex de IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	Lamp included
Lamps Wattage	10W, 25W, 50W
Rated operation voltage (UE)	110Vac / 230Vac / 240Vac 12Vdc / 24Vdc
Frequency	50/60 Hz
Note	**Continuous Running**

Evde-…XN Signalling lighting fixtures with flashing light

Type	Power W	Dimensions	Weight kg
EVde–XN-3 12/24V cc	10	195x450	5.100
EVde–XN-3 110V ca	10	195x450	5.100
Evde–XN-3 230-240V ca	10	195x450	5.100
EVde–MXN-3 12/24V cc	25	195x450	5.100
EVde–MXN-3 110V ca	25	195x450	5.100
EVde–MXN-3 230-240V ca	25	195x450	5.100
EVcc–MXN-5 12/24V cc	50	195x450	5.100
EVcc–MXN-5 110V ca	50	195x450	5.100
EVcc–MXN-5 230-240V ca	50	195x450	5.100

Note. This is a Sintesis table, which means that in each line you can choose among different combination of colors and voltage

EVde-XN / EVde-MXN / EVcc-MXN Series

Listed below you can find all the possible combinations, each of them listed with a unique code…

Type	COLOR	VOLTAGE	Power (W)	Dimensions	Weight kg
EVde–XN-3	Blue	12V cc	10	195x450	5.100
EVde–XN-3	Blue	24V cc	10	195x450	5.100
Evde–XN-3	Blue	110V ac	10	195x450	5.100
Evde–XN-3	Blue	230-240V ac	10	195x450	5.100
EVde–MXN-3	Blue	12V cc	25	195x450	5.100
EVde–MXN-3	Blue	24V cc	25	195x450	5.100
EVde–MXN-3	Blue	110V ac	25	195x450	5.100
EVde–MXN-3	Blue	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Blue	12V cc	50	195x450	5.100
EVcc–MXN-5	Blue	24V cc	50	195x450	5.100
EVcc–MXN-5	Blue	110V ac	50	195x450	5.100
EVcc–MXN-5	Blue	230-240V ac	50	195x450	5.100

Type	COLOR	VOLTAGE	Power (W)	Dimensions	Weight kg
EVde–XN-3	Orange	12V cc	10	195x450	5.100
EVde–XN-3	Orange	24V cc	10	195x450	5.100
Evde–XN-3	Orange	110V ac	10	195x450	5.100
Evde–XN-3	Orange	230-240V ac	10	195x450	5.100
EVde–MXN-3	Orange	12V cc	25	195x450	5.100
EVde–MXN-3	Orange	24V cc	25	195x450	5.100
EVde–MXN-3	Orange	110V ac	25	195x450	5.100
EVde–MXN-3	Orange	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Orange	12V cc	50	195x450	5.100
EVcc–MXN-5	Orange	24V cc	50	195x450	5.100
EVcc–MXN-5	Orange	110V ac	50	195x450	5.100
EVcc–MXN-5	Orange	230-240V ac	50	195x450	5.100

EVde-XN / EVde-MXN / EVcc-MXN Series

Type	COLOR	VOLTAGE	Power (W)	Dimensions	Weight Kg.
EVde–XN-3	Red	12V cc	10	195x450	5.100
EVde–XN-3	Red	24V cc	10	195x450	5.100
Evde–XN-3	Red	110V ac	10	195x450	5.100
Evde–XN-3	Red	230-240V ac	10	195x450	5.100
EVde–MXN-3	Red	12V cc	25	195x450	5.100
EVde–MXN-3	Red	24V cc	25	195x450	5.100
EVde–MXN-3	Red	110V ac	25	195x450	5.100
EVde–MXN-3	Red	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Red	12V cc	50	195x450	5.100
EVcc–MXN-5	Red	24V cc	50	195x450	5.100
EVcc–MXN-5	Red	110V ac	50	195x450	5.100
EVcc–MXN-5	Red	230-240V ac	50	195x450	5.100
Type	**COLOR**	**VOLTAGE**	**Power (W)**	**Dimensions**	**Weight Kg.**
EVde–XN-3	Green	12V cc	10	195x450	5.100
EVde–XN-3	Green	24V cc	10	195x450	5.100
Evde–XN-3	Green	110V ac	10	195x450	5.100
Evde–XN-3	Green	230-240V ac	10	195x450	5.100
EVde–MXN-3	Green	12V cc	25	195x450	5.100
EVde–MXN-3	Green	24V cc	25	195x450	5.100
EVde–MXN-3	Green	110V ac	25	195x450	5.100
EVde–MXN-3	Green	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Green	12V cc	50	195x450	5.100
EVcc–MXN-5	Green	24V cc	50	195x450	5.100
EVcc–MXN-5	Green	110V ac	50	195x450	5.100
EVcc–MXN-5	Green	230-240V ac	50	195x450	5.100
Type	**COLOR**	**VOLTAGE**	**Power (W)**	**Dimensions**	**Weight Kg.**
EVde–XN-3	Yellow	12V cc	10	195x450	5.100
EVde–XN-3	Yellow	24V cc	10	195x450	5.100
Evde–XN-3	Yellow	110V ac	10	195x450	5.100
Evde–XN-3	Yellow	230-240V ac	10	195x450	5.100
EVde–MXN-3	Yellow	12V cc	25	195x450	5.100
EVde–MXN-3	Yellow	24V cc	25	195x450	5.100
EVde–MXN-3	Yellow	110V ac	25	195x450	5.100
EVde–MXN-3	Yellow	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Yellow	12V cc	50	195x450	5.100
EVcc–MXN-5	Yellow	24V cc	50	195x450	5.100
EVcc–MXN-5	Yellow	110V ac	50	195x450	5.100
EVcc–MXN-5	Yellow	230-240V ac	50	195x450	5.100
Type	**COLOR**	**VOLTAGE**	**Power (W)**	**Dimensions**	**Weight Kg.**
EVde–XN-3	Transparent	12V cc	10	195x450	5.100
EVde–XN-3	Transparent	24V cc	10	195x450	5.100
Evde–XN-3	Transparent	110V ac	10	195x450	5.100
Evde–XN-3	Transparent	230-240V ac	10	195x450	5.100
EVde–MXN-3	Transparent	12V cc	25	195x450	5.100
EVde–MXN-3	Transparent	24V cc	25	195x450	5.100
EVde–MXN-3	Transparent	110V ac	25	195x450	5.100
EVde–MXN-3	Transparent	230-240V ac	25	195x450	5.100
EVcc–MXN-5	Transparent	12V cc	50	195x450	5.100
EVcc–MXN-5	Transparent	24V cc	50	195x450	5.100
EVcc–MXN-5	Transparent	110V ac	50	195x450	5.100
EVcc–MXN-5	Transparent	230-240V ac	50	195x450	5.100

WA.. Series

The WA range of aviation obstruction warning light are manufactured in Copper free Aluminium, painted RAL 6003 and with red methacrylate dome.

Specifications

Material	Copper free Aluminium (Cu <0.1%)
IP Rating	IP65-66
Temperature	-50°C to +40°C (Temp. class T4) -50°C to +60°C (Temp. class T3)
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d / Ex de IIC T4 / T3 Ex tD A21 IP65 T135°C / T200°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 1 or Nr.2 M25 entry
Hardware and Screw	Stainless steel external hardware
Lamps	Halogen (energy saver) or LEDs
Lamps Wattage	70W, 2x70W, 6W LEDs or 2x6W LEDs
Rated operation voltage (UE)	220V
Accessories	Customized colours

Note **Red Methacrylate Dome (Halogen version only)**

Code	Model	Type	Mode of Protection	Power (W)	Voltage	Weight (kg)
A.0421.12	EVde-2/HA 70	EVde-WAR 1x70W	Ex de	1x70W (old 100W inc)	230V	3.35
A.0420.12	EVCC-2/HA 70	EVCC-WAR 1x70W	Ex d	1x70W (old 100W inc)	230V	3.00
A.0422.12	EVA-2/HA 2x70	EVA-WAD 2x70W	Ex d	2x70W (old 100W inc)	230V	7.50
A.0422.13*	EVde-2/LED 6	EVde-WAR 6W	Ex de	6W	230V	3.35
A.0422.14*	EVCC-2/LED 6	EVCC-WAR 6W	Ex d	6W	230V	3.00
A.0422.15*	EVA-2/LED 2x6	EVA-WAD 2x6W	Ex d	2x6W	230V	3.00

* Special voltages from 24V up to 264V available upon request

EVcc-5 / LED Series

The EVCC-5/...LED range of Medium Intensity Obstruction Lighting products utilizes LED technology to deliver low heat dissipation, low watt ¬consumption and up to 100.000/hours ¬maintenance free operation. Aircraft warning lighting fixtures EVCC-5/...LED are multi-light source utilizing high-power LEDs with wide beam. The product is fully compliant with ICAO Annex 14, which requires that structures over 45m should incorporate medium intensity lighting fixtures (a lighting output of 1600 cd minimum) light colour red.

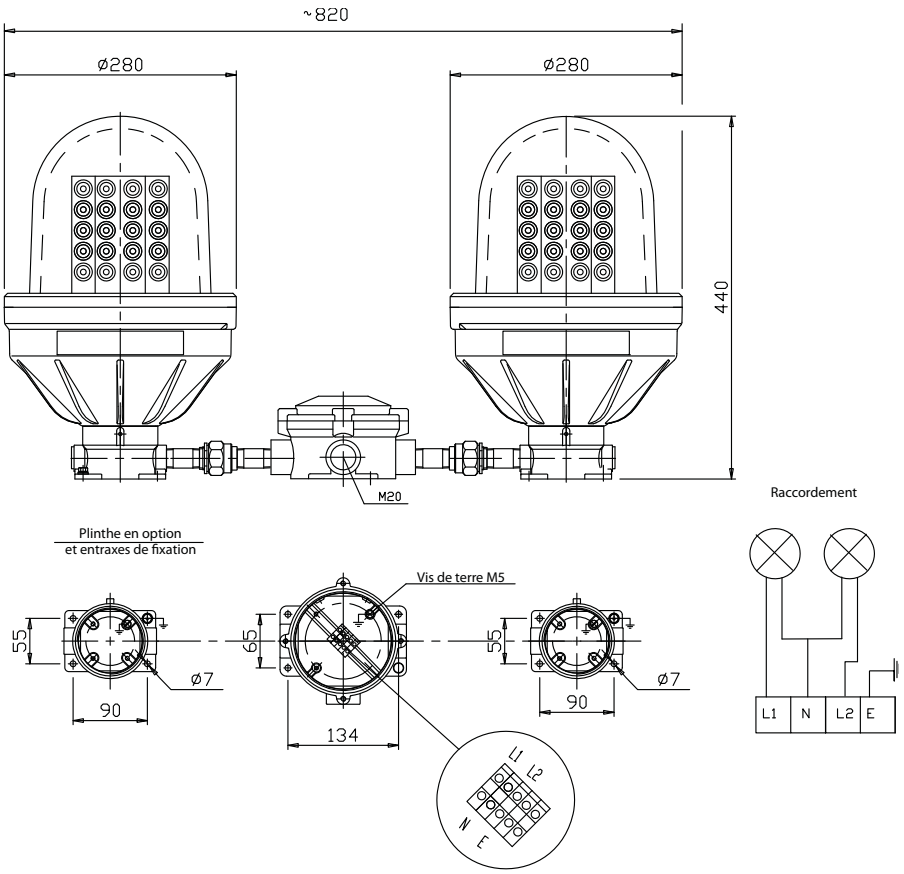
Specifications

Material	Copper-free aluminium (Cu<0.1%)
Temperature	-50°C to 60°C
IP Rating	IP65-66
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	Lamps included
Lamps Wattage	High intensity power LED's: 1W each x 60
Rated operation voltage (UE)	110Vac / 220Vac / 240Vac
Frequency	50/60 Hz
Accessories	Available upon request
Note	**Up to 100.000/hours Maintenance Free Unit**

Steady aircraft warning lighting fixtures medium intensity - power LED

Type	Code	Power (W)	Voltage	Dimension (ØA x C)	Weight (kg)
EVCC-5/LED-1x60	A.0414.37	1Wx60	110 Vac	280 x 440	13.1
EVCC-5/LED-1x60	A.0414.45	1Wx60	220÷240Vac	280 x 440	13.1
EVCC-5/LED-2x60	A.0414.46	2x(1Wx60)	220÷240Vac	820 x 467	13.1

Dimensions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EV-MIOL-LED 90+90

The EV-MIOL-LED range of Medium Intensity Obstruction Lighting products utilizes LED technology to deliver low heat dissipation, low watt consumption and up to 100.000/hours maintenance free operation or up to 50.000/hours at constant light output.

The EV-MIOL-LED is designed to accommodate a double beam in a single housing luminaire. The typical twin light product is normally configured in two separate housings with the consequence of large overall dimension whereas the EV-MIOL-LED is condensed in a single housing, saving over 50% in weight.

The product is fully compliant with ICAO Annex 14, which requires that structures over 45m should incorporate medium intensity lighting fixtures (a lighting output of 1600 cd minimum) light colour red.

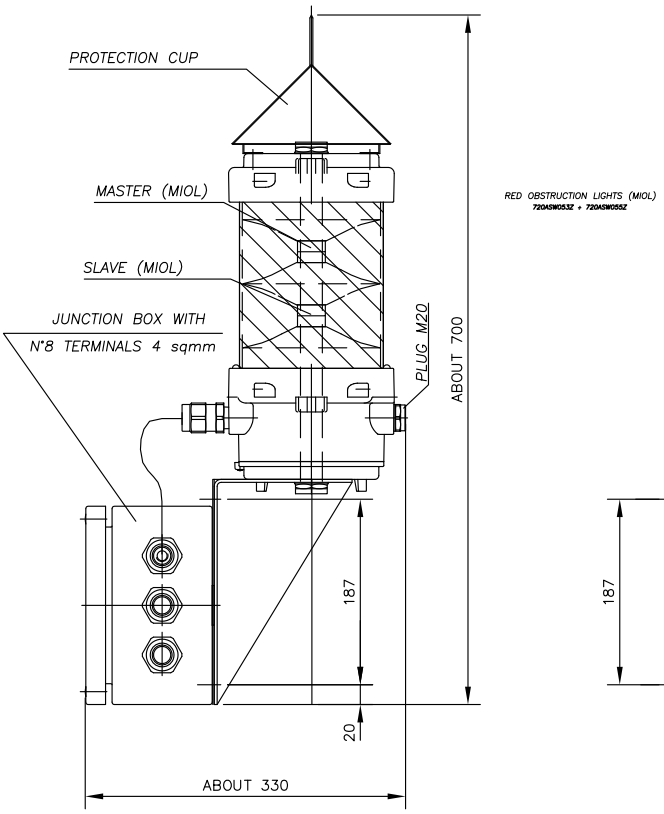
Specifications

Material	Aluminium end-cups and cover painted by green colour polyurethane painting cycle (RAL 6003)
IP Rating	IP66
Temperature	-30°C to 50°C
Approvals	
- Atex	02ATEXQ402
Standards	EN/IEC: 60079-0, 60079-15
Ex-code	⟨Ex⟩ II 3 GD Ex-nC IIC T6 Ex tD A22 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 2 and Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	30 + 30 LED LUXEON 3
Lamps Wattage	90W + 90W
Rated operation voltage (UE)	220Vac / 240Vac
Frequency	50/60 Hz
Accessories	Customized colours

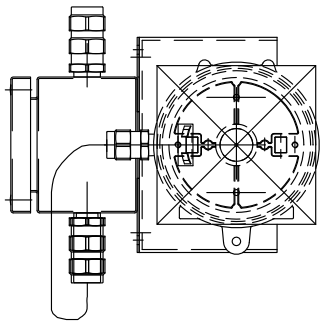
Require for data of separate central unit suitable to drive 3-4 EV-MIOL-LED-90+90

EV-MIOL-LED 90+90

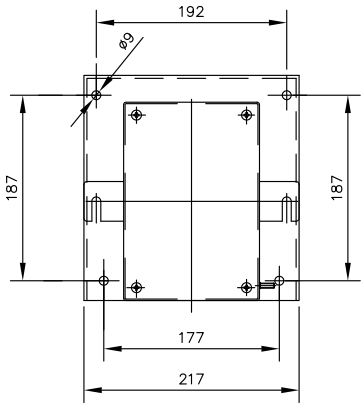
Dimensions

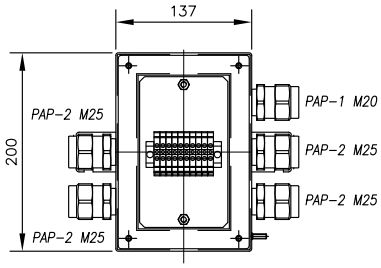


RED OBSTRUCTION LIGHTS (MIOL)
720ASW053Z + 720ASW055Z



JUNCTION BOX
FIXING DETAILS





JUNCTION BOX
INTERNAL VIEW

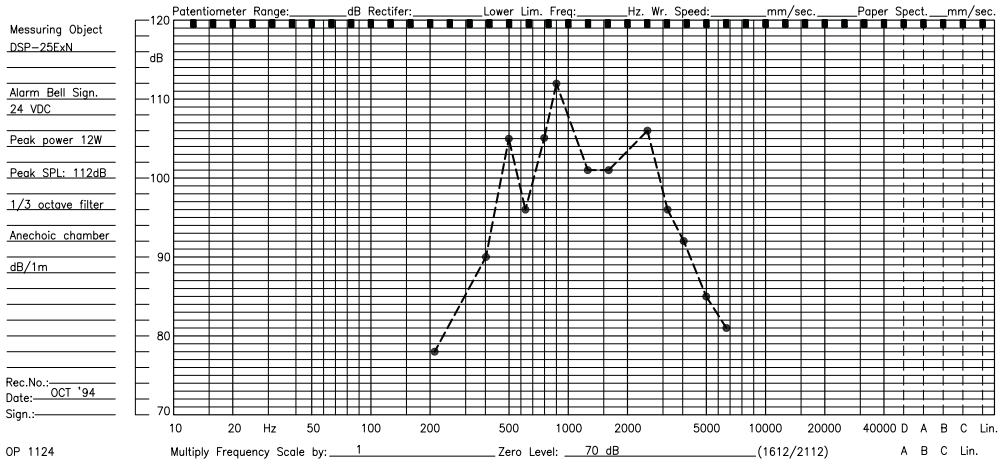
TNDSP-25 Ex bell

The TNDSP Ex d electronic speaker is configured with traditional mechanical bell sound. With no moving parts it is the ideal replacement for standard mechanical Ex protected alarms or bells.

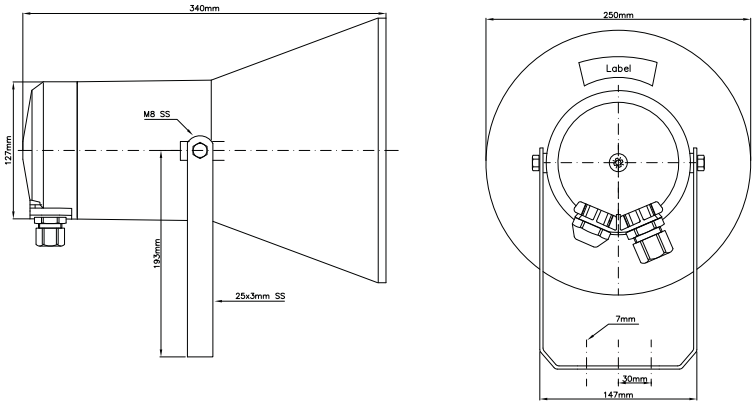
Specifications

Material	Antistatic polyamide, bracket in AISI 316L
IP Rating	IP66
Operating temperature	-20ºC to +40ºC
Approvals	
- Atex	Nemko 03ATEX1357
Standards	EN/IEC: 60079-0, 60079-1, 60079-7
Ex-Code	Ex des IIB + H2 T6 Ⓔx II 2 G
Earthing	Internal M4
Entries	1xM20 + 1xM25 plugged
Connections	2.5mm² max
Power	25W
Power consumption	19.6W (8W, 1kHz sine wave)
Sound level	P112 dB
Rated current	Max 2 Amp.
Operating voltage	24VDC (19.2 – 28VDC)
EMC protection	EN50082-2 / EN50081-2
Upon request	Other sound effects
Colour	Black

Sound Characteristics for TNDSP-25-Ex bell



Dimensions



XAWS

The XAWS Ex e break-glass call-point for emergency or fire alarm. The call point is available with two modes of operation:

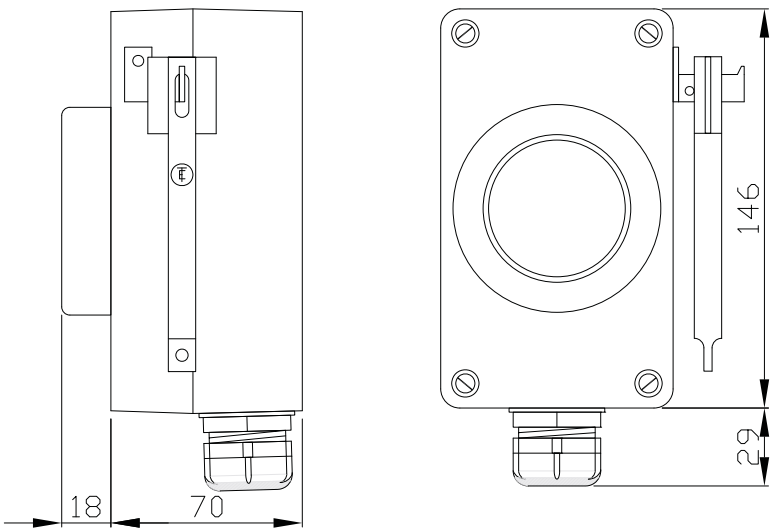
- Automatic: The contact block is held in position by the glass. The contact opens as soon as the glass is broken.
- Manual: The contact must be operated by the user once the glass is broken.

Specifications

Material	GRP
IP Rating	IP 65–66
Temperature	–20°C to +40°C (+50°C, +60°C)
Approvals	
- Atex	INERIS 03ATEX0122
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, EN50281-1-1
Ex-Code	II 2 GD, Ex ed IIC T6 to T4 T85°C to T135°C

Complete Fire alarm station			
Automatic contact operation			
Contact block type	NC ZBWE102	NO ZBWE101	NO+ NC ZBWE101+ ZBWE102
Reference	XAWS111	XAWS121	XAWS151
Manual contact operation			
Contact block type	NO ZBWE101	NC ZBWE102	NO+ NC ZBWE101 + ZBWE102
Reference	XAWS211	XAWS221	XAWS251
Accessories and spare parts			
Slow break contact block		NO	ZBWE101
		NC	ZBWE102
Glass	XAWS901		

Dimensions




MÆRSK GALLANT

RMS 540

The RMS 540 range of safe-area fluorescent luminaires is manufactured from AISI304 stainless steel. The body is fabricated from a single sheet of steel with no invasive mounting holes to minimize the risk of water ingress through the housing. The tempered glass window minimizes the risk of light output loss over time due to polycarbonate yellowing. The RMS range is ideally suited for on and offshore and marine environments and all kinds of industry where there is a high level of corrosion.

Specifications

Material	Stainless Steel AISI 304/AISI316, 0.8 mm thickness and transparent part in tempered glass
IP Rating	IP66 Industrial waterproof IP65 CLASS I
Temperature	-30°C / 55°C
Standards	Compliance with Electromagnetic Compatibility (EMC) according to European Directive 2004/108/EC
Gaskets	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
Entries	Body complete of two diam. 21mm through holes for cable entries, one complete of metallic plug with lock nut and gasket, and the other one with plastic plug for dust protection.
Hardware and Screw	AISI 304 Stainless Steel external hardware and screws
Lamps	RMS Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent (lamps excluded)
Lamps Wattage	18 / 36 W
Ballast	Electromecanichal ballast
Rated operation voltage (UE)	230 V
Frequency	50 Hz
Power factor	> 0.9
Accessories Available upon request	Wiring with High frequency electronic ballast (220-240V 50/60 Hz.) Suspension mounting kit “G1” AISI 304 made Pole mounting kit “P12” 1 ½” size AISI 304 made Wall mounting kit “H1” AISI 304 made
Emergency Service	RMS 540 lighting fixtures for Emergency Service are available: RMS 540...LE-P

Note

Very low pollution at the end of operative life time of lighting fixtures. The inorganic materials used for RMS, like stainless steel and glass, allow a recycle of 95%, only electrical components and insulation of single core wires need some more care.
No through holes between inside and outside of luminaries, out of holes for power supply cable whatever protected by a suitable waterproof cable gland (on request). Therefore, during the time, release would be possible where, for fixing devices, there are through holes and relevant gaskets.

Lighting Fixtures for Normal Service

Type RMS 540	Code	Lamps Num.	Power [W]	Overall dimensions [mm]			Weight [kg]
				A	B	C	
*03/IND	A.2213.00	1	1x18W TL-D	737	239	123	5.10
*04/IND	A.2211.00	2	2x18W TL-D	737	239	123	5.20
*01/IND	A.2214.00	1	1x36W TL-D	1347	239	123	8.40
*02/IND	A.2212.00	2	2x36W TL-D	1347	239	123	8.60

Lighting Fixtures for Emergency Service

Type RMS 540	Code	Lamps Num.	Power [W]	Overall dimensions [mm]			Weight [kg]
				A	B	C	
*01/IND/LE–P	A.2223.00	1	1x36W TL-D	737	239	123	5.80
*02/IND/LE–P	A.2224.00	2	2x36W TL-D	737	239	123	5.90
*03/IND/LE–P	A.2221.00	1	1x18W TL-D	1347	239	123	9.10
*04/IND/LE–P	A.2222.00	2	2x18W TL-D	1347	239	123	9.30

Emergency service on one lamp for 60’ with constant lighting output,
Emergency service on one lamp for 90’ with lighting output decreasing

RMS 550

The RMS 550 range of zone 2 fluorescent luminaires is manufactured from AISI304 stainless steel. The body is fabricated from a single sheet of steel with no invasive mounting holes to minimize the risk of water ingress through the housing. The tempered glass window minimizes the risk of light output loss over time due to polycarbonate yellowing. The RMS range is ideally suited for on and offshore and marine environments and all kinds of industry where there is a high level of corrosion.

Specifications

Material	Stainless Steel AISI 304/AISI316 , 0.8 mm thickness and transparent part in tempered glass
IP Rating	IP66
Temperature	-30°C to 55°C
Approvals	
- Atex	INERIS 01ATEX3002X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-15 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 3 GD Ex nA II T5 Tamb. -30°C to 50°C Ex nA II T4 Tamb -30°C to 55°C Ex tD A22 T90° Tamb -30°C to 40°C Ex tD A22 IP66/67 T100° Tamb -30°C to 50°C Ex tD A22 IP66/67 T105° Tamb -30°C to 55°C According to European Directive 94/9/EC (ATEX) For Zone 2 and Zone 22
Gaskets	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
Entries	Body complete of two diam. 21mm through holes for cable entries, one complete of metallic plug with lock nut and gasket, and the other one with plastic plug for dust protection.
Hardware and Screw	AISI 304 Stainless Steel external hardware and screws
Lamps	RMS Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent. (lamps excluded)
Lamps Wattage	18 / 36 W
Ballast	High-frequency electronic ballast conforming with EN 60079-15 and IEC 60079-15
Rated operation voltage (UE)	220-240 V
Frequency	50 ÷ 60 Hz
Power factor	> 0.95
Accessories Available upon request	Suspension mounting kit “G1” AISI 304 made Pole mounting kit “P12” 1 ½” size AISI 304 made Wall mounting kit “H1” AISI 304 made
Emergency Service	RMS 550 lighting fixtures for Emergency Service are available: RMS 550...PNL/LE-P

Note

Very low pollution at the end of operative life time of lighting fixtures. The inorganic materials used for RMS, like stainless steel and glass, allow a recycle of 95%, only electrical components and insulation of single core wires need some more care.

No through holes between inside and outside of luminaries, out of holes for power supply cable whatever protected by a suitable waterproof cable gland (on request). Therefore, during the time, release would be possible where, for fixing devices, there are through holes and relevant gaskets.

RMS 550 Lighting Fixtures for Normal Service

TYPE RMS 550	CODE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
* 03/PNL	A.2205.00	1	1x18W TL-D	737	239	123	5.10
* 04/PNL	A.2201.00	2	2x18W TL-D	737	239	123	5.20
* 01/PNL	A.2206.00	1	1x36W TL-D	1347	239	123	8.40
* 02/PNL	A.2202.00	2	2x36W TL-D	1347	239	123	8.60

RMS 550 Lighting Fixtures for Emergency Service

TYPE RMS 550	CODE		POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
* 03/PNL/LE-P	A.2236.00	1	1x18W TL-D	737	239	123	5.10
* 04/PNL/LE-P	A.2283.00	2	2x18W TL-D	737	239	123	5.20
* 01/PNL/LE-P	A.2235.00	1	1x36W TL-D	1347	239	123	8.40
* 02/PNL/LE-P	A.2234.00	2	2x36W TL-D	1347	239	123	8.60

Emergency service on one lamp for 60’ with constant lighting output,
Emergency service on one lamp for 90’ with lighting output decreasing

RMS 560

The RMS range of zone 1 fluorescent luminaires is manufactured from AISI304 stainless steel. The body is fabricated from a single sheet of steel with no invasive mounting holes to minimize the risk of water ingress through the housing. The tempered glass window minimizes the risk of light output loss over time due to polycarbonate yellowing. The RMS range is ideally suited for on and offshore and marine environments and all kinds of industry where there is a high level of corrosion.

Specifications

Material	Stainless Steel AISI 304/AISI316, 0.8 mm thickness and transparent part in tempered glass
IP Rating	IP66
Temperature	-20°C to 60°C
Approvals	
- Atex	INERIS 01ATEX0060
- Brazilian	08/UL-BRCP-0001
- GOST	GOST Certificat
Standards	EN/IEC: 60079-0, 60079-1, 60079-7, EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex de IIC T6 (–20°C to 40°C) Ex de IIC T5 (–20°C to 55°C) Ex de IIC T4 (–20°C to 60°C) Ex tD A21 IP66/67 T85°C / T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
Entries	Body complete of two diam. 21mm through holes for cable entries, one complete of metallic plug with lock nut and gasket, and the other one with plastic plug for dust protection.
Hardware and Screw	AISI 304 Stainless Steel external hardware and screws
Lamps	Lampholder suitable for fluorescent two pins lamp type PHILIPS TL-D or similar (lamps excluded)
Lamps Wattage	18 / 36 W
Ballast	high-frequency electronic ballast
Rated operation voltage (UE)	220-240 V
Frequency	50 ÷ 60 Hz
Power factor	> 0.95
Accessories Available upon request	Suspension mounting kit “G1” AISI 304 made Pole mounting kit “P12” 1 ½” size AISI 304 made (not suitable for 18W emergency version) Wall mounting kit “H1” AISI 304 made Micro switch interlocked with “closing-opening device” of lighting fixture: when opening the frame-window the micro switch will cut out the power supply
Emergency Service	RMS 560 lighting fixtures for Emergency Service are available: RMS 560...PNL/LE-P

Note

Very low pollution at the end of operative life time of lighting fixtures. The inorganic materials used for RMS, like stainless steel and glass, allow a recycle of 95%, only electrical components and insulation of single core wires need some more care.

No through holes between inside and outside of luminaries, out of holes for power supply cable whatever protected by a suitable waterproof cable gland (on request). Therefore, during the time, release would be possible where, for fixing devices, there are through holes and relevant gaskets.

