



Solutions through technology



**WWW.CABLEJOINTS.CO.UK**  
**THORNE & DERRICK UK**  
**TEL 0044 191 490 1547 FAX 0044 477 5371**  
**TEL 0044 117 977 4647 FAX 0044 977 5582**  
**WWW.THORNEANDDERRICK.CO.UK**

Reservations of failure and changes in this catalogue.

Print: Gunnarshaug - Rev. B

Editing completed January 2009.



**Technor ElectroTech** 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 Brasil. 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, electronics and combustible dust application industries.

Products for use in explosive atmospheres must satisfy the requirements of the joint European standards (ATEX regulations), and each individual component of the systems must be certified in accordance with specific Ex-certification requirements.





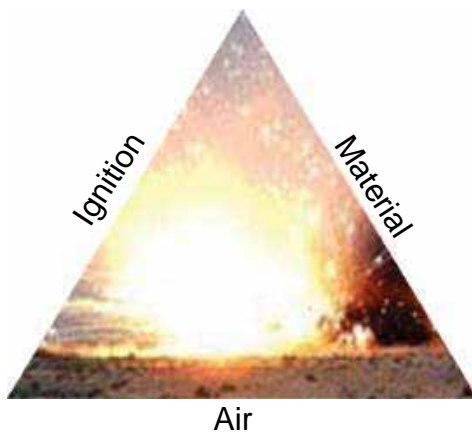
Ex-Regulations	4
Engineering and Customer Based Product Solutions	16
Project Shedule	19
Terminal Boxes	21
Control Equipment - Components	33
Control Stations	47
Level-, Detection- and Limit Switches	79
Flameproof Enclosures	101
Pressurized Systems	125
Audible and Visual Signals	129
Lighting	149
Human Machine Interface (HMI)	177
Cable Glands and Accessories	187
Plugs and Sockets	225
Gas Detection	239

### 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 material/air) has the right ratio it can be an 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.

Primary explosion protection can be achieved by (when an ignition source are present):

- 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 it is only one way of avoiding explosion, Ignition Control

### 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



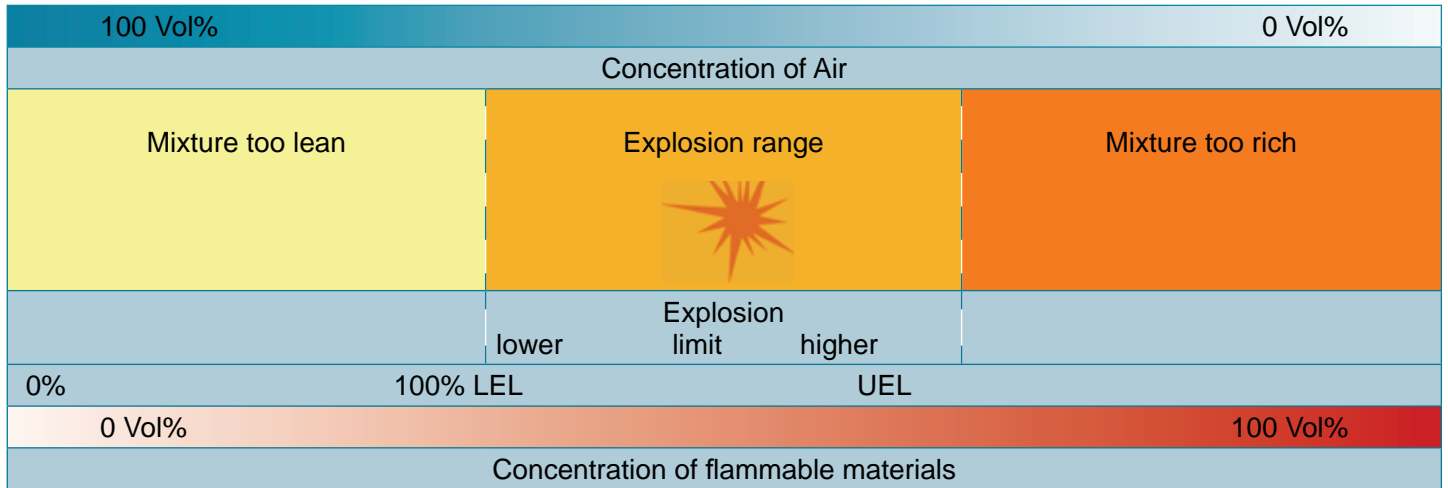
Where a potential explosive atmosphere can occur, certain safety levels need to be taken into account regarding the possible danger of an explosion in this area. The areas therefore need to be divided into zones according to presence of the flammable materials.

Zone 0	Zone 1	Zone 2
A place where the explosive atmosphere of flammable gas is present continuously or for a long period or frequently	A place where the explosive atmosphere of flammable gas is likely to occur in normal operation occasionally	A place where the explosive atmosphere of flammable gas is not likely to occur in normal operation but if it does occur it will only be present for a short period
Zone 20	Zone 21	Zone 22
A place where an explosive dust atmosphere is present continuously or for a long period of time	A place where an explosive dust atmosphere is likely to occur during normal operation	A place where an explosive dust atmosphere is not likely to occur during normal operation, but if it does occur it will be present for a short period





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



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

	LEL	Explosion	UEL
<b>Methane</b>	4,4%	→	16,5%
<b>Propane</b>	1,7%	→	10,6%
<b>Butane</b>	1,4%	→	9,3%



## Atex directive

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

### Product Directive 1994/9/EC

This has been mandatory in Europe from 01.07.2003, and covers the regulations concerning apparatus and protective systems for use in potentially explosive atmospheres. The 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 of decision for the classification of groups of apparatus in categories	
II	Essential safety and health requirements for the conception and construction of apparatus and protective systems for use in potentially explosive atmospheres	
III	Module: EC-type examination	
IV	Module: Quality assurance of the production	
V	Module: Inspection of the products	
VI	Module: Conformity with the design	
VII	Module: Quality assurance of the product	
VIII	Module: Internal production control	
IX	Module: Individual test	
X	CE marking and contents of the EC certificate of conformity	
XI	Minimum criteria to be taken into accounts by the member states for the authorization of testing laboratories	



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

- Apparatus/equipment Group I apply for mining.  
This group is subdivided into categories M1 & M2.
- Apparatus/equipment Group II applies for all other (surface) areas.  
This group is subdivided into categories 1, 2 and 3.

Group Mining Industries		Group Regular industries (gas + dust hazardous areas)		
Category	Category	Category	Category	Category
Very high level of protection (safe with 2 faults)	High level of protection (safe with 1 fault)	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)
Must remain functional under explosive atmosphere	De-energized under explosive atmosphere			
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

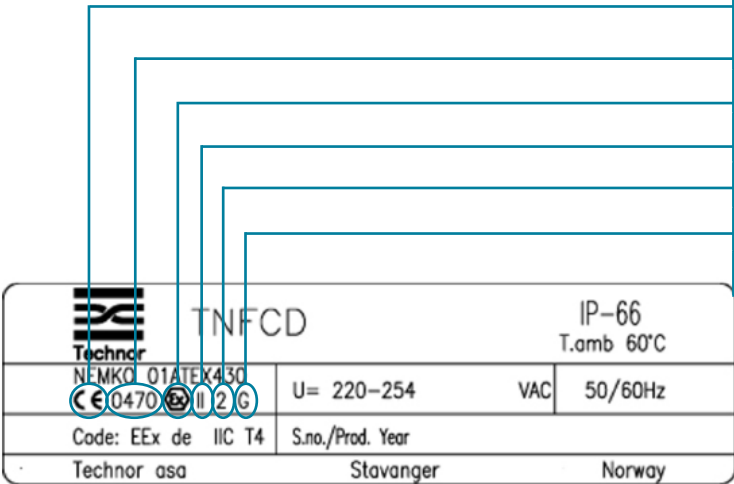
Area Zone	Equipment Category	How to comply	Production requirements
2	3	The manufacturer to evaluate the product according to valid standard/Directives, and create a technical file and subsequently issuing an EC D.O.C (Declaration of Conformity)	The manufacturer needs to have a production quality system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

### Mechanical 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 e.g.) Manufacturer to issue EC D.O.C.
0	1	To be certified by NB Manufacturer to issue EC D.O.C.

## Atex Marking

	Confirmation that the equipment fulfil all valid EU directives
0470	Ref. no. for NB (production licence)
	European conformity certificate
II	Equipment group
2	Category
G	For use in gas atmosphere

  

**Note:**

The equipment also needs to be marked with the conventional protection mode (Ex...) according to EN/IEC 60079-0 (EN/IEC 61241-0 for dust)

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 systems can be placed on the market, only if market 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 product 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.

**User Directive 1999/92/EC**

This directive gives the minimum requirement for the improvement of health protection and safety of employers who could be endangered by 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 requirements
II	3-9	Duties of employer
	3	Prevention of and protection against
	4	Assessment of the explosion risks
	5	General obligations
	6	Coordination obligations
	7	Areas with explosive atmospheres
	8	Explosion protection document
	9	Special regulations relating to working materials and places of work
III	10-15	Other requirements
Annexes		
I		Classification of areas in which explosive atmospheres can be present 1. Areas in which explosive atmospheres can be present 2. Classification of potentially explosive atmospheres
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 apparatus 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](http://ec.europa.eu/employment_social/health_safety/legislation_en.htm)



### Classification of Ignition Sources for gas and vapour



### Temperature Class

Temperature Class	Maximum Surface Temperature (at max. ambient temperature)
T1	450 °
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 e.g.
< 20 $\mu$ Joules	C	A	Acetylene, Carbon disulphide
< 20 $\mu$ Joules		B	Hydrogen
< 60 $\mu$ Joules	B	C	Ethyl ether, Ethylene
< 180 $\mu$ Joules	A	D	Acetone, Butane, Ethanol, Gasoline, Hexane, Methanol, Methane, Naphtha, Propane





## Standards valid for

Electrical Apparatus for Explosive Gas Atmospheres		
	EN (old)	EN (new)
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 mechanical equipment

Protection type	EN 13463-	Marking letter
Construction	EN13463-5	c
Inherent safety	EN13463-4	g
Flow restriction	EN13463-2	fr
Pressurization	EN13463-7	p
Flameproof	EN13463-3	d
Controlled ignition	EN13463-6	b
Protected by oil	EN13463-8	k

## Combustion motors

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

## Basic Electrical Techniques circuits

**Flameproof enclosures** (IEC/EN 60079-1 / EN 50018)

The enclosures are constructed so that internal explosions can not be transmitted to the external atmosphere

Ex d

**Increased safety** (IEC/EN 60079-7 / EN 50019)

Prevention of ignition sources by fail safe design (only simple electric components)

Ex e

**Intrinsic safety** (IEC/EN 60079-11 / EN 50020)

Limitation of the energy stored in the electrical circuits category "ia" and "ib", "simple" apparatus, "associated" apparatus, safety barriers  
Installation: Safety values (U<sub>o</sub>, I<sub>o</sub>, P<sub>o</sub>, L<sub>o</sub>, C<sub>o</sub>) and clearances

Ex ia/ib

**Type N** (IEC/EN 60079-15 / EN 50021 : Zone 2)

No ignition source in normal operation (no sparks, no hot surfaces)

Ex nA

**Oil immersion** (IEC/EN 60079-6 / EN 50015)

Electrical parts are submerged in oil

Ex o

**Pressurized apparatus** (IEC/EN 60079-2 / EN 50016)

Electrical parts are purged and pressurized with a protective gas (air or inert gas)

Installation: Purge and pressure control/shut down device

Ex p

**Powder filling** (IEC/EN 60079-5 / EN 50017)

Electrical parts are submerged in a quartz powder

Ex q

**Encapsulation** (IEC/EN 60079-18 / EN 50028)

Electrical parts are encapsulated in a specific epoxy resin.

Installation: Chemical compatibility of epoxy resin

Ex m



## EPL (Equipment Protection Level) according to IEC/EN 60079-xx series of standards

**Definition:**

The level of protection assigned to equipment based on its risk of becoming a source of ignition, and distinguishing the differences between explosive gas atmospheres, explosive dust atmospheres, and the explosive atmospheres which may exist in coal mines

**Link between Zones, Atex categories and EPL:****Area towards Equipment**

Area Classification		Equipment category/level			
Explosive Concentration	Zone	Risk	Equipment Group	Atex Category	IEC - EPL
Often/longer periods	0	High, safe with 2 faults	II	1G	Ga
Occasionally	1	High, safe with 1 fault	II	2G (1G)	Gb (Ga)
Rarely/most likely never	2	Normal	II	3G (1G/2G)	Gc (Ga/Gb)
Often/longer periods	20	High, safe with 2 faults	II*	1D	Da
Occasionally	21	High, safe with 1 fault	II*	2D (1D)	Db (Da)
Rarely/ most likely never	22	Normal	II*	3D (1D/2D)	Dc (Da/Db)
	-	High, safe with 2 faults	I	M1	Ma
	-	High, safe with 1 fault	I	M2	Mb

\* According to IEC 60079-0, 2007, equipment group for dust is to be group III

**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 be 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.



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

Approximately correlations between IP (IEC) and NEMA 250 standards	
IP 10	NEMA 1
IP 11	NEMA 2
IP 54	NEMA 3 R
IP 52	NEMA 5-12-12 K
IP 54	NEMA 3-3 S
IP 56	NEMA 4-4 X
IP 67	NEMA 6-6 P



## 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 adopted to certain tailor requirements, such as: CCTV applications, Remote I/O panels, HMI applications (LCD display and PC solutions), pressurized systems, wireless measure systems, light equipment etc. Typical examples can include:

- Ex d solutions
- Ex e/ed solutions
- EEx 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 are achieving your visions.

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 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 rating, temperature range, 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
- 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 in the name of the client (this solution requires a “dummy” 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 EU Declaration of Conformity (EC D.O.C.).

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







## **AQ/AR Series**

Junction Boxes with fixed walls, Ex e / Ex ia, AISI 316L

22



## **AQ/FR and AR/FR Series**

Junction Boxes with gland plates, Ex e / Ex ia, AISI 316L

24



## **TNCN**

Junction Boxes, Ex e/i, AISI 316L

27



## **AQ/AL and AR/AL Series**

Junction Boxes, Ex e / Ex ia, Copper free Aluminium

29



## **TNUP**

Junction Boxes, Ex e / Ex ia, GRP

31

AQ-.../AR-... Series consist enclosures, containing Ex e and/or Ex i terminals. Terminal Boxes AQ-.../AR-... Series are made of Stainless Steel AISI 316 and are especially recommended for chemical agent environments, seawater corrosion, low and high temperature, and other heavy duty environments.

### Specifications

<b>Material</b>	Stainless Steel AISI 316L
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to +60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0005X GOST Certificate POCC IT.ГБ04.В00496
<b>Standards</b>	EN 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	Ⓔ 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
<b>Cover gasket</b>	POR 303/F/GR/CIG
<b>Surface treatment</b>	Internal and External shot blasting
<b>Material thickness</b>	Body and cover made in AISI 316L thickness 1.5 mm
<b>Earthing</b>	Internal and External earth stud made in AISI 316 suitable for earth wire up to 35 sqmm.
<b>Drain plug</b>	Drain and breather devices type ECR-1, ECR-2, ECR-11 (Optional)
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Maximum quantity of entries per side A/B: see table
<b>Quantity for terminals</b>	Bearing in mind the infinite number of combinations between: <ul style="list-style-type: none"> <li>➤ quantity of terminals</li> <li>➤ relevant cross section</li> <li>➤ class of temperature</li> <li>➤ ambient temperature</li> </ul>
<b>Accessories upon request</b>	...we suggest using our software CALCUBOX to set up compatible terminals strips. A free copy of CALCUBOX is usually supplied with the Product Catalogue CD and is also available for download from our website. Identification label in AISI 304, spot welded on cover plate. Inside anti-condensation painting. Hinged Cover Stainless steel AISI 316L made Threaded holes suitable for cable glands, plugs and conduit fittings, either with Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125. Mounting plate made of AISI316, thickness 1,5 mm



### Maximum number of entries

TYPE	½" M20		¾" M25		1" M32		1 ¼" M40		1 ½" M50		2" M63		2 ½" M75		3" M80	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
AQ 6	12*	12*	10*	10*	4	4	4	4	3	3	3	3	-	-	-	-
AQ 8	24**	24**	14*	14*	12	12	5	5	4	4	3	3	3	3	2	2
AR 2	10*	6*	8*	4*	3	2	3	2	2	1	2	1	-	-	-	-
AR 4	12*	10*	10*	8*	4	3	4	3	3	2	3	2	-	-	-	-
AR 6	16*	12*	14*	10*	6	4	5	4	4	3	3	3	-	-	-	-
AR 8	36**	24**	20*	14*	18*	12*	7	5	6	4	5	3	4	3	4	2
AR 8A	36**	36**	20*	20*	18*	18*	7	7	6	6	5	5	4	4	4	4

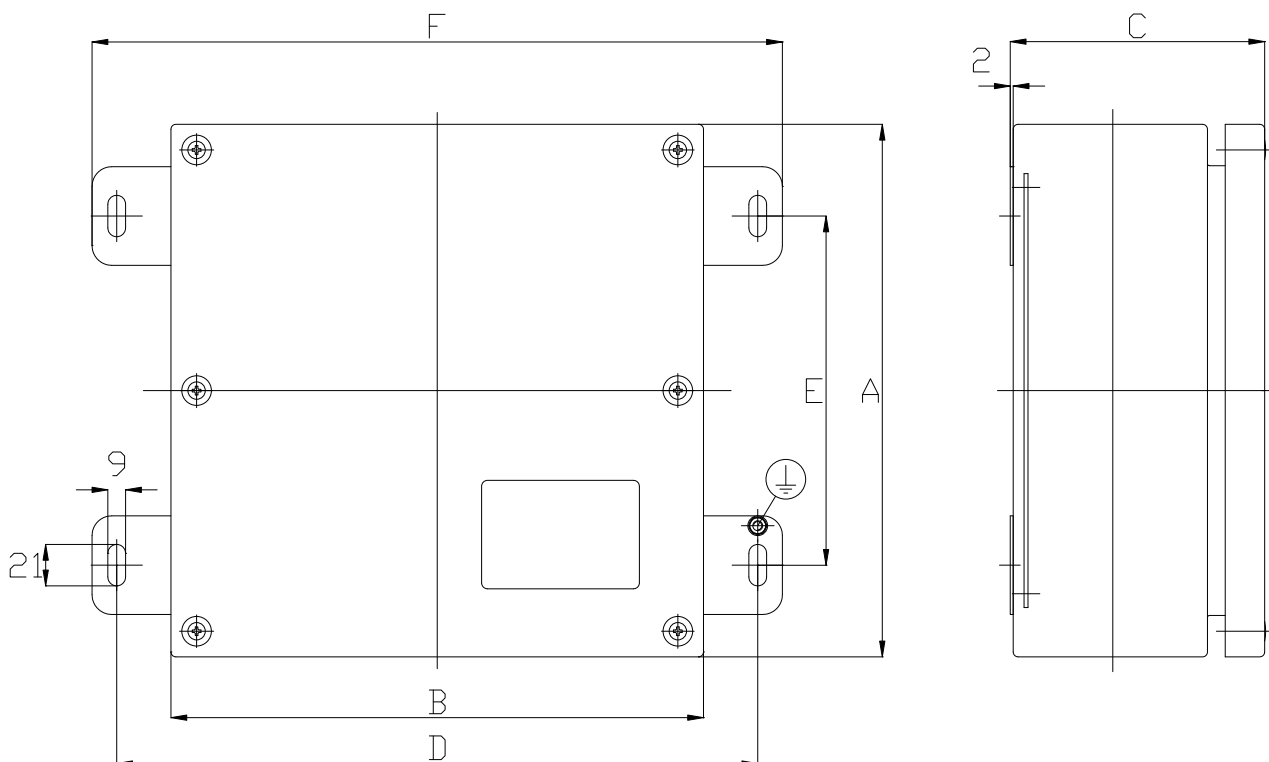
(\*) Located on two rows

(\*\*) Located on three rows

### Range

TYPE	CODE	A mm	B mm	C mm	D mm	E mm	F mm	Weight Kg.	Internal Mounting Plate	
									mm	Code
AQ 6	A.4110.06	270	270	130	325	177	350	4,5	222 x 222	P.4110.44
AQ 8	A.4110.08	350	350	160	405	257	430	5,6	302 x 302	P.4110.45
AR 2	A.4100.02	200	137	130	192	-	217	4,0	152 x 89	P.4100.46
AR 4	A.4100.04	270	200	130	255	177	280	7,0	222 x 152	P.4100.47
AR 6	A.4100.06	350	270	130	325	257	350	9,5	302 x 222	P.4100.48
AR 8	A.4100.08	500	350	160	405	407	430	13,0	452 x 302	P.4100.49
AR 8A	A.4100.18	500	500	160	555	407	580	14,5	452 x 452	P.4100.50

### Dimensions



The AQ/AR Enclosure series with gland plates are made of Stainless Steel AISI 316, and are especially recommended for chemical agent environment, sea-water corrosion, low and high temperature, and other heavy duties.