Lighting Fixtures for Normal Service

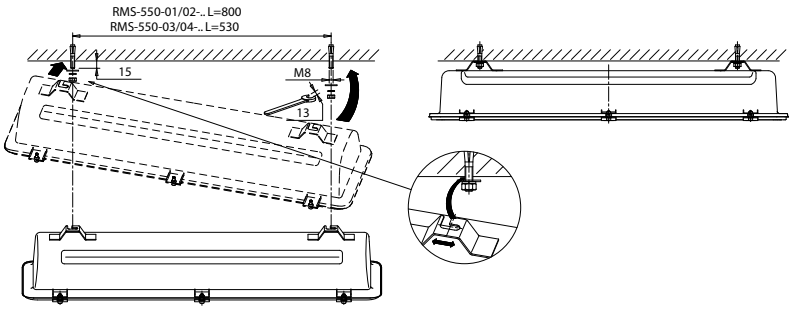
TYPE RMS 560*	CODE	LAMPS Num.	POWER [W]	Overall dimensions [mm] A	B	C	WEIGHT [kg]
* 03/PNL	A.2227.01	1	1x18W TL-D	737	239	123	5.60
* 04/PNL	A.2230.01	2	2x18W TL-D	737	239	123	5.70
* 01/PNL	A.2231.01	1	1x36W TL-D	1347	239	123	8.90
* 02/PNL	A.2232.01	2	2x36W TL-D	1347	239	123	9.10
* 03/PNL/MS	A.2227.00	1	1x18W TL-D	737	239	123	5.65
* 04/PNL/MS	A.2230.00	2	2x18W TL-D	737	239	123	5.75
* 01/PNL/MS	A.2231.00	1	1x36W TL-D	1347	239	123	8.95
* 02/PNL/MS	A.2232.00	2	2x36W TL-D	1347	239	123	9.15

MS: with Micro-Switch

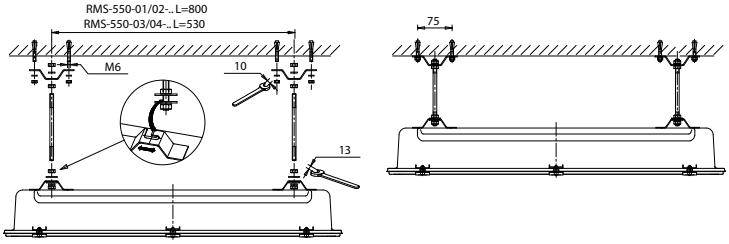
Lighting Fixtures for Emergency Service

TYPE RMS 560*	CODE	LAMPS Num.	POWER [W]	Overall dimensions [mm] A	B	C	WEIGHT [kg]
* 03/PNL/LE – P	A.2227.02	1	1x18W TL-D	737	239	173	9.50
* 04/PNL/LE – P	A.2230.02	2	2x18W TL-D	737	239	173	9.60
* 01/PNL/LE – P	A.2231.02	1	1x36W TL-D	1347	239	173	14.10
* 02/PNL/LE – P	A.2232.02	2	2x36W TL-D	1347	239	173	14.30

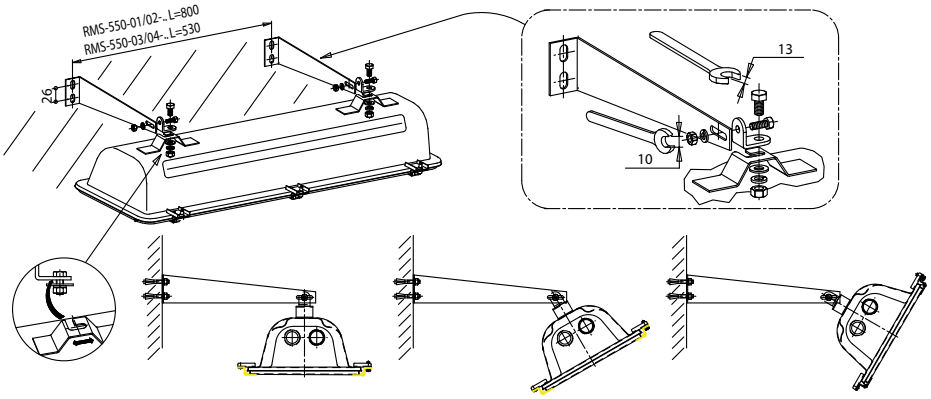
Emergency service on one lamp for 60’ with constant lighting output,
Emergency service on one lamp for 90’ with lighting output decreasing



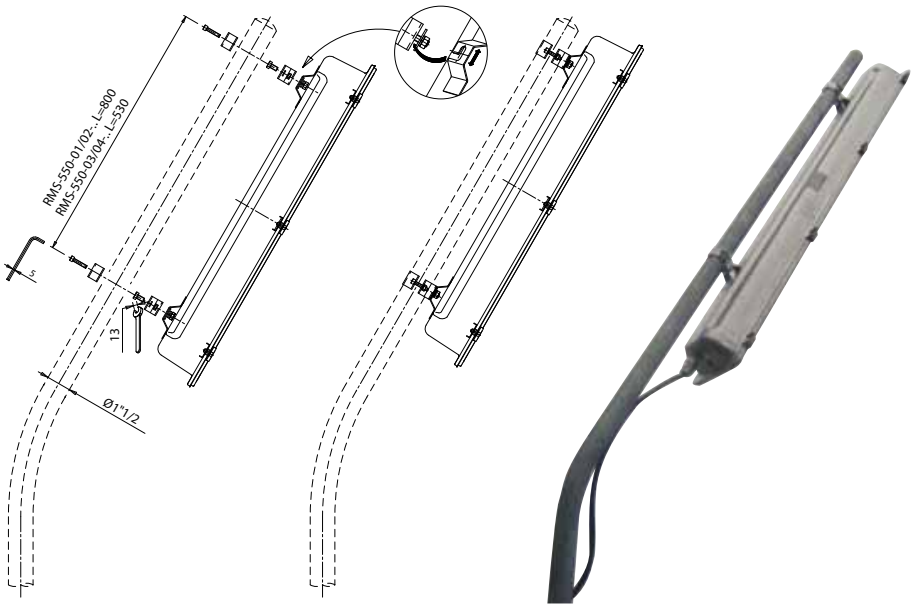
Ceiling mounting included in standard version



Suspension mounting kit “G1” type on request code: A 0530 75*



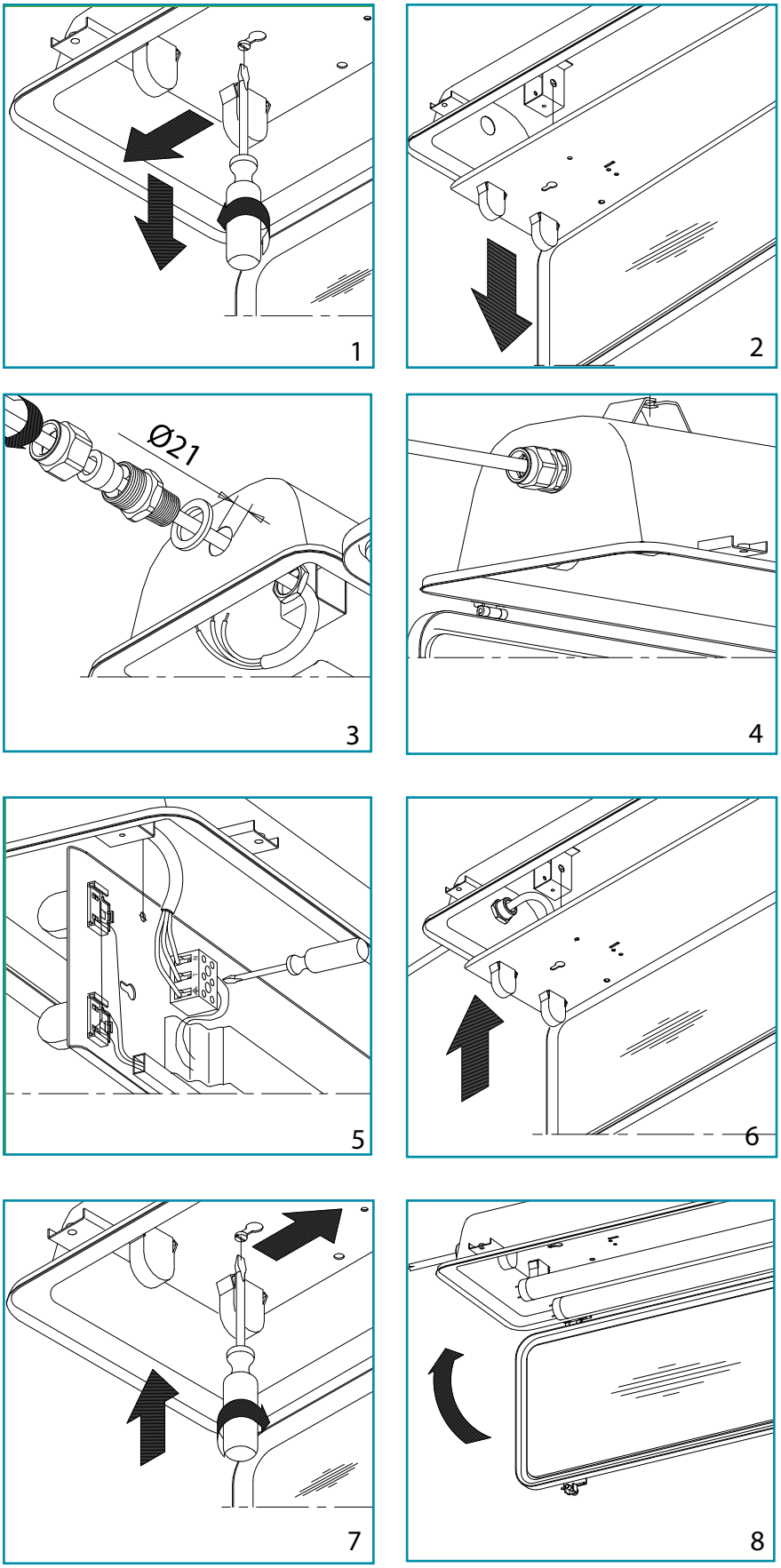
Wall mounting kit “H1” type on request code: A 0530 70*



Pole stanchion mounting kit “P12” type on request code: A 0530 71*

*** not compatible with RMS-560-03 e 04 / PNL-LE emergency 18W only**

All units are Stainless Steel made



RMS lighting fixtures mounting path

TNAML

Features

- 10 years operational warranty gives low lifecycle cost*
- 100% encapsulated.
- Maintenance free solution requiring only visual inspection from an Ex point of view
- Easy and flexible installation
- Seawater resistant anodized aluminum
- Tempered glass
- Fully recyclable
- High light efficiency (80%)
- Available with 2x18W / 2x36W / 2x58W lamps
- Optional incorporated battery powered LED emergency lighting
- Sealed-for-life concept
- Fit and forget
- Patented design
- Vibration test

Standard:	*IEC60721-2-3 Ed 1.0 and IEC68-2-6*
Frequency range:	*1 - 150 Hz*
Amplitude:	*5mm (1 to 10 Hz)*
Acceleration:	*2 gn (10 to 150 Hz)*
Sweep rate:	*1 octave per minute*
# sweep cycles:	*10*
# directions:	*3*

General specifications:

Modes of protection	Ex e mb, Ex tD A21
ATEX classification	Group II Category 2 G D
Zones	1, 2, 21, 22
Applied standards	EN/IEC: 60079-0, 60079-7, 60079-18 EN: 61241-0, 61241-1
Approvals	
- Atex	KEMA 08ATEX0163
Ex code	Ⓔx II 2 G Ex e mb II T6 Ⓔx II 2 D Ex tD A21 IP66 T80°C
Inspection	Visual inspection in accordance with EN/IEC 60079-17

Product specifications:

Housing	Seawater resistant anodized (25 micron) aluminium with tempered glass
Lamps	Pre-mounted long life lamps, colour 4000K
IP Rating	IP66
Temperature range	-20°C to +55°C
Voltage	220-264VAC 50/60Hz
Electrical connection	0.5-6mm² spring terminals through integrated external junction box (sealed by resin)
Entries	2 x Ø25 mm cable gland entries. One plugged.
Ballast	Electronic with end of life protection
Mounting	2 x adjustable brackets on guidance rail for easy and quick installation
LED (Em. lighting versions)	90 minutes battery backup

Options (upon request, minimum quatities may apply):

Voltage	110/120VAC, 50/60 Hz (only for 2x18W and 2x36W)
Lamps	Colour 3000K
Electrical connection	8 metre permanent flying lead, braided
LED Emergency lighting	180 minute back-up 4 LEDs to meet requirements of IMO/DNV-OS-A101
Glass	For use in accordance with HACCP environment (food industry)
Wiring	Through wiring (each end of the luminaire)
Other area classifications	Zone II, Ex n, 3 GD (TNAMLC...) or safe area version (TNAMLD...)

Emergency version

Accessories

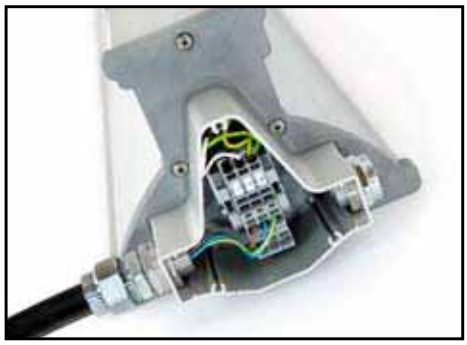
Mounting brackets	Pole and ceiling mounting brackets
Safety wire	For installation into a fixing arrangement on the light fitting
Cable Gland	Suitable rated cable glands can be supplied with the light fitting
Manned/Unmanned facilities	“Black start” function for manned/unmanned functionality
Indoor ceiling installation	Frame for resessed installation

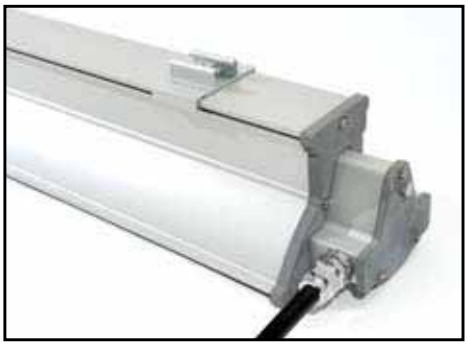
*Conditions apply

Article code	Lamps	Voltage	LED emergency service	Weight	Total length	Lumen
AMLB1218A1A	2x18W	220-264VAC	-	6.6* kg	738 mm	2.600 Lumen
AMLB1218A1B	2x18W	220-264VAC	90 min.	9.1* kg	898 mm	2,600 Lumen
AMLB1236A1A	2x36W	220-264VAC	-	9.4* kg	1118 mm	6.000 Lumen
AMLB1236A1B	2x36W	220-264VAC	90 min.	11.2* kg	1118 mm	6.000 Lumen
AMLB1236B2A	2x36W	220-264VAC	-	11.6* kg	1620 mm	6.600 Lumen
AMLB1236B2B	2x36W	220-264VAC	90 min.	13.4* kg	1620 mm	6.600 Lumen
AMLB1258A1A	2x58W	220-264VAC	-	12.1* kg	1648 mm	10.400 Lumen
AMLB1258A1B	2x58W	220-264VAC	90 min.	13.9* kg	1648 mm	10.400 Lumen

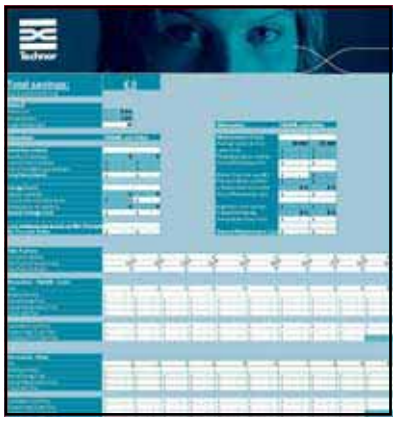
**The weight is excluding the filling material for the junction box, this is 0,35 kgs per luminaire*

Type	Max. qty. of lamp fitting on a 16A/ C-char. circuit. 30mA ELCB	Inrush current
2 x 18W	30	18A / 250µs
2 x 36W	30	18A / 250µs
2 x 58W	20	31A / 350µs





Total Cost of Ownership



The benefits of installing TNAML can be shown in a Total Cost of Ownership calculation. For this purpose we have created a software tool to calculate the lifetime cost savings based on input from the client.

Universal adjustable mounting system

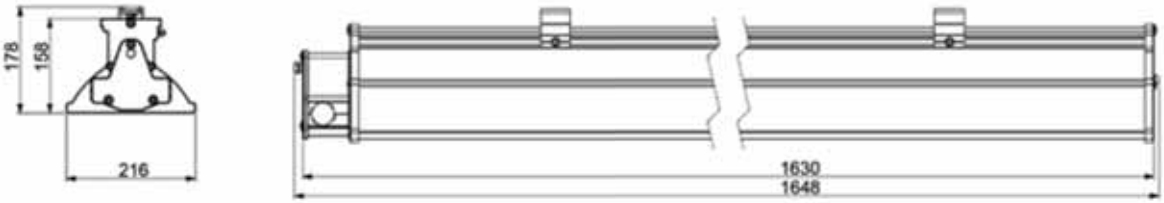
Ceiling mounting

Pole mounting

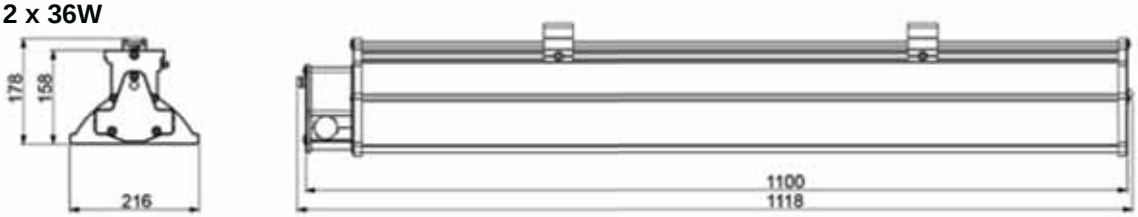
Suspension mounting

Dimensions

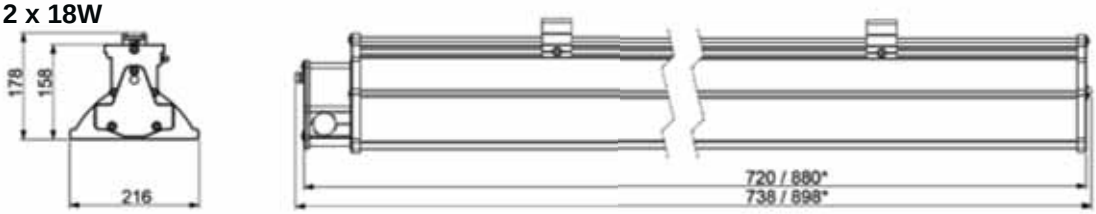
2 x 58W



2 x 36W

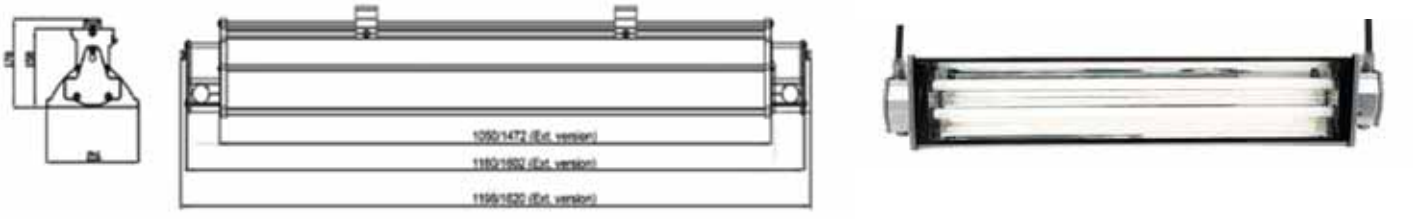


2 x 18W



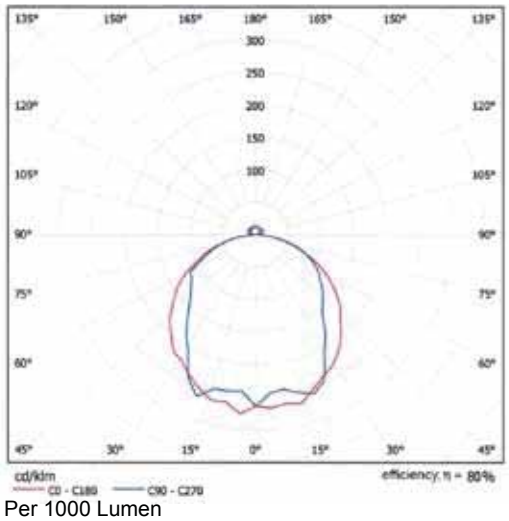
* Emergency light version

Versions with junction box in each end for through connection/wiring



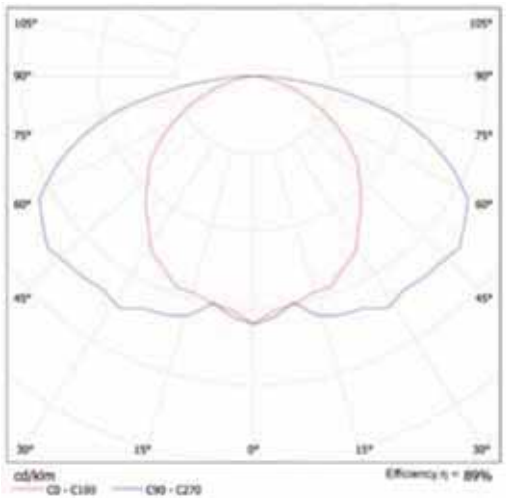
Light distribution curve

Standard version



Per 1000 Lumen

Emergency version (2 LED's)



EVF-P

The EVF-P range of Ex d IIC fluorescent luminaires is manufactured with a cylindrical polycarbonate lamp housing and two end-cups in copper-free aluminium. The polycarbonate lamp housing is manufactured from a 3 layer extrusion with UV filter to minimize the risk of polycarbonate yellowing and grant the best possible protection against direct sun heating and minimal wind resistance. These technical features make the EVF-P Series suitable for all environments where fluorescent illumination is required in zone 1 areas.

Specifications

Material	Two end-cups in copper-free aluminium (Cu<0.1%) mounted on a circular shape polycarbonate made
IP Rating	IP66
Temperature	-20°C to 50°C
Approvals	
- Atex	INERIS 02ATEX0039
- Brazilian	08/UL-BRCP-002
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T6 Ex tD A21 IP66 T85°C According to European Directive 94/9/EC (ATEX) For Zone 1/Zone 21 and Zone 2/Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Thread	Num. 2 opposite M20 pitch 1.5 metric threated entries. One plugged-off by brass nickel plated Ex-d plug with relevant gasket
Hardware and Screw	AISI 304 Stainless Steel external hardware and screws
Lamps	EVF-P Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent (lamps excluded)
Lamps Wattage	18 / 36 / 58 W
Ballast	High Frequency Electronic ballast
Rated operation voltage (UE)	220-240 V
Frequency	50 ÷ 60 Hz
Power factor	> 0.95
Accessories Available upon request	Pole mounting Kit AISI 304 made, type P14 Ceiling mounting Kit AISI 304 made, type G3 3° bottom entry M20
Emergency Service	EVF-P lighting fixtures for Emergency Service are available, see: EVF-P...LE-P

Note

The screw-cover of EVF-P, when opened, will stand linked to the body of the lighting fixtures by mean of a stainless steel chain
Steel made white coated internal reflector is also the support for electrical equipment. It is fully withdrawable in order to allow an easy re-lamping and maintenance

EVF-P... Lighting Fixtures for Normal Service

CODE	TYPE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
A.0423.00	EVF-P 118	1	1x18W	764	176	194	6
A.0424.00	EVF-P 136	1	1x36W	1374	176	194	8
A.0425.00	EVF-P 158	1	1x58W	1680	176	194	9
A.0426.00	EVF-P 218	2	2x18W	764	176	194	6
A.0427.00	EVF-P 236	2	2x36W	1374	176	194	8
A.0428.00	EVF-P 258	2	2x58W	1680	176	194	10

EVF-P...LE Lighting Fixtures for Emergency Service

CODE	TYPE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
A.0423.10	EVF-P 118 LE P	1	1 x 18W	764	176	194	8
A.0426.10	EVF-P 218 LE P	2	2 x 18W	764	176	194	8
A.0424.10	EVF-P 136 LE P	1	1 x 36W	1374	176	194	10
A.0427.10	EVF-P 236 LE P	2	2 x 36W	1374	176	194	10
A.0425.10	EVF-P 158 LE P	1	1 x 58W	1680	176	194	11
A.0428.10	EVF-P 258 LE P	2	2 x 58W	1680	176	194	11
A.0423.11	EVF-P 118 LE NP	1	1 x 18W	764	176	194	7.7
A.0424.11	EVF-P 136 LE NP	1	1 x 36W	1374	176	194	9.7
A.0425.11	EVF-P 158 LE NP	1	1 x 58W	1680	176	194	10.7

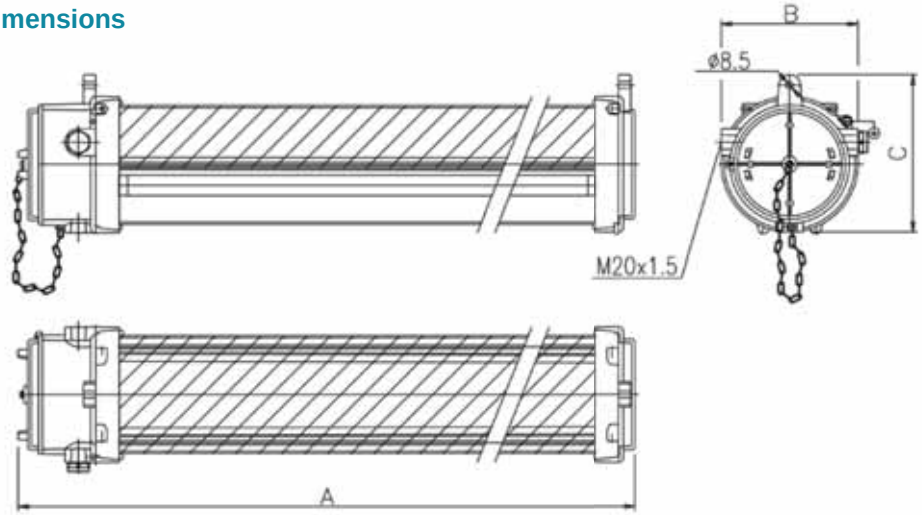
(P) Permanent Emergency Lighting Apparatus
(NP) NON Permanent Emergency Lighting Apparatus

Typical mounting kit for EVF-P Series Lighting Fixtures

Specifications	
KIT "G3"	CEILING MOUNTING KIT "G3" Type for lighting fixtures: EVF-P Series STAINLESS STEEL AISI 304
KIT "P14"	POLE MOUNTING KIT "P14" Type for lighting fixtures: EVF-P Series STAINLESS STEEL AISI 304 for 1"1/2" Ø pole

Type	Useful for Lighting Fixtures	Code	Material	Weight kg
KIT P14	EVF-P	A.0423.61	Stainless Steel AISI 304	0,44
KIT G3	EVF-P	A.0423.60	Stainless Steel AISI 304	0,167

Dimensions



EVF-P Endurance

The EVF-P endurance range of Ex d fluorescent luminaires is based upon the design benefits of the EVF-P range. The Endurance Range has been specially engineered to house the latest long-life Master TL-D Xtreme Phillips fluorescent lamps, paired with HF-Performer II Xtreme high frequency ballast. As a result, with the EVF-P Endurance you can expect over 40,000 hours of maintenance free operation.

Specifications

Material	Two end-cups in Copper free Aluminium mounted on a circular shape polycarbonate made
IP Rating	IP66
Operating Temperature	-20°C to 50°C
Approvals	
- Atex	INERIS 02ATEX0039
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d IIC T6 Ex tD A21 IP66 T85° C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 21, Zone 2 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Thread	Num. 2 opposite M20 pitch 1.5 metric threated entries. One plugged-off by brass nickel plated Ex d plug with relevant gasket
Hardware and Screw	AISI 304 Stainless Steel external hardware and screws
Lamps	EVF-P ENDurance Series is suitable for two pins fluorescent socket: MASTER TL-D Xtreme PHILIPS Low- Pressure mercury discharge lamp with tubolar 26 mm. envelope Extreme long reliable lifetime and higher efficacy are achieved with HF-PERFORMER II Xtreme electronic gear (lamps excluded).
Lamps Wattage	18 / 36 / 58 W
Ballast	HF- PERFORMER II Xtreme High Frequency Ballast Philips (36W and 58W) Smart power: costant light indipendent of mains voltage fluctuations Protected against excessive voltage peaks (up to 4Kv) and suitable for Class I and Class II luminaires Protected against mains voltages and incorrect connections up to 400V AC
Rated operation voltage (UE)	220-240 V
Frequency	50 ÷ 60 Hz
Power factor	> 0.95
Accessories Available upon request	Pole mounting Kit AISI 304 made, type P14 Ceiling mounting Kit AISI 304 made, type G3 3° bottom entry M20
Emergency Service	EVF-P ENDurance lighting fixtures for Emergency Service is available: EVF-P...LE-LP/LED-END

Note

The screw-cover of EVF-P END, when opened, will stand linked to the body of the lighting fixtures by mean of a stainless steel chain
Steel made white coated internal reflector is also the support for electrical equipment. It is fully withdrawable in order to allow an easy re-lamping and maintenence

EVF-P…LE END (Endurance) Series
Lighting Fixtures for Emergency Service

CODE	TYPE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
A.0423.12	EVF-P 118 LE-LP / LED-END	1 + LEDS	1 x 18 + x1	764	176	194	8
A.0426.11	EVF-P 218 LE-LP / LED-END	2 + LEDS	2 x 18 + x1	764	176	194	8
A.0423.13	EVF-P 136 LE-LP / LED-END	1 + LEDS	1 x 36 + x1	1374	176	194	10
A.0427.11	EVF-P 236 LE-LP / LED-END	2 + LEDS	2 x 36 + x1	1374	176	194	10
A.0423.14	EVF-P 158 LE-LP / LED-END	1 + LEDS	1 x 58 + x1	1680	176	194	11
A.0428.11	EVF-P 258 LE-LP / LED-END	2 + LEDS	2 x 58 + x1	1680	176	194	11

(LP) Permanent Emergency Lighting Apparatus by LED source

EVF-P…END (Endurance) Series
Lighting Fixtures for Normal Service

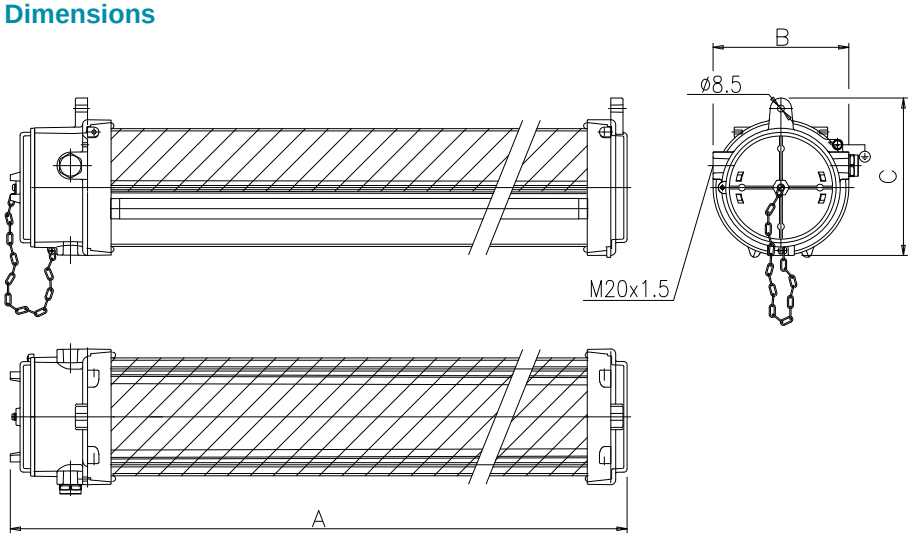
CODE	TYPE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
A.0423.01	EVF-P 118-LE P	1	1x18W	764	176	194	6
A.0424.01	EVF-P 136-LE P	2	1x36W	1374	176	194	8
A.0425.01	EVF-P 158-LE P	1	1x58W	1680	176	194	9
A.0426.01	EVF-P 218-LE P	2	2x18W	764	176	194	6
A.0427.01	EVF-P 236-LE P	2	2x36W	1374	176	194	8
A.0428.01	EVF-P 258-LE P	2	2x58W	1680	176	194	10

EVF-P
Typical Mounting Kit

Specifications	
KIT "G3"	CEILING MOUNTING KIT "G3" Type for lighting fixtures: EVF-P Series STAINLESS STEEL AISI 304
KIT "P14"	POLE MOUNTING KIT "P14" Type for lighting fixtures: EVF-P Series STAINLESS STEEL AISI 304 for 1 ½" Ø pole

TYPE	Useful for Lighting Fixtures	CODE	MATERIAL	WEIGHT Kg
KIT P14	EVF-P	A.0423.61	Stainless Steel AISI 304	0.44
KIT G3	EVF-P	A.0423.60	Stainless Steel AISI 304	0.167

Dimensions



EVde HID Series

The EVde-…H.I.D. range luminaires have been designed to house ¬built-in control gear for high intensity discharge (H.I.D.) lamps and to manage the light source, driving it where required by way of suitable reflectors and refractors.

Cast copper-free aluminium construction (Cu<0.1%) and tempered glass for lamp compartment EVde-H.I.D. luminaires can provide small dimensions/low weight combined with a wide range of wattage: from 50W to 400W. By separating the control gear and lamp compartments the EVde range ensures low temperature rise on electronic components maximizing the lifetime of the luminaire.

The EVde-…H.I.D solution with built-in control gear and Ex e junction box, allows end users and contractors the possibility to save 1 junction box, 2 cable glands and a minimum of 30 minutes of labour during the installation process.

Specifications

Material	Copper-free aluminium (Cu<0.1%)
Temperature	-50°C to 60°C, See specific limitations in the relative tables for lamps typology
IP Rating	IP65-66
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d IIC T5 / T4 / T3 Ex tD A21 IP65 T100°C / T135°C / T200°C Ex de IIC T5 / T4 / T3 Ex tD A21 IP65 T100°C / T135°C / T200°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	Lighting apparatus EVde series can be equipped with: High Pressure Sodium, Mercury Vapour, Metal Halide lamps (included)
Lamps Wattage	From 50W to 400W
Ballast	Ballast technical features depend on lamp type
Rated operation voltage (UE)	230 V
Frequency	50 Hz
Ignitor and Capacitor	Ignitor and Capacitor technical features depend on ballast type
Power factor	> 0.9
Accessories Available upon request	GEV-…Protection guard REV-…Standard reflector made of 99.85 aluminium painted white RAL 9003 REVD-…Dome reflector made of 99.85 polished and anodized aluminium KFE-…High Bay Reflector made of 99.85 polished and anodized aluminium VERTEVA-…Prismatic Refractor made of virgin acrylic
Lampholder	Ceramic lamp holder
Note	**Adjustable stainless steel mounting bracket (included), suitable for ceiling; pendant; wall; pole installation. 4x4sqmm+E mains terminal in Ex-e compartment (included)**

High Pressure Sodium (NA)

TYPE	CODE	LAMP W	LAMP TYPE	WEIGHT kg	TEMP. CLASS
EVde-2/NA-B 50	A.0405.60	50	High Pressure Sodium	6.00	T4*
EVde-2/NA-B 70	A.0405.61	70	High Pressure Sodium	6.00	T4*
EVde-3/NA-B 50	A.0405.68	50	High Pressure Sodium	v7.40	T4
EVde-3/NA-B 70	9.0801.55	70	High Pressure Sodium	7.40	T4
EVde-4/NA-B 100	A.0405.62	100	High Pressure Sodium	7.60	T3
EVde-4/NA-B 150	A.0405.63	150	High Pressure Sodium	8.40	T3
EVde-4/NA-B 250	A.0405.64	250	High Pressure Sodium	15.00	T3 Tamb. -20°C/40°C
EVde-5/NA-B 250	A.0405.66	250	High Pressure Sodium	16.70	T4 Tamb. -20°C/40°C T3 Tamb. -20°C/60°C
EVde-5/NA-B 400	A.0405.67	400	High Pressure Sodium	18.00	T3 Tamb. -20°C/60°C

* Lamp with built-in glow-discharge ignitor

Mercury Vapour (HG)

TYPE	CODE	LAMP W	LAMP TYPE	WEIGHT kg	TEMP. CLASS
EVde-2/HG-B 50	A.0405.51	50	Mercury Vapour	6.00	T4
EVde-2/HG-B 80	A.0405.52	80	Mercury Vapour	6.00	T4
EVde-3/HG-B 125	A.0405.54	125	Mercury Vapour	7.40	T3
EVde-4/HG-B 175*	A.0405.55	175	Mercury Vapour	8.30	T3
Evde-4/HG-B 250	A.0405.56	250	Mercury Vapour	14.80	T3 Tamb. -20°C / 40°C
Evde-5/HG-B 250	A.0405.58	250	Mercury Vapour	15.70	T4 Tamb. -20°C / 40°C T3 Tamb. -20°C / 60°C
Evde-5/HG-B 400	A.0405.59	400	Mercury Vapour	16.50	T3 Tamb. -20°C / 60°C

* On request

Metal Halide (IM)

TYPE	CODE	LAMP W	LAMP TYPE	WEIGHT kg	TEMP. CLASS
A.0405.75	EVde-3/IM-B 70	70	Metal Halide	7.40	T4
A.0405.76	EVde-4/IM-B 100	100	Metal Halide	7.60	T4
A.0405.77	EVde-4/IM-B 150	150	Metal Halide	8.40	T4
A.0405.71	EVde-4/IM-B-250	250	Metal Halide	15.00	T3
A.0405.73	EVde-5/IM-B-250	250	Metal Halide	16.70	T3
A.0405.74	EVde-5/IM-B-400	400	Metal Halide	16.70	T3

EVde-...H.I.D. Accessories

REV-... Standard reflector made of 99.85 Painted Ral 9003 White

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B	WEIGHT KG
REV-2	A.0504.02	EVde-2 ...	320 x 89	0.270
REV-3	A.0504.03	EVde-3 ...	320 x 89	0.270
REV-4	A.0504.04	EVde-4 ...	400 x 89	0.370

GEV-... Protection guard

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B	WEIGHT KG
GEV-2*	A.0505.02	EVde-2 ...	153 x 140	0.230
GEV-3*	A.0505.03	EVde-3 ...	174 x 147	0.240
GEV-4*	A.0505.04	EVde-4 ...	188 x 200	0.320
GEV-5	A.0530.81	EVde-5...	-	-
GEV-5-P	A.0530.80	EVde-5 with REVD-5 only	-	-

* Stainless steel AISI 304 made

REVD-… Dome reflector made of 99.85 Polished and anodized aluminium

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B	WEIGHT KG
REVD-4	A.0504.10	EVde-4 ...	440 x 310	0.800
REVD-5	A.0530.79	Evde-5 ...	500 x 250	0.800

KFE-…

High bay reflector made of 99.85 Polished and anodized aluminium

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B	WEIGHT KG
KFE*	A.0504.20	EVde-4 ... / EVde-5 ...	570 x 300	1.150

Available on request

KFE

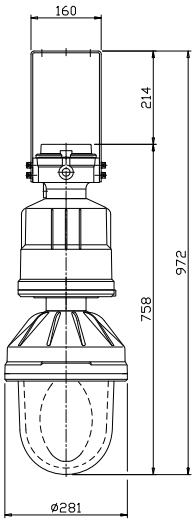
VERTEVA-…

Prismatic refractor made of virginacrylic

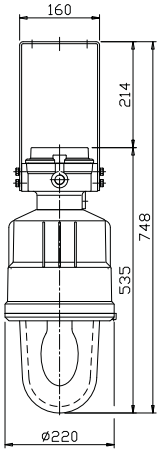
TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B	WEIGHT KG
VERTEVA*	A.0504.50	EVde-4 ... / EVde-5…	415 x 250	4.000

* only for 250W
* available on request

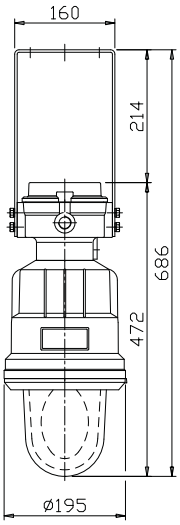
Dimensions



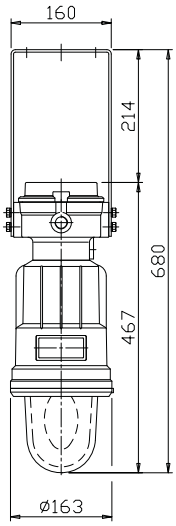
Evd-5...



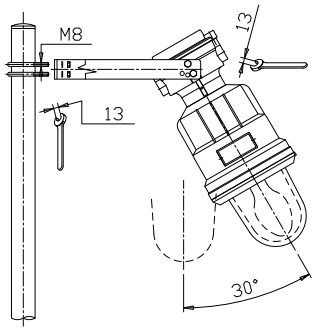
Evd-4...



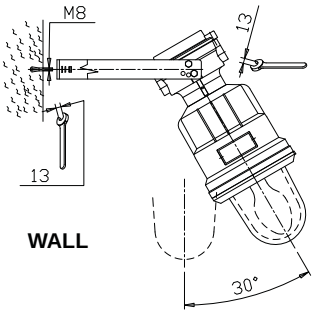
Evd-3...



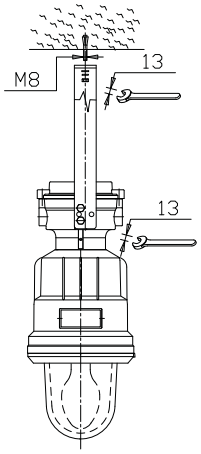
Evd-2...



POLE/STANCHION



WALL



CEILING

EVde HA/FC Series

EVde HA/FC range luminaires have been designed to house halogen and fluorescent compact lamps and to manage the light source, driving it where required by using of suitable reflectors and refractors.

Cast copper-free aluminium construction (Cu<0.1%) and tempered glass for lamp compartment EVde-.I./HA/FC luminaires can provide small dimensions/low weight combined with a wattage up to 140W.

The EVde HA/FC solution with built-in control gear and Ex e junction box, allows end users and contractors the possibility to save 1 junction box, 2 cable glands and a minimum of 30 minutes of labour during the installation process.

Specifications

Material	Copper-free aluminium (Cu<0.1%)
Temperature	-50°C to 60°C See specific limitations in the relative tables for lamps typology
IP Rating	IP65-66
Approvals - Atex - GOST	 INERIS 01ATEX0019X GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T5 / T4 / T3 Ex tD A21 IP65 T100°C / T135°C / T200°C Ex de IIC T5 / T4 / T3 Ex tD A21 IP65 T100°C / T135°C / T200°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	Lamp included: Halogen/Fluorescent compact
Lamps Wattage	Up to 140W
Rated operation voltage (UE)	230 V
Accessories **Available upon request**	GEV-…Protection guard REV-…Standard reflector made of 99.85 aluminium painted white RAL 9003
Lampholder	Ceramic lamp holder
Note	**Adjustable stainless steel mounting bracket (included), suitable for ceiling; pendant; wall; pole installation** **4x4sqmm+E mains terminal in Ex-e compartment (included)**

EVde HA/FC Series

(HA) Halogen - Energy Saver

TYPE	CODE	LAMP [W]	LAMP TYPE	WEIGHT [kg]	TEMP. CLASS
EVde-2/HA 42	A.0400.41	42 (old 60W inc)	Halogen	3.10	T4
EVde-2/HA 70	A.0400.42	70 (old 100W inc)	Halogen	3.10	T4
EVde-2/HA 105	A.0400.43	105 (old 150W inc)	Halogen	3.10	T4
EVde-3/HA 140	A.0400.44	140 (old 200W inc)	Halogen	4.40	T4

(FC) Fluorescent Compact - Energy Saver long life (8000h)

TYPE	CODE	LAMP [W]	LAMP TYPE	WEIGHT [kg]	TEMP. CLASS
EVde-4/FC 45	A.0400.45	45 (old 200W inc)	Fluorescent	7.00	T4
EVde-4/FC 65	A.0400.46	65 (old 300W inc)	Fluorescent	7.00	T4
EVde-5/FC 75	A.0400.47	75 (old 400W inc)	Fluorescent	7.00	T4

REVD-... Dome reflector
made of 99.85, Polished and anodized aluminium

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION Ø A X B [mm]	WEIGHT [kg]
REVD-4	A.0504.10	EVde-4...	440 x 310	0.800
REVD-5	A.0530.79	EVde-5...	500 x 250	0.800

REV-... Standard reflector
made of 99.85 Painted Ral 9003 White

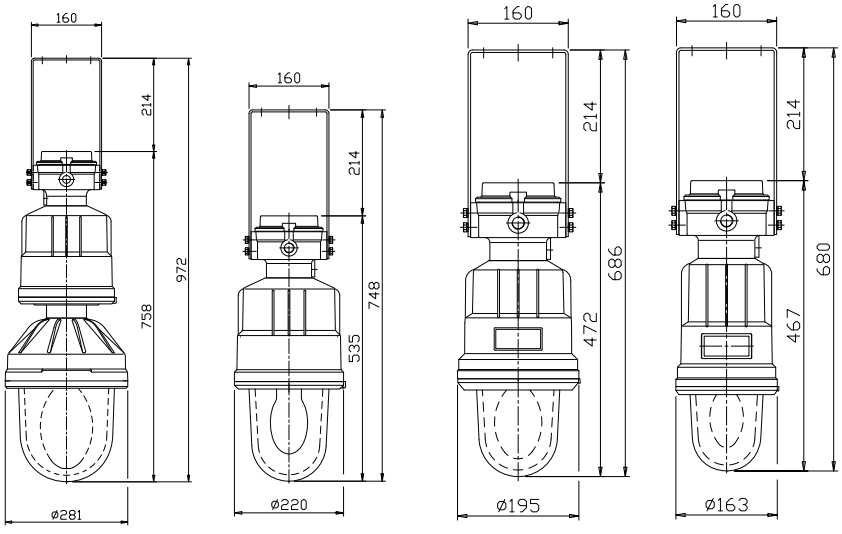
TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B [mm]	WEIGHT [kg]
REV-2	A.0504.02	EVde-2 ...	320 x 89	0.270
REV-3	A.0504.03	EVde-3 ...	320 x 89	0.270
REV-4	A.0504.04	EVde-4 ...	400 x 89	0.370

GEV-... Protection guard

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B [mm]	WEIGHT [kg]
GEV-2*	A.0505.02	EVde-2 ...	153 x 140	0.230
GEV-3*	A.0505.03	EVde-3 ...	174 x 147	0.240
GEV-4*	A.0505.04	EVde-4 ...	188 x 200	0.320

* Stainless steel AISI 304 made

Dimensions



Evd-5... **Evd-4...** **Evd-3...** **Evd-2...**

TNXCX

The TNXCX Ex d IIC low profile Xenon helideck floodlights are manufactured in AISI316 stainless steel and are developed to withstand harsh offshore environments while providing safe, powerful illumination with no glare (e.g. to pilots or crew). High quality internal electronics provide a reliable and long-life light source to minimize maintenance.

Specifications

Material	Acid resistant stainless steel AISI 316L
IP Rating	IP66 (IP67/68 upon request)
Ambient temperature	-50ºC to +50ºC
Approvals	
- Atex	DNV-2004-OSL-ATEX-27278
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN50281-1-1 CAP437
Ex-code	Ex d/Ex de IIC/IIB, Ⓔx II 2 G / D, T4 Suitable for Zone 1 and 2
Entries	Ex e glands M25 or M20, or blanking plugs
Gland Size Ex e	M25 / M20 / Blanked
Lamp	Xenon D25 / 35 Watt
Operating voltage	230, 120 VAC/12, 24 VDC
Power consumption	50 Watt
Weight	Approx. 10 kg.
Lens	Glass

X	¤	X	#	#	X	- -	#												

254 = 254VAC 230 = 220/240VAC 120 = 110/120VAC 24 = 24VDC 12 = 12VDC	
E = Explosion Proof, I = Industrial	
For XCX130: 1 = Ex de with TNCN and 2xØ25 2 = Ex de c/w EEx e bottom 5xØ25 entries 3 = Ex d with 1xM25 bottom entry 4 = Ex d with 1xM25 bottom entry and flying lead (5m)	
Diameter 130 = 130 mm	
X = Xenon light source	
Material types: C = SS316L, A = Aluminium	
TNX	

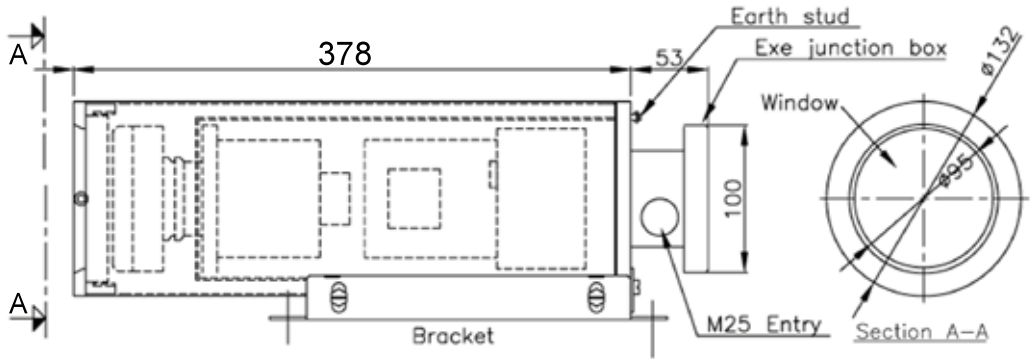
Typical floodlight with connection box or flying lead:

XCX1301E-230
TNXCX130 Ex de floodlight SS316L
TNCN connection box and cable bushing
2 nos Ex e M25 entries
DxL = 130x423 mm., 230VAC

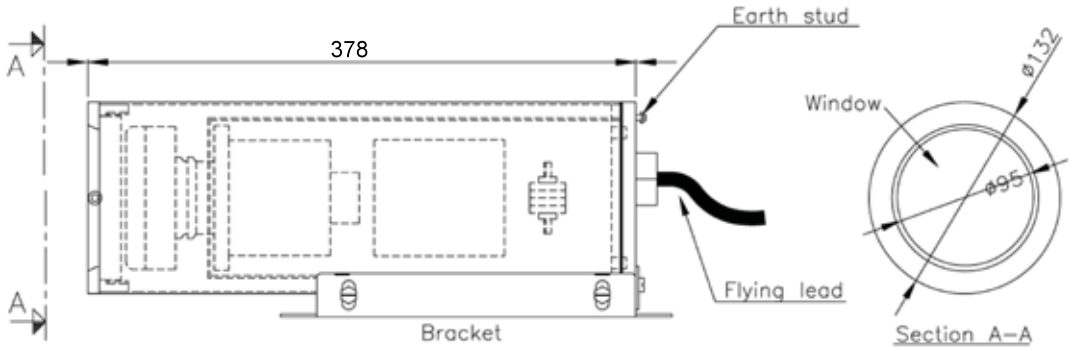
XCX1304E-12
TNXCX130 Ex d floodlight SS316L
Flying lead cable (5m)
One Ex d M25 entry
DxL = 130x378mm., 12VDC

Dimensions

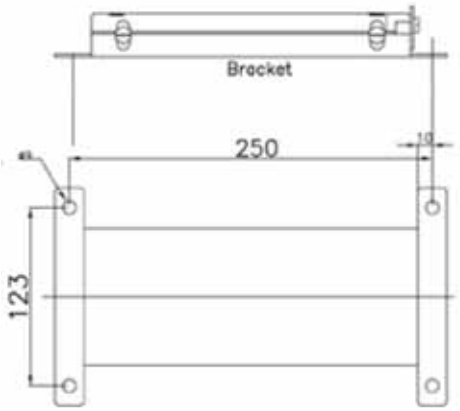
Ex de



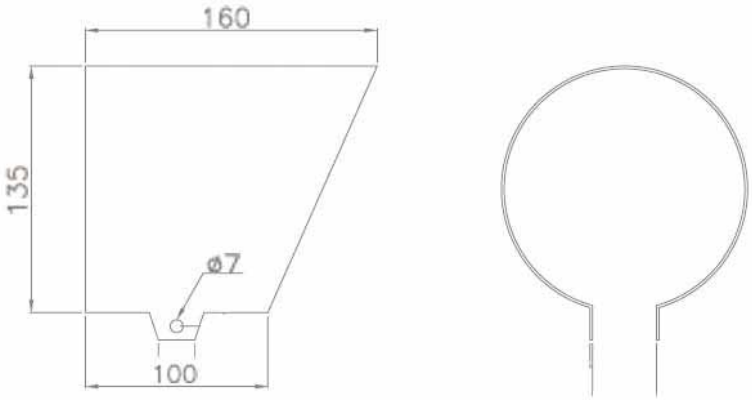
Ex d Flying Lead



Mounting bracket AISI 316L material
Ordering code: TPS14007



Canopy for extra protection against glaring (optional) AISI 316L Material
Ordering code: TPS14003



FL Series

The FL range of Ex de IIB / IIB+H2 of floodlights is manufactured in copper free aluminium and designed for halogen and discharge lamps up to 400/500W. The luminaire is available with offshore suitable RAL 6003 paint finish and internal anti-condensation coating. For ease of installation and maintenance the luminaire features an integral Ex e connection box and AISI304 stainless steel female threads for fastening bolts to minimize wear. The FL range luminaires are completed with lamp, ballast, HPF capacitor and igniter.

Specifications

Material	Copper-free aluminium (Cu<0.1%) Stainless steel AISI 316L
IP Rating	IP65-66
Temperature	-50°C to 55°C
Approvals	
- Atex	INERIS 00ATEX0023X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex de IIB T3 Ex de IIB+H_2 T3 (upon request) Ex tD A21 IP65 T200°C According to European Directive 94/9/EC (ATEX) For Zone 1/Zone 2, Zone 21/Zone 22
Gaskets	Nitrile rubber gasket on flat joint
Surface treatment	External polyurethane painting (RAL 6003)
Thread	No. 2 M25 entries: one plugged off and one completed with a single seal cable gland our type PNA 2, brass nichel plated.
Hardware and Screw	Captive stainless steel screws and stailess steel adjustable bracket
Lamps	Halogen and discharge lamps
Lamps Wattage	150, 250, 400, 500, 2x70
Ballast	Low losses integral ballast
Rated operation voltage (UE)	230 V
Frequency	50 Hz
Power factor	> 0.9
Lampholder	Ceramic lampholder E-40 with antiloosening terminals
Reflector	Internal reflector, symmetrical distribution with narrow beam pure polished aluminium, fixed to body by a safe wire even when removed during maintenance.
Accessories	Off -shore version with surface treatment for oil platforms and corrosive environments
Available upon request	External colour ON REQUEST choice between Ral classification Hammered reflector for wide beam Top-pole mounting kit (pole size 2”) Voltages and frequencies ON REQUEST: - 240V 50 o 60 Hz - 254V 60 Hz - 120V 60 Hz - 127V 50 o 60 Hz - 208V 60 Hz
Specified Version for Special services	Floodlight with wind-up stand Italgas specified cod. Aplog/log-gestilog: GAS-d3 Floodlight world wide Shell Oil specified M.e.s.c. no. 69.56.23.520.1 to 69.56.23.544.1 details with lamps in Shell standardization N.A.T.O. standarization floodlight specified for military purposes code NSN 5795-17-109-2235. Floodlight for lighting the escape platform/ship area “Life boat” FL-2x70-HA series with 2 halogen lamps 50 or 70W each with back refl ector for narrow beam , suitable for connection to emergency circuit powered by batteries always available on escape platform circuits. The narrow beam issued is lighting the sea surface below the safe boat to aid the life boat splash-down and as sign “ life boat “ for “ man in water
Note	**Hinged window on cover** **Connection to electric network via the backside through the Ex-e connection box with 4 terminals (4 sqmm.) bridged 2 by 2**

Floodlight

CODE	TYPE	LAMPS TYPE	POWER [W]	VOLTAGE [V]	WEIGHT [kg]
A.0421.14	FL 15 SA	High Pressure Sodium	150	220/230 [50Hz]	24.7
A.0421.15	FL 25 SA	High Pressure Sodium	250	220/230 [50Hz]	25.8
A.0421.19	FL 40 SA	High Pressure Sodium	400	220/230 [50Hz]	27.0
A.0421.20	FL 25 IM	Metal Halide	250	220/230 [50Hz]	25.8
A.0421.25	FL 40 IM	Metal Halide	400	220/230 [50Hz]	24.8
A.0421.30	FL 25 HG	Mercury Vapours	250	220/230 [50Hz]	25.7
A.0421.35	FL 40 HG	Mercury Vapours	400	220/230 [50Hz]	22.9
A.0421.40	FL 50 HA	Halogen	500	220	21.0
A.0421.45	FL 14 HA	Halogen	2x70	48	22.0

FL...316 Floodlight

TYPE	LAMPS TYPE	POWER [W]	VOLTAGE [V]	WEIGHT Package [kg]
FL 15 SA / 316	High Pressure Sodium	150	220/230 [50Hz]	50.2
FL 25 SA / 316	High Pressure Sodium	250	220/230 [50Hz]	51.3
FL 40 SA / 316	High Pressure Sodium	400	220/230 [50Hz]	52.5
FL 25 IM / 316	Metal Halide	250	220/230 [50Hz]	51.3
FL 40 IM / 316	Metal Halide	400	220/230 [50Hz]	50.3
FL 25 HG / 316	Mercury Vapours	250	220/230 [50Hz]	51.2
FL 40 HG / 316	Mercury Vapours	400	220/230 [50Hz]	47.5
FL 50 HA / 316	Halogen	500	220	
FL 14 SA / 316	Halogen	2x70	48	

FL/AISI 316 Series...

With the intent to answer to the off-shore market need of a totally corrosion proof apparatus able to withstand the combined action of salty marine and hydrocarbons environments, has been studied and developed the FL/AISI 316 Series. The high cost of ordinary and extraordinary maintenance on oil platforms fully justifies the replacement of Aluminum light alloy with Stainless steel 316.

The exclusive foundry know-how allowed Italsmea to cast and to machine units Aisi 316 made with L title and with same shape and thickens of Aluminum version also reducing to the lowest possible the weight.

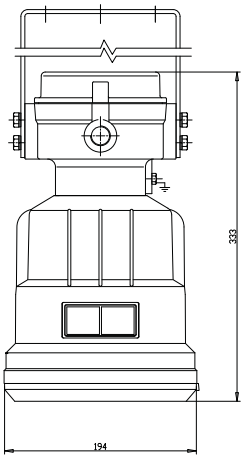
EVde-LED / EVde-PT Series

The EVde-LED / EVde-PT range of LED and halogen spot-lights are designed for applications where high intensity illumination is required. Utilizing LED technology the Evde-LED is especially resistant to shock or vibration and free from infrared and ultraviolet wavelengths. The range is also available as tank light and portable light, ideal for demanding onshore and offshore applications such as cleaning, grit blasting and inspection of confined spaces.

Specifications

Material	Copper free Aluminium (Cu <0.1%)
IP Rating	IP65-66
Temperature	-50°C to 60°C
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex d IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C Ex de IIC T5 / T4 Ex tD A21 IP65 T100°C / T135°C According to European Directive 94/9/EC (ATEX) For Zone 1/Zone 2, Zone 21/Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 M25 entries
Hardware and Screw	Stainless steel external hardware
Lamps	18 LED's or Halogen
Lamps Wattage	High Intensity Power LED's: 1W each
Rated operation voltage (UE)	24Vdc or 240Vac. 230V models are available
Frequency	50/60 Hz.
Accessories Available upon request	Handle for single handed portability
Note	**Adjustable stainless steel U-bracket for wall mounting (included), suitable for ceiling; pendant; wall; pole installation** **4x4sqmm+E mains terminal in Ex-e compartment (included)**

Dimensions



Type	Code	Power (W)	Lamp Type	Voltage (V)	Frequency	Weight kg	Temp. Class	Overall Dimension Ø X Length mm
EVde-3/LED 18	A.0416.54	18W	18 LED's x 1W each	24Vdc	-	5.00	T6	195 x 336
EVde-3/LED 18	A.0416.52	18W	18 LED's X 1W each	115-240Vac	50/60 Hz	5.00	T6	195 x 336
EVde-PT/HA 70	A.0416.61	70W (old 100W inc)	Halogen (energy saver)	230V	50/60 Hz	3.00	T3	231 x 282
EVCC-PT/HA 70	A.0416.11	70W (old 100W inc)	Halogen (energy saver)	230V	50/60 Hz	3.00	T3	231 x 282

EVcc-PR Series

The EVcc-PR luminaire is manufactured in copper-free aluminium and designed for tank inspection. Delivered painted to RAL 6003 and complete with halogen or LED light source and 2 off M25 cable entries. Flange mount version is available on request.

Specifications

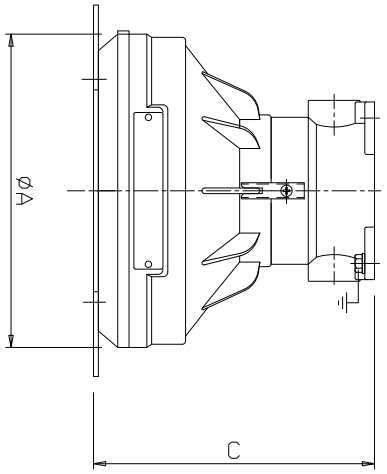
Material	Copper-free aluminium (Cu<0.1%)
IP Rating	IP65-66
Temperature	-50°C to 40°C
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d IIC T3 Ex tD A21 IP65 T200°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 2 entries diam. M25
Hardware and Screw	Stainless steel external hardware
Lamps	Halogen lamp included or LED, replacing the incandescent lamp
Lamps Wattage	70W, LEDs 9W (ref. table below)
Rated operation voltage (UE)	230 V
Accessories	Fixing flange available upon request

ENERGY SAVING

Lighting fixtures for tank inspections

Type	Code	Lamp (W)	Lamp Type	Voltage	Dimension ØAxC	Weight kg
EVCC-PR2/HA 70	A.0414.52	70 (old 100W inc)	Halogen (Energy saver)	230V	163 x 152	3.10
EVCC-PR3/HA 70	A.0414.53	70 (old 100W inc)	Halogen (Energy saver)	230V	195 x 168	4.40
EVde-PR9/LED	A.0416.55	9W	LEDs	90-264V	195 x 168	5.00

Dimensions



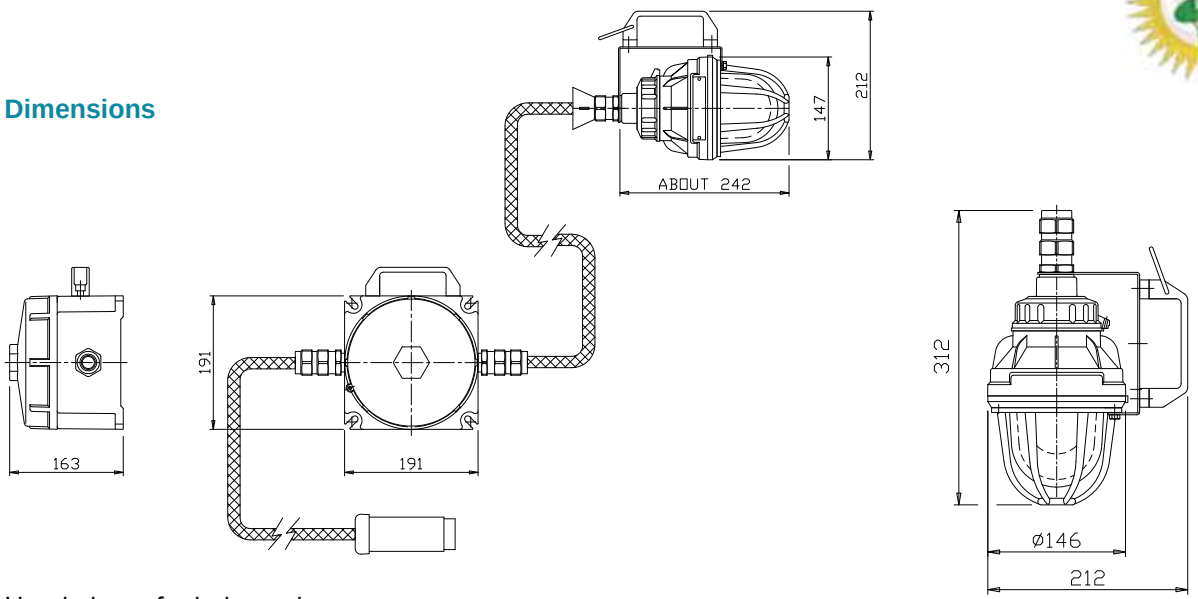
EVA Series

The EVA luminaire is manufactured in copper free aluminium and designed for use as a hand-lamp, complete with handle made of insulating material, protection guard and halogen lamp.

Specifications

Material	Copper-free aluminium (Cu<0.1%)
IP Rating	IP65-66
Temperature	-50°C to 60°C
Approvals	
- Atex	INERIS 01ATEX0019X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex d IIC T4 / T3 Ex tD A21 IP65 T135°C / T200°C According to European Directive 94/9/EC (ATEX) For Zone 1/Zone 2, Zone 21/Zone 22
Gaskets	O-ring made in Nitrile Rubber (NBR)
Surface treatment	External polyurethane painting (RAL 6003)
Entries	Nr. 1 entry with cable gland PAT2
Hardware and Screw	Stainless steel external hardware
Lamps	Halogen lamp included
Lamps Wattage	42 or 70 watt
Rated operation voltage (UE)	230 V
Accessories	transformer 240/24V 100VA available upon request

Dimensions



Hand –lamp for halogen lamps
with transformer 240/24V 100VA

HAND LAMP for halogen Lamp (replacing the incandescent lamp)

Type	Code	Lamp W	Lamp Type	Voltage V	Weight kg
EVA-2/HA 42 (EVP 60)	A.0413.12	42 (old 60W inc)	Halogen (energy saver)	230V	3.10
EVA-2/HA 70 (EVP 100)	A.0413.13	70 (old 100W inc)	Halogen (energy saver)	230V	4.40

TNCLS

The TNCLS range of Ex em LED backlights are designed for use to illuminate level gauges in all kinds of industry where an explosive atmosphere may be present. TNCLS offers a long life, low maintenance LED solution to enable the operator to accurately read the level through the gauge glass.