### Specifications

<b>Material</b>	Stainless Steel AISI 316L
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to +60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0005X GOST Certificate POCC IT.ГБ04.B00496
<b>Standards</b>	EN 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	⊕ 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
<b>Cover gasket</b>	POR 303/F/GR/CIG
<b>Surface treatment</b>	Internal and External shot blasting
<b>Material thickness</b>	Body and cover made of AISI 316L thickness 1.5 mm
<b>Earthing</b>	Internal and External earth stud made in AISI 316 suitable for earth wire up to 35 sqmm.
<b>Drain plug</b>	Drain and breather devices type ECR-1, ECR-2, ECR-11 (Optional)
<b>Standard identification</b>	Identification nameplate is made of high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Maximum quantity of entries per side A/B: see table
<b>Quantity for terminals</b>	Bearing in mind the infinite number of combinations between: <ul style="list-style-type: none"> <li>• quantity of terminals</li> <li>• relevant cross section</li> <li>• class of temperature</li> <li>• ambient temperature</li> </ul> <p>...we suggest using our software CALCUBOX to set up the compatible terminals strips. A free copy of CALCUBOX is usually supplied with the CD Catalog and is also available to download from our website.</p>
<b>Accessories upon request</b>	Mounting plate made in AISI 316L thickness 1.5 mm. Identification label Stainless steel AISI 304 made, spot welded on cover. Inside anti-condensation painting. Hinged cover Stainless steel AISI 316L made. Threaded holes suitable for cable glands, plugs and conduit fittings, either with Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125.





### Maximum number of entries

TYPE	½" M20		¾" M25		1" M32		1 ¼" M40		1 ½" M50		2" M63		2 ½" M75		3" M80	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
AQ 6 / FR	5	5	5	5	4	4	3	3	-	-	-	-	-	-	-	-
AQ 8 / FR	14*	14*	6	6	5	5	4	4	4	4	3	3	-	-	-	-
AR 4 / FR	5	4	5	3	4	2	3	2	-	-	-	-	-	-	-	-
AR 6 / FR	7	5	6	5	5	4	4	3	-	-	-	-	-	-	-	-
AR 8 / FR	22*	14*	10	6	8	5	7	4	6	4	5	3	-	-	-	-
AR 8A/FR	22*	22*	10	10	8	8	7	7	6	6	5	5	-	-	-	-

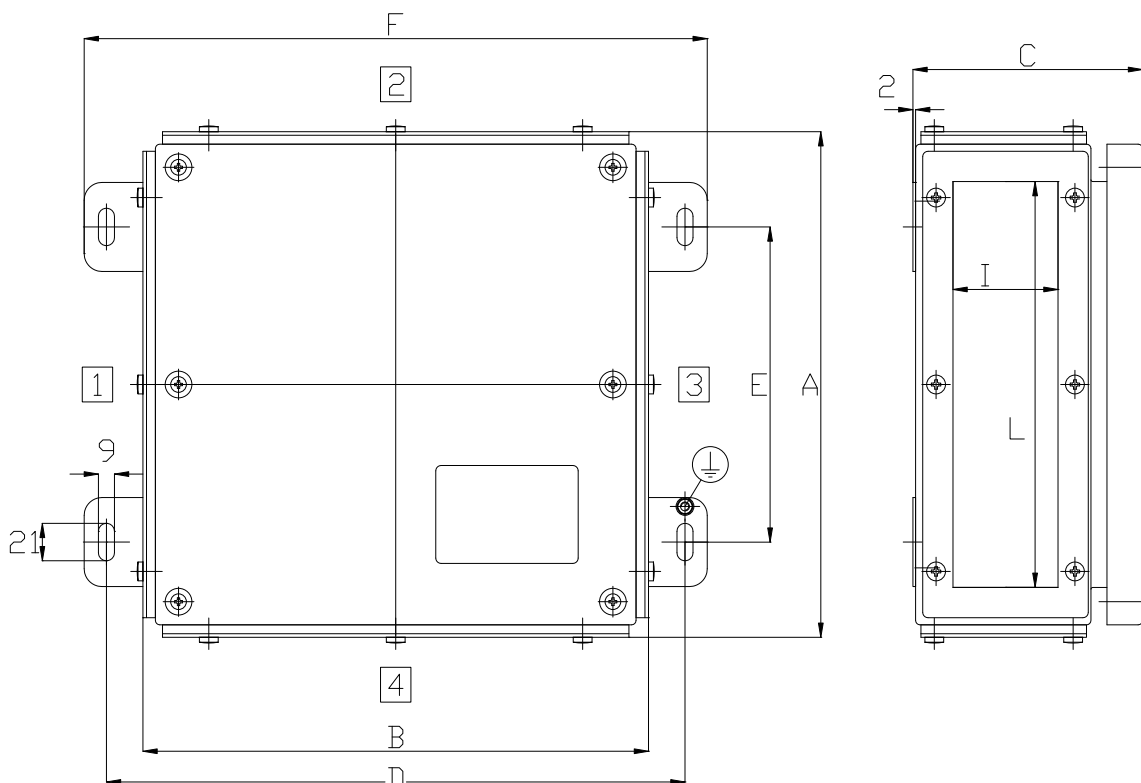
(\*) Located on two rows

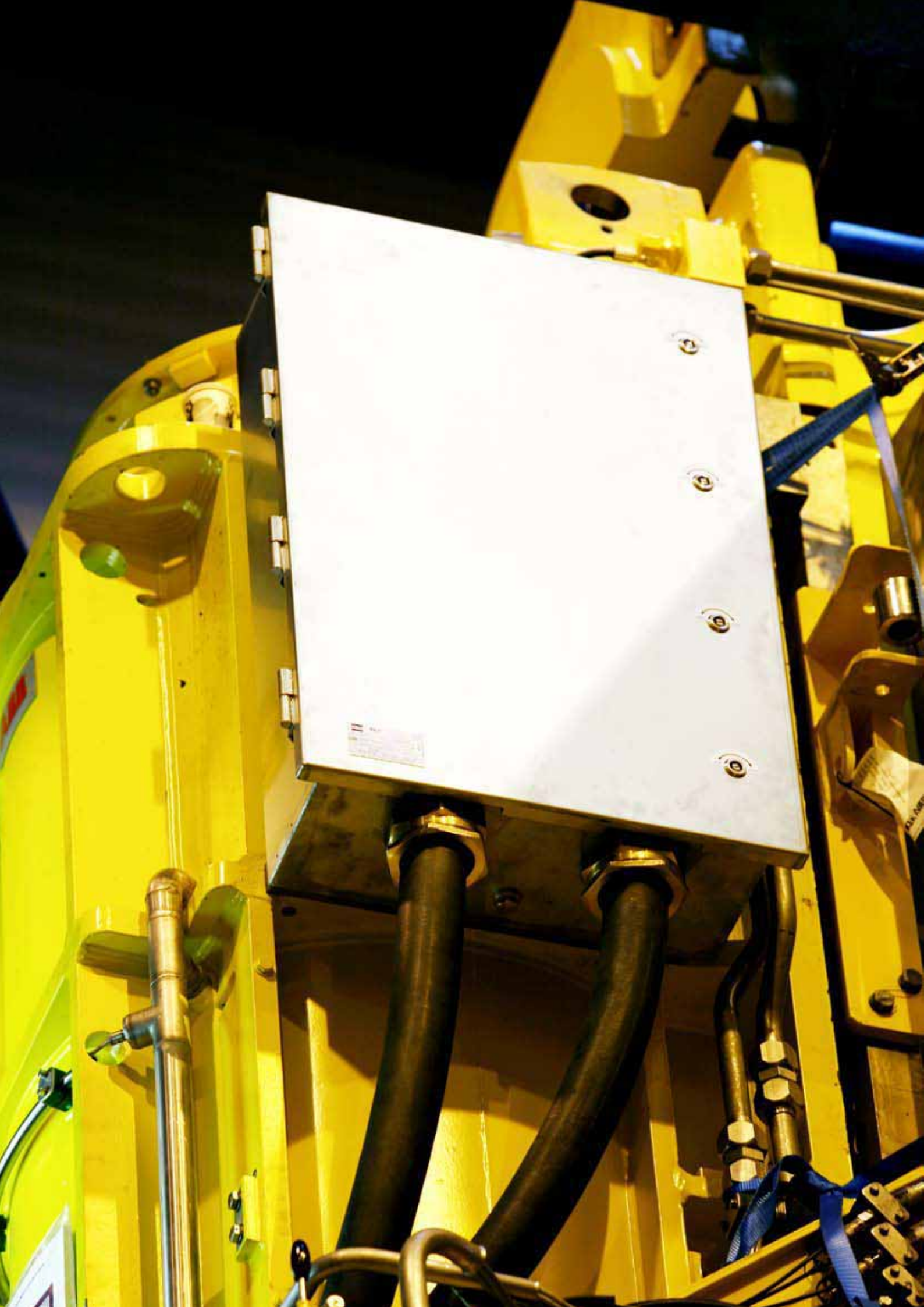
"FR" is the abbreviation for removable plates, "FR" is not shown in the type number certificate

### Range

TYPE	Code	A mm.	B mm.	C mm.	D mm.	E mm.	F mm.	I mm.	L mm.		Mounting Plate		Weight Kg
									1-3	2-4	mm.	Code	
AQ 6/FR	A.4010.06	286	286	130	325	177	350	59	228	228	222 x 222	P.4110.44	5.0
AQ 8/FR	A.4010.08	366	366	160	405	257	430	89	308	308	302 x 302	P.4110.45	6.5
AR 4/FR	A.4000.04	286	216	130	255	177	280	59	228	158	222 x 152	P.4100.47	7.3
AR 6/FR	A.4000.06	366	286	130	325	257	350	59	308	228	302 x 222	P.4100.48	10.0
AR 8/FR	A.4000.08	516	366	160	405	407	430	89	458	308	452 x 302	P.4100.49	13.7
AR 8A/FR	A.4000.18	516	516	160	555	407	580	89	458	458	452 x 452	P.4100.50	15.2

### Dimensions





The TNCN range of boxes and cabinets is designed for use in any environments where an explosive atmosphere may be present.

### Specifications

<b>Material</b>	Acid Resistant Stainless Steel SS316
<b>IP Rating</b>	IP66 (IP67 and IP68 upon request)
<b>Temperature</b>	-40°C to +40°C (T5) -40°C to +60°C (T6/T4) Option: -40°C to +200°C
<b>Approvals Standards</b>	ATEX DNV-2001-OSL-ATEX-0176 and GOST EN50014, IEC/EN 60079-0 EN50019, IEC/EN 60079-7
<b>Ex-Code</b>	Ex e II T5 (alt. T6/T4) Ex [ia] IIC T6 Ⓔ II 2 G
<b>Cover gasket</b>	Neoprene (temp. -40°C to +100°C) Silicone (temp. -40°C to +200°C)
<b>Surface treatment</b>	Acidized Pickling as standard Electropolished as an option
<b>Material thickness</b>	Min. 1,5 mm (depending on the box size)
<b>Earthing</b>	Internal earth bar/bracket External earth bracket
<b>Drain Plug</b>	Optional



### Terminal box: maximum heat dissipation - number of terminals

Maximum heat dissipation	
Box type	Max. dissipated power at Tamb=40°C
1210XX	6 W
1515XX	15 W
2828XX	30 W
3020 XX	30 W
3845XX	50 W
3857XX	65 W
5757XX	90 W
5776XX	120 W

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

### TNCN Range of stocked boxes

Type	A Width (cm)	B Height (cm)	C Depth (cm)	Volume (dm³)	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
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	86,64	21,7
769520	76	95	20	144,4	32,9

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	6	4
	15	12	8
	20	14	9
	27	24	17
20	10	9	6
	15	18	13
	20	22	15
	27	36	25
30	10	14	9
	15	27	18
	20	36	22
	27	57	36
38	10	18	11
	15	36	25
	20	48	30
	27	72	50
40	10	20	12
	15	38	25
	20	42	30
	27	72	50
45	10	21	14
	15	42	32
	20	50	33
	27	84	60
57	10	27	20
	15	54	38
	20	63	42
	30	108	74
76	10	38	26
	15	75	45
	20	100	70
	27	144	105

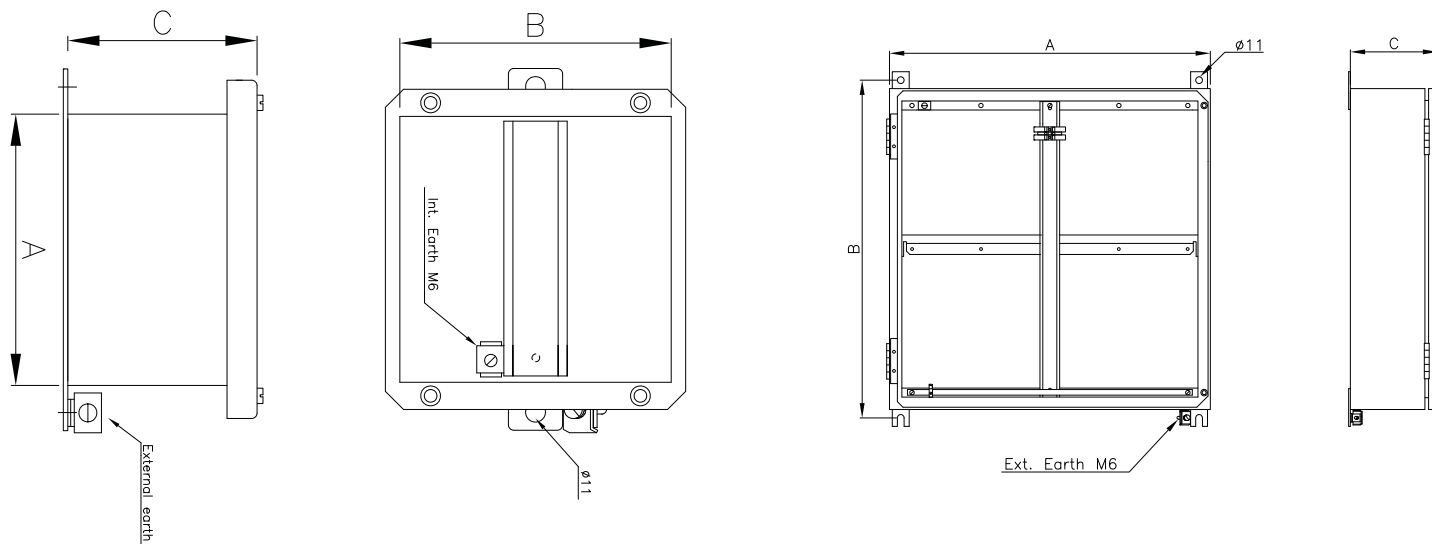
### Entry Matrix

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



AQ...-AL/AR...-AL Series Enclosures are highly recommended for chemical agent environments, or those with a high level of exposure to H<sub>2</sub>O, H<sub>2</sub>SO<sub>4</sub>, sea-water corrosion, low and high temperatures, and other heavy duty environments. The body and cover is made of Copper free Aluminium and have a thickness of 8 mm.

### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to +60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0005X GOST Certificate POCC IT.ГБ04.В00496
<b>Standards</b>	EN 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-7 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	⊕ 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
<b>Lid/Door gasket</b>	Neoprene
<b>Surface treatment</b>	Painted Polyurethane finish (standard) RAL 6003 colours External polyurethane customized painting
<b>Material thickness</b>	Body and cover thickness 8 mm, or more
<b>Earthing</b>	Internal and external earth stud made in AISI 304 suitable for earth wire up to 35 sqmm
<b>Drain plug</b>	Drain and breather devices type ECR-1, ECR-2, ECR-11 (Optional)
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Maximum quantity of entries per side A/B: see table
<b>Quantity for terminals</b>	Bearing in mind the infinite variety of combinations available: <ul style="list-style-type: none"> <li>• quantity of terminals</li> <li>• relevant cross section</li> <li>• class of temperature</li> <li>• ambient temperature</li> </ul> <p>...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.</p>
<b>Accessories on request</b>	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

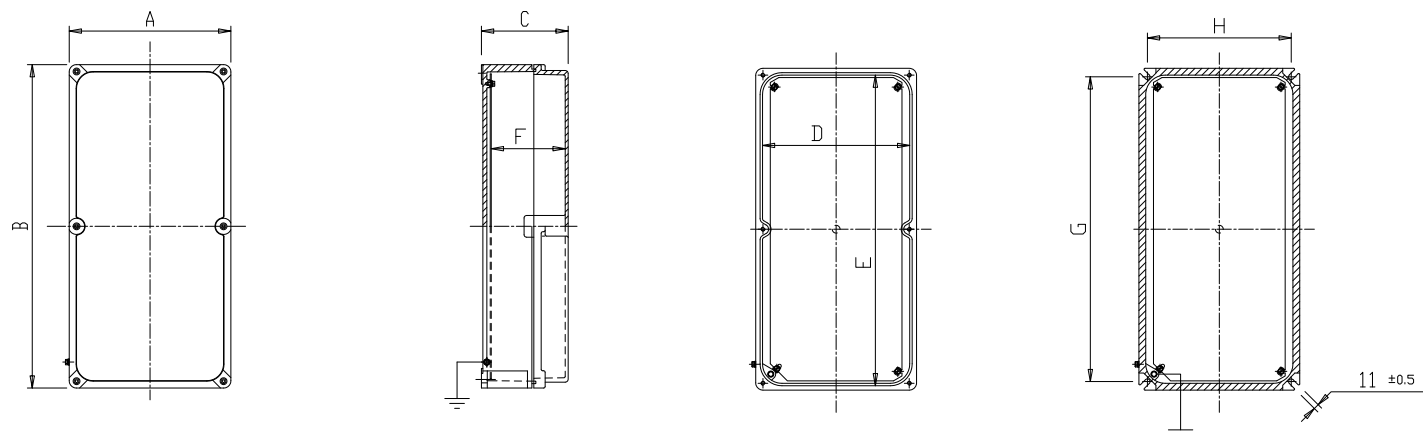
Box Type	½" M20		¾" M25		1" M32		1 ¼" M40		1 ½" M50		2" M63		2 ½" M75		3" M80	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
AQ-8A HTH AL	31**	31**	18*	18*	16*	16*	7	7	5	5	4	4	4	4	3	3
AR-8 HTH AL	36**	24**	20*	14*	18*	12*	7	5	6	4	5	3	4	3	4	2
AR-8A HTH AL	36**	36**	20*	20*	18*	18*	7	7	6	6	5	5	4	4	4	4
AR-8A S AL	50**	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 boxes is suitable for Petrochemical, Marine and other applications where an explosive atmosphere may be present.

### Specifications

<b>Material</b>	Glass fibre reinforced polyester (GRP)
<b>IP Rating</b>	IP66 according to IEC 529
<b>Temperature</b>	-20°C to +40°C (T6)
<b>Approvals</b>	DNV-2003-OSL-ATEX-0207X
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50019, IEC/EN 60079-7 EN50020, IEC/EN 60079-11 IEC 60529
<b>Ex-Code</b>	Ex e II T6 Ex e[ia] IIC T6 ⊕ II 2 G
<b>Earthing</b>	PE bar and/or earth terminals Earth continuity plate/ earth tag upon request
<b>Drain Plug</b>	Upon request
<b>Glands</b>	Plastic or metal, quantities according to table
<b>Terminals</b>	According to table



### TNUP – Range of stocked boxes

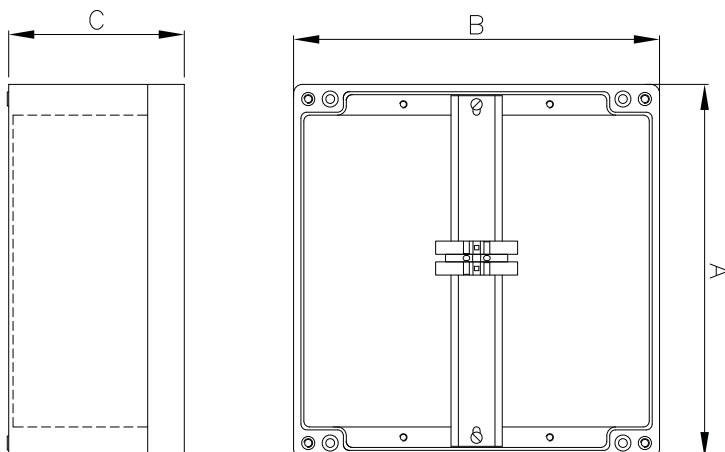
Type	A Width (mm)	B Height (mm)	C Depth (mm)	Weight (kg)	GA-Dwg.
121209	123	120	91	1,1	TNU-35-6
161609	160	160	92	1,5	TNU-36-6
252512	255	250	120	2,9	TNU-37-6
361609	360	160	92	2,5	TNU-39-6
402512	400	250	120	4,3	TNU-49-6
404117	400	405	165	6,1	TNU-40-6

### 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

The boxes are delivered with screws in lid as standard

### Dimensions















SWL 4 T

MAX COMBINED 9 T  
SWL 6 T

SWL 4 T



	<b>Pushbutton</b> HarmAtex pushbutton, Ex ed, Metal and Plastic	34
	<b>Emergency Mushroom</b> HarmAtex Emergency Mushroom, Ex ed, Metal and Plastic	36
	<b>Selector Switch</b> HarmAtex Selector Switch, Ex ed, Metal and Plastic	37
	<b>Illuminated Unit</b> HarmAtex Illuminated Unit, Ex ed, Metal and Plastic	39
	<b>Pilot Light</b> HarmAtex Pilot Light, Ex ed, Metal and Plastic	41
	<b>Contactblock</b> HarmAtex Contactblock, Ex ed, Metal and Plastic	42
	<b>Pushbuttons</b> Ex d Components	43
	<b>Rotary Selector Switches</b> Ex d Components	44
	<b>Pilot Lamps</b> Ex d Components	45
	<b>Contacts</b> Ex d Components	45

## Pushbutton

The HarmAtex pushbutton range features large flush, projecting or mushroom type heads - and a choice of push-push or spring-return actuation mode. The metal and plastic heads allow numerous combinations for the control panel.

The product range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, accessories. To meet the high standards and demands of our customers, the HarmAtex range is constantly being updated and improved, and offers flexible design solutions, such as up to 6 contacts blocks (up to 3 elements next to each other in max 2 layers), and up to 4 elements at illuminated switches.

### Specifications

<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +80°C
<b>Approvals</b>	INERIS02ATEX9007U
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, 50028, EN50281-1-1
<b>Ex-Code</b>	Ex ed IIC 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm Mounting centres 30x40mm (WxH) Depth below head 58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals

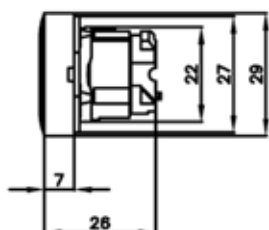


Rated Operational Characteristics	Ø22 pushbutton		Lid mounting		Base mounting	
	Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
AC15; A 600 Ue=400 V Ie=1,8 A or Ue=240 V Ie=3 A or Ue=120 V Ie=6 A  DC13; Q600 Ue=400 V Ie=0,15 A or Ue=250 V Ie=0,27 A or Ue=125 V Ie=0,55 A  ADD: Head Mechanical durability (millions of operating cycles): 5 Contact Mechanical durability (millions of operating cycles): 1	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		

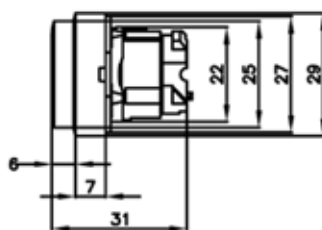
## Pushbutton

	Ø22 pushbutton			Lid mounting		Base mounting
	Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
<p>Rated Operational Characteristics</p> <p>AC15; A 600                      Ue=400 V Ie=1,8 A or                      Ue=240 V Ie=3 A or                      Ue=120 V Ie=6 A</p> <p>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</p> <p>Head Mechanical durability (millions of operating cycles): 5                      Contact Mechanical durability (millions of operating cycles): 1</p>	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
<b>Mushroom Pushbutton</b>						
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	

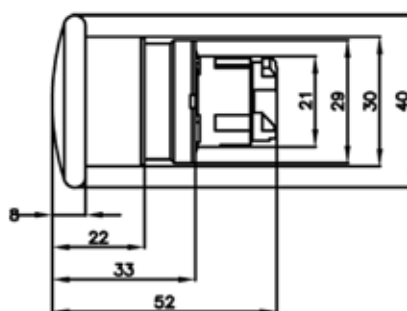
### Dimensions (mm)



XBW4BA...  
 XBW4BH0...  
 XLW4BW..



XBW4BL...  
 XBW4BH..



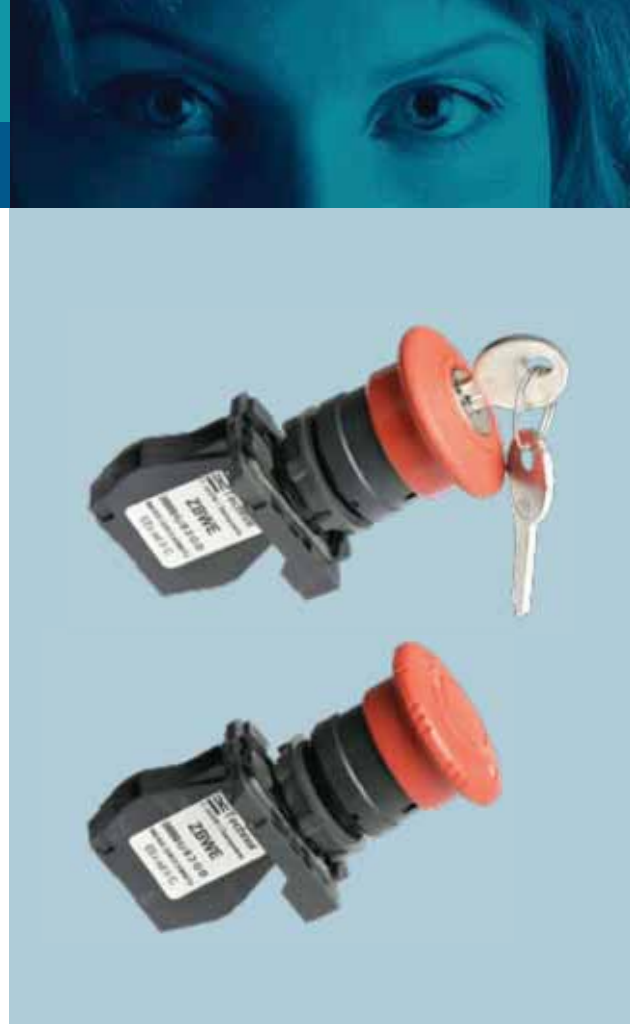
XBW4BC...  
 XBW5AC...

Emergency Mushroom

The HarmAtex emergency mushroom is available with or without a key as unlocking system. Standard equipment features a normally close contact, with the option of additional contacts to increase contacts efficiency. The HarmAtex range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. To meet the high standards and demands of our customers, the HarmAtex range is constantly being updated and improved, and offers flexible design solutions such as up to 6 contacts/ switches (with a maximum of 2 on top of one another) and up to 4 contacts/illuminated switches.

Specifications

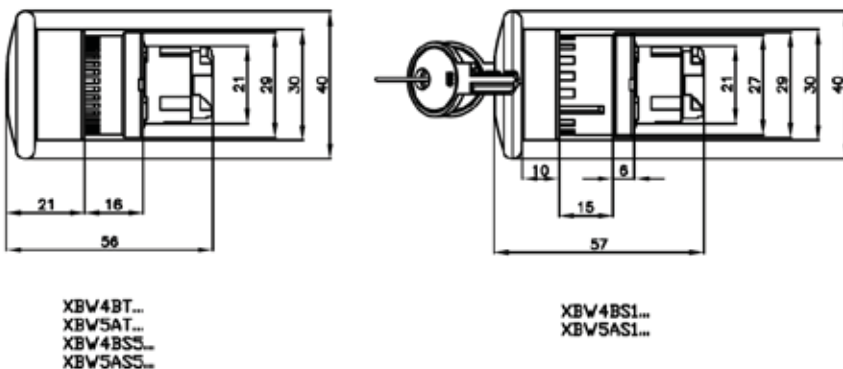
<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +80°C
<b>Approvals</b>	INERIS02ATEX9007U
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50281-1-1
<b>Ex-Code</b>	Ex ed IIC 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm (recommended 22,4)
<b>Mounting centres</b>	30x40mm (WxH)
<b>Depth below head</b>	58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals



Rated Operational Characteristics	Emergency stop mushroom pushbutton			Lid mounting		Base mounting
	Type	Colour	Contact	Reference w/metal bezel	Reference w/plastic bezel	Reference w/plastic bezel
AC15; A 600 Ue=400 V Ie=1,8 A or Ue=240 V Ie=3 A or Ue=120 V Ie=6 A	Ø40mm latching mushroom head pushbutton, "push-pull"	● Red	NC	XBW4BT42 XBW4BT842 w/trigger action	XBW5AT42 XBW5AT842 w/trigger action	XBW5AT42P XBW5AT842P w/trigger action
		● Black	NO	XBW4BT21		
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	Ø40mm latching mushroom head pushbutton, key 455	● Red	NC	XBW4BS142	XBW5AS142 (1)	XBW5AS142P
		● Black	NO	XBW4BS121		
Head Mechanical durability (millions of operating cycles): 5 Contact Mechanical durability (millions of operating cycles): 1	Ø40mm latching mushroom head pushbutton, turn to release	● Red	NC	XBW4BS542	XBW5AS542 (1)	XBW5AS542P
		● Black	NO	XBW4BS521		

(1) Provided with metallic screw

Dimensions (mm)



## Selector Switch

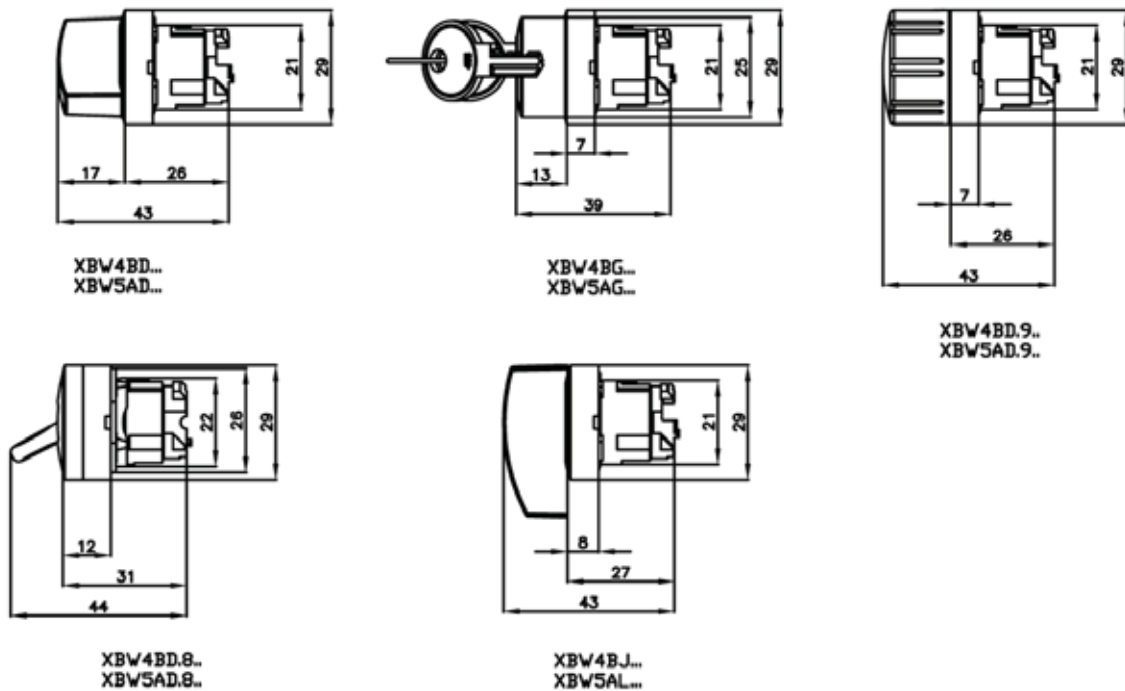
The HarmAtex range of selector switches feature a large range of head designs, with the option for 2 or 3 positions, and the choice of a stay-put or spring-return acutation mode. Metal and Plastic heads allow for a variety of control panel combinations. All our selector switches are available without key, with standard key no. 455 or with other keys upon request. The current range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. The range are improved and reinforced of previous versions. Flexible product range Up to 6 contacts/switch (max. 2 on the top of each other). Up to 4 contacts/illuminated switch.

### Specifications

<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +80°C
<b>Approvals</b>	INERIS02ATEX9007U
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50281-1-1
<b>Ex-Code</b>	Ex ed IIC 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm (recommended 22,4)
<b>Mounting centres</b>	30x40mm (WxH)
<b>Depth below head</b>	58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals
<b>Key</b>	Key n°455 as standard, other upon request



### Dimensions (mm)



## 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  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	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 switches, 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 Unit

The HarmAtex range of illuminated unit switch is composed of pushbutton and selector switches, with a large type of head. Metal and plastic head allow various combinations for control panel.

HarmAtex range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. To meet the high standards and demands of our customers, the HarmAtex range is constantly being updated and improved, and offers flexible design solutions such as up to 6 contacts/ switches (with a maximum of 2 on top of one another) and up to 4 contacts/ illuminated switches.

### Specifications

<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +65°C
<b>Approvals</b>	INERIS04ATEX9003U, INERIS 02ATEX9007U
<b>Standards</b>	Cenelec EN50014, EN50019, 50028, EN50281-1-1
<b>Ex-Code</b>	Ex ed IIC / Ex em II 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm (recommended 22,4)
<b>Mounting centres</b>	30x40mm (WxH)
<b>Depth below head</b>	58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals



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

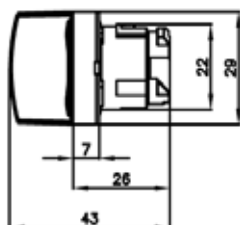
## Illuminated Unit



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...

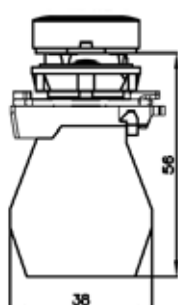


XLW4BW...

Tête métallique XBW4...



Tête métallique XBW4...



## Pilot Light

The Harmatex range of pilot lights is available in 5 colors. The capabilities of this product are greatly appreciated by our customers in order to signal actions on their control panels, and by electrical service professionals on their signal units.