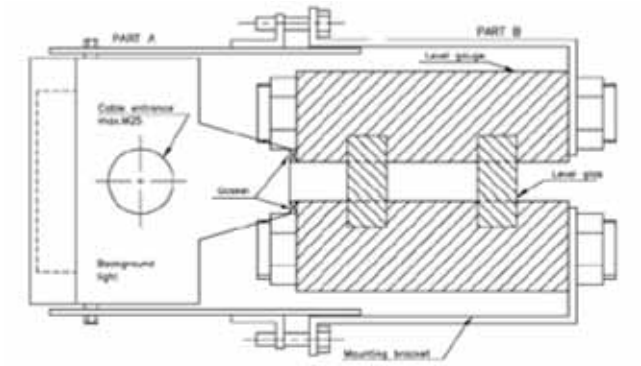
Specifications

Material	Acid resistant stainless steel AISI 316L
IP Rating	IP66
Temperature	-20ºC to + 45ºC (T4)
Approvals	
- Atex	DNV-2002-OSL-ATEX-0195
Standards	EN/IEC: 60079-0, 60079-7, 60079-18
Ex-Code	Ex em II T4 Ⓔx II 2 G
Surface treatment	Acidized
Earthing	M6 inside and outside
Cable entry	Max. 2xM25 in top and / or bottom, and/or sides
Power comsumption	Approx. 3VA per module
Voltage	220-240VAC or 254VAC
Frequency	50-60 Hz
Humidity	100%
Terminals	Minimum 4x2.5 m²
Lumination colour	Yellow

Size-qty. modules	Total length (A) mm	Light exposure (B) mm	Weight kg
27-1	270	250	2.3
30-1	300	280	2.5
34-1	340	320	2.7
36-1	360	340	2.8
27-2	540	520	4.3
30-2	600	580	4.6
34-2	680	660	5.1
36-2	720	700	5.3
27-3	810	790	6.2
30-3	900	880	6.7
34-3	1020	1000	7.3
36-3	1080	1060	7.5
30-4	1200	1180	8.5

Size-qty. modules	Total length (A) mm	Light exposure (B) mm	Weight kg
27-1	270	250	2.3
30-1	300	280	2.5
34-1	340	320	2.7
36-1	360	340	2.8
27-2	540	520	4.3
30-2	600	580	4.6
34-2	680	660	5.1
36-2	720	700	5.3
27-3	810	790	6.2
30-3	900	880	6.7
34-3	1020	1000	7.3
36-3	1080	1060	7.5
30-4	1200	1180	8.5

Dimensions



Several units can be assembles to one column

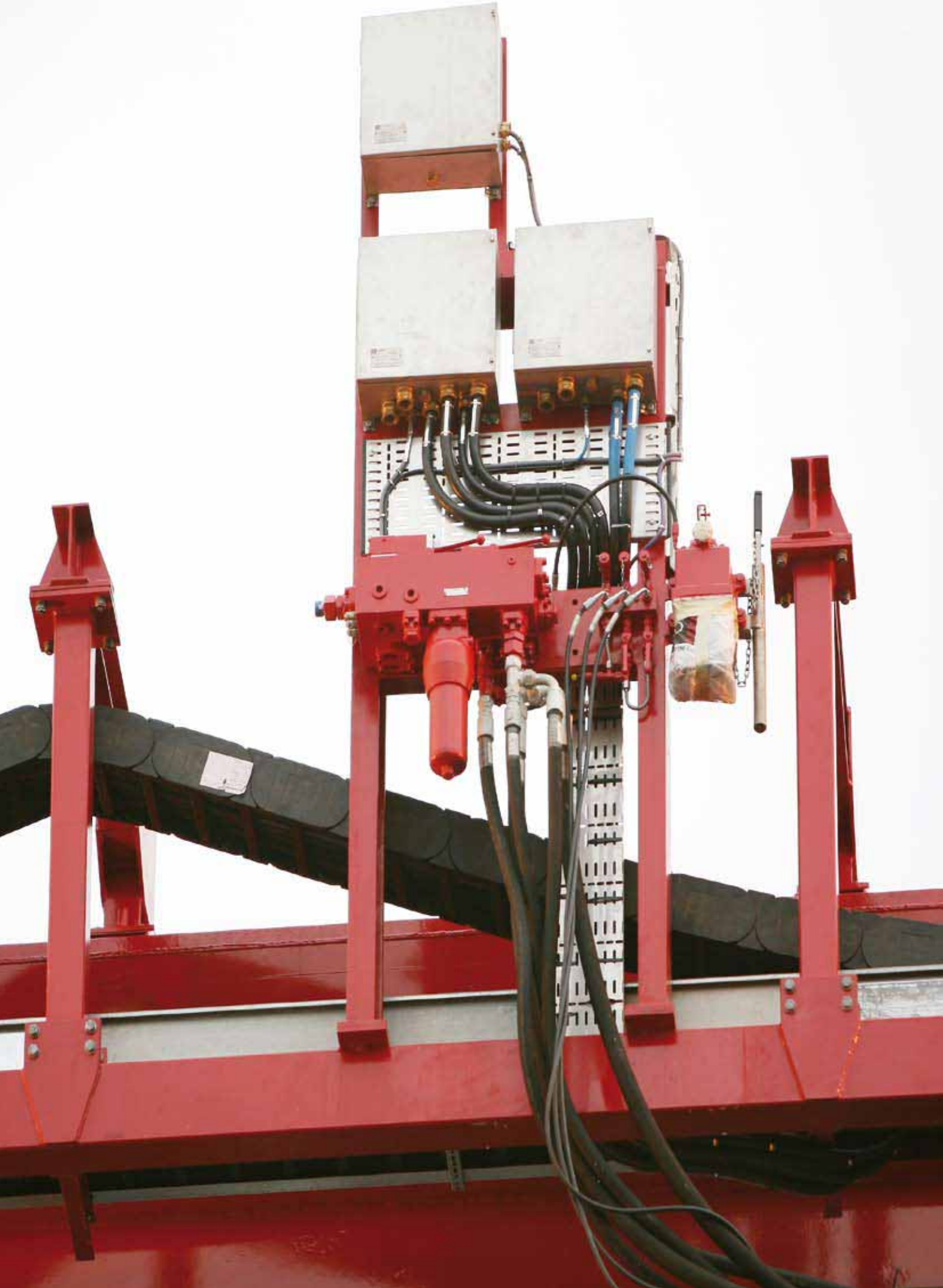
Type key: TNCLS L-X

L = Module lendth

X = No. of modules

Total length: A = L*X

Other sizes upon request



TRCG

Polyamid cable gland with metric threads for use in Ex e enclosure, with high IP rating.

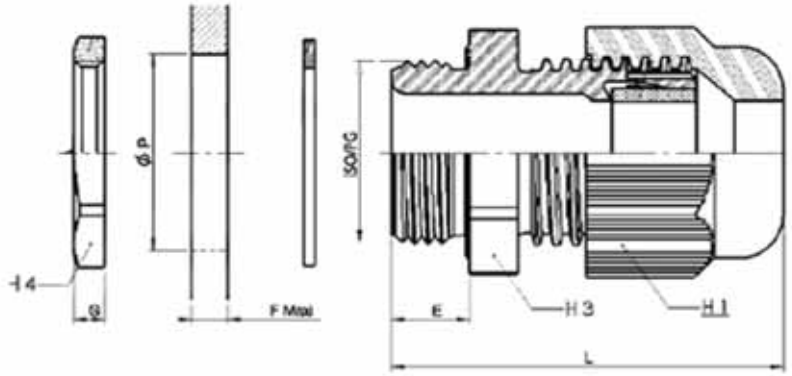
Specifications

Material	Polyamid
IP Rating	IP68
Temperature	-35°C to +95°C
Approvals	
- Atex	LCIE 07ATEX6082X
Standards	EN/IEC: 60079-0, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex e
Gaskets	Included
Thread	Metric, pitch 1.5
Version on Request	Other threads PG/NPT Light blue colour for use in Ex i circuits
Accessories	Lock nut

Threads	Clamping range	H (mm)	E (mm)	L (mm)	Reference		Packing	Accessories
					Ex e (black)	Ex i (blue)		Lock nuts
M16	5.0 - 8.0	19	10	37	TRCG12M16099	TRCG12M16095	50	TRCG32M16000
M16	5.0 - 10.0	22	10	39	TRCG12M16119	TRCG12M16115	50	TRCG32M16000
M20	7.0 - 12.0	24	10	40	TRCG12M20139	TRCG12M20135	50	TRCG32M20000
M20	10.0 - 14.0	27	10	43	TRCG12M20169	TRCG12M20165	50	TRCG32M20000
M25	10.0 - 14.0	27	10	45	TRCG12M25169	TRCG12M25165	50	TRCG32M25000
M25	12.0 - 18.0	33	10	49	TRCG12M25219	TRCG12M25215	20	TRCG32M25000
M32	16.0 - 25.0	42	10	52	TRCG12M32009	TRCG12M32005	20	TRCG32M32000
M40	22.0 - 32.0	53	10	62	TRCG12M40009	TRCG12M40005	10	TRCG32M40009
M50	28.0 - 38.5	60	12	67	TRCG12M50009	TRCG12M50005	5	TRCG32M50009
M63	40.0 - 48.0	70	12	68	TRCG12M63009	TRCG12M63005	5	TRCG32M63009

H = SW = Key size

Drawing



Plug

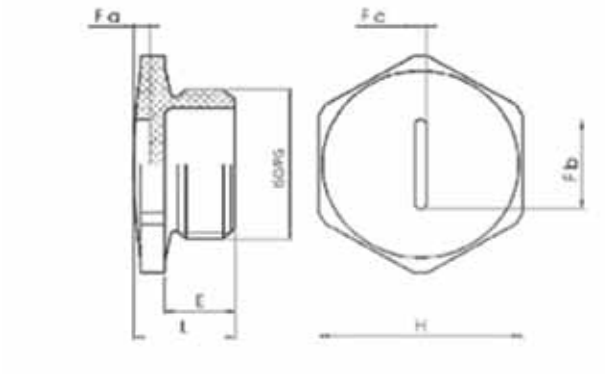
Polyamid plug with metric threads for use in Ex e enclosure, with high IP rating.

Specifications

Material	Polyamid
IP Rating	IP68
Temperature	-20°C to +55°C
Approvals	
- Atex	LCIE 03ATEX0033U
Standards	EN/IEC: 60079-0, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex e
Gaskets	Included
Thread	Metric, pitch 1.5
Version on Request	Other threads PG
Accessories	Lock nut

Threads	H (mm)	E (mm)	L (mm)	Reference Ex e (black)	Packing	Lock nuts
M16	20	8	12.0	TRCG22M16009	50	TRCG32M16000
M20	26	9	13.0	TRCG22M20009	50	TRCG32M20000
M25	32	10	15.0	TRCG22M25009	25	TRCG32M25000
M32	40	11	16.5	TRCG22M32009	15	TRCG32M32000
M40	48	12	18.0	TRCG22M40009	10	TRCG32M40009
M50	55	13	21.0	TRCG22M50009	10	TRCG32M50009
M63	70	15	24.5	TRCG22M63009	10	TRCG32M63009

Drawing



TRCG

Nickel-plated brass cable gland with metric threads for use in Ex e enclosure, with high IP rating.

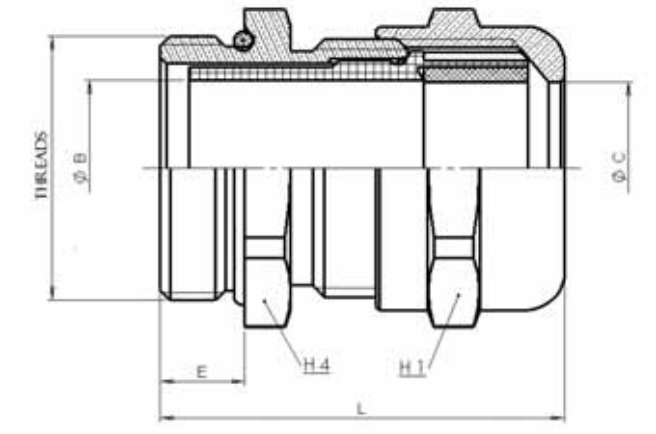
Specifications

Material	Brass nickel plated
IP Rating	IP66 and IP68
Temperature	-40°C to +100°C
Approvals	
- Atex	LCIE 03ATEX6400X
Standards	EN/IEC: 60079-0, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex e
Gaskets	Included
Surface treatment	Nickel-plated
Thread	Metric, pitch 1.5
Version on Request	Other threads PG/NPT
Accessories	Lock nut

Threads	Clamping range	H (mm)	E (mm)	L (mm)	Reference	Packing
M12	4,5 - 6,5	14	5	25	TRCG12M12000	50
M16	5 - 9,5	17	5	28	TRCG12M16000	50
M20	8 - 13	22	6	32	TRCG12M20000	50
M25	9 - 16	27	7	35	TRCG12M22000	20
M32	12 - 21	34	8	38	TRCG12M32000	20
M40	16 - 27	42	8	41	TRCG12M40000	20
M50	23 - 35	55	9	46	TRCG12M50000	10
M63	36 - 48	65	10	54	TRCG12M63000	5

H = SW = Key size

Drawing



PAP

Double seal cable glands suitable for armoured cables. Nickel-chrome plated brass, hexagon shape, anti-ageing EPDM oil resistant gaskets.

PAP-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

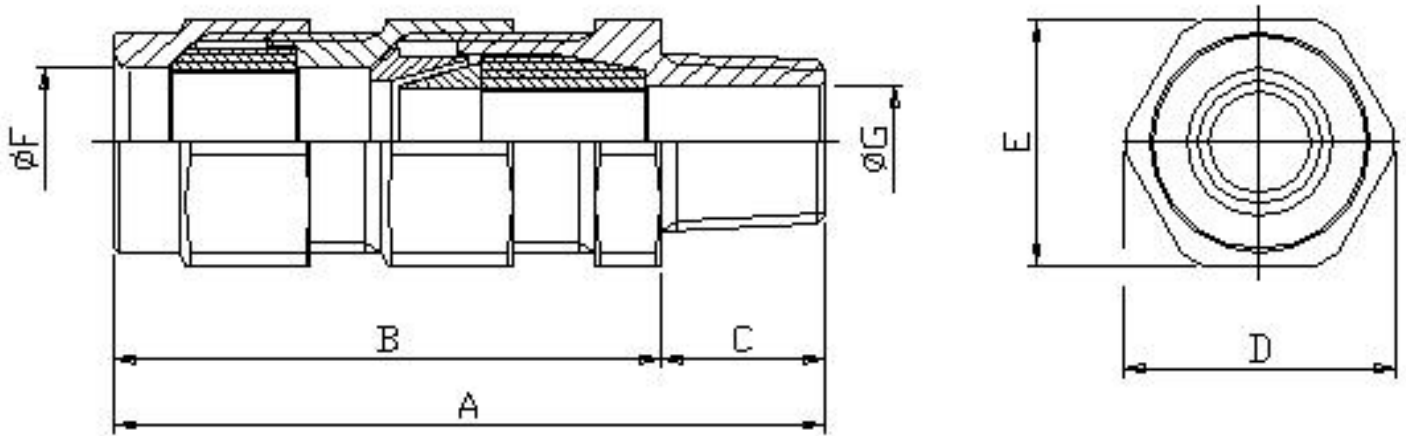
Specifications

Material	Brass (alternative AISI316L, aluminium)
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084 TüV: AEX-11632-X
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless Steel AISI 304: type number will assume the ending 304. Example PAP-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PAP-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PAP-1-A1/Al
Accessories	Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently in offer or in order acknowledgement)**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

PAP

Type	Cable under armour (inner seal)	Cable overall diameter (outer seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
			F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PAP-1/A1B1	6-9	8-11	18	85	65	20	33	30	M20	A.1800.18	Uni 6125 ½”	A.1801.01	NPT ½”	A.1801.51
PAP-1/A1B2	6-9	11-14	18	85	65	20	33	30	M20	A.1800.19	Uni 6125 ½”	A.1801.02	NPT ½”	A.1801.52
PAP-1/A2B3	9-12	14-17	18	85	65	20	33	30	M20	A.1800.21	Uni 6125 ½”	A.1801.03	NPT ½”	A.1801.53
PAP-2/A1B1	6-9	14-17	24	85	65	20	33	36	M25	A.1800.23	Uni 6125 ¾”	A.1802.01	NPT ¾”	A.1802.51
PAP-2/A2B1	9-12	14-17	24	85	65	20	33	36	M25	A.1800.24	Uni 6125 ¾”	A.1802.02	NPT ¾”	A.1802.52
PAP-2/A3B2	11-14	17-20	24	85	65	20	33	36	M25	A.1800.27	Uni 6125 ¾”	A.1802.03	NPT ¾”	A.1802.53
PAP-2/A4B3	14-17	20-23	24	85	65	20	33	36	M25	A.1800.28	Uni 6125 ¾”	A.1802.04	NPT ¾”	A.1802.54
PAP-3/A1B1	14-17	20-23	30	93	68	25	49	44	M32	A.1803.21	Uni 6125 1”	A.1803.01	NPT 1”	A.1803.51
PAP-3/A2B2	17-20	23-26	30	93	68	25	49	44	M32	A.1803.22	Uni 6125 1”	A.1803.02	NPT 1”	A.1803.52
PAP-3/A3B3	20-23	26-29	30	93	68	25	49	44	M32	A.1803.23	Uni 6125 1”	A.1803.03	NPT 1”	A.1803.53
PAP-5/A2B2	23-26	29-32	43	93	68	25	62	56	M50	A.1805.22	Uni 6125 1 1/2”	A.1805.02	NPT 1 1/2”	A.1805.52
PAP-5/A3B3	26-29	32-36	43	93	68	25	62	56	M50	A.1805.23	Uni 6125 1 1/2”	A.1805.03	NPT 1 1/2”	A.1805.53
PAP-5/A4B4	29-32	36-39	43	93	68	25	62	56	M50	A.1805.24	Uni 6125 1 1/2”	A.1805.04	NPT 1 1/2”	A.1805.54
PAP-5/A5B5	32-36	39-42	43	93	68	25	62	56	M50	A.1805.25	Uni 6125 1 1/2”	A.1805.05	NPT 1 1/2”	A.1805.55
PAP-6/A2B2	36-39	44-48	57	95	71	25	78	70	M63	A.1806.22	Uni 6125 2”	A.1806.02	NPT 2”	A.1806.52
PAP-6/A3B3	39-42	48-52	57	95	71	25	78	70	M63	A.1806.23	Uni 6125 2”	A.1806.03	NPT 2”	A.1806.53
PAP-6/A4B4	42-46	52-56	57	95	71	25	78	70	M63	A.1806.24	Uni 6125 2”	A.1806.04	NPT 2”	A.1806.54
PAP-7/A2B2	44-48	55-59	69	100	71	32	92	83	M75	A.1807.22	Uni 6125 2 1/2”	A.1807.02	NPT 2 1/2”	A.1807.52
PAP-7/A3B3	48-52	59-63	69	100	71	32	92	83	M75	A.1807.23	Uni 6125 2 1/2”	A.1807.03	NPT 2 1/2”	A.1807.53
PAP-7/A4B4	52-56	63-67	69	100	71	32	92	83	M75	A.1807.24	Uni 6125 2 1/2”	A.1807.04	NPT 2 1/2”	A.1807.54
PAP-7/A5B4	56-60	63-67	69	100	71	32	92	83	M75	A.1807.25	Uni 6125 2 1/2”	A.1807.05	NPT 2 1/2”	A.1807.55
PAP-8/A4B4	56-60	63-67	79	100	71	32	103	93	M80	A.1808.24	Uni 6125 3”	A.1808.04	NPT 3”	A.1808.54
PAP-8/A5B5	59-63	67-69	79	100	71	32	103	93	M80	A.1808.25	Uni 6125 3”	A.1808.05	NPT 3”	A.1808.55
PAP-8/A6B6	63-67	69-73	79	100	71	32	103	93	M80	A.1808.26	Uni 6125 3”	A.1808.06	NPT 3”	A.1808.56
PAP-8/A7B7	67-71	73-11	79	100	71	32	103	93	M80	A.1808.27	Uni 6125 3”	A.1808.07	NPT 3”	A.1808.57

Dimensions



PNA

Single seal cable glands suitable for armoured cables. Nickel-chrome plated brass, hexagon shape, anti-ageing EPDM oil resistant gaskets.

PNA-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

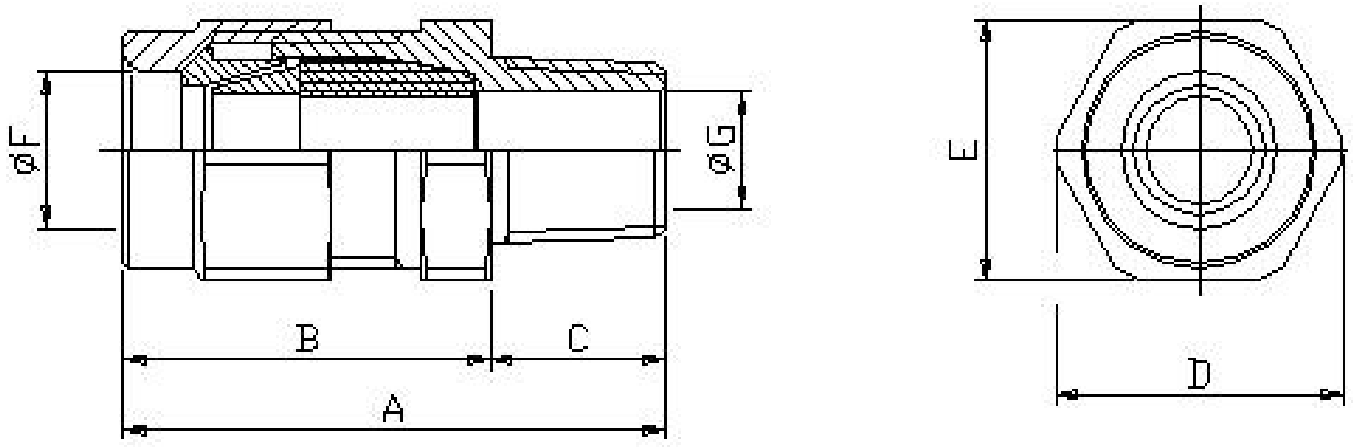
Specifications

Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PNA-1-A1/304 Cable glands made of Steinless steel AISI 316L: type number will assume the ending 316. Example PNA-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PNA-1-A1/Al
Accessories	Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently specified in offer or in order acknowledgment)**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

PNA

Type	Cable under armour (inner seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PNA-1/A1	6-9	18	62	42	20	33	30	M20	A.1501.23	UNI 6125 ½”	A.1501.01	NPT 1/2”	A.1501.51
PNA-1/A2	9-12	18	62	42	20	33	30	M20	A.1501.24	UNI 6125 ½”	A.1501.02	NPT 1/2”	A.1501.52
PNA-2/A1	6-9	24	62	42	20	40	36	M25	A.1502.21	UNI 6125 3/4”	A.1502.01	NPT 3/4”	A.1502.51
PNA-2/A2	9-12	24	62	42	20	40	36	M25	A.1502.22	UNI 6125 3/4”	A.1502.02	NPT 3/4”	A.1502.52
PNA-2/A3	11-14	24	62	42	20	40	36	M25	A.1502.23	UNI 6125 3/4”	A.1502.03	NPT 3/4”	A.1502.53
PNA-2/A4	14-17	24	62	42	20	40	36	M25	A.1502.24	UNI 6125 3/4”	A.1502.04	NPT 3/4”	A.1502.54
PNA-3/A1	14-17	30	70	45	25	49	44	M32	A.1503.21	UNI 6125 1”	A.1503.01	NPT 1”	A.1503.51
PNA-3/A2	17-20	30	70	45	25	49	44	M32	A.1503.22	UNI 6125 1”	A.1503.02	NPT 1”	A.1503.52
PNA-3/A3	20-23	30	70	45	25	49	44	M32	A.1503.23	UNI 6125 1”	A.1503.03	NPT 1”	A.1503.53
PNA-5/A2	23-26	43	70	45	25	62	56	M50	A.1505.22	UNI 6125 1 1/2”	A.1505.02	NPT 1 1/2”	A.1505.52
PNA-5/A3	26-29	43	70	45	25	62	56	M50	A.1505.23	UNI 6125 1 1/2”	A.1505.03	NPT 1 1/2”	A.1505.53
PNA-5/A4	29-32	43	70	45	25	62	56	M50	A.1505.24	UNI 6125 1 1/2”	A.1505.04	NPT 1 1/2”	A.1505.54
PNA-5/A5	32-36	43	70	45	25	62	56	M50	A.1505.25	UNI 6125 1 1/2”	A.1505.05	NPT 1 1/2”	A.1505.55
PNA-6/A2	36-39	57	72	46	25	78	70	M63	A.1506.22	UNI 6125 2”	A.1506.02	NPT 2”	A.1506.52
PNA-6/A3	39-42	57	72	46	25	78	70	M63	A.1506.23	UNI 6125 2”	A.1506.03	NPT 2”	A.1506.53
PNA-6/A4	42-46	57	72	46	25	78	70	M63	A.1506.24	UNI 6125 2”	A.1506.04	NPT 2”	A.1506.54
PNA-7/A2	44-48	69	78	46	32	92	83	M75	A.1507.22	UNI 6125 2 1/2”	A.1507.02	NPT 2 1/2”	A.1507.52
PNA-7/A3	48-52	69	78	46	32	92	83	M75	A.1507.23	UNI 6125 2 1/2”	A.1507.03	NPT 2 1/2”	A.1507.53
PNA-7/A4	52-56	69	78	46	32	92	83	M75	A.1507.24	UNI 6125 2 1/2”	A.1507.04	NPT 2 1/2”	A.1507.54
PNA-7/A5	56-60	69	78	46	32	92	83	M75	A.1507.25	UNI 6125 2 1/2”	A.1507.05	NPT 2 1/2”	A.1507.55
PNA-8/A4	56-60	79	78	46	32	103	93	M80	A.1508.24	UNI 6125 3”	A.1508.04	NPT 3”	A.1508.54
PNA-8/A5	59-63	79	78	46	32	103	93	M80	A.1508.25	UNI 6125 3”	A.1508.05	NPT 3”	A.1508.55
PNA-8/A6	63-67	79	78	46	32	103	93	M80	A.1508.26	UNI 6125 3”	A.1508.06	NPT 3”	A.1508.56
PNA-8/A7	67-71	79	78	46	32	103	93	M80	A.1508.27	UNI 6125 3”	A.1508.07	NPT 3”	A.1508.57

Dimensions



PSF

Single seal through “male-female” cable glands for unarmoured cable, suitable for assembling side by side 2 enclosures: Ex d / Ex d or Ex d / Ex e by adding a rigid or flexible conduit to the cable gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PSF-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

Specifications

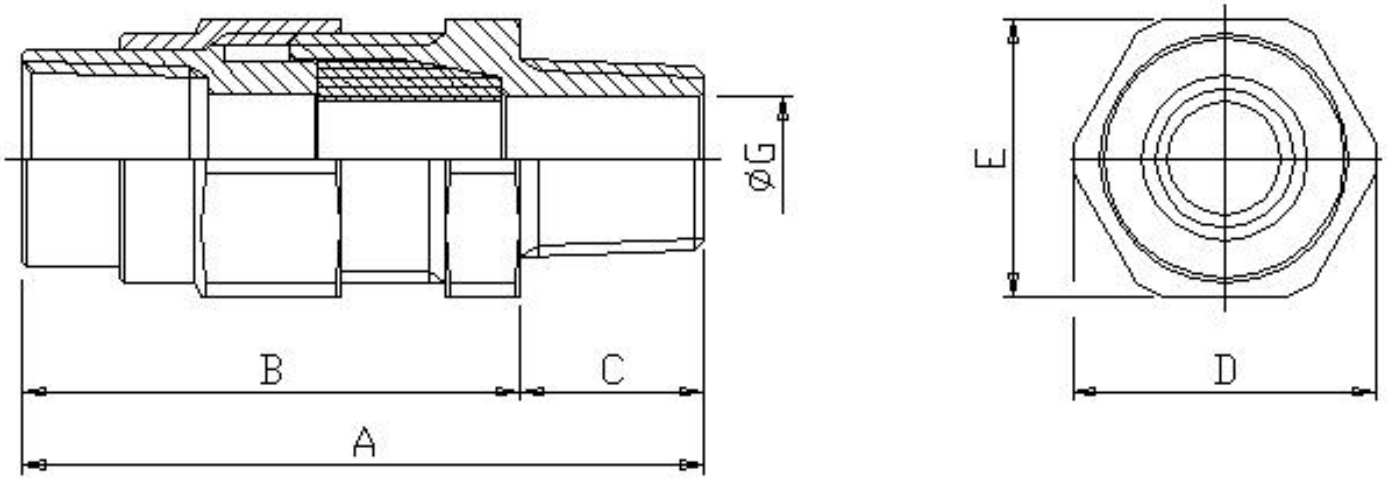
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PSF-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PSF-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PSF-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

Note	**Female sleeve cilindric ISO 228**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

PSF

Type	Cable overall diameter	Free conpling threading	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
			A	B	C	D	E	Size	Code	Size	Code	Size	Code
PSF-1/A1	6-9	½”	73	53	20	33	30	M20	A.2821.01	UNI 6125 ½”	A.2801.01	NPT ½”	A.2811.01
PSF-1/A2	9-12	½”	73	53	20	33	30	M20	A.2821.02	UNI 6125 ½”	A.2801.02	NPT ½”	A.2811.02
PSF-2/A1	6-9	¾”	73	53	20	40	36	M25	A.2822.01	UNI 6125 3/4”	A.2802.01	NPT 3/4”	A.2812.01
PSF-2/A2	9-12	¾”	73	53	20	40	36	M25	A.2822.02	UNI 6125 3/4”	A.2802.02	NPT 3/4”	A.2812.02
PSF-2/A3	11-14	¾”	73	53	20	40	36	M25	A.2822.03	UNI 6125 3/4”	A.2802.03	NPT 3/4”	A.2812.03
PSF-2/A4	14-17	¾”	73	53	20	40	36	M25	A.2822.04	UNI 6125 3/4”	A.2802.04	NPT 3/4”	A.2812.04
PSF-3/A1	14-17	1”	88	63	25	49	44	M32	A.2823.01	UNI 6125 1”	A.2803.01	NPT 1”	A.2813.01
PSF-3/A2	17-20	1”	88	63	25	49	44	M32	A.2823.02	UNI 6125 1”	A.2803.02	NPT 1”	A.2813.02
PSF-3/A3	20-23	1”	88	63	25	49	44	M32	A.2823.03	UNI 6125 1”	A.2803.03	NPT 1”	A.2813.03
PSF-5/A2	23-26	1 ½”	89	64	25	65	58	M50	A.2825.02	UNI 6125 1 1/2”	A.2805.02	NPT 1 1/2”	A.2815.02
PSF-5/A3	26-29	1 ½”	89	64	25	65	58	M50	A.2825.03	UNI 6125 1 1/2”	A.2805.03	NPT 1 1/2”	A.2815.03
PSF-5/A4	29-32	1 ½”	89	64	25	65	58	M50	A.2825.04	UNI 6125 1 1/2”	A.2805.04	NPT 1 1/2”	A.2815.04
PSF-5/A5	32-36	1 ½”	89	64	25	65	58	M50	A.2825.05	UNI 6125 1 1/2”	A.2805.05	NPT 1 1/2”	A.2815.05
PSF-6/A2	36-39	2”	On request					M63	A.2826.02	UNI 6125 2”	A.2806.02	NPT 2”	A.2816.02
PSF-6/A3	39-42	2”						M63	A.2826.03	UNI 6125 2”	A.2806.03	NPT 2”	A.2816.03
PSF-6/A4	42-46	2”						M63	A.2826.04	UNI 6125 2”	A.2806.04	NPT 2”	A.2816.04
PSF-7/A2	44-48	2 ½”	On request					M75	A.2827.02	UNI 6125 2 1/2”	A.2807.02	NPT 2 1/2”	A.2817.02
PSF-7/A3	48-52	2 ½”						M75	A.2827.03	UNI 6125 2 1/2”	A.2807.03	NPT 2 1/2”	A.2817.03
PSF-7/A4	52-56	2 ½”						M75	A.2827.04	UNI 6125 2 1/2”	A.2807.04	NPT 2 1/2”	A.2817.04
PSF-7/A5	56-60	2 ½”						M75	A.2827.05	UNI 6125 2 1/2”	A.2807.05	NPT 2 1/2”	A.2817.05
PSF-8/A4	56-60	3”	On request					M80	A.2828.04	UNI 6125 3”	A.2808.04	NPT 3”	A.2818.04
PSF-8/A5	59-63	3”						M80	A.2828.05	UNI 6125 3”	A.2808.05	NPT 3”	A.2818.05
PSF-8/A6	63-67	3”						M80	A.2828.06	UNI 6125 3”	A.2808.06	NPT 3”	A.2818.06
PSF-8/A7	67-71	3”						M80	A.2828.07	UNI 6125 3”	A.2808.07	NPT 3”	A.2818.07

Dimensions



PSM

Single seal through “male-male” cable glands for unaroumred cable, suitable for assembling side by side 2 enclosures: Ex d/Ex d or Ex d/Ex e by adding a rigid or flexible conduit to the cable gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PSM-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

Specifications

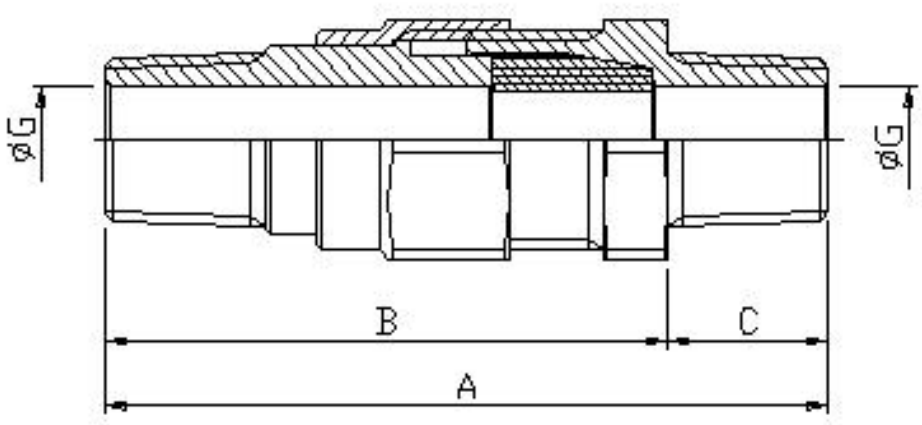
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PSM-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PSM-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PSM-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

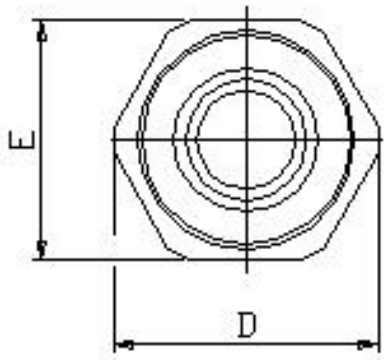
Note	**Free nipple is always UNI 6125 threaded**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

PSM

Type	Cable overall diameter	Free nipple threading	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
			A	B	C	D	E	Size	Code	Size	Code	Size	Code
PSM-1/A1	6-9	½”	90	70	20	33	30	M20		UNI 6125 ½”	A.2901.01	NPT ½”	A.2911.01
PSM-1/A2	9-12	½”	90	70	20	33	30	M20		UNI 6125 ½”	A.2901.02	NPT ½”	A.2911.02
PSM-2/A1	6-9	¾”	90	70	20	40	36	M25		UNI 6125 3/4”	A.2902.01	NPT 3/4”	A.2912.01
PSM-2/A2	9-12	¾”	90	70	20	40	36	M25		UNI 6125 3/4”	A.2902.02	NPT 3/4”	A.2912.02
PSM-2/A3	11-14	¾”	90	70	20	40	36	M25		UNI 6125 3/4”	A.2902.03	NPT 3/4”	A.2912.03
PSM-2/A4	14-17	¾”	90	70	20	40	36	M25		UNI 6125 3/4”	A.2902.04	NPT 3/4”	A.2912.04
PSM-3/A1	14-17	1”	104	79	25	49	44	M32		UNI 6125 1”	A.2903.01	NPT 1”	A.2913.01
PSM-3/A2	17-20	1”	104	79	25	49	44	M32		UNI 6125 1”	A.2903.02	NPT 1”	A.2913.02
PSM-3/A3	20-23	1”	104	79	25	49	44	M32		UNI 6125 1”	A.2903.03	NPT 1”	A.2913.03
PSM-5/A2	23-26	1 ½”	104	79	25	65	58	M50		UNI 6125 1 1/2”	A.2905.02	NPT 1 1/2”	A.2915.02
PSM-5/A3	26-29	1 ½”	104	79	25	65	58	M50		UNI 6125 1 1/2”	A.2905.03	NPT 1 1/2”	A.2915.03
PSM-5/A4	29-32	1 ½”	104	79	25	65	58	M50		UNI 6125 1 1/2”	A.2905.04	NPT 1 1/2”	A.2915.04
PSM-5/A5	32-36	1 ½”	104	79	25	65	58	M50		UNI 6125 1 1/2”	A.2905.05	NPT 1 1/2”	A.2915.05
PSM-6/A2	36-39	2”	On request					M63		UNI 6125 2”	A.2906.02	NPT 2”	A.2916.02
PSM-6/A3	39-42	2”						M63		UNI 6125 2”	A.2906.03	NPT 2”	A.2916.03
PSM-6/A4	42-46	2”						M63		UNI 6125 2”	A.2906.04	NPT 2”	A.2916.04
PSM-7/A2	44-48	2 ½”	On request					M75		UNI 6125 2 1/2”	A.2907.02	NPT 2 1/2”	A.2917.02
PSM-7/A3	48-52	2 ½”						M75		UNI 6125 2 1/2”	A.2907.03	NPT 2 1/2”	A.2917.03
PSM-7/A4	52-56	2 ½”						M75		UNI 6125 2 1/2”	A.2907.04	NPT 2 1/2”	A.2917.04
PSM-7/A5	56-60	2 ½”						M75		UNI 6125 2 1/2”	A.2907.05	NPT 2 1/2”	A.2917.05
PSM-8/A4	56-60	3”	On request					M80		UNI 6125 3”	A.2908.04	NPT 3”	A.2918.04
PSM-8/A5	59-63	3”						M80		UNI 6125 3”	A.2908.05	NPT 3”	A.2918.05
PSM-8/A6	63-67	3”						M80		UNI 6125 3”	A.2908.06	NPT 3”	A.2918.06
PSM-8/A7	67-71	3”						M80		UNI 6125 3”	A.2908.07	NPT 3”	A.2918.07

Dimensions





PBD

Double seal cable glands for lead sheath unarmoured cable. It guarantees earth continuity between enclosure and armour/lead sheet in the gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PDB-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

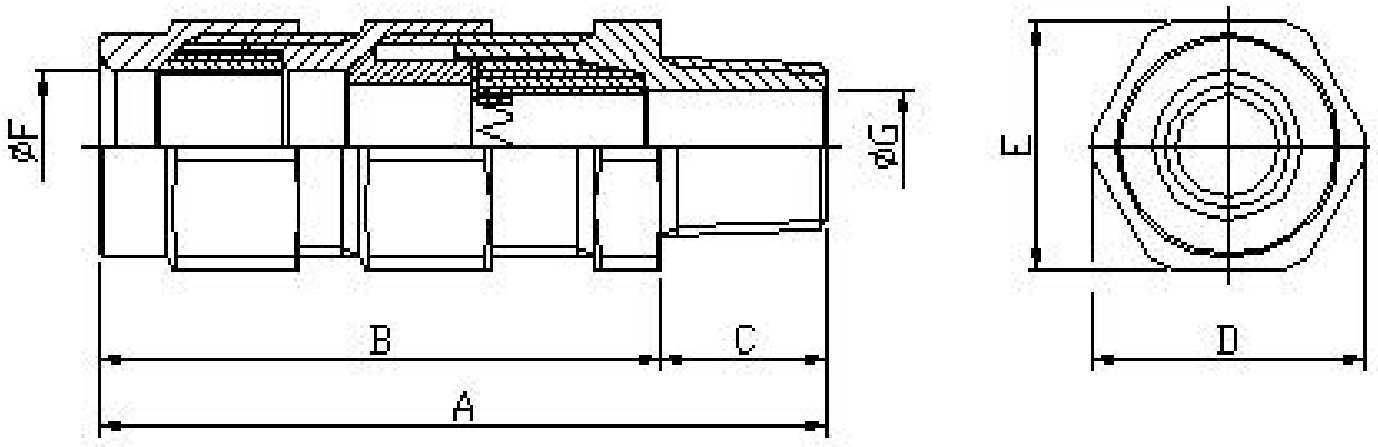
Specifications

Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Certification & Approvals	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PBD-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PBD-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PBD-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

PBD

Type	Cable overall diameter (2nd insulation	Cable overall diameter (1st insulation)	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
			A	B	C	D	E	Size	Code	Size	Code	Size	Code
PBD-1/A1B1	8-11	18	85	65	20	33	30	M20	A.5021.01	Uni 6125 ½”	A.5001.01	NPT ½”	A.5011.01
PBD-1/A1B2	11-14	18	85	65	20	33	30	M20	A.5021.02	Uni 6125 ½”	A.5001.02	NPT ½”	A.5011.02
PBD-1/A2B3	14-17	18	85	65	20	33	30	M20	A.5021.03	Uni 6125 ½”	A.5001.03	NPT ½”	A.5011.03
PBD-2/A1B1	14-17	24	85	65	20	33	36	M25	A.5022.01	Uni 6125 ¾”	A.5002.01	NPT ¾”	A.5012.01
PBD-2/A2B1	14-17	24	85	65	20	33	36	M25	A.5022.02	Uni 6125 ¾”	A.5002.02	NPT ¾”	A.5012.02
PBD-2/A3B2	17-20	24	85	65	20	33	36	M25	A.5022.03	Uni 6125 ¾”	A.5002.03	NPT ¾”	A.5012.03
PBD-2/A4B3	20-23	24	85	65	20	33	36	M25	A.5022.04	Uni 6125 ¾”	A.5002.04	NPT ¾”	A.5012.04
PBD-3/A1B1	20-23	30	93	68	25	49	44	M32	A.5023.01	Uni 6125 1”	A.5003.01	NPT 1”	A.5013.01
PBD-3/A2B2	23-26	30	93	68	25	49	44	M32	A.5023.02	Uni 6125 1”	A.5003.02	NPT 1”	A.5013.02
PBD-3/A3B3	26-29	30	93	68	25	49	44	M32	A.5023.03	Uni 6125 1”	A.5003.03	NPT 1”	A.5013.03
PBD-5/A2B2	29-32	43	93	68	25	62	56	M50	A.5025.02	Uni 6125 1 1/2”	A.5005.02	NPT 1 1/2”	A.5015.02
PBD-5/A3B3	32-36	43	93	68	25	62	56	M50	A.5025.03	Uni 6125 1 1/2”	A.5005.03	NPT 1 1/2”	A.5015.03
PBD-5/A4B4	36-39	43	93	68	25	62	56	M50	A.5025.04	Uni 6125 1 1/2”	A.5005.04	NPT 1 1/2”	A.5015.04
PBD-5/A5B5	39-42	43	93	68	25	62	56	M50	A.5025.05	Uni 6125 1 1/2”	A.5005.05	NPT 1 1/2”	A.5015.05
PBD-6/A2B2	44-48	57	95	71	25	78	70	M63	A.5026.02	Uni 6125 2”	A.5006.02	NPT 2”	A.5016.02
PBD-6/A3B3	48-52	57	95	71	25	78	70	M63	A.5026.03	Uni 6125 2”	A.5006.03	NPT 2”	A.5016.03
PBD-6/A4B4	52-56	57	95	71	25	78	70	M63	A.5026.04	Uni 6125 2”	A.5006.04	NPT 2”	A.5016.04
PBD-7/A2B2	55-59	69	100	71	32	92	83	M75	A.5027.02	Uni 6125 2 1/2”	A.5007.02	NPT 2 1/2”	A.5017.02
PBD-7/A3B3	59-63	69	100	71	32	92	83	M75	A.5027.03	Uni 6125 2 1/2”	A.5007.03	NPT 2 1/2”	A.5017.03
PBD-7/A4B4	63-67	69	100	71	32	92	83	M75	A.5027.04	Uni 6125 2 1/2”	A.5007.04	NPT 2 1/2”	A.5017.04
PBD-7/A5B4	63-67	69	100	71	32	92	83	M75	A.5027.05	Uni 6125 2 1/2”	A.5007.05	NPT 2 1/2”	A.5017.05
PBD-8/A4B4	63-67	79	100	71	32	103	93	M80	A.5028.04	Uni 6125 3”	A.5008.04	NPT 3”	A.5018.04
PBD-8/A5B5	65-69	79	100	71	32	103	93	M80	A.5028.05	Uni 6125 3”	A.5008.05	NPT 3”	A.5018.05
PBD-8/A6B6	69-73	79	100	71	32	103	93	M80	A.5028.06	Uni 6125 3”	A.5008.06	NPT 3”	A.5018.06
PBD-8/A7B7	73-77	79	100	71	32	103	93	M80	A.5028.07	Uni 6125 3”	A.5008.07	NPT 3”	A.5018.07

Dimensions



PBS

Single seal cable glands for lead sheath unarmoured cable. It guarantees earth continuity between enclosure and armour/lead sheet in the gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PBS-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

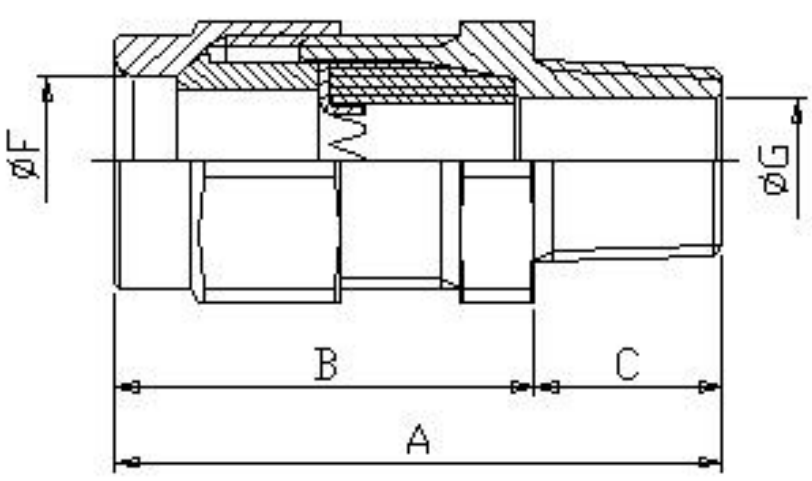
Specifications

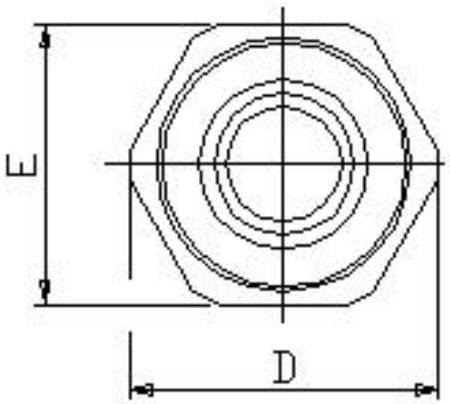
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PBS-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PBS-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PBS-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

PBS

Type	Cable under armour (inner seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PBS-1/A1	6-9	18	62	42	20	33	30	Metrico M20	A.1891.01	UNI 6125 ½”	A.1871.01	NPT 1/2”	A.1881.01
PBS-1/A2	9-12	18	62	42	20	33	30	Metrico M20	A.1891.02	UNI 6125 ½”	A.1871.02	NPT 1/2”	A.1881.02
PBS-2/A1	6-9	24	62	42	20	40	36	Metrico M25	A.1892.01	UNI 6125 3/4”	A.1872.01	NPT 3/4”	A.1882.01
PBS-2/A2	9-12	24	62	42	20	40	36	Metrico M25	A.1892.02	UNI 6125 3/4”	A.1872.02	NPT 3/4”	A.1882.02
PBS-2/A3	11-14	24	62	42	20	40	36	Metrico M25	A.1892.03	UNI 6125 3/4”	A.1872.03	NPT 3/4”	A.1882.03
PBS-2/A4	14-17	24	62	42	20	40	36	Metrico M25	A.1892.04	UNI 6125 3/4”	A.1872.04	NPT 3/4”	A.1882.04
PBS-3/A1	14-17	30	70	45	25	49	44	Metrico M32	A.1893.01	UNI 6125 1”	A.1873.01	NPT 1”	A.1883.01
PBS-3/A2	17-20	30	70	45	25	49	44	Metrico M32	A.1893.02	UNI 6125 1”	A.1873.02	NPT 1”	A.1883.02
PBS-3/A3	20-23	30	70	45	25	49	44	Metrico M32	A.1893.03	UNI 6125 1”	A.1873.03	NPT 1”	A.1883.03
PBS-5/A2	23-26	43	70	45	25	62	56	Metrico M50	A.1895.02	UNI 6125 1 1/2”	A.1875.02	NPT 1 1/2”	A.1885.02
PBS-5/A3	26-29	43	70	45	25	62	56	Metrico M50	A.1895.03	UNI 6125 1 1/2”	A.1875.03	NPT 1 1/2”	A.1885.03
PBS-5/A4	29-32	43	70	45	25	62	56	Metrico M50	A.1895.04	UNI 6125 1 1/2”	A.1875.04	NPT 1 1/2”	A.1885.04
PBS-5/A5	32-36	43	70	45	25	62	56	Metrico M50	A.1895.05	UNI 6125 1 1/2”	A.1875.05	NPT 1 1/2”	A.1885.05
PBS-6/A2	36-39	57	72	46	25	78	70	Metrico M63	A.1896.02	UNI 6125 2”	A.1876.02	NPT 2”	A.1886.02
PBS-6/A3	39-42	57	72	46	25	78	70	Metrico M63	A.1896.03	UNI 6125 2”	A.1876.03	NPT 2”	A.1886.03
PBS-6/A4	42-46	57	72	46	25	78	70	Metrico M63	A.1896.04	UNI 6125 2”	A.1876.04	NPT 2”	A.1886.04
PBS-7/A2	44-48	69	78	46	25	78	70	Metrico M75	A.1897.02	UNI 6125 2 1/2”	A.1877.02	NPT 2 1/2”	A.1887.02
PBS-7/A3	48-52	69	78	46	25	78	70	Metrico M75	A.1897.03	UNI 6125 2 1/2”	A.1877.03	NPT 2 1/2”	A.1887.03
PBS-7/A4	52-56	69	78	46	25	78	70	Metrico M75	A.1897.04	UNI 6125 2 1/2”	A.1877.04	NPT 2 1/2”	A.1887.04
PBS-7/A5	56-60	69	78	46	25	78	70	Metrico M75	A.1897.05	UNI 6125 2 1/2”	A.1877.05	NPT 2 1/2”	A.1887.05
PBS-8/A4	56-60	79	78	46	32	103	93	Metrico M80	A.1898.04	UNI 6125 3”	A.1878.04	NPT 3”	A.1888.04
PBS-8/A5	59-63	79	78	46	32	103	93	Metrico M80	A.1898.05	UNI 6125 3”	A.1878.05	NPT 3”	A.1888.05
PBS-8/A6	63-67	79	78	46	32	103	93	Metrico M80	A.1898.06	UNI 6125 3”	A.1878.06	NPT 3”	A.1888.06
PBS-8/A7	67-71	79	78	46	32	103	93	Metrico M80	A.1898.07	UNI 6125 3”	A.1878.07	NPT 3”	A.1888.07

Dimensions





PDB

Double seal cable glands for lead sheath armoured cable. It guarantees earth continuity between enclosure and armour/lead sheet in the gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PDB-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

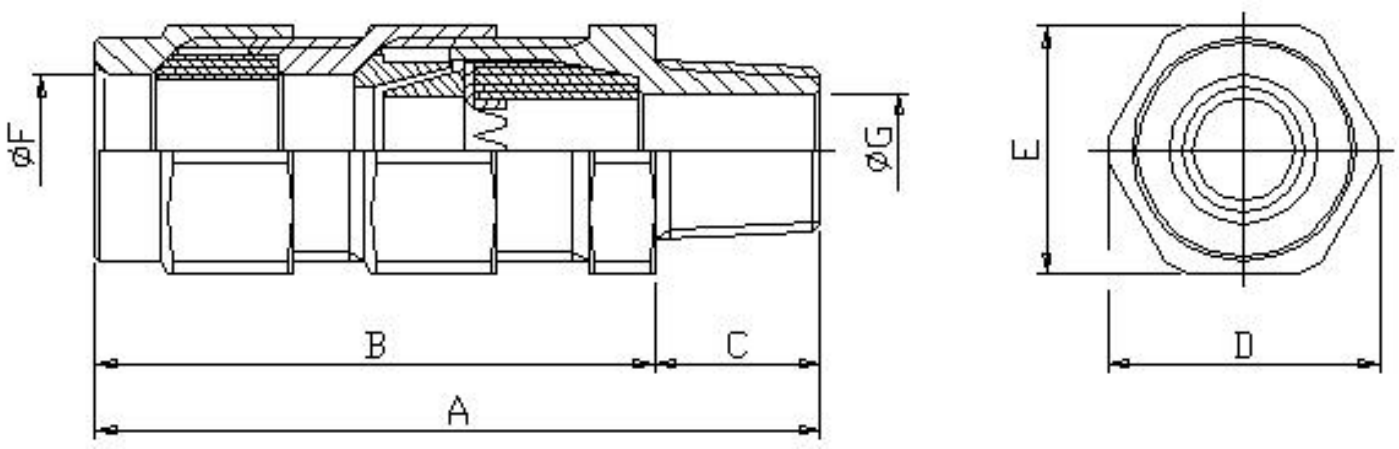
Specifications

Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PDB-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PDB-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PDB-1-A1/Al
Accessories	Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently specified in offer or in order acknowledgment)**

PDB

Type	Cable under armour (inner seal)	Cable overall diameter (outer seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
			F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PDB-1/A1B1	6-9	8-11	18	85	65	20	33	30	M20	A.1831.01	Uni 6125 ½”	A.1811.01	NPT ½”	A.1821.01
PDB-1/A1B2	6-9	11-14	18	85	65	20	33	30	M20	A.1831.02	Uni 6125 ½”	A.1811.02	NPT ½”	A.1821.02
PDB-1/A2B3	9-12	14-17	18	85	65	20	33	30	M20	A.1831.03	Uni 6125 ½”	A.1811.03	NPT ½”	A.1821.03
PDB-2/A1B1	6-9	14-17	24	85	65	20	33	36	M25	A.1832.01	Uni 6125 ¾”	A.1812.01	NPT ¾”	A.1822.01
PDB-2/A2B1	9-12	14-17	24	85	65	20	33	36	M25	A.1832.02	Uni 6125 ¾”	A.1812.02	NPT ¾”	A.1822.02
PDB-2/A3B2	11-14	17-20	24	85	65	20	33	36	M25	A.1832.03	Uni 6125 ¾”	A.1812.03	NPT ¾”	A.1822.03
PDB-2/A4B3	14-17	20-23	24	85	65	20	33	36	M25	A.1832.04	Uni 6125 ¾”	A.1812.04	NPT ¾”	A.1822.04
PDB-3/A1B1	14-17	20-23	30	93	68	25	49	44	M32	A.1833.01	Uni 6125 1”	A.1813.01	NPT 1”	A.1823.01
PDB-3/A2B2	17-20	23-26	30	93	68	25	49	44	M32	A.1833.02	Uni 6125 1”	A.1813.02	NPT 1”	A.1823.02
PDB-3/A3B3	20-23	26-29	30	93	68	25	49	44	M32	A.1833.03	Uni 6125 1”	A.1813.03	NPT 1”	A.1823.03
PDB-5/A2B2	23-26	29-32	43	93	68	25	62	56	M50	A.1835.02	Uni 6125 1 1/2”	A.1815.02	NPT 1 1/2”	A.1825.02
PDB-5/A3B3	26-29	32-36	43	93	68	25	62	56	M50	A.1835.03	Uni 6125 1 1/2”	A.1815.03	NPT 1 1/2”	A.1825.03
PDB-5/A4B4	29-32	36-39	43	93	68	25	62	56	M50	A.1835.04	Uni 6125 1 1/2”	A.1815.04	NPT 1 1/2”	A.1825.04
PDB-5/A5B5	32-36	39-42	43	93	68	25	62	56	M50	A.1835.05	Uni 6125 1 1/2”	A.1815.05	NPT 1 1/2”	A.1825.05
PDB-6/A2B2	36-39	44-48	57	95	71	25	78	70	M63	A.1836.02	Uni 6125 2”	A.1816.02	NPT 2”	A.1826.02
PDB-6/A3B3	39-42	48-52	57	95	71	25	78	70	M63	A.1836.03	Uni 6125 2”	A.1816.03	NPT 2”	A.1826.03
PDB-6/A4B4	42-46	52-56	57	95	71	25	78	70	M63	A.1836.04	Uni 6125 2”	A.1816.04	NPT 2”	A.1826.04
PDB-7/A2B2	44-48	55-59	69	100	71	32	92	83	M75	A.1837.02	Uni 6125 2 1/2”	A.1817.02	NPT 2 1/2”	A.1827.02
PDB-7/A3B3	48-52	59-63	69	100	71	32	92	83	M75	A.1837.03	Uni 6125 2 1/2”	A.1817.03	NPT 2 1/2”	A.1827.03
PDB-7/A4B4	52-56	63-67	69	100	71	32	92	83	M75	A.1837.04	Uni 6125 2 1/2”	A.1817.04	NPT 2 1/2”	A.1827.04
PDB-7/A5B4	56-60	63-67	69	100	71	32	92	83	M75	A.1837.05	Uni 6125 2 1/2”	A.1817.05	NPT 2 1/2”	A.1827.05
PDB-8/A4B4	56-60	63-67	79	100	71	32	103	93	M80	A.1838.04	Uni 6125 3”	A.1818.04	NPT 3”	A.1828.04
PDB-8/A5B5	59-63	65-69	79	100	71	32	103	93	M80	A.1838.05	Uni 6125 3”	A.1818.05	NPT 3”	A.1828.05
PDB-8/A6B6	63-67	69-73	79	100	71	32	103	93	M80	A.1838.06	Uni 6125 3”	A.1818.06	NPT 3”	A.1828.06
PDB-8/A7B7	67-71	73-77	79	100	71	32	103	93	M80	A.1838.07	Uni 6125 3”	A.1818.07	NPT 3”	A.1828.07

Dimensions



PSB

Single seal cable glands for lead sheath armoured cables. It guarantees earth continuity between enclosure and armour/lead sheet in the gland. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PSB-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

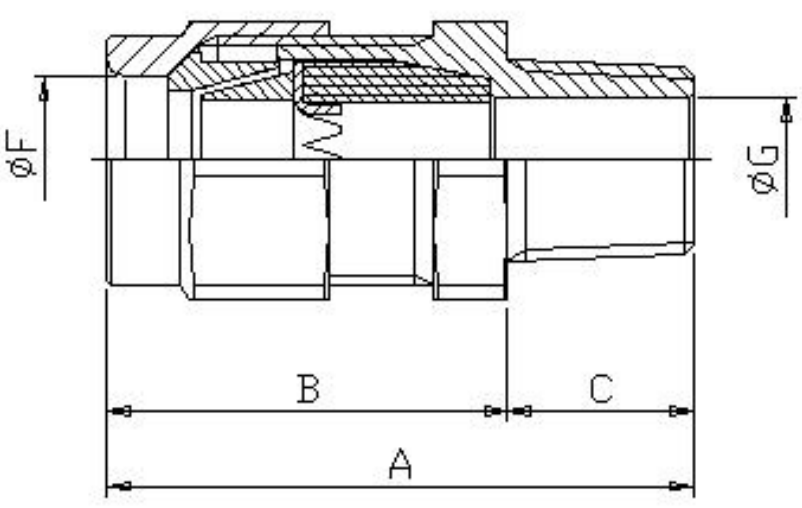
Specifications

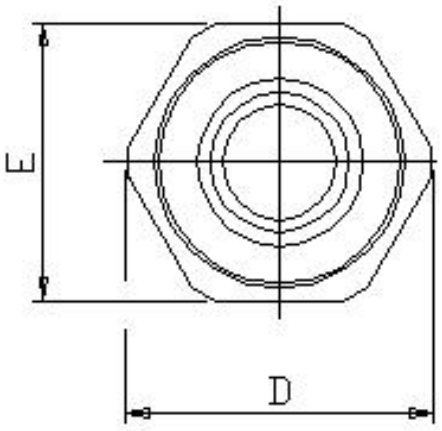
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PSB-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PSB-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PSB-1-A1/Al
Accessories	Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently specified in offer or in order acknowledgment)**

PSB

Type	Cable under armour (inner seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PSB-1/A1	6-9	18	62	42	20	33	30	M20	A.5121.01	UNI 6125 ½”	A.5101.01	NPT 1/2”	A.5111.01
PSB-1/A2	9-12	18	62	42	20	33	30	M20	A.5121.02	UNI 6125 ½”	A.5101.02	NPT 1/2”	A.5111.02
PSB-2/A1	6-9	24	62	42	20	40	36	M25	A.5122.01	UNI 6125 3/4”	A.5102.01	NPT 3/4”	A.5112.01
PSB-2/A2	9-12	24	62	42	20	40	36	M25	A.5122.02	UNI 6125 3/4”	A.5102.02	NPT 3/4”	A.5112.02
PSB-2/A3	11-14	24	62	42	20	40	36	M25	A.5122.03	UNI 6125 3/4”	A.5102.03	NPT 3/4”	A.5112.03
PSB-2/A4	14-17	24	62	42	20	40	36	M25	A.5122.04	UNI 6125 3/4”	A.5102.04	NPT 3/4”	A.5112.04
PSB-3/A1	14-17	30	70	45	25	49	44	M32	A.5123.01	UNI 6125 1”	A.5103.01	NPT 1”	A.5113.01
PSB-3/A2	17-20	30	70	45	25	49	44	M32	A.5123.02	UNI 6125 1”	A.5103.02	NPT 1”	A.5113.02
PSB-3/A3	20-23	30	70	45	25	49	44	M32	A.5123.03	UNI 6125 1”	A.5103.03	NPT 1”	A.5113.03
PSB-5/A2	23-26	43	70	45	25	49	44	M50	A.5125.02	UNI 6125 1 1/2”	A.5105.02	NPT 1 1/2”	A.5115.02
PSB-5/A3	26-29	43	70	45	25	49	44	M50	A.5125.03	UNI 6125 1 1/2”	A.5105.03	NPT 1 1/2”	A.5115.03
PSB-5/A4	29-32	43	70	45	25	49	44	M50	A.5125.04	UNI 6125 1 1/2”	A.5105.04	NPT 1 1/2”	A.5115.04
PSB-5/A5	32-36	43	70	45	25	49	44	M50	A.5125.05	UNI 6125 1 1/2”	A.5105.05	NPT 1 1/2”	A.5115.05
PSB-6/A2	36-39	57	72	46	25	78	70	M63	A.5126.02	UNI 6125 2”	A.5106.02	NPT 2”	A.5116.02
PSB-6/A3	39-42	57	72	46	25	78	70	M63	A.5126.03	UNI 6125 2”	A.5106.03	NPT 2”	A.5116.03
PSB-6/A4	42-46	57	72	46	25	78	70	M63	A.5126.04	UNI 6125 2”	A.5106.04	NPT 2”	A.5116.04
PSB-7/A2	44-48	69	78	46	32	92	83	M75	A.5127.02	UNI 6125 2 1/2”	A.5107.02	NPT 2 1/2”	A.5117.02
PSB-7/A3	48-52	69	78	46	32	92	83	M75	A.5127.03	UNI 6125 2 1/2”	A.5107.03	NPT 2 1/2”	A.5117.03
PSB-7/A4	52-56	69	78	46	32	92	83	M75	A.5127.04	UNI 6125 2 1/2”	A.5107.04	NPT 2 1/2”	A.5117.04
PSB-7/A5	56-60	69	78	46	32	92	83	M75	A.5127.05	UNI 6125 2 1/2”	A.5107.05	NPT 2 1/2”	A.5117.05
PSB-8/A4	56-60	79	78	46	32	103	93	M80	A.5128.04	UNI 6125 3”	A.5108.04	NPT 3”	A.5118.04
PSB-8/A5	59-63	79	78	46	32	103	93	M80	A.5128.05	UNI 6125 3”	A.5108.05	NPT 3”	A.5118.05
PSB-8/A6	63-67	79	78	46	32	103	93	M80	A.5128.06	UNI 6125 3”	A.5108.06	NPT 3”	A.5118.06
PSB-8/A7	67-71	79	78	46	32	103	93	M80	A.5128.07	UNI 6125 3”	A.5108.07	NPT 3”	A.5118.07

Dimensions





PBAX

Single seal barrier cable glands, suitable for armoured cables. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PBAX is a barrier cable gland with sealing compound in a separate kit. PBAX-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