Harmatex range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. To meet the high standards and demands of our customers, the Harmatex range is constantly being updated and improved, and offers flexible design solutions such as up to 6 contacts/switches (with a maximum of 2 on top of one another) and up to 4 contacts/illuminated switches.

### Specifications

<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +65°C
<b>Approvals</b>	INERIS04ATEX9003U
<b>Standards</b>	Cenelec EN50014, EN50019, 50028, EN50281-1-1
<b>Ex-Code</b>	Ex em II 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm (recommended 22,4)
<b>Mounting centres</b>	30x40mm (WxH)
<b>Depth below head</b>	58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals



### Pilot lights, spare parts and complementary parts

	Compleat Pilot light with integral LED 24V to 415V AC/DC			
	Type	Colour	Lid mounting	
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 415V AC/DC	Pilot light for coloured head	○ White	ZBWW1	
		● Green	ZBWW3	
		● Red	ZBWW1	
		● Yellow	ZBWW1	
		● Blue	ZBWW1	

## Contact block

The HarmAtex contactblock normally open or normally closed allows for a variety of possible combinations with our command units. HarmAtex range consists of pushbuttons, mushroom heads, selector switches, key switches, illuminated selector switches, pilot lights, complementary parts and spare parts. To meet the high standards and demands of our customers, the HarmAtex range is constantly being updated and improved, and offers flexible design solutions such as up to 6 contacts/switches (with a maximum of 2 on top of one another) and up to 4 contacts/illuminated switches.

### Specifications

<b>Material</b>	Metal and Plastic
<b>IP Rating</b>	IP66 according to IEC 60529
<b>Temperature</b>	-20°C to +80°C
<b>Approvals</b>	INERIS02ATEX9007U
<b>Standards</b>	Cenelec EN50014, EN50019, 50028, EN50281-1-1
<b>Ex-Code</b>	Ex ed IIC / II 2 GD
<b>Mounting</b>	Panel cut-out Ø 22,5mm (recommended 22,4)
<b>Mounting centres</b>	30x40mm (WxH)
<b>Depth below head</b>	58mm (one contact layer)
<b>Connection</b>	Screw clamp terminals



### Contactblocks, spare parts and complementary parts

Rated Operational Characteristics	Contact Block			
	Type	Contact	Reference w/metal bezel	Reference w/plastic bezel
AC15; A 600	NO contact block for lead mounting	NO	ZBWE101	
Ue= 400 V Ie= 1,8 A	NC contact block for lead mounting	NC	ZBWE102	
Ue= 240 V Ie= 3 A	NO contact block for base plate mounting	NO	ZBWE1111	
Ue= 120 V Ie= 6 A	NC contact block for base plate mounting	NC	ZBWE1121	
DC13; Q600	NO contact block with bracket	NO	ZBWZ101	ZBWZ1010
Ue= 400 V Ie= 0,15 A	NC contact block with bracket	NC	ZBWZ102	ZBWZ1020
Ue= 250 V Ie= 0,27 A				
Ue= 125 V Ie= 0,55 A				

## Components for certified Ex d enclosures

### Pushbutton PLA

Pushbutton Operators - Modular Barrel M32.

Code	Type	Colour	Description	Weight (kg)
276.11	PLA 10	Black	Start pushbutton operator	0,150
276.12	PLA 20	Red	Stop pushbutton operator	0,150
276.13	PLA 30	Green		0,150

### Pushbutton PLB

Pushbutton Lockable Operators - Modular Barrel M32.

Code	Type	Colour	Description	Weight (kg)
276.14	PLB 10	Black		0,180
276.15	PLB 20	Red		0,180
276.16	PLB 30	Green		0,180

### Pushbutton PLF

Key Pushbutton Operator - Modular Barrel M32.

Code	Type	Colour	Description	Weight (kg)
279.11	PLF 10-01/12	Black		0,200

### Pushbutton PLC-I

Mushroom-Head Momentary Pushbutton Operator - Modular Barrel M32.

Code	Type	Colour	Description	Weight (kg)
276.17	PLC-I	Red		0,150

### Pushbutton PLC-S

Mushroom-Head Maintained Pushbutton Operator - Modular Barrel M32.

Code	Type	Colour	Description	Weight (kg)
276.18	PLC-S	Red		0,150

### Pushbutton PLC-S Lockable

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

Type	Colour	Description	Weight (kg)
PLC-S Lockable	Red		0,210

**Note: Valid for all M32 Barrels.**

**To be used with our certified Ex d enclosures only.**



### Pilot Lamps and Relative Tubular Lamps Pilot Lamps Operator – Modular Barrel M32

Code	Type	Colour	Description	Weight (kg)
277.11	PLD 10	White		0,130
277.12	PLD 20	Red		0,130
277.13	PLD 30	Green		0,130
277.14	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
H001072	L BA 110/130V	Incandescent Lamps with sockets BA9S – 3 W*
H001073	L BA 220/260V	
H001070	L BA 24/30V	
H001071	L BA 48V	

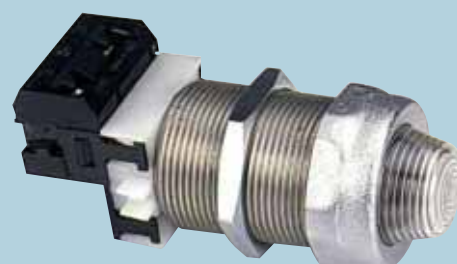
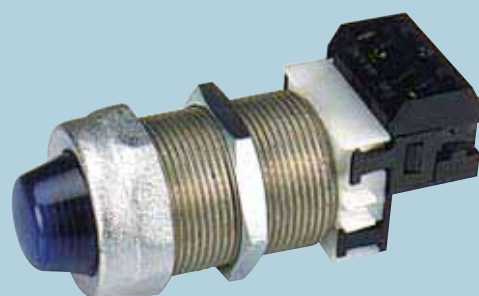
\* Enclosures equipped with pilot light + incandescent lamps will have the Temperature Class = T4

### LED for Pilot Lamp PLD... Type with lamp holder BA9S: 10x28

Code	Type	Colour	Voltage
H001312	LED BA9S 110V-B	White	110V
H001311	LED BA9S 110V-G	Yellow	110V
H001309	LED BA9S 110V-R	Red	110V
H001310	LED BA9S 110V-V	Green	110V
H001304	LED BA9S 12V-B-	White	12V
H001303	LED BA9S 12V-G	Yellow	12V
H001301	LED BA9S 12V-R	Red	12V
H001302	LED BA9S 12V-V	Green	12V
H001316	LED BA9S 220-B	White	220V
H001315	LED BA9S 220-G	Yellow	220V
H001313	LED BA9S 220-R	Red	220V
H001314	LED BA9S 220-V	Green	220V
H001308	LED BA9S 24V-B	White	24V
H001307	LED BA9S 24V-G	Yellow	24V
H001305	LED BA9S 24V-R	Red	24V
H001306	LED BA9S 24V-V	Green	24V

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

**Note: Valid for all M32 Barrels.  
To be used with our certified Ex d enclosures only.**



## Components for certified Ex d enclosures

### Selector Switches (nominal current AC1-600V)

#### – Modular Barrel M32

Code	Type	Poles	Rating A	Weight (kg)
542.51	PSRC 120	1	20	0,130
542.52	PSRC 220	2	20	0,160
542.53	PSRC 320	3	20	0,200
542.54	PSRC 420	4	20	0,200
543.51	PSRC 132	1	32	0,200
543.52	PSRC 232	2	32	0,200
543.53	PSRC 332	3	32	0,250
543.54	PSRC 432	4	32	0,250

### PSRC – C

#### Step Switches (nominal current AC1-600V)

#### – Modular Barrel M32

Code	Type	Poles	Rating A	Weight (kg)
545.51	PSRC-C-120	1	20	0,130
545.52	PSRC-C-220	2	20	0,200
545.53	PSRC-C-320	3	20	0,250

### PSRC – D

#### Change Over Switches (nominal current AC1-600V)

#### – Modular Barrel M32

Code	Type	Poles	Rating A	Weight (kg)
544.51	PSRC-D-120	1	20	0,130
544.52	PSRC-D-220	2	20	0,200
544.53	PSRC-D-320	3	20	0,250

### Maximum 4 contact blocks for each operators

Code	Type	Description	Weight (kg)
280.1	ELC - NO	NO FOR Pushbutton operator	0,006
280.2	ELC - NC	NC FOR Pushbutton operator	0,006
	ELC – NC/NO	NC+NO Contact block combination	
	ELC – NO/NC	NO+NC Contact block combination	














Note: Valid for all M32 Barrels.

To be used with our certified Ex d enclosures only.







	<b>XAWG-XAWF- XAWFS</b> Complete Control Station, Ex e/ed/em/emd, GRP/Zinc Alloy/AISI 316	48
	<b>XAWE</b> Enclosure, Ex e/em/ed/emd, Plastic	52
	<b>XAWG-XAWF-XAWFS</b> Enclosure for Control Station, Ex e/ed/em/emd, GRP/Zinc Alloy/AISI 316	54
	<b>XAWP</b> Pendant Control Station, Ex ed/emd, Metal, Rubber and GRP	56
	<b>EFE Series</b> Push Button Stations, Ex e/em/de/dem, GRP	60
	<b>TNCC</b> Control Box/Station, Ex e/i, AISI 316	62
	<b>TNUC</b> Control Box/Station, Ex e/i, GRP	63
	<b>XADW/XAEW</b> Complete Control Station, Ex d, Aluminium	64
	<b>CP../EFDCN Series</b> Enclosure for Push Button Stations, Ex d, Copper free Aluminium	68
	<b>CP../EFSRC Series</b> Switches, Selector Switches, Push Button Stations, Ex d, Copper free Aluminium	72
	<b>EFQL Series</b> Miniature Circuit Breakers Enclosures, Ex d	74
	<b>EPKMZ Series</b> Motor-Protective Circuit Breakers Enclosures, Ex d	75
	<b>AC1WD/DE8BA</b> Motor Starter, Ex d, Aluminium	76

## XAWG/XAWF/XAWFS

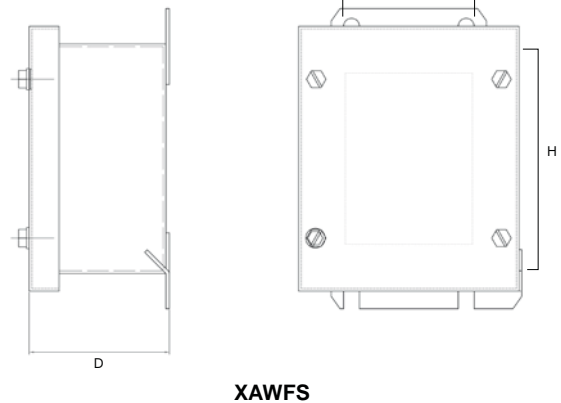
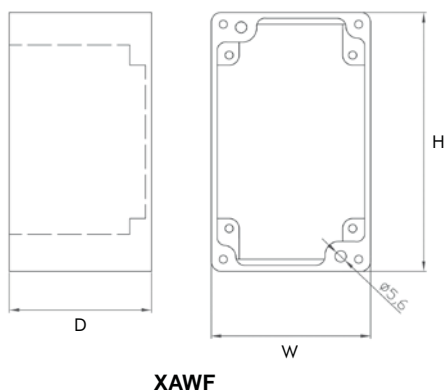
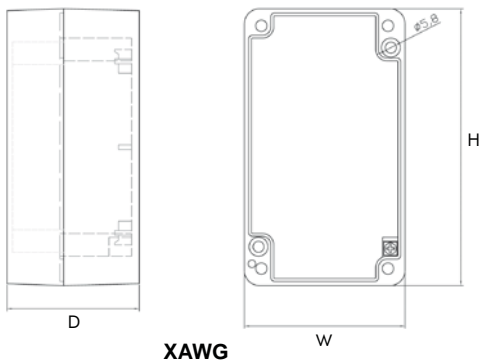
Technor ATEX Ex e empty enclosures are used with the HARMATEX range of pushbuttons and light units. The combination enables our customers to customize each control station. The enclosures can be delivered with 1 to 52 control units in lid. Small enclosures are standard fitted with 1 M20 entry.

### Specifications

<b>Material</b>	GRP, zinc alloy, stainless steel
<b>IP Rating</b>	IP65 – IP66
<b>Temperature</b>	-20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0122
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, N50028, EN500281-1-1
<b>Ex-Code</b>	Ex e II or em II or ed IIC or emd IIC T6 to T4 IP65 or IP66 T85°C to T135°C ATEX II 2 GD or 2 (1) GD



### Dimensions



## Control stations enclosures Ex e

Empty insulated enclosures							
External dimensions in mm			Max. nbr. of Ø22,2 cutout	Window for de- vice Ø48mm	Enclosure reference with cutouts	Enclosure reference without 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							
External dimensions in mm			Max. nbr. of Ø22,2 cutout	Window for de- vice Ø48mm	Enclosure reference with cutouts	Enclosure reference without 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 de- vice Ø48mm	Enclosure reference with cutouts	Enclosure reference without cutouts	Weight kg
W	H	D					
90	90	77	1	-	XAWFS101	XAWFS1C	1,000
90	130	77	2	-	XAWFS202	XAWFS2C	1,200
			-	1	XAWFS208	-	1,200
90	175	77	3	-	XAWFS303	XAWFS3C	1,400
			2	1	XAWFS308	-	1,400
90	220	77	4	-	XAWFS404	XAWFS4C	1,600
			3	1	XAWFS408	-	1,600
90	275	77	5	-	XAWFS505	XAWFS5C	1,900
			4	1	XAWFS508	-	1,900
90	310	77	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								
W	External dimensions in mm			Max. nbr. of terminal blocks to be fitted	Max terminal capacity in mm <sup>2</sup>	Enclosure reference with cutouts	Enclosure reference without cutouts	Weight kg
	H	D						
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								
W	External dimensions in mm			Max. nbr. of Ø22,2 cutout	Max terminal capacity in mm <sup>2</sup>	Enclosure reference with cutouts	Enclosure reference without cutouts	Weight kg
	H	D						
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								
W	External dimensions in mm			Max. nbr. of Ø22,2 cutout	Max terminal capacity in mm <sup>2</sup>	Enclosure reference with cutouts	Enclosure reference without cutouts	Weight kg
	H	D						
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					
Reference	Dimensions in mm			Number of control and signaling units which can be mounted on the cover	Maximum permissible dissipation for the enclosure W
	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					
Reference	Dimensions in mm			Number of control and signaling units which can be mounted on the cover	Maximum permissible dissipation for the enclosure in W
	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 mm<sup>2</sup> = 1,2W  
 1 terminal 0 to 10 mm<sup>2</sup> = 2W  
 1 terminal 6 to 16 mm<sup>2</sup> = 3,5W  
 1 terminal 16 to 35 mm<sup>2</sup> = 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.



## XAWE

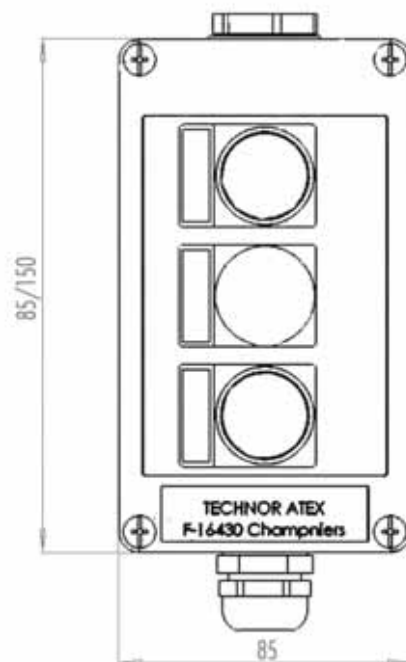
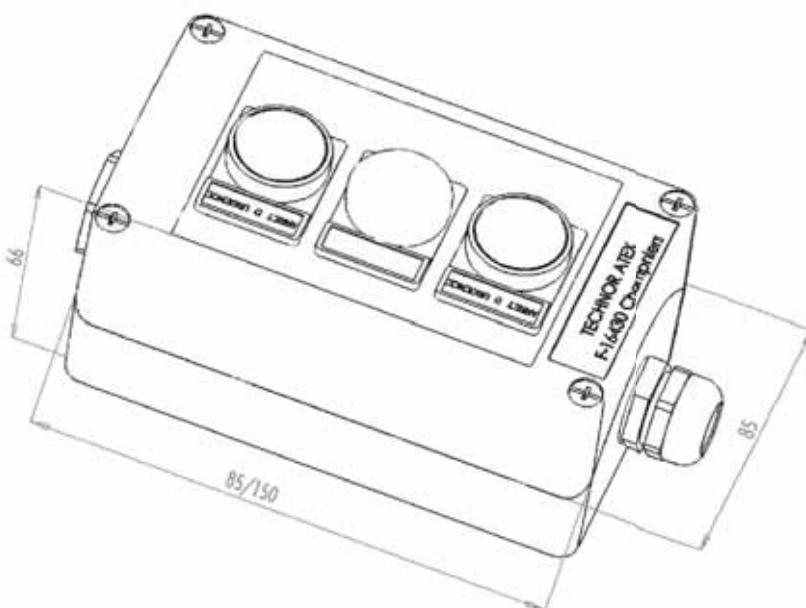
This new range of enclosures has been designed for optimized use with our HARMATEX Pushbutton range. Advanced coupling abilities mean that customers need only 1 unit to realize a specific control system. Our standard range of pushbutton unit covers the most used types, but tailor made units can be delivered upon request. All of our enclosures are standard fitted with polyamide cable gland and plug.