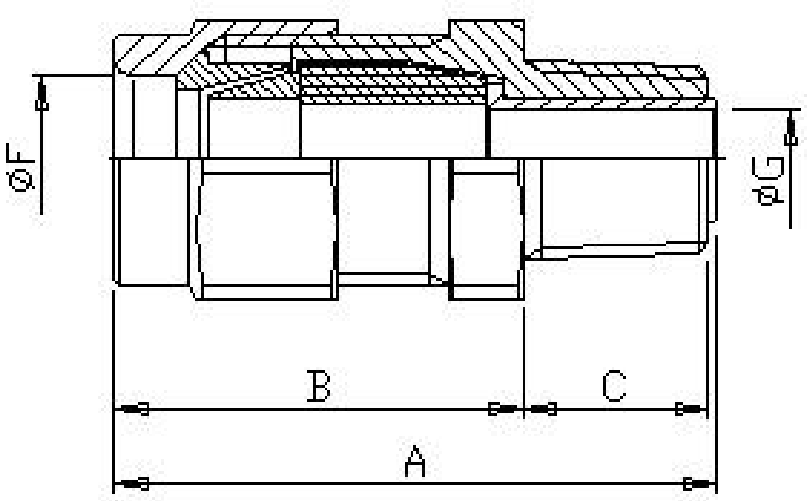
Specifications

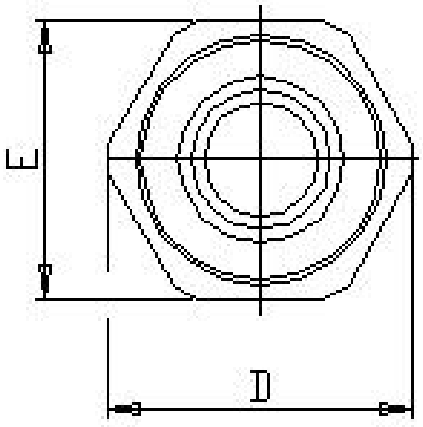
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PBAX-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PBAX-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): type number will assume the ending Al. Example PBAX-1-A1/Al
Accessories	Sealing compound in separate kit. With one 200 ml. cartridge can be sealed between 30 to 35 cable glands “barrier type” size 1 to 3. Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently specified in offer or in order acknowledgment)**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

PBAX

Type	Cable under armour (inner seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PBAX-1/A1	6-9	18	62	42	20	33	30	M20	A.5321.01	UNI 6125 ½”	A.5301.01	NPT 1/2”	A.5311.01
PBAX-1/A2	9-12	18	62	42	20	33	30	M20	A.5321.02	UNI 6125 ½”	A.5301.02	NPT 1/2”	A.5311.02
PBAX-2/A1	6-9	24	62	42	20	40	36	M25	A.5322.01	UNI 6125 3/4”	A.5302.01	NPT 3/4”	A.5312.01
PBAX-2/A2	9-12	24	62	42	20	40	36	M25	A.5322.02	UNI 6125 3/4”	A.5302.02	NPT 3/4”	A.5312.02
PBAX-2/A3	11-14	24	62	42	20	40	36	M25	A.5322.03	UNI 6125 3/4”	A.5302.03	NPT 3/4”	A.5312.03
PBAX-2/A4	14-17	24	62	42	20	40	36	M25	A.5322.04	UNI 6125 3/4”	A.5302.04	NPT 3/4”	A.5312.04
PBAX-3/A1	14-17	30	70	45	25	49	44	M32	A.5323.01	UNI 6125 1”	A.5303.01	NPT 1”	A.5313.01
PBAX-3/A2	17-20	30	70	45	25	49	44	M32	A.5323.02	UNI 6125 1”	A.5303.02	NPT 1”	A.5313.02
PBAX-3/A3	20-23	30	70	45	25	49	44	M32	A.5323.03	UNI 6125 1”	A.5303.03	NPT 1”	A.5313.03
PBAX-5/A2	23-26	43	70	45	25	62	56	M50	A.5325.02	UNI 6125 1 1/2”	A.5305.02	NPT 1 1/2”	A.5315.02
PBAX-5/A3	26-29	43	70	45	25	62	56	M50	A.5325.03	UNI 6125 1 1/2”	A.5305.03	NPT 1 1/2”	A.5315.03
PBAX-5/A4	29-32	43	70	45	25	62	56	M50	A.5325.04	UNI 6125 1 1/2”	A.5305.04	NPT 1 1/2”	A.5315.04
PBAX-5/A5	32-36	43	70	45	25	62	56	M50	A.5325.05	UNI 6125 1 1/2”	A.5305.05	NPT 1 1/2”	A.5315.05
PBAX-6/A2	36-39	57	72	46	25	78	70	M63	A.5326.02	UNI 6125 2”	A.5306.02	NPT 2”	A.5316.02
PBAX-6/A3	39-42	57	72	46	25	78	70	M63	A.5326.03	UNI 6125 2”	A.5306.03	NPT 2”	A.5316.03
PBAX-6/A4	42-46	57	72	46	25	78	70	M63	A.5326.04	UNI 6125 2”	A.5306.04	NPT 2”	A.5316.04
PBAX-7/A2	44-48	69	78	46	25	78	70	M75	A.5327.02	UNI 6125 2 1/2”	A.5307.02	NPT 2 1/2”	A.5317.02
PBAX-7/A3	48-52	69	78	46	25	78	70	M75	A.5327.03	UNI 6125 2 1/2”	A.5307.03	NPT 2 1/2”	A.5317.03
PBAX-7/A4	52-56	69	78	46	25	78	70	M75	A.5327.04	UNI 6125 2 1/2”	A.5307.04	NPT 2 1/2”	A.5317.04
PBAX-7/A5	56-60	69	78	46	25	78	70	M75	A.5327.05	UNI 6125 2 1/2”	A.5307.05	NPT 2 1/2”	A.5317.05
PBAX-8/A4	56-60	79	78	46	32	103	93	M80	A.5328.04	UNI 6125 3”	A.5308.04	NPT 3”	A.5318.04
PBAX-8/A5	59-63	79	78	46	32	103	93	M80	A.5328.05	UNI 6125 3”	A.5308.05	NPT 3”	A.5318.05
PBAX-8/A6	63-67	79	78	46	32	103	93	M80	A.5328.06	UNI 6125 3”	A.5308.06	NPT 3”	A.5318.06
PBAX-8/A7	67-71	79	78	46	32	103	93	M80	A.5328.07	UNI 6125 3”	A.5308.07	NPT 3”	A.5318.07

Dimensions





PND

Double seal cable glands, suitable for unarmoured cables. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PND-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

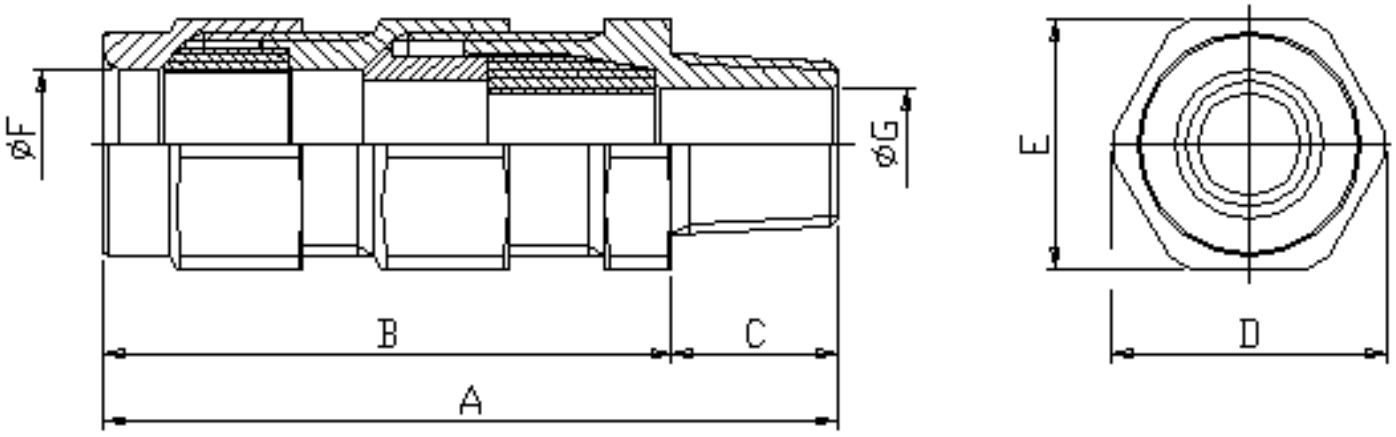
Specifications

Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PND-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PND-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): the type number will assume the ending Al. Example PND-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

PND

Type	Cable overall diameter (2nd insulation)	Cable overall diameter (1st insulation)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
			F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PND-1/A1B1	6-9	8-11	18	85	65	20	33	30	M20	A.5221.01	Uni 6125 ½”	A.5201.01	NPT ½”	A.5211.01
PND-1/A1B2	6-9	11-14	18	85	65	20	33	30	M20	A.5221.02	Uni 6125 ½”	A.5201.02	NPT ½”	A.5211.02
PND-1/A2B3	9-12	14-17	18	85	65	20	33	30	M20	A.5221.03	Uni 6125 ½”	A.5201.03	NPT ½”	A.5211.03
PND-2/A1B1	6-9	14-17	24	85	65	20	33	36	M25	A.5222.01	Uni 6125 ¾”	A.5202.01	NPT ¾”	A.5212.01
PND-2/A2B1	9-12	14-17	24	85	65	20	33	36	M25	A.5222.02	Uni 6125 ¾”	A.5202.02	NPT ¾”	A.5212.02
PND-2/A3B2	11-14	17-20	24	85	65	20	33	36	M25	A.5222.03	Uni 6125 ¾”	A.5202.03	NPT ¾”	A.5212.03
PND-2/A4B3	14-17	20-23	24	85	65	20	33	36	M25	A.5222.04	Uni 6125 ¾”	A.5202.04	NPT ¾”	A.5212.04
PND-3/A1B1	14-17	20-23	30	93	68	25	49	44	M32	A.5223.01	Uni 6125 1”	A.5203.01	NPT 1”	A.5213.01
PND-3/A2B2	17-20	23-26	30	93	68	25	49	44	M32	A.5223.02	Uni 6125 1”	A.5203.02	NPT 1”	A.5213.02
PND-3/A3B3	20-23	26-29	30	93	68	25	49	44	M32	A.5223.03	Uni 6125 1”	A.5203.03	NPT 1”	A.5213.03
PND-5/A2B2	23-26	29-32	43	93	68	25	62	56	M50	A.5225.02	Uni 6125 1 1/2”	A.5205.02	NPT 1 1/2”	A.5215.02
PND-5/A3B3	26-29	32-36	43	93	68	25	62	56	M50	A.5225.03	Uni 6125 1 1/2”	A.5205.03	NPT 1 1/2”	A.5215.03
PND-5/A4B4	29-32	36-39	43	93	68	25	62	56	M50	A.5225.04	Uni 6125 1 1/2”	A.5205.04	NPT 1 1/2”	A.5215.04
PND-5/A5B5	32-36	39-42	43	93	68	25	62	56	M50	A.5225.05	Uni 6125 1 1/2”	A.5205.05	NPT 1 1/2”	A.5215.05
PND-6/A2B2	36-39	44-48	57	95	71	25	78	70	M63	A.5226.02	Uni 6125 2”	A.5206.02	NPT 2”	A.5216.02
PND-6/A3B3	39-42	48-52	57	95	71	25	78	70	M63	A.5226.03	Uni 6125 2”	A.5206.03	NPT 2”	A.5216.03
PND-6/A4B4	42-46	52-56	57	95	71	25	78	70	M63	A.5226.04	Uni 6125 2”	A.5206.04	NPT 2”	A.5216.04
PND-7/A2B2	44-48	55-59	69	100	71	32	92	83	M75	A.5227.02	Uni 6125 2 1/2”	A.5207.02	NPT 2 1/2”	A.5217.02
PND-7/A3B3	48-52	59-63	69	100	71	32	92	83	M75	A.5227.03	Uni 6125 2 1/2”	A.5207.03	NPT 2 1/2”	A.5217.03
PND-7/A4B4	52-56	63-67	69	100	71	32	92	83	M75	A.5227.04	Uni 6125 2 1/2”	A.5207.04	NPT 2 1/2”	A.5217.04
PND-7/A5B4	56-60	63-67	69	100	71	32	92	83	M75	A.5227.05	Uni 6125 2 1/2”	A.5207.05	NPT 2 1/2”	A.5217.05
PND-8/A4B4	56-60	63-67	79	100	71	32	103	93	M80	A.5228.04	Uni 6125 3”	A.5208.04	NPT 3”	A.5218.04
PND-8/A5B5	59-63	65-69	79	100	71	32	103	93	M80	A.5228.05	Uni 6125 3”	A.5208.05	NPT 3”	A.5218.05
PND-8/A6B6	63-67	69-73	79	100	71	32	103	93	M80	A.5228.06	Uni 6125 3”	A.5208.06	NPT 3”	A.5218.06
PND-8/A7B7	67-71	73-77	79	100	71	32	103	93	M80	A.5228.07	Uni 6125 3”	A.5208.07	NPT 3”	A.5218.07

Dimensions



PNS

Single seal cable glands, suitable for unarmoured cables. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PNS-... Series cable glands are used in classified Area Zone 1 & 2 and Zone 21 & 22.

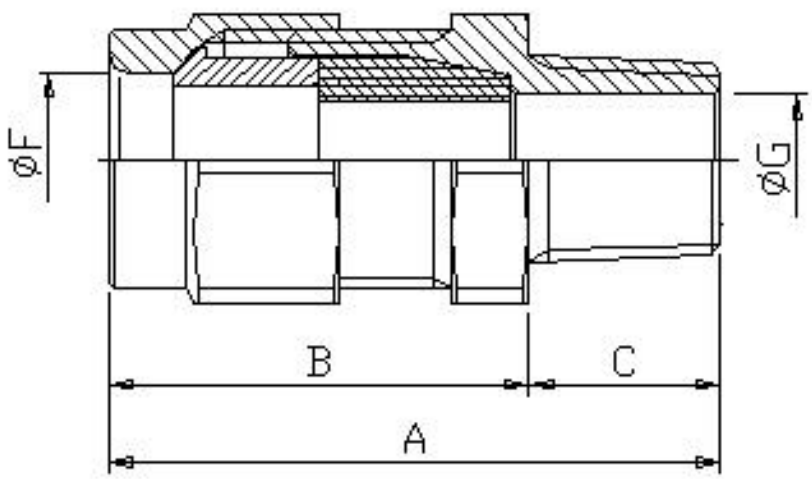
Specifications

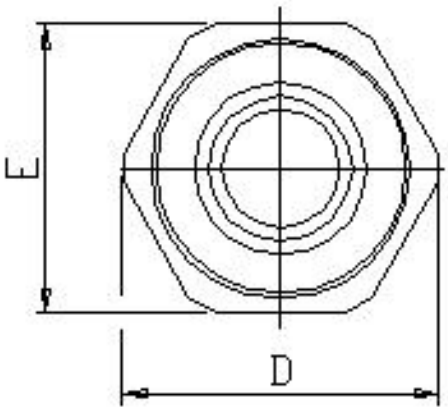
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PNS-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PNS-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): The type number will assume the ending Al. Example PNS-1-A1/Al
Accessories	Rubber Shroud for cable glands protection

PNS

Type	Cable overall diameter (outer seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PNS-1/A1	6-9	18	62	42	20	33	30	M20	A.1701.21	UNI 6125 ½”	A.1701.01	NPT 1/2”	A.1701.51
PNS-1/A2	9-12	18	62	42	20	33	30	M20	A.1701.22	UNI 6125 ½”	A.1701.02	NPT 1/2”	A.1701.52
PNS-2/A1	6-9	24	62	42	20	40	36	M25	A.1702.21	UNI 6125 3/4”	A.1702.01	NPT 3/4”	A.1702.51
PNS-2/A2	9-12	24	62	42	20	40	36	M25	A.1702.22	UNI 6125 3/4”	A.1702.02	NPT 3/4”	A.1702.52
PNS-2/A3	11-14	24	62	42	20	40	36	M25	A.1702.23	UNI 6125 3/4”	A.1702.03	NPT 3/4”	A.1702.53
PNS-2/A4	14-17	24	62	42	20	40	36	M25	A.1702.24	UNI 6125 3/4”	A.1702.04	NPT 3/4”	A.1702.54
PNS-3/A1	14-17	30	70	45	25	49	44	M32	A.1703.21	UNI 6125 1”	A.1703.01	NPT 1”	A.1703.51
PNS-3/A2	17-20	30	70	45	25	49	44	M32	A.1703.22	UNI 6125 1”	A.1703.02	NPT 1”	A.1703.52
PNS-3/A3	20-23	30	70	45	25	49	44	M32	A.1703.23	UNI 6125 1”	A.1703.03	NPT 1”	A.1703.53
PNS-5/A2	23-26	43	70	45	25	62	56	M50	A.1705.22	UNI 6125 1 1/2”	A.1705.02	NPT 1 1/2”	A.1705.52
PNS-5/A3	26-29	43	70	45	25	62	56	M50	A.1705.23	UNI 6125 1 1/2”	A.1705.03	NPT 1 1/2”	A.1705.53
PNS-5/A4	29-32	43	70	45	25	62	56	M50	A.1705.24	UNI 6125 1 1/2”	A.1705.04	NPT 1 1/2”	A.1705.54
PNS-5/A5	32-36	43	70	45	25	62	56	M50	A.1705.25	UNI 6125 1 1/2”	A.1705.05	NPT 1 1/2”	A.1705.55
PNS-6/A2	36-39	57	72	46	25	78	70	M63	A.1706.22	UNI 6125 2”	A.1706.02	NPT 2”	A.1706.52
PNS-6/A3	39-42	57	72	46	25	78	70	M63	A.1706.23	UNI 6125 2”	A.1706.03	NPT 2”	A.1706.53
PNS-6/A4	42-46	57	72	46	25	78	70	M63	A.1706.24	UNI 6125 2”	A.1706.04	NPT 2”	A.1706.54
PNS-7/A2	44-48	69	78	46	32	92	83	M75	A.1707.22	UNI 6125 2 1/2”	A.1707.02	NPT 2 1/2”	A.1707.52
PNS-7/A3	48-52	69	78	46	32	92	83	M75	A.1707.23	UNI 6125 2 1/2”	A.1707.03	NPT 2 1/2”	A.1707.53
PNS-7/A4	52-56	69	78	46	32	92	83	M75	A.1707.24	UNI 6125 2 1/2”	A.1707.04	NPT 2 1/2”	A.1707.54
PNS-7/A5	56-60	69	78	46	32	92	83	M75	A.1707.25	UNI 6125 2 1/2”	A.1707.05	NPT 2 1/2”	A.1707.55
PNS-8/A4	56-60	79	78	46	32	103	93	M80	A.1708.24	UNI 6125 3”	A.1708.04	NPT 3”	A.1708.54
PNS-8/A5	59-63	79	78	46	32	103	93	M80	A.1708.25	UNI 6125 3”	A.1708.05	NPT 3”	A.1708.55
PNS-8/A6	63-67	79	78	46	32	103	93	M80	A.1708.26	UNI 6125 3”	A.1708.06	NPT 3”	A.1708.56
PNS-8/A7	67-71	79	78	46	32	103	93	M80	A.1708.27	UNI 6125 3”	A.1708.07	NPT 3”	A.1708.57

Dimensions





PABAX

Double seal barrier cable glands, suitable for armoured cables. Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

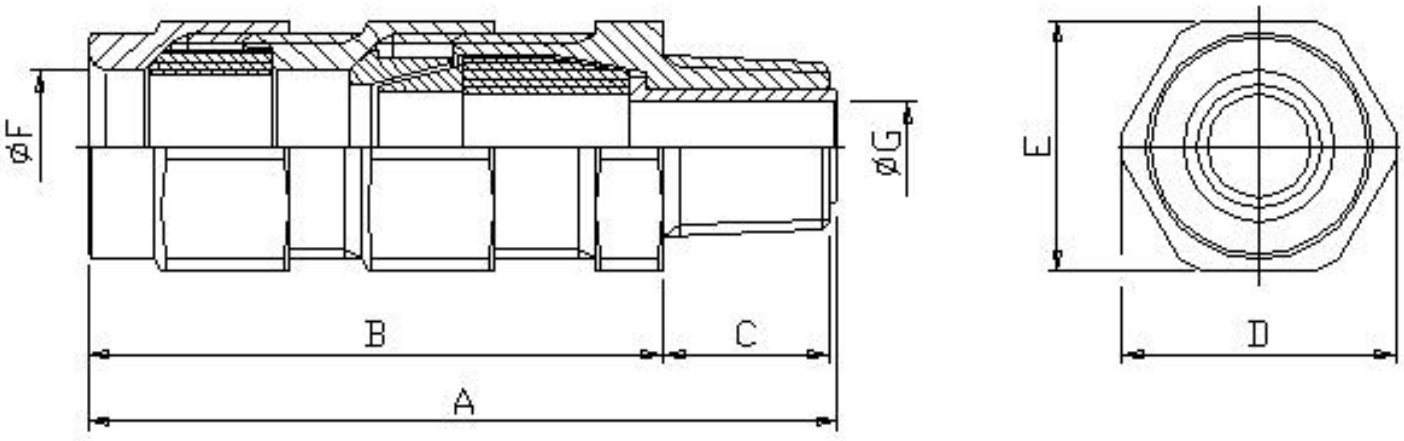
PABAX is a barrier cable gland with sealing compound in a separate kit. PABAX-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

Specifications

Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PABAX-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PABAX-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): type number will assume the ending Al. Example PABAX-1-A1/Al
Accessories	Sealing compound in separate kit. With one 200 ml. cartridge can be sealed between 30 to 35 cable glands “barrier type” size 1 to 3. Rubber Shroud for cable glands protection
Note	**All cable glands of a.m. series will be supplied with armouring-ring and cone nickel-chrome plated brass made (if not differently specified in offer or in order acknowledgment)**
Note	**The cable glands for armoured cables are suitable for armour thickness up to 1.25mm. Armours thicker than 1.26mm is available upon request**

Type	Cable under armour (inner seal)	Cable overall diameter (outer seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
			F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PABAX-1/A1B1	6-9	8-11	18	85	65	20	33	30	M20	A.5521.01	Uni 6125 ½”	A.5501.01	NPT ½”	A.5511.01
PABAX-1/A1B2	6-9	11-14	18	85	65	20	33	30	M20	A.5521.02	Uni 6125 ½”	A.5501.02	NPT ½”	A.5511.02
PABAX-1/A2B3	9-12	14-17	18	85	65	20	33	30	M20	A.5521.03	Uni 6125 ½”	A.5501.03	NPT ½”	A.5511.03
PABAX-2/A1B1	6-9	14-17	24	85	65	20	33	36	M25	A.5522.01	Uni 6125 ¾”	A.5502.01	NPT ¾”	A.5512.01
PABAX-2/A2B1	9-12	14-17	24	85	65	20	33	36	M25	A.5522.02	Uni 6125 ¾”	A.5502.02	NPT ¾”	A.5512.02
PABAX-2/A3B2	11-14	17-20	24	85	65	20	33	36	M25	A.5522.03	Uni 6125 ¾”	A.5502.03	NPT ¾”	A.5512.03
PABAX-2/A4B3	14-17	20-23	24	85	65	20	33	36	M25	A.5522.04	Uni 6125 ¾”	A.5502.04	NPT ¾”	A.5512.04
PABAX-3/A1B1	14-17	20-23	30	93	68	25	49	44	M32	A.5523.01	Uni 6125 1”	A.5503.01	NPT 1”	A.5513.01
PABAX-3/A2B2	17-20	23-26	30	93	68	25	49	44	M32	A.5523.02	Uni 6125 1”	A.5503.02	NPT 1”	A.5513.02
PABAX-3/A3B3	20-23	26-29	30	93	68	25	49	44	M32	A.5523.03	Uni 6125 1”	A.5503.03	NPT 1”	A.5513.03
PABAX-5/A2B2	23-26	29-32	43	93	68	25	62	56	M50	A.5525.02	Uni 6125 1 1/2”	A.5505.02	NPT 1 1/2”	A.5515.02
PABAX-5/A3B3	26-29	32-36	43	93	68	25	62	56	M50	A.5525.03	Uni 6125 1 1/2”	A.5505.03	NPT 1 1/2”	A.5515.03
PABAX-5/A4B4	29-32	36-39	43	93	68	25	62	56	M50	A.5525.04	Uni 6125 1 1/2”	A.5505.04	NPT 1 1/2”	A.5515.04
PABAX-5/A5B5	32-36	39-42	43	93	68	25	62	56	M50	A.5525.05	Uni 6125 1 1/2”	A.5505.05	NPT 1 1/2”	A.5515.05
PABAX-6/A2B2	36-39	44-48	57	95	71	25	78	70	M63	A.5526.02	Uni 6125 2”	A.5506.02	NPT 2”	A.5516.02
PABAX-6/A3B3	39-42	48-52	57	95	71	25	78	70	M63	A.5526.03	Uni 6125 2”	A.5506.03	NPT 2”	A.5516.03
PABAX-6/A4B4	42-46	52-56	57	95	71	25	78	70	M63	A.5526.04	Uni 6125 2”	A.5506.04	NPT 2”	A.5516.04
PABAX-7/A2B2	44-48	55-59	69	100	71	32	92	83	M75	A.5527.02	Uni 6125 2 1/2”	A.5507.02	NPT 2 1/2”	A.5517.02
PABAX-7/A3B3	48-52	59-63	69	100	71	32	92	83	M75	A.5527.03	Uni 6125 2 1/2”	A.5507.03	NPT 2 1/2”	A.5517.03
PABAX-7/A4B4	52-56	63-67	69	100	71	32	92	83	M75	A.5527.04	Uni 6125 2 1/2”	A.5507.04	NPT 2 1/2”	A.5517.04
PABAX-7/A5B4	56-60	63-67	69	100	71	32	92	83	M75	A.5527.05	Uni 6125 2 1/2”	A.5507.05	NPT 2 1/2”	A.5517.05
PABAX-8/A4B4	56-60	63-67	79	100	71	32	103	93	M80	A.5528.04	Uni 6125 3”	A.5508.04	NPT 3”	A.5518.04
PABAX-8/A5B5	59-63	65-69	79	100	71	32	103	93	M80	A.5528.05	Uni 6125 3”	A.5508.05	NPT 3”	A.5518.05
PABAX-8/A6B6	63-67	69-73	79	100	71	32	103	93	M80	A.5528.06	Uni 6125 3”	A.5508.06	NPT 3”	A.5518.06
PABAX-8/A7B7	67-71	73-77	79	100	71	32	103	93	M80	A.5528.07	Uni 6125 3”	A.5508.07	NPT 3”	A.5518.07

Dimensions



PMS

Single seal barrier cable glands, suitable for unarmoured cables.
Nickel-chrome plated brass, hexagon shaped, oil resistant anti-ageing EPDM gaskets.

PMS-… is a barrier cable gland with sealing compound in a separate kit. PMS-… Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

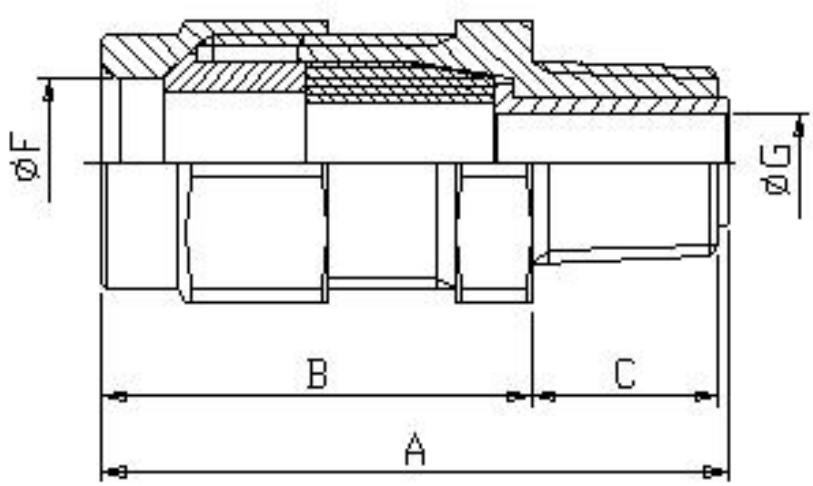
Specifications

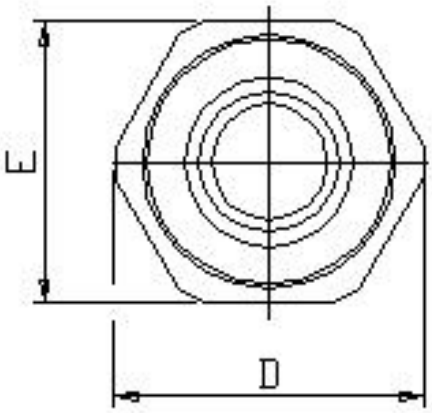
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PMS-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PMS-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): type number will assume the ending Al. Example PMS-1-A1/Al
Accessories	Sealing compound in separate kit. With one 200 ml. cartridge can be sealed between 30 to 35 cable glands “barrier type” size 1 to 3. Rubber Shroud for cable glands protection

PMS

Type	Cable overall diameter (outer seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
		F	A	B	C	D	E	Size	Code	Size	Code	Thread type	Code
PMS-1/A1	6-9	18	62	42	20	33	30	M20	A.5421.01	UNI 6125 ½”	A.5401.01	NPT 6125 ½”	A.5411.01
PMS-1/A2	9-12	18	62	42	20	33	30	M20	A.5421.02	UNI 6125 ½”	A.5401.02	NPT 6125 ½”	A.5411.02
PMS-2/A1	6-9	24	62	42	20	40	36	M25	A.5422.01	UNI 6125 3/4”	A.5402.01	NPT 6125 3/4”	A.5412.01
PMS-2/A2	9-12	24	62	42	20	40	36	M25	A.5422.02	UNI 6125 3/4”	A.5402.02	NPT 6125 3/4”	A.5412.02
PMS-2/A3	11-14	24	62	42	20	40	36	M25	A.5422.03	UNI 6125 3/4”	A.5402.03	NPT 6125 3/4”	A.5412.03
PMS-2/A4	14-17	24	62	42	20	40	36	M25	A.5422.04	UNI 6125 3/4”	A.5402.04	NPT 6125 3/4”	A.5412.04
PMS-3/A1	14-17	30	70	45	25	49	44	M32	A.5423.01	UNI 6125 1”	A.5403.01	NPT 6125 1”	A.5413.01
PMS-3/A2	17-20	30	70	45	25	49	44	M32	A.5423.02	UNI 6125 1”	A.5403.02	NPT 6125 1”	A.5413.02
PMS-3/A3	20-23	30	70	45	25	49	44	M32	A.5423.03	UNI 6125 1”	A.5403.03	NPT 6125 1”	A.5413.03
PMS-5/A2	23-26	43	70	45	25	62	56	M50	A.5425.02	UNI 6125 1 1/2”	A.5405.02	NPT 6125 1 ½”	A.5415.02
PMS-5/A3	26-29	43	70	45	25	62	56	M50	A.5425.03	UNI 6125 1 1/2”	A.5405.03	NPT 6125 1 ½”	A.5415.03
PMS-5/A4	29-32	43	70	45	25	62	56	M50	A.5425.04	UNI 6125 1 1/2”	A.5405.04	NPT 6125 1 ½”	A.5415.04
PMS-5/A5	32-36	43	70	45	25	62	56	M50	A.5425.05	UNI 6125 1 1/2”	A.5405.05	NPT 6125 1 ½”	A.5415.05
PMS-6/A2	36-39	57	72	46	25	78	70	M63	A.5426.02	UNI 6125 2”	A.5406.02	NPT 6125 2”	A.5416.02
PMS-6/A3	39-42	57	72	46	25	78	70	M63	A.5426.03	UNI 6125 2”	A.5406.03	NPT 6125 2”	A.5416.03
PMS-6/A4	42-46	57	72	46	25	78	70	M63	A.5426.04	UNI 6125 2”	A.5406.04	NPT 6125 2”	A.5416.04
PMS-7/A2	44-48	69	78	46	25	78	70	M75	A.5427.02	UNI 6125 2 1/2”	A.5407.02	NPT 6125 2 ½”	A.5417.02
PMS-7/A3	48-52	69	78	46	25	78	70	M75	A.5427.03	UNI 6125 2 1/2”	A.5407.03	NPT 6125 2 ½”	A.5417.03
PMS-7/A4	52-56	69	78	46	25	78	70	M75	A.5427.04	UNI 6125 2 1/2”	A.5407.04	NPT 6125 2 ½”	A.5417.04
PMS-7/A5	56-60	69	78	46	25	78	70	M75	A.5427.05	UNI 6125 2 1/2”	A.5407.05	NPT 6125 2 ½”	A.5417.05
PMS-8/A4	56-60	79	78	46	32	103	93	M80	A.5428.04	UNI 6125 3”	A.5408.04	NPT 6125 3”	A.5418.04
PMS-8/A5	59-63	79	78	46	32	103	93	M80	A.5428.05	UNI 6125 3”	A.5408.05	NPT 6125 3”	A.5418.05
PMS-8/A6	63-67	79	78	46	32	103	93	M80	A.5428.06	UNI 6125 3”	A.5408.06	NPT 6125 3”	A.5418.06
PMS-8/A7	67-71	79	78	46	32	103	93	M80	A.5428.07	UNI 6125 3”	A.5408.07	NPT 6125 3”	A.5418.07

Dimensions





PMD

Double seal barrier cable glands, suitable for unarmoured cables. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets.