### Specifications

<b>Material</b>	Plastic
<b>IP Rating</b>	IP65 –IP66
<b>Temperature</b>	–20°C to +60°C
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50028, EN500281-1-1
<b>Ex-Code</b>	Ex e II or em II or ed IIC or emd IIC T6 to T4 IP65 or IP66 T85°C to T135°C ATEX II 2 GD
<b>Cable gland entry</b>	M20 or M25 cable gland



### Dimensions (mm)





Pushbutton Stations		
Function	Labels (pushbutton colour) and contact function	Insulated station with insulated unit
1 pushbutton, spring return	Start (green) 1 NO	XAWE10
1 pushbutton, spring return	Stop (red) 1 NC	XAWE11
1 pushbutton, mushroom head Ø40 mm, spring return	Stop (red) 1 NC	XAWE16
1 pushbutton, mushroom head Ø40 mm, latching turn to release	Stop (red) 1 NC	XAWE17
1 selector switch, 2 positions stay put	Start/Stop 1 NO	XAWE13
2 pushbuttons, spring return	Start (green) 1 NO Stop (red) 1 NC	XAWE21
3 pushbuttons, spring return	Forward (green) 1 NO Stop (red) 1 NC Reverse (green) 1 NO	XAWE31
1 pilot light, 2 pushbuttons, spring return	Red light unit 24-415V AC-DC Start (green) 1 NO Stop (red) 1 NC	XAWE34

Measurement Station		
Function	Label (pushbutton colour) and contact function	Insulated station with insulated unit
1 ammeter		XAWE2812

Junction Box		
Function	Label (pushbutton colour) and contact function	Insulated station with insulated unit
5 terminals	3P+T+N	XAWE9104

Cable gland :

XAWE1... :

1 cable gland M20 for cable Ø 8 to 13 mm + 1 plug

XAWE2 and XAWE3... :

1 cable gland M20 for cable Ø 8 to 13 mm + 1 plug

1 cable gland M25 for cable Ø 13 to 16 mm + 1 plug

XAWE9... :

4 cable glands M20 for cable Ø 8 to 13 mm + 4 plugs

The ammeter is of the current transformer type, for use with a current transformer of 1 or 5 amp secondary (C.T. not supplied). Please state required ammeter motor scale and C.T. secondary current when ordering. If more pilot lights and switches are required, several XAWE can be mounted together.

Please contact Technor for further information.

Empty Stations			External dimensions in mm		
Function	Insulated station with insulated unit	Cable gland number and type	W	H	D
1 pushbutton	XAWE101	1 cable gland M20 1 plug M20	85	85	66
2 pushbuttons	XAWE302	1 cable gland + 1 plug M20 1 cable gland + 1 plug M25	85	150	66
3 pushbuttons	XAWE303	1 cable gland + 1 plug M20 1 cable gland + 1 plug M25	85	150	66

All empty enclosures are fitted with certified polyamide cable gland and plug.

The cable gland is located on the smallest face.

See the HARMATEX section for further details of available pushbuttons or light units.

Cable gland capacity :

- cable gland M20 for unarmored cable Ø 8 to 13 mm

- cable gland M25 for unarmored cable Ø 13 to 19 mm

### XAWG/XAWF/XAWFS

Our complete stations, made in GRP, Zinc alloy or Stainless Steel, are primarily used as control systems. Composed by control units or an ammeter, our boxes come standard-fitted with plastic cable glands.

#### Specifications

<b>Material</b>	GRP, zinc alloy or stainless steel
<b>IP Rating</b>	IP65 – IP66
<b>Temperature</b>	–20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0122
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50028, EN500281-1-1
<b>Ex-Code</b>	Ex e II or em II or ed IIC or emd IIC T6 to T4 IP65 or IP66 T85°C to T135°C ATEX II 2 GD



#### 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 24-415V 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

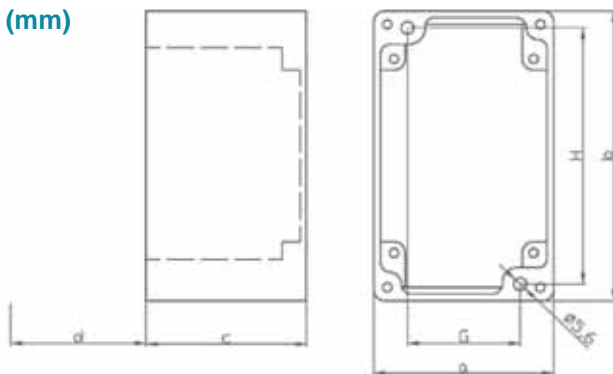
Cable gland: XAWG1... XAWG2... plastic cable gland for cable Ø 8 to 13 mm  
 XAWG3... plastic cable gland for cable Ø 13 to 19 mm  
 XAWF(S)1... XAWF(S)2... XAWF(S)3... brass cable gland for cable Ø 8,5 to 16 mm  
 XAWF(S)4... brass cable gland for cable Ø 12 to 20,5 mm  
 For control unit please see our Harmatex documentation

The ammeter is of the current transformer type, for use with a current 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.

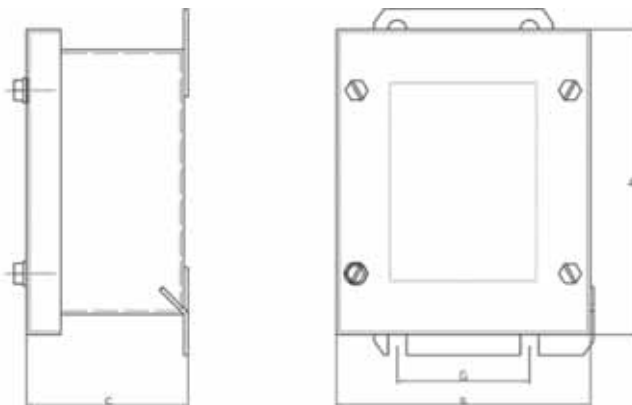


Dimensions (mm)

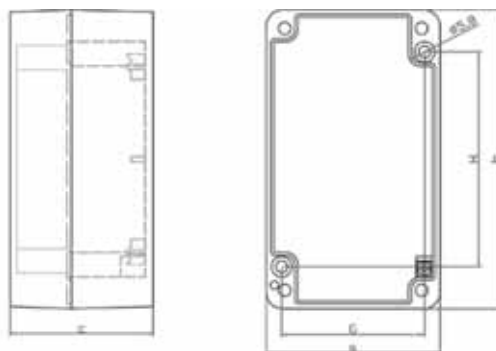


d : max 67 mm for operating head

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

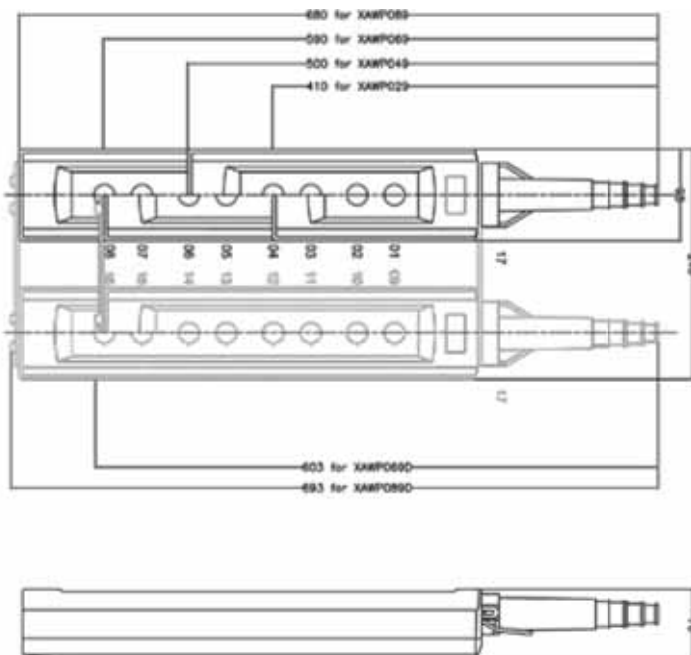
The XAWP range of pendant control stations is suitable for all kinds of industry, especially those where an explosive atmosphere may be present. This range is certified ATEX II 2 GD. Primarily used on cranes. Our pendant control station is available with 2, 4, 6, 8 pushbuttons and offers a variety of simple and complex design features including 12 or 16 pushbutton models.

### Specifications

<b>Material</b>	Metal, Rubber and GRP
<b>IP Rating</b>	IP65
<b>Temperature</b>	20°C to +60°C (without lighting functions) -20°C to +50°C (with lighting functions)
<b>Approvals</b>	INERIS 03ATEX0122
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50028, EN500281-1-1
<b>Ex-Code</b>	II 2 GD - Ex ed IIC / Ex emd IIC
<b>Mounting</b>	Assembly of components only by TECHNOR
<b>Cable entry capacity</b>	for Ø10 to Ø22 mm cable
<b>Connection</b>	Screw clamp terminals From 1 x 0,5 mm <sup>2</sup> cable to 2 x 1,5 mm <sup>2</sup> cable (with or without ferrule)
<b>Availability</b>	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	↑ ↓	E- 1 N/O	XAWP271	0,940
		E- 1 N/C + 1 N/O	XAWP281	1,000
4	↑ ↓ ← →	E- 1 N/O	XAWP471	1,290
		E- 1 N/C + 1 N/O	XAWP481	1,400
6	↑ ↓ ← → ↗ ↘	E- 1 N/O	XAWP671	1,650
		E- 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	↑ ↓	E- 1 N/O For Direction and Start Functions	E- 1 N/C For Stop Function	XAWP472	1,320
			E- 1 N/C + 1 N/O For All Functions		XAWP482	1,380
	6	↑ ↓ ← →	E- 1 N/O For Direction and Start Functions	E- 1 N/C For Stop Function	XAWP672	1,650
			E- 1 N/C + 1 N/O For All Functions		XAWP682	1,690
	8	↑ ↓ ← → ↗ ↘	E- 1 N/O For Direction and Start Functions	E- 1 N/C For Stop Function	XAWP872	2,000
			E- 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. Illuminated or not 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 XAWP4373 with illuminated START pushbutton	1,350
6			XAWP6272 with standard START pushbutton XAWP6373 with illuminated START pushbutton	1,800
8			XAWP8272 with standard START pushbutton XAWP8373 with illuminated 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
Illuminator pushbutton "Start"	Green (G)+NO	XLW5AV033
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

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

### Specifications

<b>Material</b>	Resin GRP (Glass Fiber Reinforced Polyester)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to 60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 04ATEX0035 GOST Certificate POCC IT.ГБ04.В00493
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 60079-18 / 61241-0 / 61241-1
<b>Ex-code</b>	<p>⊕ Ex II 2 GD</p> <p>Ex e II T6 IP65 T85°C</p> <p>Ex e II T4 IP65 T135°C</p> <p>Ex emb II T6 IP65 T85°C</p> <p>Ex emb II T4 IP65 T135°C</p> <p>Ex de IIC T6 IP65 T85°C</p> <p>Ex de IIC T4 IP65 T135°C</p> <p>Ex demb IIC T6 IP65 T85°C</p> <p>Ex demb IIC T4 IP65 T135°C</p>
	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
<b>Lid / Door gasket</b>	Silicone seal
<b>Surface treatment</b>	Black colour
<b>Earthing</b>	Earth connections are made via EEx e certified terminals
<b>Drain plug</b>	The enclosures can be equipped with drain and breather devices ECR-1; ECR-2 type.
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Contact our Technical Department for further information
<b>Quantity for terminals</b>	Contact our Technical Department for further information
<b>Rated Voltage</b>	690 V
<b>Rated Current</b>	16 A
<b>Rated Frequency</b>	48÷62 Hz
<b>Note</b>	<b>Captive screws stainless steel made</b> <b>Available only with terminal strip installed</b>





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



The control boxes/stations in SS316 are 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

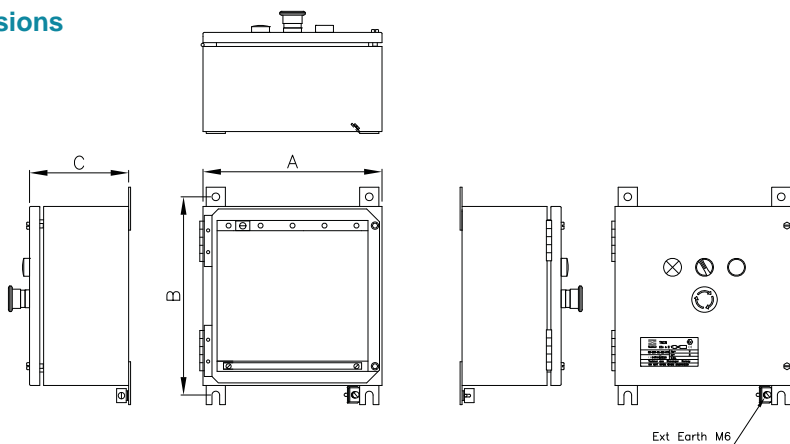
<b>Material</b>	Acid resistant stainless steel SS316
<b>IP Rating</b>	IP66 standard (67 and 68 upon request)
<b>Temperature</b>	-40°C to +60°C
<b>Approvals</b>	DNV-2003-OSL-ATEX-0042 GOST
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1
<b>Lid/Door gasket</b>	Neoprene (temp. -40°C to +100°C) Silicone (temp. -40°C to +200°C)
<b>Surface treatment</b>	Acidized Pickling as standard Electropolished as an option
<b>Material thickness</b>	Min. 1,5 mm (depending on the box size)
<b>Earthing</b>	Internal earth bar/bracket External earth bracket
<b>Drain Plug</b>	Optional
<b>Other options</b>	Ref. TNCN



### TNCC Measurement Range of Stocked Boxes

Type	A Width cm	B Height cm	C Depth cm	Volume dm³	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 control boxes/stations in GRP 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

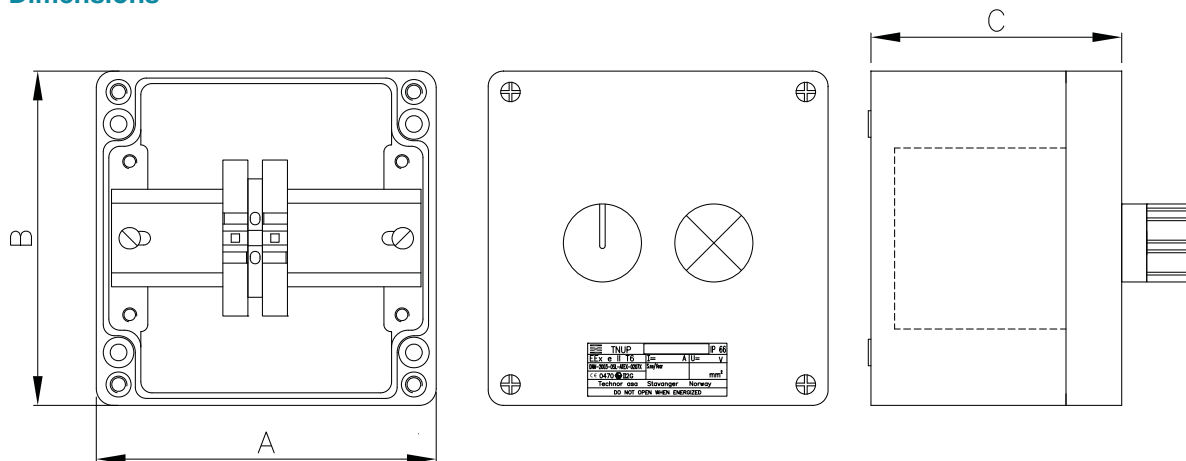
<b>Material</b>	Glass fibre reinforced polyester (GRP)
<b>IP Rating</b>	IP66 according to IEC 529
<b>Temperature</b>	-20°C to +40°C
<b>Approvals</b>	DNV-2004-OSL-ATEX-0121
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50019, IEC/EN 60079-7
<b>Lid/Door gasket</b>	Perbunan
<b>Earthing</b>	PE bar and/or earth terminals Earth continuity plate / earth tag upon request
<b>Electrical data</b>	U <sub>max</sub> = 750V, I <sub>max</sub> = 500A
<b>Colour</b>	Black
<b>Cover Screws</b>	SS316
<b>Other options</b>	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
404117	400	405	165	6,1

### Dimensions



## XADW / XAEW

Primarily used as a control system, our complete station is composed of a pushbutton unit, pilot light or ammeter. Aluminium enclosure and brass glands is standard.

### Specifications

<b>Material</b>	Aluminium
<b>IP Rating</b>	IP65 – IP66
<b>Temperature</b>	-20°C to +60°C
<b>Approvals</b>	INERIS 03ATEX0145 for XADW INERIS 03ATEX0146 for XAEW
<b>Standards</b>	Cenelec EN50014, EN50018, EN500281-1-1
<b>Ex-Code</b>	Ex d IIB T6 IP65/66 - T85°C for XADW Ex d IIC T6 IP65/66 - T85°C for XAEW ATEX II 2 GD
<b>Surface treatment</b>	RAL 7032 Painting Special painting upon request
<b>Cable gland entry</b>	Fitted with 1 M20 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	

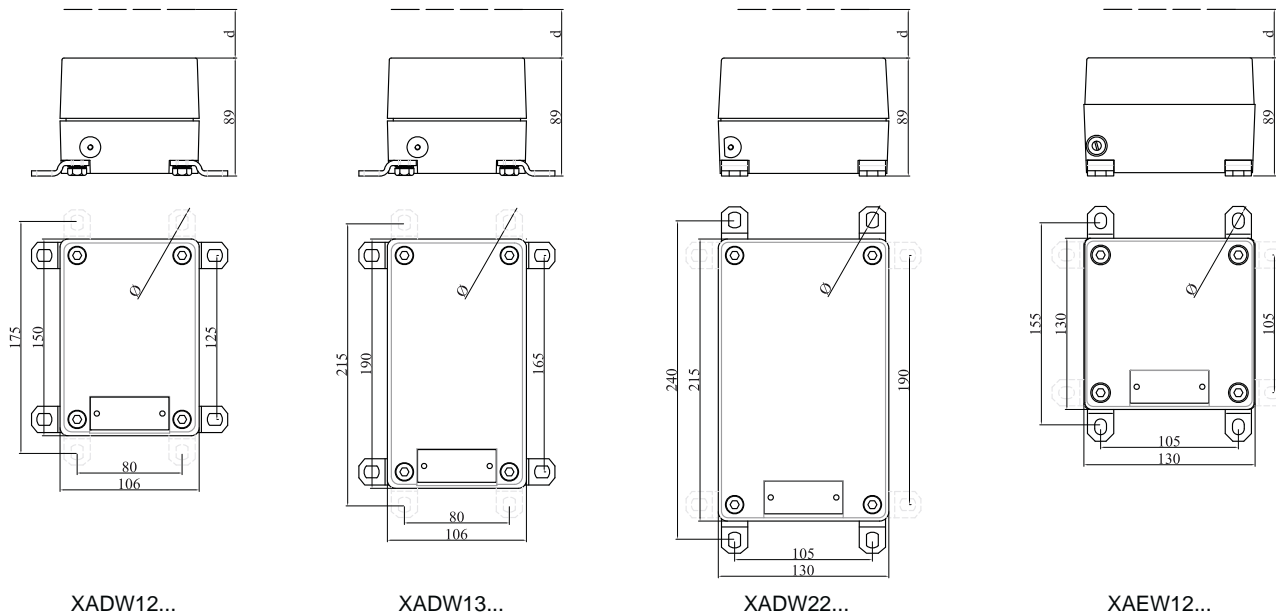
(1) available in Group IIC-T6, please contact our sale office

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 glands only mounted on complete station