PMD-… is a barrier cable gland with sealing compound in a separate kit.
PMD-… Series cable glands are used in classified area
Zone 1 & 2 and Zone 21 & 22.

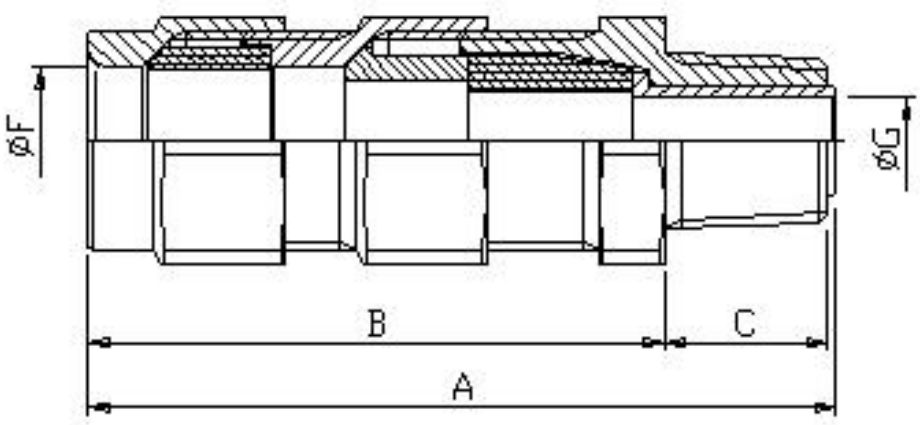
Specifications

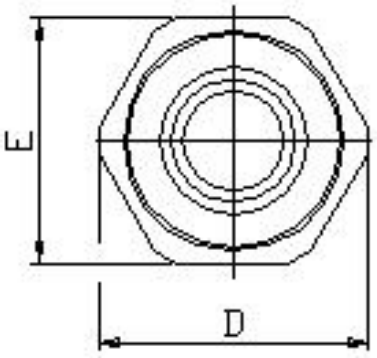
Material	Brass
IP Rating	IP66
Temperature	-50°C to 110°C
Approvals	
- Atex	INERIS 02ATEX0084
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Gaskets	EPDM
Surface treatment	Nickel-chrome Plated
Thread	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
Version on Request	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PMD-1-A1/304 Cable glands made of Stainless steel AISI 316L: type number will assume the ending 316. Example PMD-1-A1/316 Cable glands Aluminium Anticorodal made (not suitable for Group I): type number will assume the ending Al. Example PMD-1-A1/Al
Accessories	Sealing compound in separate kit. With one 200 ml. cartridge can be sealed between 30 to 35 cable glands “barrier type” size 1 to 3. Rubber Shroud for cable glands protection

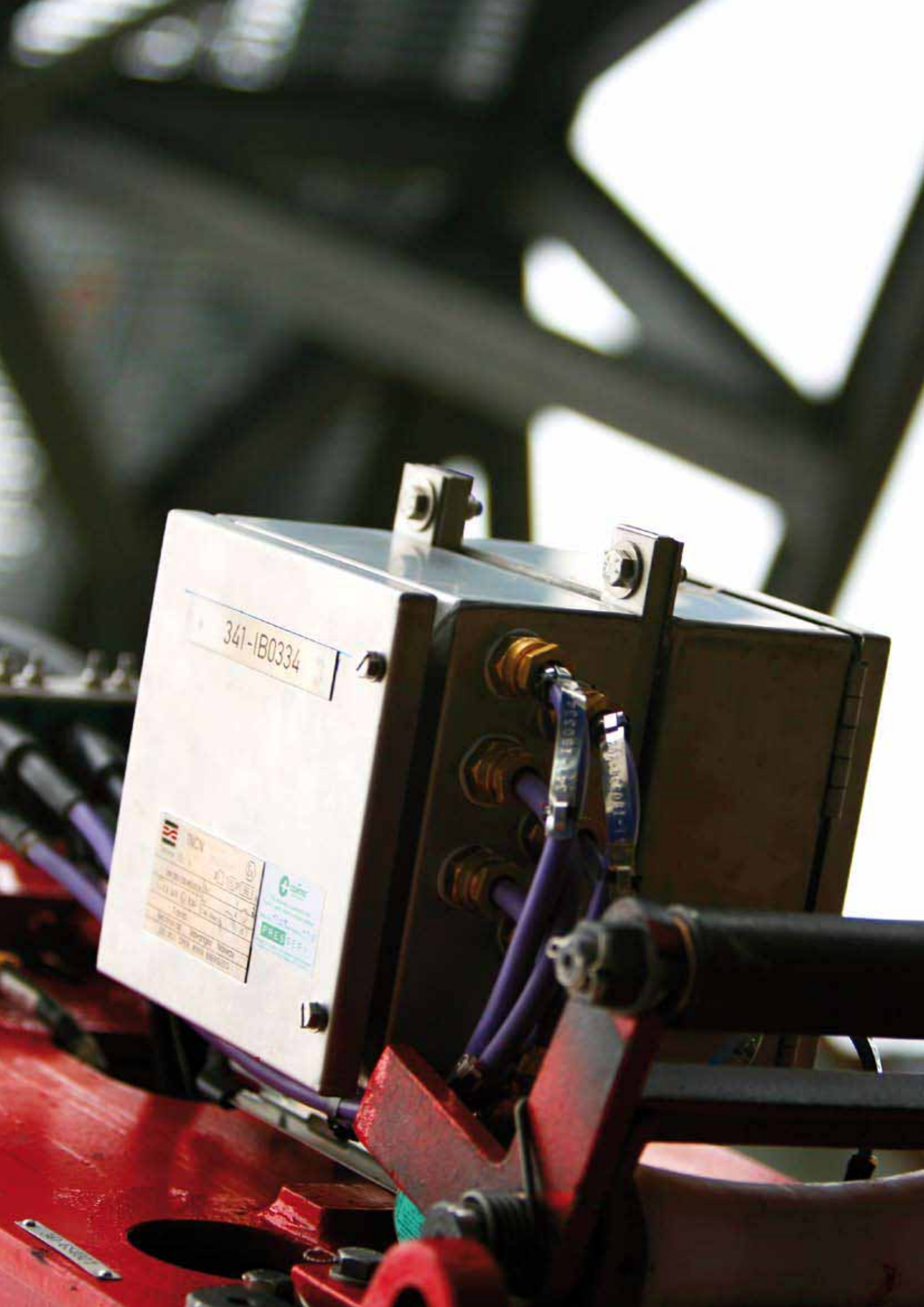
PMD

Type	Cable overall diameter (2nd insulation)	Cable overall diameter (1st insulation)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
			F	A	B	C	D	E	Size	Code	Size	Code	Size	Code
PMD-1/A1B1	6-9	8-11	18	85	65	20	33	30	M20	A.5621.01	Uni 6125 ½”	A.5601.01	NPT ½”	A.5611.01
PMD-1/A1B2	6-9	11-14	18	85	65	20	33	30	M20	A.5621.02	Uni 6125 ½”	A.5601.02	NPT ½”	A.5611.02
PMD-1/A2B3	9-12	14-17	18	85	65	20	33	30	M20	A.5621.03	Uni 6125 ½”	A.5601.03	NPT ½”	A.5611.03
PMD-2/A1B1	6-9	14-17	24	85	65	20	33	36	M25	A.5622.01	Uni 6125 ¾”	A.5602.01	NPT ¾”	A.5612.01
PMD-2/A2B1	9-12	14-17	24	85	65	20	33	36	M25	A.5622.02	Uni 6125 ¾”	A.5602.02	NPT ¾”	A.5612.02
PMD-2/A3B2	11-14	17-20	24	85	65	20	33	36	M25	A.5622.03	Uni 6125 ¾”	A.5602.03	NPT ¾”	A.5612.03
PMD-2/A4B3	14-17	20-23	24	85	65	20	33	36	M25	A.5622.04	Uni 6125 ¾”	A.5602.04	NPT ¾”	A.5612.04
PMD-3/A1B1	14-17	20-23	30	93	68	25	49	44	M32	A.5623.01	Uni 6125 1”	A.5603.01	NPT 1”	A.5613.01
PMD-3/A2B2	17-20	23-26	30	93	68	25	49	44	M32	A.5623.02	Uni 6125 1”	A.5603.02	NPT 1”	A.5613.02
PMD-3/A3B3	20-23	26-29	30	93	68	25	49	44	M32	A.5623.03	Uni 6125 1”	A.5603.03	NPT 1”	A.5613.03
PMD-5/A2B2	23-26	29-32	43	93	68	25	62	56	M50	A.5625.02	Uni 6125 1 1/2”	A.5605.02	NPT 1 1/2”	A.5615.02
PMD-5/A3B3	26-29	32-36	43	93	68	25	62	56	M50	A.5625.03	Uni 6125 1 1/2”	A.5605.03	NPT 1 1/2”	A.5615.03
PMD-5/A4B4	29-32	36-39	43	93	68	25	62	56	M50	A.5625.04	Uni 6125 1 1/2”	A.5605.04	NPT 1 1/2”	A.5615.04
PMD-5/A5B5	32-36	39-42	43	93	68	25	62	56	M50	A.5625.05	Uni 6125 1 1/2”	A.5605.05	NPT 1 1/2”	A.5615.05
PMD-6/A2B2	36-39	44-48	57	95	71	25	78	70	M63	A.5626.02	Uni 6125 2”	A.5606.02	NPT 2”	A.5616.02
PMD-6/A3B3	39-42	48-52	57	95	71	25	78	70	M63	A.5626.03	Uni 6125 2”	A.5606.03	NPT 2”	A.5616.03
PMD-6/A4B4	42-46	52-56	57	95	71	25	78	70	M63	A.5626.04	Uni 6125 2”	A.5606.04	NPT 2”	A.5616.04
PMD-7/A2B2	44-48	55-59	69	100	71	32	92	83	M75	A.5627.02	Uni 6125 2 1/2”	A.5607.02	NPT 2 1/2”	A.5617.02
PMD-7/A3B3	48-52	59-63	69	100	71	32	92	83	M75	A.5627.03	Uni 6125 2 1/2”	A.5607.03	NPT 2 1/2”	A.5617.03
PMD-7/A4B4	52-56	63-67	69	100	71	32	92	83	M75	A.5627.04	Uni 6125 2 1/2”	A.5607.04	NPT 2 1/2”	A.5617.04
PMD-7/A5B4	56-60	63-67	69	100	71	32	92	83	M75	A.5627.05	Uni 6125 2 1/2”	A.5607.05	NPT 2 1/2”	A.5617.05
PMD-8/A4B4	56-60	63-67	79	100	71	32	103	93	M80	A.5628.04	Uni 6125 3”	A.5608.04	NPT 3”	A.5618.04
PMD-8/A5B5	59-63	65-69	79	100	71	32	103	93	M80	A.5628.05	Uni 6125 3”	A.5608.05	NPT 3”	A.5618.05
PMD-8/A6B6	63-67	69-73	79	100	71	32	103	93	M80	A.5628.06	Uni 6125 3”	A.5608.06	NPT 3”	A.5618.06
PMD-8/A7B7	67-71	73-77	79	100	71	32	103	93	M80	A.5628.07	Uni 6125 3”	A.5608.07	NPT 3”	A.5618.07

Dimensions






341-IB0334

Fitting Accessories

Reducers provide a means of connection between equipment with dissimilar thread sizes.

RE range of reducers: Larger External Male Thread/Smaller Inner Female Thread

All the Reducers are designed for Ex d and Ex e mode of protection. Different types and sizes are indicated on the “Reducer Selection Table”

Specifications

Material Galvanised steel

Thread RE... Series:

Larger External Male Thread NPT/Smaller Inner Female Thread NPT

Larger External Male Thread UNI 6125/Smaller Inner Female Thread UNI 6125

Version on Request Alternative materials are:
- Brass nickel chrome-plating finishing
- Stainless Steel
- Aluminium (Mg. ≤ 6%). Not suitable for Group I

Note **The Marking is directly realized on the reducers with mechanically incision inscriptions**

Selection Table

Code UNI 6125	Code NPT	Type	Size	Weight (kg)
A.0050.01	A.0050.61	RE 21	3/4” X 1/2”	0.04
A.0050.02	A.0050.62	RE 31	1” X 1/2”	0.08
A.0050.03	A.0050.63	RE 32	1” X 3/4”	0.08
A.0050.07	A.0050.67	RE 51	1 ½” X 1/2”	0.27
A.0050.08	A.0050.68	RE 52	1 ½” X 3/4”	0.27
A.0050.09	A.0050.69	RE 53	1 ½” X 1”	0.27
A.0050.12	A.0050.72	RE 62	2” X 3/4”	0.48
A.0050.13	A.0050.73	RE 63	2” X 1”	0.48
A.0050.15	A.0050.75	RE 65	2” X 1 ½”	0.48
A.0050.17		RE 72	2 ½” X 3/4”	0.80
A.0050.18	A.0050.78	RE 73	2 ½” X 1”	0.80
A.0050.20	A.0050.80	RE 75	2 ½” X 1 ½”	0.80
A.0050.21	A.0050.81	RE 76	2 ½” X 2”	0.80
A.0050.23		RE 82	3” X 3/4”	1.00
A.0050.24	A.0050.84	RE 83	3” X 1”	1.00
A.0050.26	A.0050.86	RE 85	3” X 1 ½”	1.00
A.0050.27	A.0050.87	RE 86	3” X 2”	1.00
A.0050.28	A.0050.88	RE 87	3” X 2 ½”	1.00

Reducers ordering examples: E.g. Type RE31 = Male Thread 1” / Famale Thread ½”

Fitting Accessories

Adaptors provide a means of connection between equipment with dissimilar thread sizes.

REB range adaptors: Larger Female Thread/Smaller Male Thread

All the adaptors are designed for Ex d and Ex e mode of protection. Different types and sizes are indicated on the “Adaptor Selection Table”

Specifications

Material	Galvanised steel
Thread	REB... Series:

Smaller External Male Thread NPT/Larger Inner Female Thread NPT

Smaller External Male Thread UNI 6125/Larger Inner Female Thread UNI 6125

Version on Request	Alternative materials are: - Brass nickel chrome-plating finishing - Stainless Steel - Aluminium (Mg. ≤ 6%). Not suitable for Group I
Note	**The Marking is directly realized on the reducers with mechanically incision inscriptions**

Selection Table

Code Uni 6125	Code NPT	Type	Size	Weight (kg)
A.0051.1	A.0051.71	REB 21	3/4” X 1/2”	0.12
A.0051.2	A.0051.40	REB 31	1” X 1/2”	0.15
A.0051.3	A.0051.73	REB 32	1” X 3/4”	0.15
A.0051.8	A.0051.78	REB 52	1 ½” X ¾”	0.27
A.0051.9	A.0051.79	REB 53	1 ½” X 1”	0.27
A.0051.13	A.0051.41	REB 63	2” X 1”	0.35
A.0051.15	A.0051.42	REB 65	2” X 1 ½”	0.35
A.0051.18	A.0051.43	REB 73	2 ½” X 1”	0.60
A.0051.20	A.0051.80	REB 75	2 ½” X 1 ½”	0.60
A.0051.21	A.0051.81	REB 76	2 ½” X 2”	0.60
A.0051.24	A.0051.84	REB 83	3” X 1”	0.70
A.0051.26	A.0051.86	REB 85	3” X 1 ½”	0.70
A.0051.27	A.0051.87	REB 86	3” X 2”	0.70
A.0051.28	A.0051.88	REB 87	3” X 2 ½”	0.70

Adaptors ordering example: E.g. REB31 = Female Thread 1” / Male Thread 1/2”

Fitting Accessories

Male Taper NPT / Female Taper UNI 6125 thread adaptors provide a connection between equipment with dissimilar thread sizes and type.

All the adaptors are designed for Ex d and Ex e mode of protection. Different types and sizes are indicated on the “Adaptor Selection Table”

Specifications

Material	Brass nickel chrome-plating finishing
Version on Request	Alternative materials are: - Stainless Steel - Aluminium (Mg. ≤ 6%). Not suitable for Group I - Galvanized mild Steel
Note	**The Marking is directly realized on the adaptors with mechanically incision inscriptions**

Selection Tables

Cylindrical Male PG / Conic Female UNI-6125 or NPT thread

CODE UNI 6125	CODE NPT	TYPE	SIZE	WEIGHT (Kg)
A.0051.52	A.0052.60	REB 16/1	½” X PG 16	0.12
A.0051.50	A.0052.61	REB 16/2	¾” X PG 16	0.15
A.0051.53	A.0052.62	REB 21/2	¾” X PG 21	0.27
A.0051.51	A.0052.63	REB 21/3	1” X PG 21	0.27
A.0051.54	A.0052.64	REB 29/3	1” X PG 29	0.30
A.0051.55	A.0052.65	REB 36/5	1 ½” X PG 36	0.35
A.0051.56	A.0052.66	REB 42/6	2” X PG 42	0.60
A.0051.57	A.0052.67	REB 48/6	2” X PG 48	0.70

Cylindrical Male Metric Pitch (1,5) / Conic Female UNI-6125

CODE UNI 6125	Type	TYPE	WEIGHT (kg)
A.0051.61	REB m16/1	M 16 X 1/2”	0.12
A.0051.62	REB m20/1	M 20 X 1/2”	0.15
A.0051.63	REB m20/2	M 20 X 3/4”	0.27
A.0051.64	REB m25/2	M 25 X 3/4”	0.27
A.0051.65	REB m25/3	M 25 X 1”	0.30
A.0051.66	REB m32/3	M 32 X 1”	0.35

Fitting Accessories

Stopping Plugs provide a means to close unused entries and maintain the integrity of the enclosure. The Stopping Plugs are Ex d and Ex e certified. Different Types and sizes are indicated in the “Plugs Selection Tables”.

Specifications

Material	Brass /Stainless Steel
IP Rating	IP67
Temperature	-50°C to 130°C
Approvals	
- Atex	INERIS 04ATEX9006U
- GOST	GOST Certificate
Standards	EN/IEC: 60079-0, 60079-1, 60079-7
	EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I IP67 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
Thread	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
Version on Request	Alternative materials are: Brass nickel chrome-plating finishing Galvanized Mild Steel Stainless Steel Aluminium (Mg. ≤ 6%). Not suitable for Group I
Note	**The Marking is directly realized on the Plugs with mechanically incision inscriptions**

Code-Brass Nickelchrome	Code-Stainless Steel	Type	UNI 6125 Threaded
G.1211.00	G.1411.00	T1	½”
G.1212.00	G.1412.00	T2	¾”
G.1213.00	G.1413.00	T3	3 1”
G.1215.00	G.1415.00	T5	1 ½”
G.1216.00	G.1416.00	T6	2
G.1217.00	G.1417.00	T7	2 ½”
G.1218.00	G.1418.00	T8	3”

Code-Brass Nickechrome	Code-Stainless Steel	Type	NPTThreaded
G.1231.00	G.1431.00	T1N	½” NPT
G.1232.00	G.1432.00	T2N	¾” NPT
G.1233.00	G.1433.00	T3N	1” NPT
G.1235.00	G.1435.00	T5N	1 ½” NPT
G.1236.00	G.1436.00	T6N	2” NPT
G.1237.00	G.1437.00	T7N	2 ½” NPT
G.1238.00	G.1438.00	T8N	3” NPT

Code-Brass Nickelchrome	Code-Stainless Steel	Type	Metric Threaded
G.1221.00	G.1421.00	T20	M20
G.1222.00	G.1422.00	T25	M25
G.1223.00	G.1423.00	T32	M32
G.1224.00	G.1424.00	T40	M40
G.1225.00	G.1425.00	T50	M50
G.1226.00	G.1426.00	T63	M63
G.1227.00	G.1427.00	T75	M75

Locknuts - DL

Locknuts DL Series made of Nickel-chrome plated brass, suitable for connection with fittings and cable glands, with tightness gasket.

Code	Type	Size
A.1500.10	DL 20	M20
A.1500.11	DL 25	M25
A.1500.12	DL 32	M32
A.1500.13	DL 40	M40
A.1500.14	DL 50	M50
A.1500.15	DL 63	M63
A.1500.16	DL 75	M75

Gaskets - GK

Tightness Gasket GK Series, suitable for connection with fittings and cable glands.

Code	Type	Size
P.2201.14	GK 20	M20
P.2201.51	GK 25	M25
P.8650.13	GK 32	M32
P.8650.14	GK 40	M40
P.8650.15	GK 50	M50
P.8650.16	GK 63	M63
P.8650.17	GK 75	M75
P.8620.12	GK 1	½" NPT – UNI 6125
P.8620.13	GK 2	¾" NPT - UNI 6125
P.8620.14	GK 3	1" NPT - UNI 6125
P.8620.16	GK 5	1 ½" NPT - UNI 6125
P.8620.17	GK 6	2" NPT - UNI 6125
P.8620.18	GK 7	2 ½" NPT - UNI 6125
P.8620.19	GK 8	3" NPT - UNI 6125

Rubber Shroud - PGA

Black Rubber Shroud PGA for cable glands protection.

Code	Type	Size
2.0001.01	PGA 1	M20 / ½" UNI6125 / NPT
2.0001.02	PGA 2	M25 / ¾" UNI6125 / NPT
2.0001.03	PGA 3	M32 / 1" UNI6125 / NPT
2.0001.05	PGA 5	M50 / 1 ½" UNI6125 / NPT
2.0001.06	PGA 6	M63 / 2" UNI6125 / NPT
2.0001.07	PGA 7	M75 / 2 ½" UNI6125 / NPT
2.0001.08	PGA 8	M80 / 3" UNI6125 / NPT

Sealing Compound for Barrier Cable Glands

For a correct application of the quick-drying two-components "Resin-Araldite" compound in barrier cable glands, use of our special mixer-gun is strongly recommended. Manual mixer-gun grants a perfect dosage of the two-component compound. One 200 ml. cartridge can seal between 30 to 35 barrier cable gland size 1 to 3.

Code	Type	Notes
A.0299.10	2012 / PT	Manual mixer gun for two components cartridges 200 ml., 2012/1 type.
A.0299.15	2012 /1	Single 200 ml. cartridge with mixer spout
A.0299.20	2012/6	Standard carton with 6x200 ml. cartridges completed with mixer spout
H010030	-	Manual mixer gun for single component cartridges (silicone only)
H010003	-	Silicone 7091 type n.1 310ml cartridge

FSX

The FSX range of socket outlets / welding receptacles are housed in AISI316 stainless steel enclosure utilizing the DXN range of decontactor. The socket is mounted on a hinged lid to keep internal space of the junction box available for ease of wiring and installation.

The FSX enclosure is supplied with terminal rail suitable for looping and the cross section of looping terminals allows the use of cable size up to one size larger than socket contacts for flexibility.

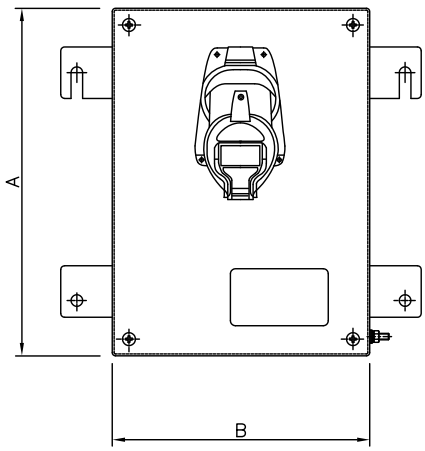
Specifications

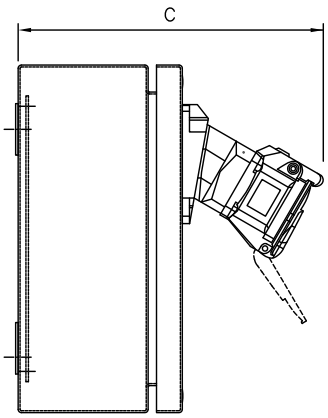
Material	Stainless Steel AISI316L Housing
IP Rating	IP65-66 (see attached table)
Temperature	-40°C to 60°C (see attached table)
Approvals	
- Atex	INERIS 06ATEX0015
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex ed IIC T6/T5/T4 Ex tD A21 IP66 T85°C/T100°C/T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 21, Zone 2 / Zone 22
Lid / Door gasket	POR 303/F/GR/CIG
Quantity for entries	Nr. 1 double seal Ex e Stainless steel AISI 316L cable gland Nr. 1 Ex e Stainless steel AISI 316L blank plug

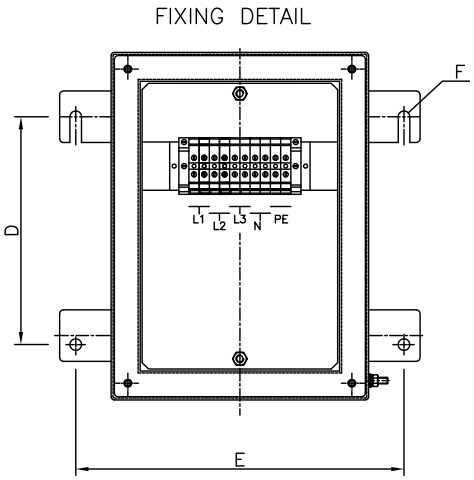
Note

Detailed description of DXN contact system is available in following chapter concerning FPR plugs.
Rated voltage identification by colour code as per IEC/EN 60-309-1
Interior keying system with 24 non interchangeable positions to avoid accidental connection of apparatus having a non compatible voltage.

Dimensions







FSX

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE [V]	CON-TACT ARR-ANGE-MENTS	CURRENT [A]	Earth Pin Position	FQ [Hz]	CON-NECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) [mmq]	ENTRIES	OVERALL DIMENSIONS (AxBxC) [mm]	MOUNTING INTERAXES (ExD)-F
FSX-2-20-24-50	A.4300.26		24	2P	20	Central	50	10 / 10	2 x M25	217X200X257	192X1 -9
FSX-3-20-110-50	A.4300.27		110-130	1P+N+E	20	Central	50	10 / 10	2 x M25	217X200X257	192X1 -9
FSX-3-20-230-50	A.4300.28		220-250	1P+N+E	20	Central	50	10 / 10	2 x M25	217X200X257	192X1 -9
FSX-4-20-400-50	A.4300.29		380-440	3P+E	20	Central	50	10 / 10	2 x M25	280X270X257	255X177 -9
FSX-5-20-400-50	A.4300.30		380-440	3P+N+E	20	Central	50	10 / 10	2 x M25	280X270X257	255X177 -9
FSX-2-32-24-50	A.4300.31		24	2P	32	Central	50	16 / 16	2 x M32	280X270X268	255X177 -9
FSX-3-32-110-50	A.4300.32		110-130	1P+N+E	32	Central	50	16 / 16	2 x M32	280X270X268	255X177 -9
FSX-3-32-230-50	A.4300.33		220-250	1P+N+E	32	Central	50	16 / 16	2 x M32	280X270X268	255X177 -9
FSX-4-32-400-50	A.4300.34		380-440	3P+E	32	Central	50	16 / 16	2 x M32	350X350X268	325X257 -9
FSX-5-32-400-50	A.4300.35		380-440	3P+N+E	32	Central	50	16 / 16	2 x M32	350X350X268	325X257 -9
FSX-2-63-24-50	A.4300.36		24	2P	63	Central	50	35 / 35	2 x M50	350X350X295	325X257 -9
FSX-3-63-110-50	A.4300.37		110-130	1P+N+E	63	Central	50	35 / 35	2 x M50	350X350X295	325X257 -9
FSX-3-63-230-50	A.4300.38		220-250	1P+N+E	63	Central	50	35 / 35	2 x M50	350X350X295	325X257 -9
FSX-4-63-400-50	A.4300.39		380-440	3P+E	63	Central	50	35 / 35	2 x M50	430X500X325	405X407 -9
FSX-5-63-400-50	A.4300.40		380-440	3P+N+E	63	Central	50	35 / 35	2 x M50	430X500X325	405X407 -9

I.E. / Example
FSX-3-20-230-50
FSX = Flameproof Socket Stainless Steel
3 = Poles Number
20 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE (V)	CONTACT ARRANGE-MENTS	CURRENT (A)	Earth Pin Position	FRE-QUENCY (HZ)	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) mmq	ENTRIES	OVERALL DIMEN-SIONS (AxBxC)	MOUN-TING INTER-AXES (ExD)-F
FSX-2-2a-32-24-50	A.4300.80		24	2P +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	280x270 x268	255x177-9
FSX-3-2a-32-110-50	A.4300.41		110-130	1P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	280x270 x268	255x177-9
FSX-3-2a-32-230-50	A.4300.42		220-250	1P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	280x270 x268	255x177-9
FSX-4-2a-32-400-50	A.4300.43		380-440	3P+E +2aux	32	Central	50	16 / 16 /4	2 x M32 + 1 x M20	350x350 x268	325x257-9
FSX-5-2a-32-400-50	A.4300.44		380-440	3P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M32 + 1 x M20	350x350 x268	325x257-9
FSX-2-2a-63-24-50	A.4300.45		24	2P +2aux	63	Central	50	35 / 35 / 4	2 x M32 + 1 x M20	350x350 x295	325x257-9
FSX-3-2a-63-110-50	A.4300.46		110-130	1P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M32 + 1 x M20	350x350 x295	325x257-9
FSX-3-2a-63-230-50	A.4300.47		220-250	1P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M32 + 1 x M20	350x350 x295	325x257-9
FSX-4-2a-63-400-50	A.4300.48		380-440	3P+E +2aux	63	Central	50	35 / 35 / 4	2 x M50 + 1 x M20	350x350 x295	325x257-9
FSX-5-2a-63-400-50	A.4300.49		380-440	3P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M50 + 1 x M20	350x350 x295	325x257-9

I.E. / Example
FSX-3-2a-32-230-50
FSX = Flameproof Socket Stainless Steel
3 = Poles Number
2a = Number auxiliary contact
20 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

FSAL

The FSAL range of socket outlets / welding receptacles are housed in a copper free aluminium enclosure utilizing the DXN range of decontactor. The socket is mounted on a hinged lid to keep internal space of the junction box available for ease of wiring and installation.
The FSAL enclosure is supplied with terminal rail suitable for looping and the cross section of looping terminals allows the use of cable size up to one size larger than socket contacts for flexibility.