## XADW / XAEW

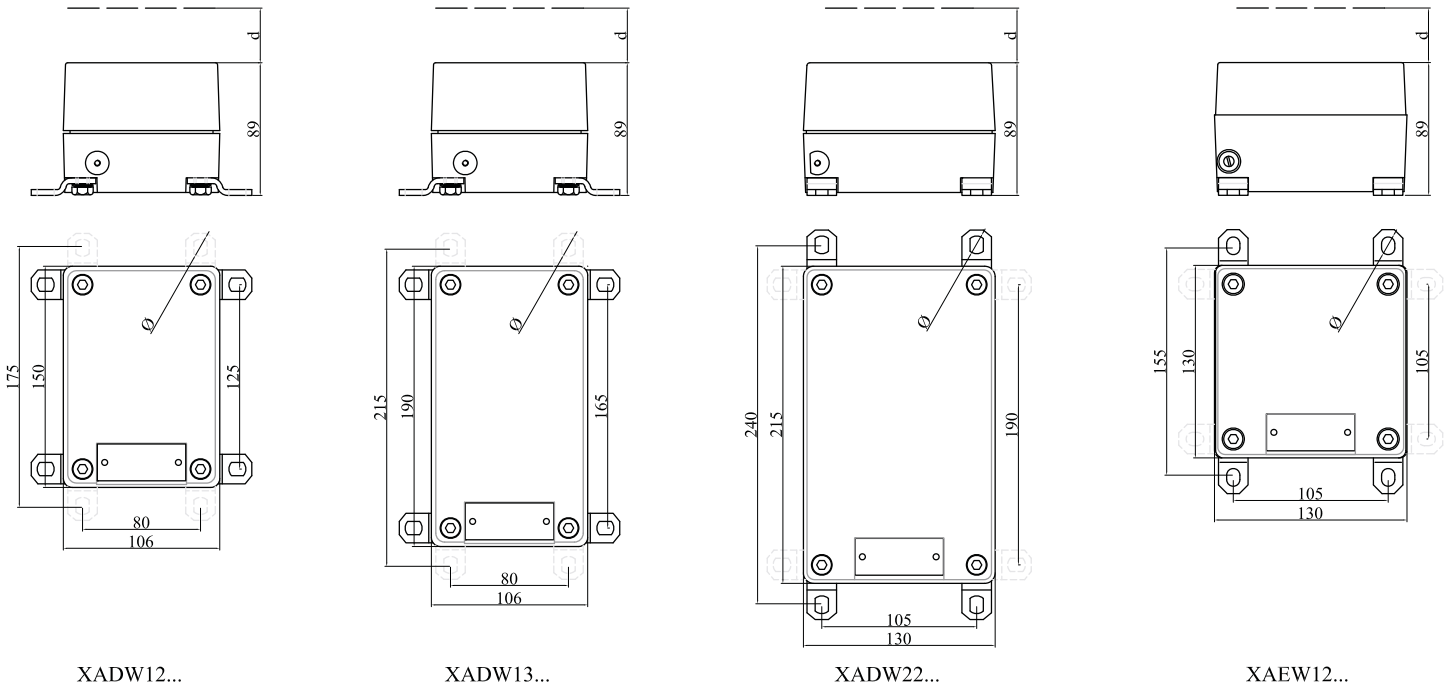
Our extensive range of flameproof are primarily used use as control unit and signal units in Atex zones. The variable composition of our enclosures enables customers to customize the unit to meet their specific application needs. In addition, elements of our Standard range can be included in the design process to ensure that the final product meets our customers' specific needs.

### Specifications

<b>Material</b>	Aluminium
<b>IP Rating</b>	IP65 – IP66
<b>Temperature</b>	–20°C to +60°C
<b>Approvals</b>	INERIS 03ATEX0145 for XADW INERIS 03ATEX0146 for XAEW
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	Ex d IIB T6 IP65/66 - T85°C for XADW Ex d IIC T6 IP65/66 - T85°C for XAEW
<b>Surface treatment</b>	ATEX II 2 GD RAL 7032 Painting Special painting on request.



### Dimensions



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.

The Push Buttons Stations CP.../ EFDCN Series is based on the features of our CP... Enclosure, which enables 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 made of 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 fittings do not affect inner space, which is fully available for terminals and wirings. Internal and external screws are in Stainless Steel AISI 304. This series is custom-made to customer specifications, including quantity and type of operators (M32 modular barrels) required on the CP.../EFDCN enclosure. Based on the customers needs and certificate requirements, our technical department will advise and select the most suitable CP.../EFDCN combination.



### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)	
<b>IP Rating</b>	IP65	
<b>Temperature</b>	-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	
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 03ATEX0009 GOST Certificate POCC IT.ГБ04.В00508	
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1	
<b>Ex-code</b>	<b>CE</b> <b>Ex</b> 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	
<b>Lid / Door gasket</b>	O-ring made in Nitrile Rubber (NBR)	
<b>Surface treatment</b>	Unpainted	
<b>Electrical characteristics</b>	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
<b>Internal diameter</b>	Available from 90 mm. to 120 mm.	
<b>Entries position</b>	(C) = 2, (T) = 3, ways	
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions	
<b>Accessories on request</b>	External polyurethane painting "Standard Cycle" Green RAL 6003	

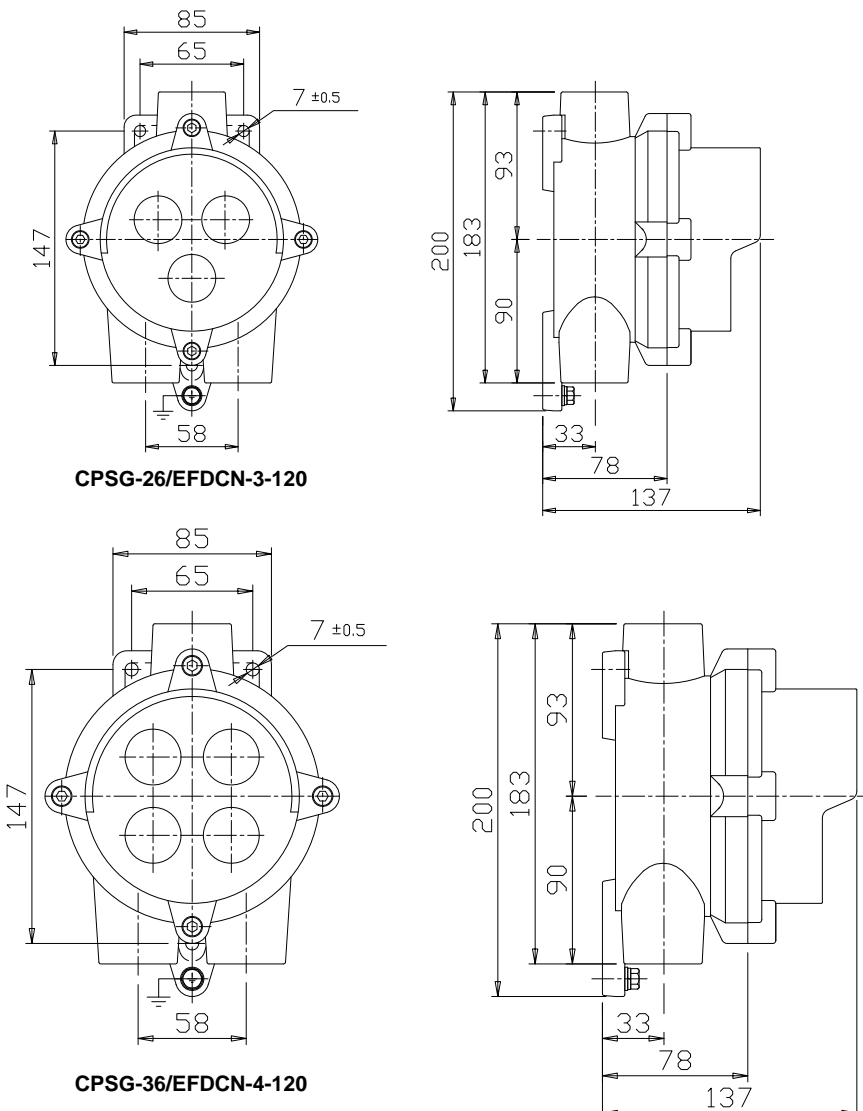


This series is custom-made to customer specifications, including the number and type of operators (M32 modular barrels) required on the CP-... enclosure. Based on the customers needs and certificate requirements, our technical department will advise and select the most suitable CP.../EFDCN combination.

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

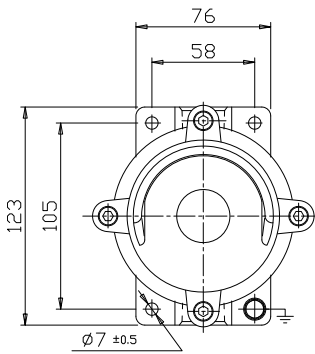
CODE	TYPE	DESCRIPTION	ENTRIES	WEIGHT
A.0451.10	CPC-26/ EFDCN-1-90	1 Operator - enclosure 90 mm. diameter	2xM25	0,930
A.0452.50	CPSC-26/ EFDCN-1-120	1 Operator on 120 mm enclosure's diameter	2xM25	1,330
A.0452.20	CPSC-26/ EFDCN-2-120	2 Operator on 120 mm enclosure's diameter	2xM25	1,280
A.0452.30	CPSC-36/ 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 button complete with breakable glass and hummer	2xM25	1,200
A.0493.21	CPC-26/EFDCN-EM-P	1 Emergency push button 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

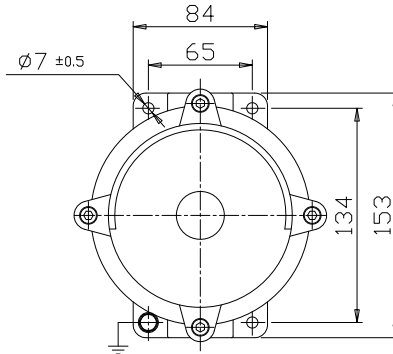




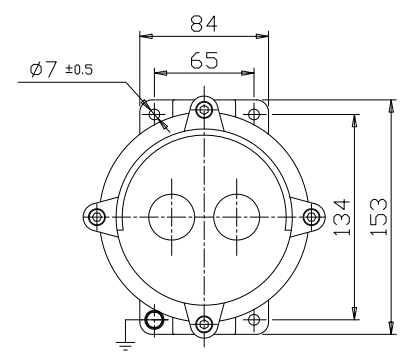
Dimensions



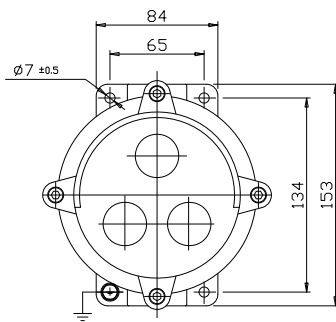
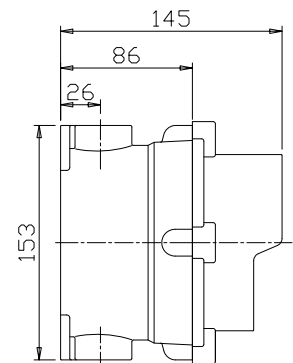
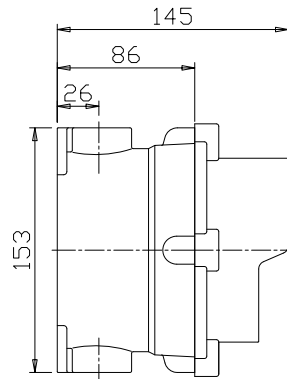
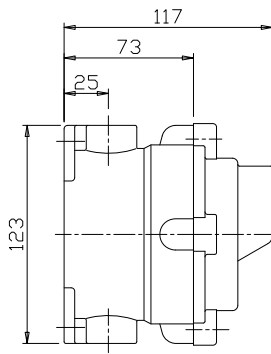
**CPC-26/EFDCN-1-90**



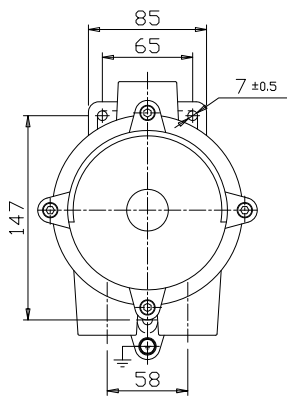
**CPSC-26/EFDCN-1-120**



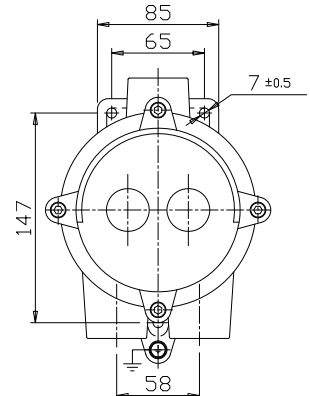
**CPSC-26/EFDCN-2-120**



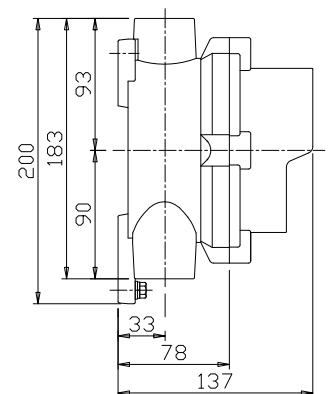
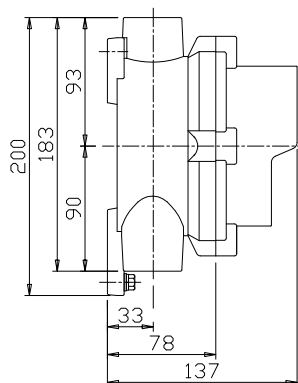
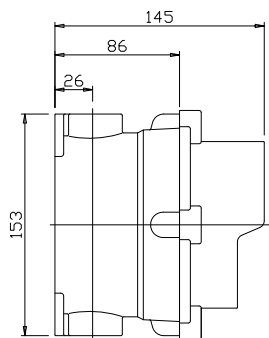
**CPSC-26/EFDCN-3-120**



**CPSG-26/EFDCN-1-120**



**CPSG-26/EFDCN-2-120**



The Customer Oriented Combination Enclosure for Switches: CP-.../ EFSRC Series is based on the features of CP... Enclosures Series which can grant 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 made of Copper free Aluminium (Cu<0,1%), 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 fittings do not affect inner space, which is fully available for terminals and wirings. Internal and external screws are in Stainless Steel AISI 304.

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-.../EFSRC combination.

### Specifications

<b>Material</b>	Copper free aluminium (Cu<0,1%)	
<b>IP Rating</b>	IP65	
<b>Temperature</b>	-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	
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 03ATEX0009 GOST Certificate POCC IT.ГБ04.B00508	
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1	
<b>Ex-code</b>	<b>CE</b> <b>Ex</b> 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	
<b>Lid / Door gasket</b>	O-ring made in Nitrile Rubber (NBR)	
<b>Surface treatment</b>	Unpainted	
<b>Electrical characteristics</b>	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
<b>Internal diameter</b>	90 mm.	
<b>Entries position</b>	(C) = 2	
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions	
<b>Accessories on request</b>	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
451.2	CPC-26/ EFSRC-220	Rotary switch 2 poles 20 A	2XM25	1,100
451.4	CPC-26/ EFSRC-420	Rotary switch 4 poles 20 A	2XM25	1,150
452.4	CPC-26/ EFSRC-432	Rotary switch 4 poles 32 A	2XM25	1,300
453.2	CPC-26/ EFSRC- D - 220	Change - over switch 2 poles 20 A	2XM32	1,150
453.3	CPC-26/ EFSRC- D - 320	Change - over switch 3 poles 20 A	2XM32	1,200
454.2	CPC-26/ EFSRC- C - 220	Step switch 2 poles 20 A	2XM25	1,150
454.3	CPC-26/ EFSRC- C - 320	Step switch 3 poles 20 A	2XM25	1,300



EFQL

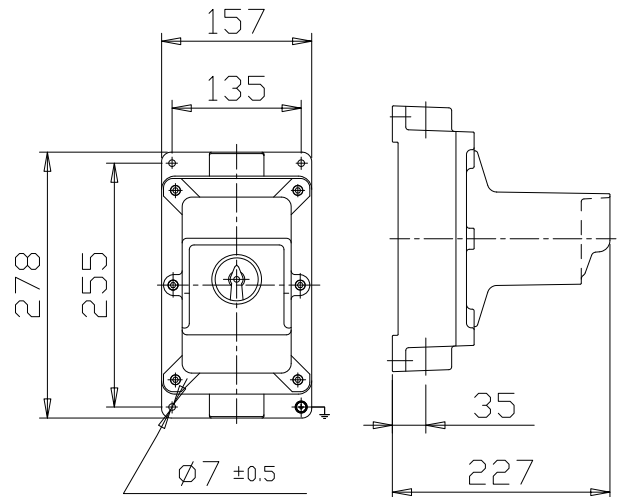
EFQL Miniature Automatic Circuit Breakers are based on the features of EFQL Enclosure, made of Copper free Aluminium and painted according to RAL 6003. Can be used indoor or outdoor, in corrosive and hazardous locations where gases, vapours and dusts may be present. The control-, interruption- and/or protection units EFQL... Series consists of Ex d IIB certified enclosures, completed with automatic circuit breakers, on-load switches and selector switches up to 63A.



Specifications

<b>Material</b>	Copper free aluminium (Cu<0,1%)
<b>IP Rating</b>	IP66/IP67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
<b>Temperature</b>	-30°C to 55°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0027X GOST Certificate POCC IT.ГБ04.В00508
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ II 2 GD Ex d IIB T6 Ex tD A21 IP66 T85°C
<b>Surface treatment</b>	According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
<b>Entries</b>	Painted RAL 6003 colour No 2 Entries diam. 1" or M32
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Poles</b>	3 Poles
<b>Voltage</b>	220/660V 50/60Hz
<b>Accessories</b>	Residual Current Device "VIGI" Auxiliary Switch "OF" Alarm Switch "SD" Shunt trip release "MX+OF" Undervoltage release "MN" Customized colours
<b>Note</b>	<b>Foreseen with electrical unit up to 63 A External operating handle</b>

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

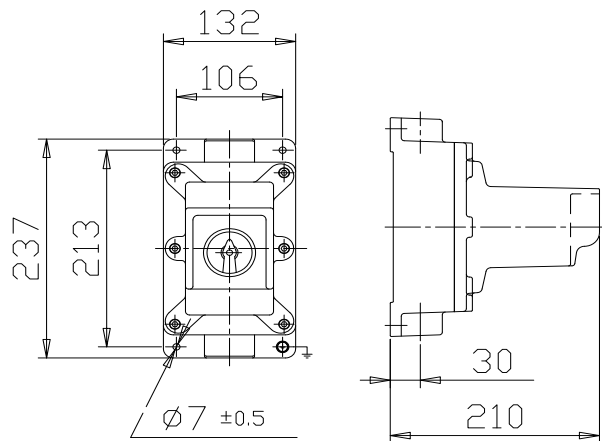
EPKMZ Motor-Protective Circuit Breakers are based on the EFQL Enclosure made of Copper free Aluminium and painted according to RAL 6003. They can be used indoor or outdoor, as well as in corrosive and hazardous locations where gases, vapours and dusts may be present. Motor-protective circuits breakers EPKMZ... Series consists of Ex d IIB certified enclosures, completed with automatic circuit breakers, on-load switches and selector switches up to 63A.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>IP Rating</b>	IP66/IP67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
<b>Temperature</b>	-30°C to 55°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0027X GOST Certificate POCC IT.ГБ04.В00508
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Surface treatment</b>	Painted RAL 6003 colour
<b>Entries</b>	No 2 Entries diam. 1" or M32
<b>Standard Identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Poles</b>	3 Poles
<b>Voltage</b>	220/660V 50/60Hz
<b>Accessories</b>	Customized colors Overload and short circuit releases
<b>Note</b>	<b>Foreseen with electrical unit up to 63 A External operating handle</b>



### 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

Solid and robust, our range of Ex d triple-pole starters with overload relay will meet your needs. Motor-starters are available in three versions with overload relay:

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

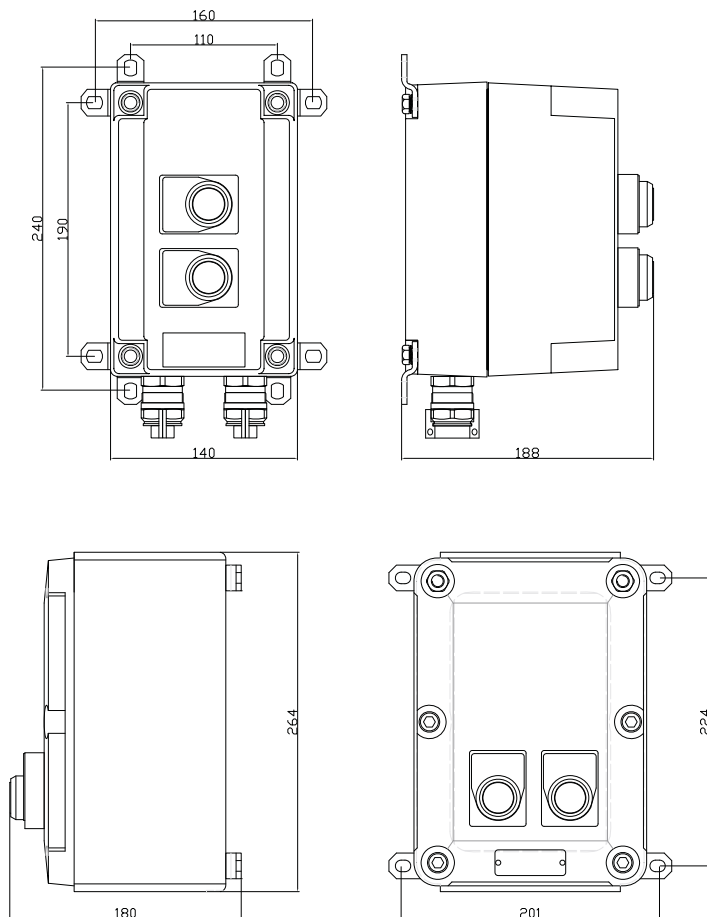
A standard range of contactors, thermal relays and disconnecting switch with or without fusible door, allows a customization of starters for various applications.

#### Specifications

<b>Material</b>	Cast iron, steel
<b>IP Rating</b>	IP65
<b>Temperature</b>	20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0121X INERIS 03ATEX0144X
<b>Standards</b>	Cenelec EN50014, EN50018, EN500281-1-1
<b>Ex-Code</b>	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	Motor rating			Overload range	Gas Group and temp. class	Basic reference (2)	Complete your own reference (1)				Weight without cable gland	
	230V kw	400 V kw	500V kw				A					
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								
	25	1,1	2,2	3	4 to 6	IIC-T3	DE8WH2612	••	•	•	•	12,00
		1,8	3	4	5.5 to 8							
		2,2	4	5,5	7 to 10							
		3	5,5	7,5	9 to 13							
40	4	7,5	10	12 to 18	IIB-T6	AC1WD325	••	•	•	•	5,50	
	5,5	11	15	17 to 25								
					IIC-T3	DE8WH2625	••	•	•	•	12,00	
65	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					
				2	A, H		P1	•	•	•
				2	L, M		P2	•	•	•
				3	L, M, H		P3	•	•	•
Thread ISO M20		1 F for non armoured cable with clamping module						1	I	C
		4 F for armoured cable						4	I	
		Without cable 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 cable 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

Dette udstyr er udstyret med hydraulisk energi. Dette udstyr kan indeholde potentielt farlige elementer.  
TMCN  
TMCN 202015

IB-10-0207









TMCN 202015

IB-10-0213

Dette udstyr er udstyret med hydraulisk energi. Dette udstyr kan indeholde potentielt farlige elementer.  
TMCN  
TMCN 202015

3425



	<b>XUWB</b> Proximity Detector, Ex d, AISI 316L	80
	<b>XCW</b> Limit Switch, Ex d, Zinc Alloy	82
	<b>XC8</b> Limit Switch, Ex d, Cast Iron	84
	<b>XCKW</b> Limit Switch, Ex ed, Zinc Alloy	86
	<b>XCSW</b> Scurity Swich, Ex ed, Zinc Alloy	92
	<b>XY2WCE</b> Emergency Trip Switch, Ex ed, Zinc Alloy	94
	<b>XPEW</b> Emergency Foot Switch, Ex ed, Zinc Alloy	95
	<b>XMLWC</b> Nautilix Pressure Switch, Ex ed, Zinc Alloy	96

## XUWB

The first Technor ATEX 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. Featuring 0.6 meter to 15 meters of useful sensing range, you will be able to find the detector for your application.

### Specifications

<b>Material</b>	Stainless Steel 316L
<b>IP Rating</b>	IP65 / IP67
<b>Working Temperature</b>	-20°C to +55°C
<b>Storage temperature</b>	-40°C to +70°C
<b>Standards</b>	Cenelec EN50014, EN50018, EN500281-1-1
<b>Ex-Code</b>	II 2 GD – Ex d IIC T6 to T4 IP 65–66 T85 to T135°C
<b>Connection</b>	Length: 2m (XUWB...L2) Length: 5 m (XUWB...L5)
<b>Type of transmission</b>	Infrared, except for polarized reflex (red)
<b>Way of detection</b>	Along case axis

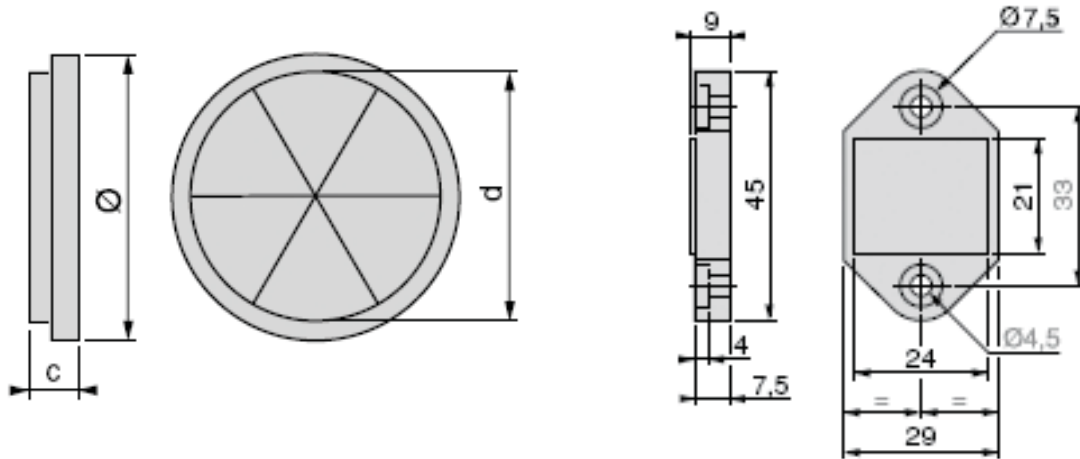


Detector for DC application (static output)				
Detector type	Diffuse system with adjustable sensitivity	Polarised reflex system	Reflex system	Thru-beam system
Sensing distance (Sn) (m)	0,6	2	4	15
Fixing diameter	30 mm			
Rated supply voltage	12 to 24V DC with protection against reverse polarity			
Current consumption, no-load	35 mA			
Maximum switching frequency	500 Hz			
CONTACT TYPE		PNP		
NO	XUWB5APANL2	XUWB9APANL2	XUWB1APANL2	XUWB2APANL2R
NC	XUWB5APBNL2	XUWB9APBNL2	XUWB1APBNL2	XUWB2APBNL2R
Transmitter for Thru-beam	-	-	-	XUWB2AKSNL2T
CONTACT TYPE		NPN		
NO	XUWB5ANANL2	XUWB9ANANL2	XUWB1ANANL2	XUWB2ANANL2R
NC	XUWB5ANBNL2	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

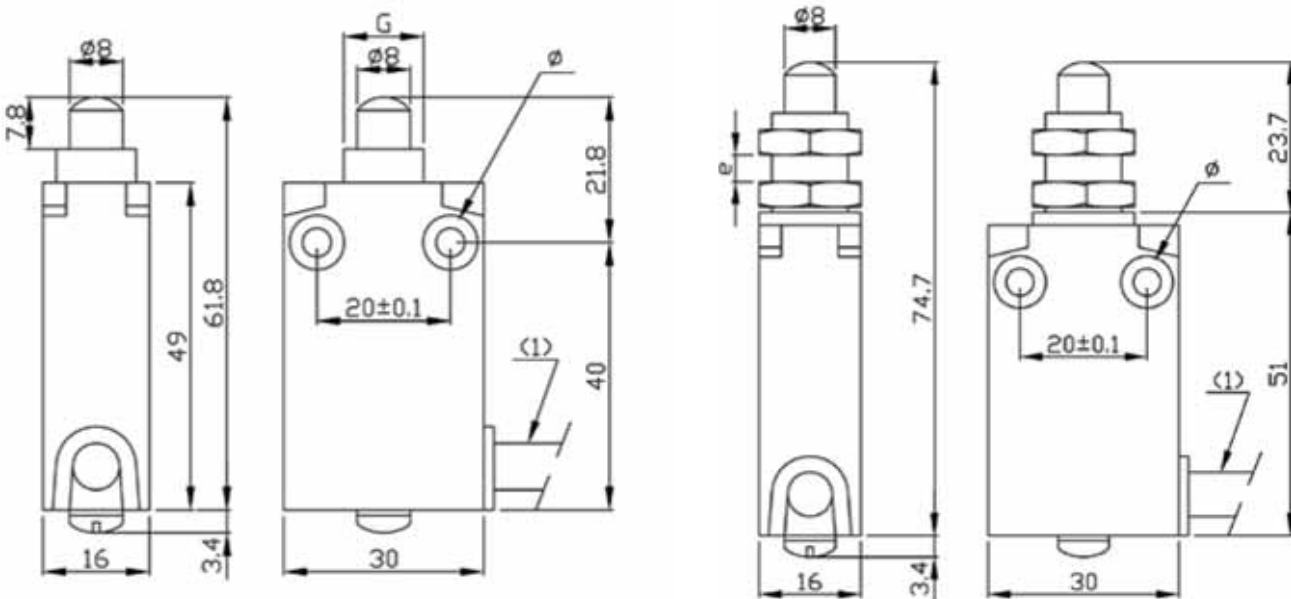
The XCW family is a full pre-cabled range of certified ATEX limit switches. Available in a range of cable lengths, the XCW's compact bodies and large choice of heads makes them a practical solution in process systems and much more.

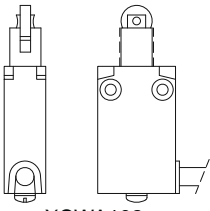
### Specifications

<b>Material (body)</b>	Zinc Alloy (ZnAl 4 - Zamak)
<b>IP Rating</b>	IP66 – IP67
<b>Temperature</b>	-20°C to +60°C
<b>Approvals</b>	03ATEX0083X
<b>Standards</b>	Cenelec EN50014, EN50018, EN500281-1-1
<b>Ex-Code</b>	Ex d IIC T6 T85°C II 2 GD
<b>Cable type</b>	Pre-wired cable
<b>Cable length</b>	Standard 1, 2, 5, 10 meters
<b>Mechanical life</b>	10 millions

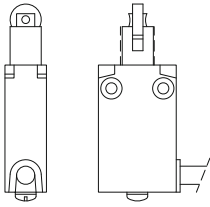


### Dimensions

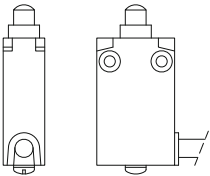




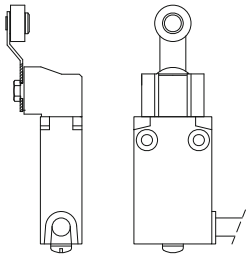
XCWA102



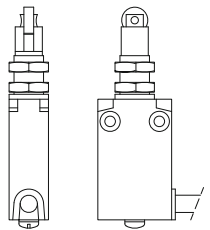
XCWA103



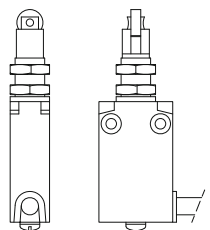
XCWA110



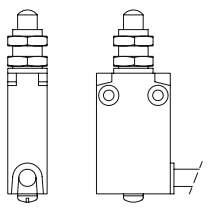
XCWA115



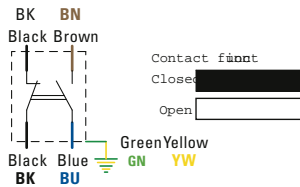
XCWF102



XCWF103



XCWF110



**Limit switches EEx"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.

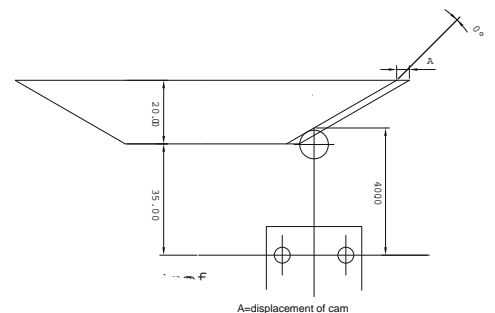
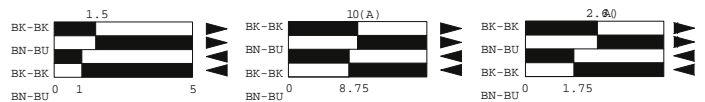
**Contact function**

**Wiring diagram**

XCW•110

XCWZ24

XCW•102,  
XCW•103,  
XCWA115



## XC8

The XC8 series 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 our customers worldwide.

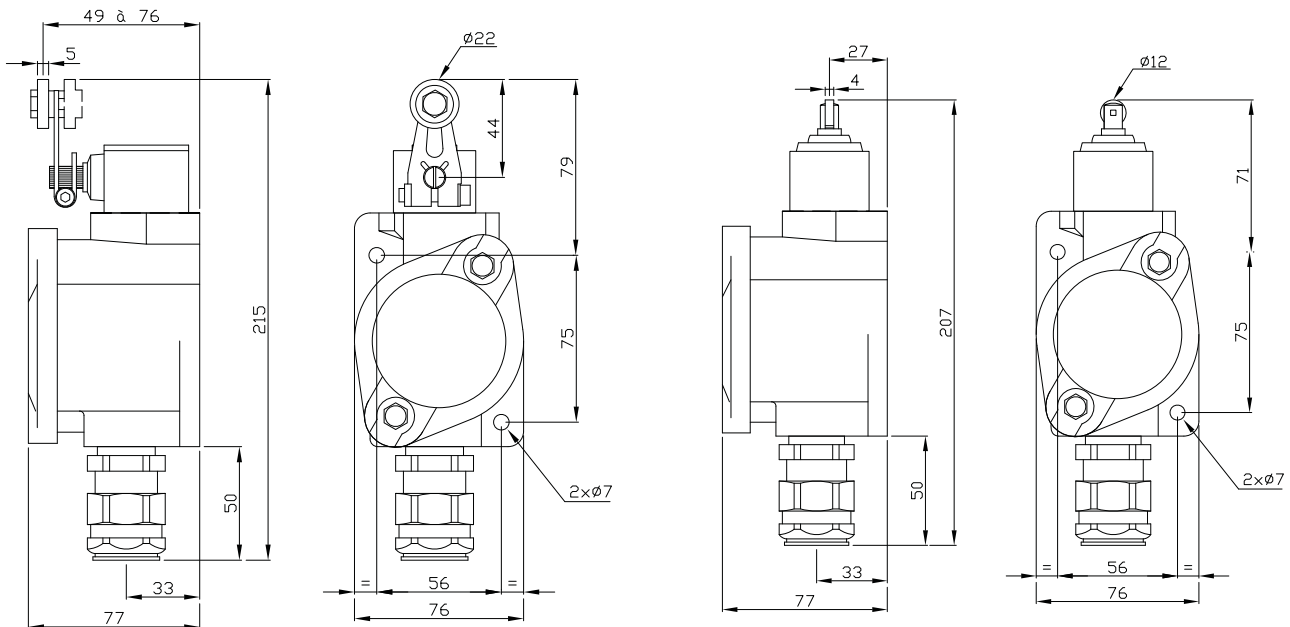
In addition, further head types are available for those customers who need a more customized product.