Specifications

Material	Copper Free Aluminum Housing
IP Rating	IP65-66 (see attached table)
Temperature	-40°C to 60°C (see attached table)
Approvals	
- Atex	INERIS 06ATEX0015
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex ed IIC T6/T5/T4 Ex tD A21 IP66 T85°C/T100°C/T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 21, Zone 2 / Zone 22
Lid / Door gasket	Silicone seal
Surface treatment	External polyurethane painting (RAL 6003)v
Quantity for entries	Nr. 1 single seal Ex e brass nickel chrome plated cable gland for armoured cable Nr. 1 Ex e brass nickel chrome plated blank plug

Note	**Detailed description of DXN contact system is available in following chapter concerning FPR plugs.** **Rated voltage identification by colour code as per IEC/EN 60-309-1** **Interior keying system with 24 non interchangeable positions to avoid accidental connection of apparatus having a non compatible voltage.**

FSAL

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE [V]	CONTACT ARRANGE-MENTS	CURRENT [A]	Earth Pin Position	FQ Hz	Cores mmq	ENTRIES	OVERALL DIMENSIONS (AxBxC) [mm]	MOUNTING INTERAXES (ExD)-F
FSAL-2-20-24-50	A.4300.50		24	2P	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 7
FSAL-3-20-110-50	A.4300.51		110-130	1P+N+E	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 7
FSAL-3-20-230-50	A.4300.52		220-250	1P+N+E	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 7
FSAL-4-20-400-50	A.4300.53		380-440	3P+E	20	Central	50	10 / 10	2 x M25	178x160x218	140x110 - 7
FSAL-5-20-400-50	A.4300.54		380-440	3P+N+E	20	Central	50	10 / 10	2 x M25	178x160x218	140x110 - 7
FSAL-2-32-24-50	A.4300.55		24	2P	32	Central	50	16 / 16	2 x M32	198x180x240	160x130 - 7
FSAL-3-32-110-50	A.4300.56		110-130	1P+N+E	32	Central	50	16 / 16	2 x M32	198x180x240	160x130 - 7
FSAL-3-32-230-50	A.4300.57		220-250	1P+N+E	32	Central	50	16 / 16	2 x M32	198x180x240	160x130 - 7
FSAL-4-32-400-50	A.4300.58		380-440	3P+E	32	Central	50	16 / 16	2 x M32	220x232x248	180x180 - 7
FSAL-5-32-400-50	A.4300.59		380-440	3P+N+E	32	Central	50	16 / 16	2 x M32	220x232x248	180x180 - 7
FSAL-2-63-24-50	A.4300.60		24	2P	63	Central	50	35 / 35	2 x M50	220x232x276	180x180 - 7
FSAL-3-63-110-50	A.4300.61		110-130	1P+N+E	63	Central	50	35 / 35	2 x M50	220x232x276	180x180 - 7
FSAL-3-63-230-50	A.4300.62		220-250	1P+N+E	63	Central	50	35 / 35	2 x M50	220x232x276	180x180 - 7
FSAL-4-63-400-50	A.4300.63		380-440	3P+E	63	Central	50	35 / 35	2 x M50	331x404x276	262x382.5 - 7
FSAL-5-63-400-50	A.4300.64		380-440	3P+N+E	63	Central	50	35 / 35	2 x M50	331x404x276	262x382.5 - 7

FQ = Frequency
Cores = CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) [mmq]

I.E. / Example
FSAL-3-20-230-50
FSAL = Flameproof Socket Aluminium
3 = Poles Number
20 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE (V)	CONTACT ARRANGE-MENTS	CURRENT (A)	Earth Pin Position	FQ HZ	Cores mmq	ENTRIES	OVERALL DIMENSIONS (AxBxC)	MOUNTING INTERAXES (ExD)-F
FSAL-2-2a-32-24-50	A.4300.65		24	2P+2aux	32	Central	50	16/16/4	2 x M25 + 1 x M20	198x180x240	160x130 -7
FSAL-3-2a-32-110-50	A.4300.66		110-130	1P+N+E+2aux	32	Central	50	16/16/4	2 x M25 + 1 x M20	198x180x240	160x130 -7
FSAL-3-2a-32-230-50	A.4300.67		220-250	1P+N+E+2aux	32	Central	50	16/16/4	2 x M25 + 1 x M20	198x180x240	160x130 -7
FSAL-4-2a-32-400-50	A.4300.68		380-440	3P+E+2aux	32	Central	50	16/16/4	2 x M32 + 1 x M20	220x232x248	180x180 -7
FSAL-5-2a-32-400-50	A.4300.69		380-440	3P+N+E+2aux	32	Central	50	16/16/4	2 x M32 + 1 x M20	220x232x248	180x180 -7
FSAL-2-2a-63-24-50	A.4300.70		24	2P+2aux	63	Central	50	35/35/4	2 x M25 + 1 x M20	220x232x276	180x180 -7
FSAL-3-2a-63-110-50	A.4300.71		110-130	1P+N+E+2aux	63	Central	50	35/35/4	2 x M25 + 1 x M20	220x232x276	180x180 -7
FSAL-3-2a-63-230-50	A.4300.72		220-250	1P+N+E+2aux	63	Central	50	35/35/4	2 x M25 + 1 x M20	220x232x276	180x180 -7
FSAL-4-2a-63-400-50	A.4300.73		380-440	3P+E+2aux	63	Central	50	35/35/4	2 x M50 + 1 x M20	331x404x276	262x382.5-7
FSAL-5-2a-63-400-50	A.4300.74		380-440	3P+N+E+2aux	63	Central	50	35/35/4	2 x M50 + 1 x M20	331x404x276	262x382.5-7

I.E. / Example
FSAL-3-2a-32-230-50
FSAL = Flameproof Socket Aluminium
3 = Poles Number
2a = Number auxiliary contact
20 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

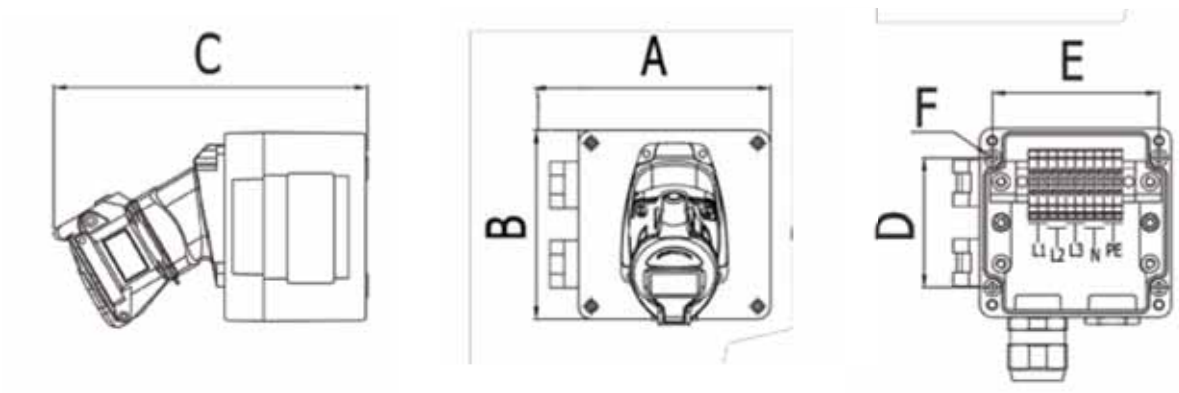
FSR

The FSR range of socket outlets / welding receptacles are housed in a GRP enclosure utilizing the DXN range of decontactor. The socket is mounted on a hinged lid to keep internal space of the junction box available for ease of wiring and installation. The FSR enclosure is supplied with terminal rail suitable for looping and the cross section of looping terminals allows the use of cable size up to one size larger than socket contacts for flexibility.

Specifications

Material	Glass Fibre Reinforced Polyester
IP Rating	IP65-66 (see attached table)
Temperature	-40°C to 60°C (see attached table)
Approvals	
- Atex	INERIS 06ATEX0015
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ⓔx II 2 GD Ex ed IIC T6/T5/T4 Ex tD A21 IP66 T85°C/T100°C/T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 21, Zone 2 / Zone 22
Lid / Door gasket	Silicone seal
Surface treatment	Black Glass Fibre
Quantity for entries	Nr. 1 single seal Ex e brass nickel chrome plated cable gland for armoured cable Nr. 1 Ex e brass nickel chrome plated blank plug
Note	**Detailed description of DXN contact system is available in following chapter concerning FPR plugs.** **Rated voltage identification by colour code as per IEC/EN 60-309-1** **Interior keying system with 24 non interchangeable positions to avoid accidental connection of apparatus having a non compatible voltage.**

Dimensions



FSR

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE (V)	CONTACT ARRANGEMENTS	CUR-RENT (A)	Earth Pin Position	FQ HZ	Cores mmq	ENTRIES	OVERALL DIMENSIONS (AxBxC)	MOUNTING INTERAXES (ExD)-F
FSR-2-20-24-50	A.4300.01		24	2P	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 6.3
FSR-3-20-110-50	A.4300.02		110-130	1P+N+E	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 6.3
FSR-3-20-230-50	A.4300.03		220-250	1P+N+E	20	Central	50	10 / 10	2 x M25	140x120x218	106x82 - 6.3
FSR-4-20-400-50	A.4300.04		380-440	3P+E	20	Central	50	10 / 10	2 x M25	178x160x218	140x110 -6.5
FSR-5-20-400-50	A.4300.05		380-440	3P+N+E	20	Central	50	10 / 10	2 x M25	178x160x218	140x110 -6.5
FSR-2-32-24-50	A.4300.06		24	2P	32	Central	50	16 / 16	2 x M32	273x250x259	235x200 - 6.5
FSR-3-32-110-50	A.4300.07		110-130	1P+N+E	32	Central	50	16 / 16	2 x M32	273x250x259	235x200 - 6.5
FSR-3-32-230-50	A.4300.08		220-250	1P+N+E	32	Central	50	16 / 16	2 x M32	273x250x259	235x200 - 6.5
FSR-4-32-400-50	A.4300.09		380-440	3P+E	32	Central	50	16 / 16	2 x M32	273x250x259	235x200 - 6.5
FSR-5-32-400-50	A.4300.10		380-440	3P+N+E	32	Central	50	16 / 16	2 x M32	273x250x259	235x200 - 6.5
FSR-2-63-24-50	A.4300.11		24	2P	63	Central	50	35 / 35	2 x M50	273x250x286	235x200 - 6.5
FSR-3-63-110-50	A.4300.12		110-130	1P+N+E	63	Central	50	35 / 35	2 x M50	273x250x286	235x200 - 6.5
FSR-3-63-230-50	A.4300.13		220-250	1P+N+E	63	Central	50	35 / 35	2 x M50	273x250x286	235x200 - 6.5
FSR-4-63-400-50	A.4300.14		380-440	3P+E	63	Central	50	35 / 35	2 x M50	273x250x286	235x200 - 6.5
FSR-5-63-400-50	A.4300.15		380-440	3P+N+E	63	Central	50	35 / 35	2 x M50	273x250x286	235x200 - 6.5

I.E./Example FSR-3-20-230-50 FSR = Flameproof Socket Resin 3 = Poles Number 20 = Current (A) 230 = Voltage (V) 50 = Frequency (HZ)

ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE (V)	CONTACT ARRANGEMENTS	CUR-RENT (A)	Earth Pin Position	FQ (HZ)	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) mmq	ENTRIES	OVERALL DIMEN-SIONS (AxBxC)	MOUN-TING INTER-AXES (ExD)-F
FSR-2-2a-32-24-50	A.4300.16		24	2P +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	273x250 x259	235x200-6.5
FSR-3-2a-32-110-50	A.4300.17		110-130	1P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	273x250 x259	235x200-6.5
FSR-3-2a-32-230-50	A.4300.18		220-250	1P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M25 + 1 x M20	273x250 x259	235x200-6.5
FSR-4-2a-32-400-50	A.4300.19		380-440	3P+E +2aux	32	Central	50	16 / 16 /4	2 x M32 + 1 x M20	273x250 x259	235x200-6.5
FSR-5-2a-32-400-50	A.4300.20		380-440	3P+N+E +2aux	32	Central	50	16 / 16 /4	2 x M32 + 1 x M20	273x250 x259	235x200-6.5
FSR-2-2a-63-24-50	A.4300.21		24	2P +2aux	63	Central	50	35 / 35 / 4	2 x M25 + 1 x M20	273x250 x286	235x200-6.5
FSR-3-2a-63-110-50	A.4300.22		110-130	1P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M25 + 1 x M20	273x250 x286	235x200-6.5
FSR-3-2a-63-230-50	A.4300.23		220-250	1P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M25 + 1 x M20	273x250 x286	235x200-6.5
FSR-4-2a-63-400-50	A.4300.24		380-440	3P+E +2aux	63	Central	50	35 / 35 / 4	2 x M50 + 1 x M20	273x250 x286	235x200-6.5
FSR-5-2a-63-400-50	A.4300.25		380-440	3P+N+E +2aux	63	Central	50	35 / 35 / 4	2 x M50 + 1 x M20	273x250 x286	235x200-6.5

I.E. / Example FSR-3-2a-32-230-50

FSR = Flameproof Socket Resin 3 = Poles Number 2a = Number auxiliary contact 20 = Current (A) 230 = Voltage (V) 50 = Frequency (HZ)

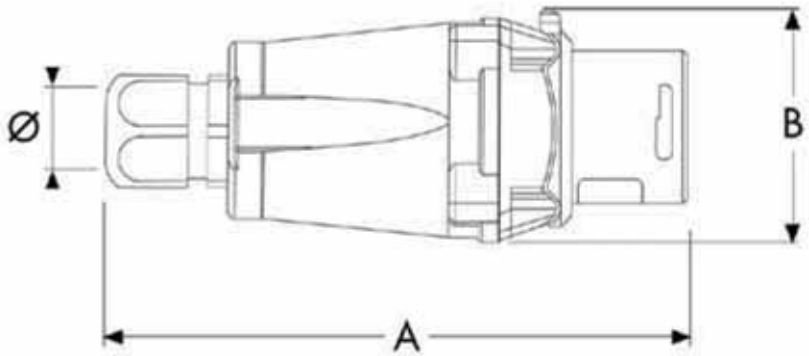
FPR

The FPR range of plugs utilize the DXN System and are compatible with socket outlet & welding receptacles FSR, FSX and FSAL series.
DXN Decontactors, thanks to their self-extinguishing non-static Glass Reinforced Polyester can withstand heavy duty use, severe mechanical stress and presence of chemical aggressive agents.

Specifications

Material	Glass Fibre Reinforced Polyester
IP Rating	IP65-66 (see attached table)
Temperature	-40°C to 60°C (see attached table)
Approvals	
- Atex	INERIS 06ATEX0015
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN: 61241-0, 61241-1
Ex-code	Ex II 2 GD Ex ed IIC T6/T5/T4 Ex tD A21 IP66 T85°C/T100°C/T135°C According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 21, Zone 2 / Zone 22
Quantity for entries	Cable entry c/w single seal Ex e GRP Resin Cable Gland

Dimensions



FPR

TYPE	CODE	COL. CODE	CABLE GLAND EEx-e	VOLTAGE [V]	CONTACT ARRANGE-MENT	CUR-RENT [A]	EARTH PIN POSI-TION	FRE-QUEN-CY [Hz]	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) [mmq]	OVERALL DIMENSIONS [mm]
FPR-2-20-24-50	A.4301.01		M20 (8÷13)	24	2P	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-2-20-24-50	A.4301.02		M25 (13÷19)	24	2P	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-3-20-110-50	A.4301.03		M20 (8÷13)	110-130	1P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-3-20-110-50	A.4301.04		M25 (13÷19)	110-130	1P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-3-20-230-50	A.4301.05		M20 (8÷13)	220-250	1P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-3-20-230-50	A.4301.06		M25 (13÷19)	220-250	1P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-4-20-400-50	A.4301.07		M20 (8÷13)	380-440	3P+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-4-20-400-50	A.4301.08		M25 (13÷19)	380-440	3P+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-5-20-400-50	A.4301.09		M20 (8÷13)	380-440	3P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-5-20-400-50	A.4301.10		M25 (13÷19)	380-440	3P+N+E	20	Central	50	4 mmq / 6 mmq	127 x 51 x 51
FPR-2-32-24-50	A.4301.11		M20 (8÷13)	24	2P	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-32-24-50	A.4301.12		M25 (13÷19)	24	2P	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-32-24-50	A.4301.13		M32 (17÷25)	24	2P	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-110-50	A.4301.14		M20 (8÷13)	110-130	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-110-50	A.4301.15		M25 (13÷19)	110-130	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-110-50	A.4301.16		M32 (17÷25)	110-130	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-230-50	A.4301.17		M20 (8÷13)	220-250	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-230-50	A.4301.18		M25 (13÷19)	220-250	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-32-230-50	A.4301.19		M32 (17÷25)	220-250	1P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-32-400-50	A.4301.20		M20 (8÷13)	380-440	3P+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-32-400-50	A.4301.21		M25 (13÷19)	380-440	3P+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-32-400-50	A.4301.22		M32 (17÷25)	380-440	3P+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-32-400-50	A.4301.23		M20 (8÷13)	380-440	3P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-32-400-50	A.4301.24		M25 (13÷19)	380-440	3P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-32-400-50	A.4301.25		M32 (17÷25)	380-440	3P+N+E	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-63-24-50	A.4301.26		M25 (13÷19)	24	2P	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-2-63-24-50	A.4301.27		M32 (17÷25)	24	2P	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-2-63-24-50	A.4301.28		M40 (24÷32)	24	2P	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-110-50	A.4301.29		M25 (13÷19)	110-130	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-110-50	A.4301.30		M32 (17÷25)	110-130	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-110-50	A.4301.31		M40 (24÷32)	110-130	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-230-50	A.4301.32		M25 (13÷19)	220-250	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-230-50	A.4301.33		M32 (17÷25)	220-250	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-63-230-50	A.4301.34		M40 (24÷32)	220-250	1P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-63-400-50	A.4301.35		M25 (13÷19)	380-440	3P+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-63-400-50	A.4301.36		M32 (17÷25)	380-440	3P+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-63-400-50	A.4301.37		M40 (24÷32)	380-440	3P+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-63-400-50	A.4301.38		M25 (13÷19)	380-440	3P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-63-400-50	A.4301.39		M32 (17÷25)	380-440	3P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-63-400-50	A.4301.40		M40 (24÷32)	380-440	3P+N+E	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83

I.E. / Example
FPR-3-20-230-50
FPR = FLAMEPROOF PLUG RESIN
3 = Poles Number
20 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

FPR

TYPE	CODE	COLOR CODE	CABLE GLAND EEx-e	VOLTAGE (V)	CONTACT ARRANGEMENT	CUR-RENT (A)	EARTH PIN POSI-TION	FRE-QUEN-CY (HZ)	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) mmq.	OVERALL DIMENSIONS
FPR-2-2a-32-24-50	A.4301.41		M20 (8÷13)	24	2P+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-2a-32-24-50	A.4301.42		M25 (13÷19)	24	2P+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-2a-32-24-50	A.4301.43		M32 (17÷25)	24	2P+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-110-50	A.4301.44		M20 (8÷13)	110-130	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-110-50	A.4301.45		M25 (13÷19)	110-130	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-110-50	A.4301.46		M32 (17÷25)	110-130	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-230-50	A.4301.47		M20 (8÷13)	220-250	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-230-50	A.4301.48		M25 (13÷19)	220-250	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-3-2a-32-230-50	A.4301.49		M32 (17÷25)	220-250	1P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-2a-32-400-50	A.4301.50		M20 (8÷13)	380-440	3P+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-2a-32-400-50	A.4301.51		M25 (13÷19)	380-440	3P+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-4-2a-32-400-50	A.4301.52		M32 (17÷25)	380-440	3P+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-2a-32-400-50	A.4301.53		M20 (8÷13)	380-440	3P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-2a-32-400-50	A.4301.54		M25 (13÷19)	380-440	3P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-5-2a-32-400-50	A.4301.55		M32 (17÷25)	380-440	3P+N+E+2aux	32	Central	50	10 mmq / 16 mmq	128 x 68 x 68
FPR-2-2a-63-24-50	A.4301.56		M25 (13÷19)	24	2P+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-2-2a-63-24-50	A.4301.57		M32 (17÷25)	24	2P+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-2-2a-63-24-50	A.4301.58		M40 (24÷32)	24	2P+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-110-50	A.4301.59		M25 (13÷19)	110-130	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-110-50	A.4301.60		M32 (17÷25)	110-130	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-110-50	A.4301.61		M40 (24÷32)	110-130	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-230-50	A.4301.62		M25 (13÷19)	220-250	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-230-50	A.4301.63		M32 (17÷25)	220-250	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-3-2a-63-230-50	A.4301.64		M40 (24÷32)	220-250	1P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-2a-63-400-50	A.4301.65		M25 (13÷19)	380-440	3P+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-2a-63-400-50	A.4301.66		M32 (17÷25)	380-440	3P+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-4-2a-63-400-50	A.4301.67		M40 (24÷32)	380-440	3P+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-2a-63-400-50	A.4301.68		M25 (13÷19)	380-440	3P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-2a-63-400-50	A.4301.69		M32 (17÷25)	380-440	3P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83
FPR-5-2a-63-400-50	A.4301.70		M40 (24÷32)	380-440	3P+N+E+2aux	63	Central	50	16 mmq / 25 mmq	149 x 83 x 83

I.E. / Example
FPR-3-2a-32-230-50
FPR = FLAMEPROOF PLUG RESIN
3 = Poles Number
2a = Number auxiliary contacts
32 = Current (A)
230 = Voltage (V)
50 = Frequency (HZ)

Starline Explosion Proof Connector

Technor is an approved distributor and stockist of the Amphenol Starline & Starline Ex range of heavy duty connectors for power, signal and hybrid applications.

Typical applications include:
- Petro-chemical plants.
- Off-shore oil drilling.
- Automotive paint booths.
- Aircraft Refuelling Pits.
- Pharmaceutical Manufacturing Equipment

Specifications

- Operating temperature from -20ºC to +40ºC
- IP68
- Hard anodic coating provides high dielectric strength and superior heat/corrosion resistance.
- High amperage of 1135 Amps at 1000VAC or DC rating available
- Solder, crimp and pressure terminals available

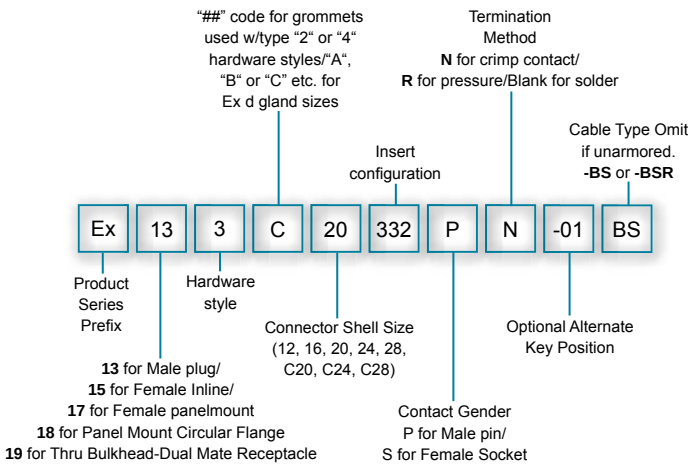
Standards/Requirements

ATEX Certified for use in Zone 1 IIC hazardous areas
Certificate SIRA03ATEX1101X
Ⓔx II 2 GD
Ex d IIC T6
Ex de IIC T6

Coupling / mounting

Double lead Acme threads provide complete coupling in one turn of the coupling nut, and do not clog under adverse weather conditions. Large wiring space provided in cable housings and conduit fitting bodies.

Code Logic Starline Ex



Example: EX-13-3-C-20-332PN
Male plug with Ex gland for a cable with 0.95"/24.1mm O.D., 20ea #12/4.0mm male contacts

EX-15-4-1620-332SN
Female Inline with basketweave grip for a cable with 0.95"/24.1mm O.D., 20ea #12/4.0mm female contacts

EX-17-1-20-332SN
Female Panelmount. 20ea #12/4.0mm female contacts

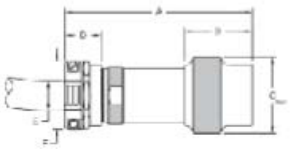
EX-13-3-C-16-22PR-BS
Male plug with Ex gland for an armored cable with 1.25"/31.75mm O.D. 4ea #4/25.0mm male contacts

EX-17-3-C-16-22SR-BS
Female Panelmount with cable adapter with an Ex gland for armored cable to match above

Plug with Mechanical Clamp

EX - 13 - 2 Style

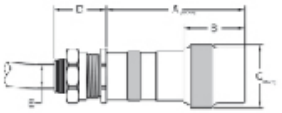
Dimension Shell	A	B	C	D	E	F	G
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)	N/A
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)	N/A
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)	N/A
24	8-15/16 (227.0)	1-3/4 (44.5)	3 (76.2)	2-3/16 (55.6)	2-7/16 (61.9)	4-1/2 (114.3)	N/A
28	9 (228.6)	3 1/16 (77.8)	4 3/16 (106.4)	2 1/4 (57.2)	2-7/8 (73.0)	5-1/8 (130.2)	N/A



Plug with Ex d Gland

EX - 13 - 3 Style

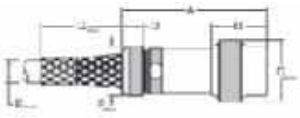
Dimension Shell	A	B	C	Gland Thread
12	6-1/16 (154)	3-9/16 (91)	2-1/8 (54)	M25
16	8-1/16 (205)	3-9/16 (91)	2-5/8 (67)	M40
20	8-1/16 (205)	3-9/16 (91)	3-1/8 (79)	M50
24	8-1/16 (205)	3-9/16 (91)	3-5/8 (92)	M63
28	8-1/16 (205)	3-9/16 (91)	4-1/8 (105)	M75



Plug with Kellems Grip

EX - 13 - 4 Style

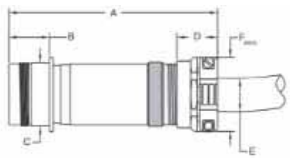
Dimension Shell	A	B	C	D	E	F	G
12	7-3/8 (187.3)	1-3/4 (44.5)	1-1/2 (38.1)	1-1/4 (31.8)	15/16 (23.8)	1-1/2 (38.1)	8 (203.2)
16	7-3/8 (187.3)	1-3/4 (44.5)	2 (50.8)	1-1/4 (31.8)	1-7/16 (36.5)	2 (50.8)	10-1/2 (266.7)
20	7-3/8 (187.3)	1-3/4 (44.5)	2-1/2 (63.5)	1-1/4 (31.8)	1-15/16 (49.2)	2-1/2 (63.5)	14-1/2 (368.3)
24	7-3/8 (187.3)	1-3/4 (44.5)	3 (76.2)	1-1/4 (31.8)	2-7/16 (61.9)	3 (76.2)	17-1/2 (444.5)
28	7-3/8 (187.3)	1-3/4 (44.5)	3-1/2 (88.9)	1-1/4 (31.8)	2-7/8 (73.0)	3-1/2 (88.9)	19 (482.6)



In-line Receptacle with Mechanical Clamp

EX - 15 - 2 Style

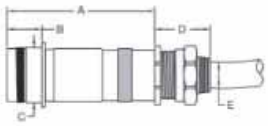
Dimension Shell	A	B	C	D	E	F	G
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)	N/A
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)	N/A
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)	N/A
24	8-15/16 (227.0)	1-3/4 (44.5)	3 (76.2)	2-3/16 (55.6)	2-7/16 (61.9)	4-1/2 (114.3)	N/A
28	9 (228.6)	1-3/4 (44.5)	3-1/2 (88.9)	2 1/4 (57.2)	2-7/8 (73.0)	5-1/8 (130.2)	N/A



In-line Receptacle with Ex d Gland

EX - 15 - 3 Style

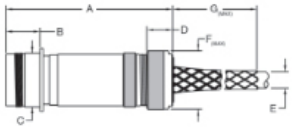
Dimension Shell	A	B	C	Gland Thread
12	5-5/8 (143)	1-7/16 (37)	1-1/2 (38)	M25
16	7-5/8 (194)	1-7/16 (37)	2 (51)	M40
20	7-5/8 (194)	1-7/16 (37)	2-1/2 (64)	M50
24	7-5/8 (194)	1-7/16 (37)	3 (76)	M63
28	7-5/8 (194)	1-7/16 (37)	3-1/2 (89)	M75



Starline Explosion Proof Connector

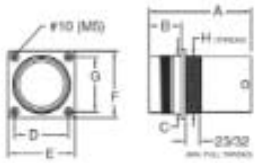
In-line Receptacle with Kellems Grip — EX - 15 - 4 Style

Dimension Shell	A	B	C	D	E	F	G
12	7-3/8 (187.3)	1-3/4 (44.5)	1-1/2 (38.1)	1-1/4 (31.8)	15/16 (23.8)	1-1/2 (38.1)	8 (203.2)
16	7-3/8 (187.3)	1-3/4 (44.5)	2 (50.8)	1-1/4 (31.8)	1-7/16 (36.5)	2 (50.8)	10-1/2 (266.7)
20	7-3/8 (187.3)	1-3/4 (44.5)	2-1/2 (63.5)	1-1/4 (31.8)	1-15/16 (49.2)	2-1/2 (63.5)	14-1/2 (368.3)
24	7-3/8 (187.3)	1-3/4 (44.5)	3 (76.2)	1-1/4 (31.8)	2-7/16 (61.9)	3 (76.2)	17-1/2 (444.5)
28	7-3/8 (187.3)	1-3/4 (44.5)	3-1/2 (88.9)	1-1/4 (31.8)	2-7/8 (73.0)	3-1/2 (88.9)	19 (482.6)



Panel Mount Receptacle (Potting Required) — EX - 17 - 1 Style

Dimension Shell	A	B	C	D	E	H
12	4-3/4 (120.7)	1-3/4 (44.5)	1-1/2 (38.1)	1.654 (42)	2-1/4 (57.2)	M40
16	4-3/4 (120.7)	1-3/4 (44.5)	2 (50.8)	2.047 (52)	2-5/8 (66.7)	M50
20	4-3/4 (120.7)	1-3/4 (44.5)	2-1/2 (63.5)	2.441 (62)	3 (76.2)	M63
24	4-3/4 (120.7)	1-3/4 (44.5)	3 (76.2)	2.835 (72)	3-1/2 (88.9)	M75
28	4-3/4 (120.7)	1-3/4 (44.5)	3-1/2 (88.9)	3.228 (82)	4 (101.6)	M90

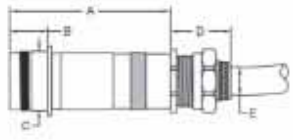


Fixed In-line Receptacle with Mechanical clamp — EX - 17 - 2 Style

Dimension Shell	A	B	C	D	E	F
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)
24	8-15/16 (227.0)	1-3/4 (44.5)	3 (76.2)	2-3/16 (55.6)	2-7/16 (61.9)	4-1/2 (114.3)
28	9 (228.6)	1-3/4 (44.5)	3-1/2 (88.9)	2 1/4 (57.2)		

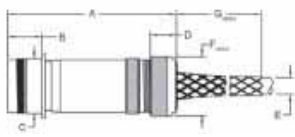
Fixed In-line Receptacle with Ex d Gland — EX - 17 - 3 Style

Dimension Shell	A	B	C	Gland Thread
12	5-5/8 (143)	1-7/16 (37)	1-1/2 (38)	M25
16	7-7/8 (194)	1-7/16 (37)	2 (51)	M40
20	7-7/8 (194)	1-7/16 (37)	1-/12 (64)	M50
24	7-7/8 (194)	1-7/16 (37)	3 (76)	M63
28	7-7/8 (194)	1-7/16 (37)	3-1/2 (89)	M75



Fixed In-line Receptable with Kellems Grip — EX - 17 - 4 Style

Dimen-sion Shell	A	B	C	D	E	F	G
12	7-3/8 (187.3)	1-3/4 (44.5)	1-1/2 (38.1)	1-1/4 (31.8)	15/16 (23.8)	1-1/2 (38.1)	8 (203.2)
16	7-3/8 (187.3)	1-3/4 (44.5)	2 (50.8)	1-1/4 (31.8)	1-7/16 (36.5)	2 (50.8)	10-1/2 (266.7)
20	7-3/8 (187.3)	1-3/4 (44.5)	2-1/2 (63.5)	1-1/4 (31.8)	1-15/16 (49.2)	2-1/2 (63.5)	14-1/2 (368.3)
24	7-3/8 (187.3)	1-3/4 (44.5)	3 (76.2)	1-1/4 (31.8)	2-7/16 (61.9)	3 (76.2)	17-1/2 (444.5)
28	7-3/8 (187.3)	1-3/4 (44.5)	3-1/2 (88.9)	1-1/4 (31.8)	2-7/8 (73.0)	3-1/2 (88.9)	19 (482.6)



TN 2000-4
Mobile Gas Detection System, Ex de, AISI316L

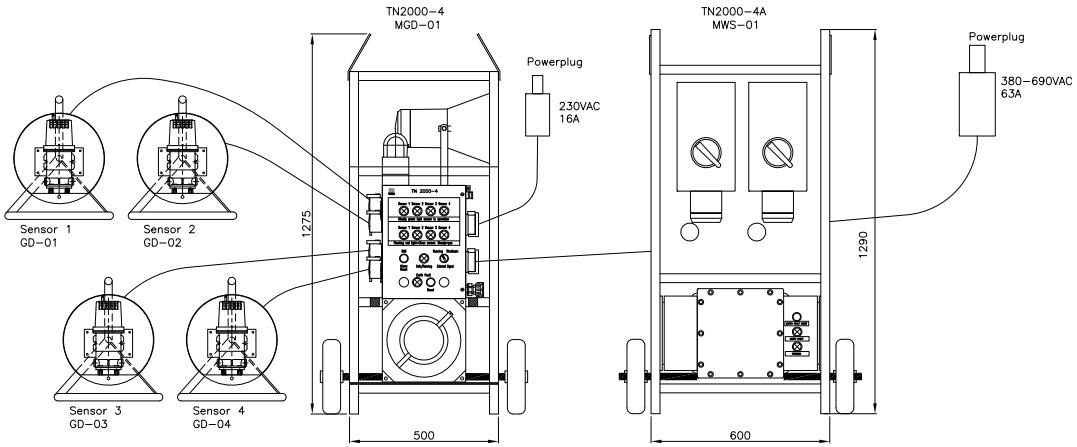
TN 2000-4

The Mobile Gas Detection System is specially designed as a protection and shutdown system for use in connection with hot work in Ex Zones 1 and 2 within on- and offshore installations.
The unit is designed to shut down the connected electrical equipment and give acoustic and visual alarm when gas is detected.

Specifications

Material sensor unit	Stainless steel DIN 1.4572 / AISI 316L
Material trolley	SS316
Operating temperature	-20ºC to +40ºC
Approvals	ATEX
Approved lifting lugs	2
Ex protection control unit	Ex de IIC T5 ⟨Ex⟩ II 2 G
Ex protection sensor	Ex de IIC T6 ⟨Ex⟩ II 2 G
Sensor cable	Radox Tenuis-TW/S EMC
Dimension trolley incl. equipment	H x W 1275 x 500mm
Total weight (control unit)	105 kg
Mobility (control unit)	Wheeled, lifted
PLC	OMRON
Sensor	Simtronics GD10, Other sensors upon request
Rated voltage	220 – 240 VAC
Max. current	16A
Frequency	50/60 Hz
Gas monitoring	0-100% LEL
Level shut down	10% LEL
Earth fault monitoring/ shut off	30mA

Dimensions



Control unit **Shutdown unit (separate)**