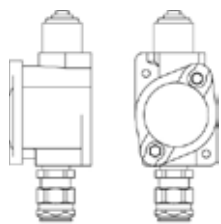
### Specifications

<b>Material</b>	Cast iron (Painted)
<b>IP Rating</b>	IP65–IP66
<b>Temperature</b>	–20°C to +60°C
<b>Approvals</b>	03ATEX0123
<b>Standards</b>	Cenelec EN50014, EN50018, EN500281-1-1
<b>Ex-Code</b>	Ex d IIC T6 T85°C II 2 GD
<b>Cable type</b>	Nickel-plated brass cable gland
<b>Mechanical life</b>	10 millions

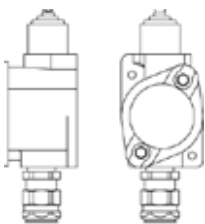


### Dimensions

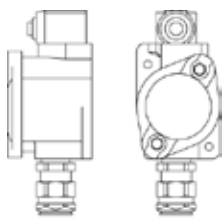




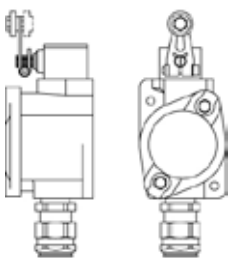
XC8-JC161P1



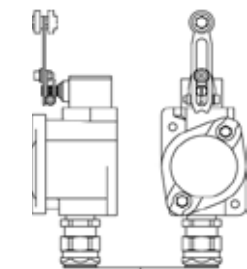
XC8-JC162P1



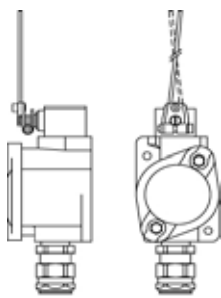
XC8-JC163P1



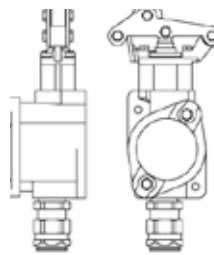
XC8JC10111P1-  
XC8JC10511P1



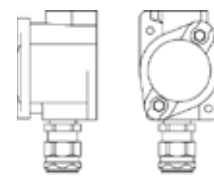
XC8JC10131P1-  
XC8JC10531P1



XC8JC10151P1-  
XC8JC10151P1



XC8TA1P1



Z8JC1P1-ZC8JC1P1-  
ZC8JC4P1

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

- (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.

## XCKW

This range of limit switches is based on Telemecanique series of heads and bodies, and equipped with Ex ed Technor Atex contact-block. The products are well known around the world for their reliability, design and possibilities of the different heads. Glands gives easy installation.

### Specifications

<b>Material (body)</b>	Zink Alloy (ZnAl 4 - Zamak)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-20°C to +60°C
<b>Approvals</b>	03ATEX0038X/03ATEX0039X
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	Ex ed IIC T6 T85°C EX II 2 GD
<b>Entries</b>	ISO M20 or ISO M16
<b>Thermal current</b>	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 whisker"	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)



Type of actuator	Rotary (lever)				Conveyor belt shift monitoring switch	
	Square cross levers 6mm crossed spring return position	Large roller rod lever thermoplastic Ø 30mm	Large roller rod lever thermoplastic Ø 50mm	Square cross levers 6mm crossed stay put position	Galvanized steel operating lever	Stainless steel operating lever
Mechanical durability (millions 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 (2)		
N/O + N/C snap action actuated in each direction	XCRBW111	XCRBW121	XCRBW151	XCRFW171 (3)		
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, horizontal actuation	Thermoplastic roller lever	"Cat's whisker"
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 (1)				
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



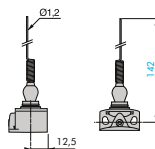
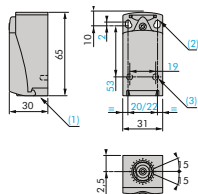
### XCKWMR, For hoisting, handling, conveyor belts (fixing centres 61.5mm)



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 (1)	
Body dimensions WxHxD (mm)	118x59x77	
2N/C + 2N/C snap action break for make	XCKWMR54D1H29	XCKWMR54D2H29

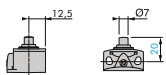
### Dimensions

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

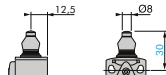


- (1) ISO M16 x 1,5 for cable gland.
- (2) 2 oblongs holes  $\phi 4,3 \times 6,3$  mm pitch 22 mm or 2 holes  $\phi 4,3$  pitch 20 mm.
- (3) 2 holes for mounting  $\phi 3$  depth 4 mm.

ZCE 10



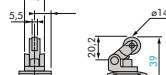
ZCE 11



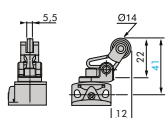
ZCE 02



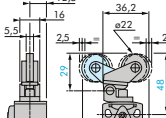
ZCE 21



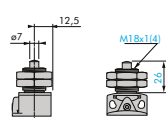
ZCE 27



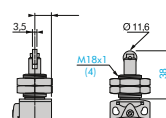
ZCE 28



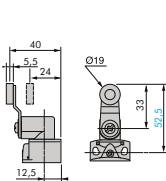
ZCEH0



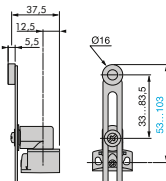
ZCEH2



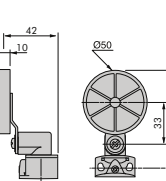
ZCE01 + ZCY8



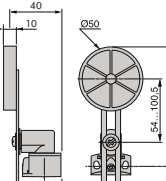
ZCE01 + ZCY45



ZCE01 + ZCY89

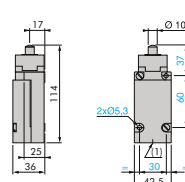


ZCE01 + ZCY49

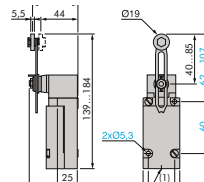
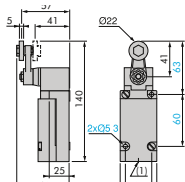
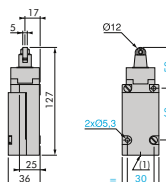
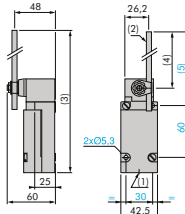


(4) Screw thickness 3,5 mm.

#### Limit switch, Classic, XCKWJ (metal)

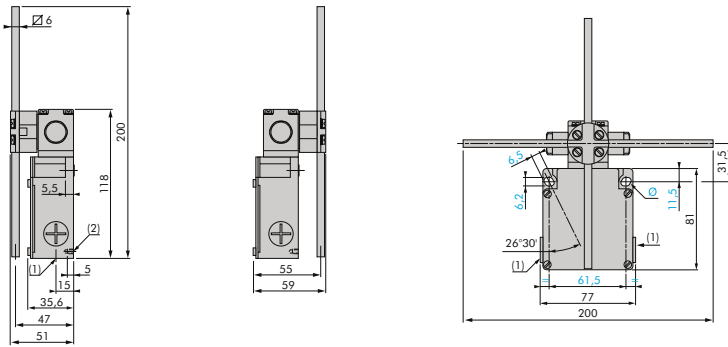


XCKWJ210559H29



- (1) 1 ISO M20 x 1,5 for cable gland.
- (2) lever  $\phi 6$ , length 200 mm.
- (3) 282 maxi.
- (4) 190 maxi.
- (5) 212 maxi.
- $\phi$ : 2 oblongs holes  $\phi 5,3 \times 7,3$ .

### Limit switch, XCKWMR, XCRA/B/TW



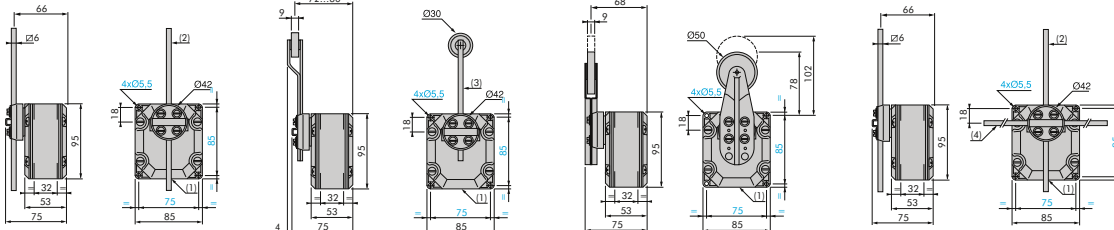
- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 centring holes  $\varnothing$  3,9.
- $\varnothing$  : 2 oblongs holes 6,2 x 6,5.

XCRAW111  
XCRBW111

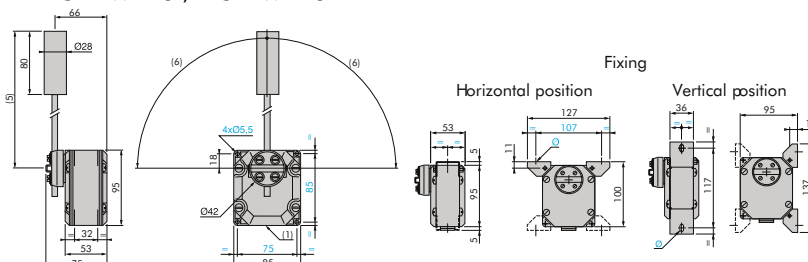
XCRAW121  
XCRBW121

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.

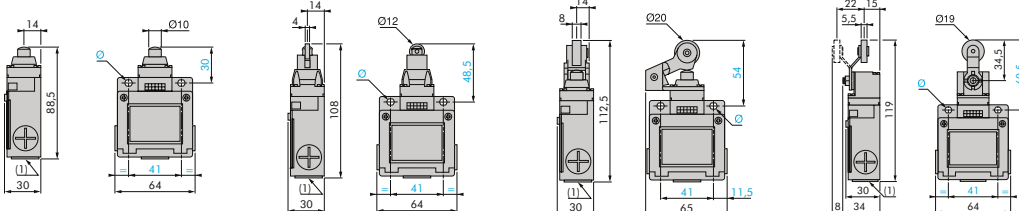
### Limit switch, Classic, XCKWM (metal)

XCKWM2110H29

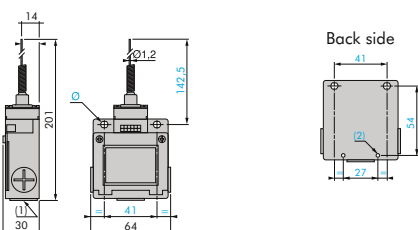
XCKWM2102H29

XCKWM2121H29

XCKWM2115H29



XCK WM2106H29



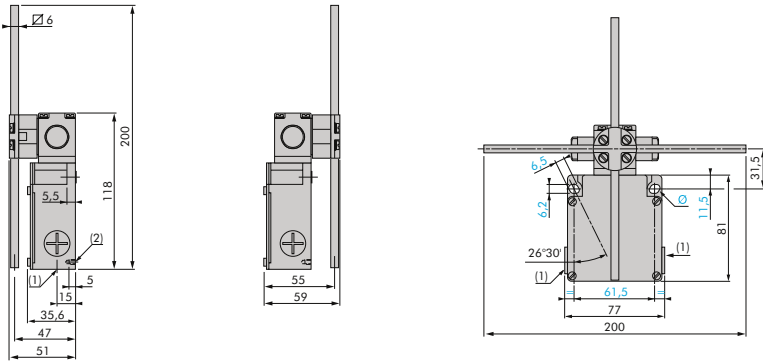
- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 x Ø 4.
- Ø: 2 oblongs holes 5,2 x 6,2.





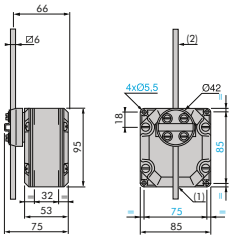
Limit switch, XCKWMR, XCRA/B/TW

XCKWMR54D1H29 / XCKWMR54D2H29

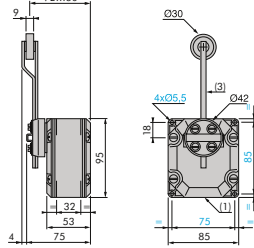


- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 centring holes  $\varnothing$  3,9.
- $\varnothing$ : 2 oblongs holes 6,2 x 6,5.

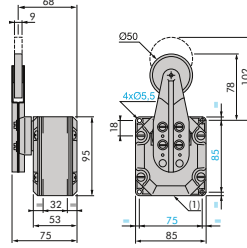
XCRAW111  
XCRBW111



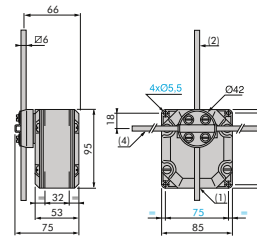
XCRAW121  
XCRBW121



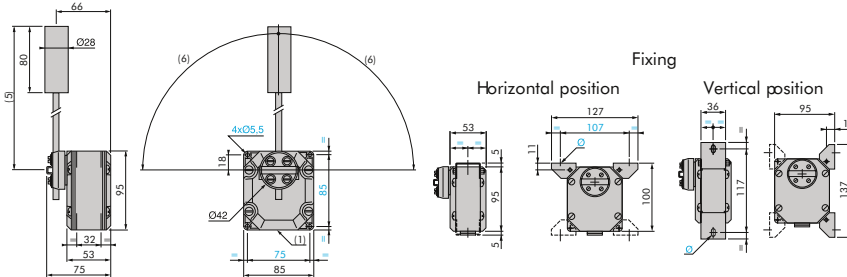
XCRAW151  
XCRBW151



XCREW181  
XCRFW171



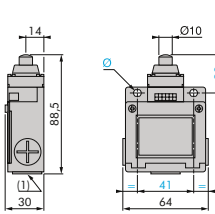
XCR TW115 / XCRTW215



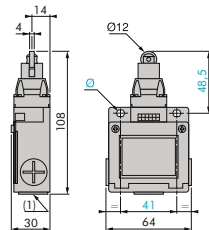
- (1) ISO M20 x 1,5 for cable gland.
- (2) Lever length: 200mm.
- (3) Lever length + roller: 160mm.
- (4) Lever length 300mm for XCRFW, 200mm for XCREW
- (5) 200 maxi – 83 mini
- (6) 90° maxi
- $\varnothing$ : 2 oblongs holes 6,2 x 6,5.

Limit switch, Classic, XCKWM (metal)

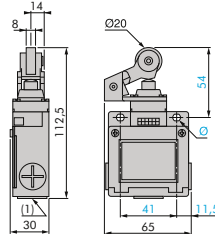
XCKWM2110H29



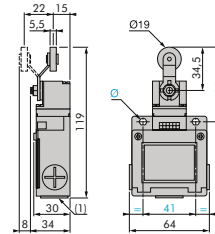
XCKWM2102H29



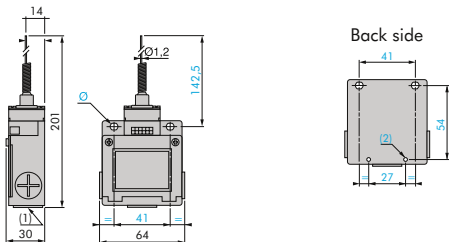
XCKWM2121H29



XCKWM2115H29



XCK WM2106H29



- (1) 3 ISO M20 x 1,5 for cable gland.
- (2) 2 x  $\varnothing$  4.
- $\varnothing$ : 2 oblongs holes 5,2 x 6,2.

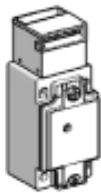

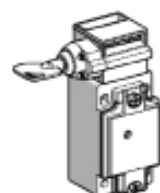
## XCSW

These key operated safety switches is specially designed for machine guarding applications. They provide an ideal solution for the locking or interlocking of movable guards used on industrial machinery.

### Specifications




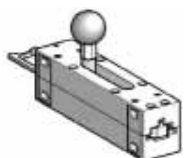
<b>Material (body)</b>	Zink Alloy (ZnAl 4 - Zamak)
<b>IP Rating</b>	IP66
<b>Temperature</b>	-20°C to +60°C
<b>Approvals</b>	INERIS 04ATEX0038X Ex II 2 GD - Ex ed IIC T6 IP67 T85°C
<b>Standards</b>	IEC61241-0, pr IEC61241-1
<b>Ex-Code</b>	Ex ed IIC T6 T85°C ATEX II 2 GD
<b>Zone</b>	1 - 2 and 21 - 22
<b>Type of actuator</b>	XCSW metallic body
<b>Actuator speed</b>	Maximal: 0,5 m/s, minimal: 0,001 m/s
<b>Cable entry</b>	1 entry fitted with ISO M20 cable gland
<b>Fixing centres</b>	30 x 60
<b>Dimensions (mm)</b>	40 x 113,5 x 44



Guard switches			
			
	Without locking of the operating key	With locking of the operating key and manual unlocking	
		With pushbutton	With key operated lock
Weight (kg)	0,450	0,480	0,500
Resistance to forcible withdrawal of actuator	XCSWB and XCSWC: 1500 N		
Mechanical durability (millions of operating cycles)	1	0,6	
N/C + N/C snap action	XCSWA2902	XCSWB2902	XCSWC2902
N/O + N/C staggered	XCSWA2102	XCSWB2102	XCSWC2102

### Attention:

The XCSW product must be used with a Safety modules for monitoring based on Schneider PREVENTA range. This module must be locate in safety zone (not ATEX) or in an Explosion proof enclosure.

Reference of actuators				
Description	Straight actuator	Wide actuator	Pivoting actuator	Latch for sliding doors
				
For guard switches XCSWA, B, C, E	XCS Z01	XCS Z02	XCS Z03	XCS Z05
Weight (kg)	0,020	0,020	0,095	0,600



### Key operated metal case safety switches

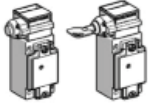
#### Without locking of the operating key

Metal case limit switches for use on machines without inertia and operating in normal conditions (no vibration or shock). Guard mounted vertically without risk of rebound on closing, thereby eliminating unintentional opening of the guard.



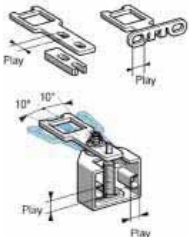
#### With locking of the operating key and manual unlocking

Metal case limit switches for use on heavy machines without inertia and operating in arduous conditions (shock or vibration exist), whereby the guard could open unintentionally. A key operated lock or a pushbutton enables the positive locking of the guard and its subsequent unlocking.



### Operating keys

The operating keys are common to all metal case safety switches. Their oblong fixing holes enable simple adjustment when mounting on moving guards. A pivoting operating key (both horizontally and vertically) is available when using safety switches in conjunction with hinged guards or guards with imprecise guiding. Straight operating keys are supplied with an adaptor shank for simple replacement of an XCKWJ limit switch by an XCSW switch, without the need to drill additional fixing holes.

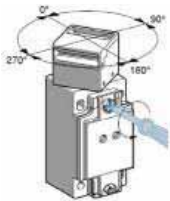


### Turret head

All metal case safety switches are fitted with a square turret head which can be rotated through 360° in 90° steps. 8 directions of actuation are possible for the operating key:

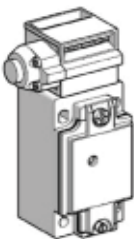
- 4 in the horizontal plane,
- 4 from above the switch (4 alternative positions of the key slot, depending on the orientation of the head).

On removal of the fixing screw for re-orientation of the operating head, the head itself remains attached to the body and the contact state remain unchanged.



### Safety contacts

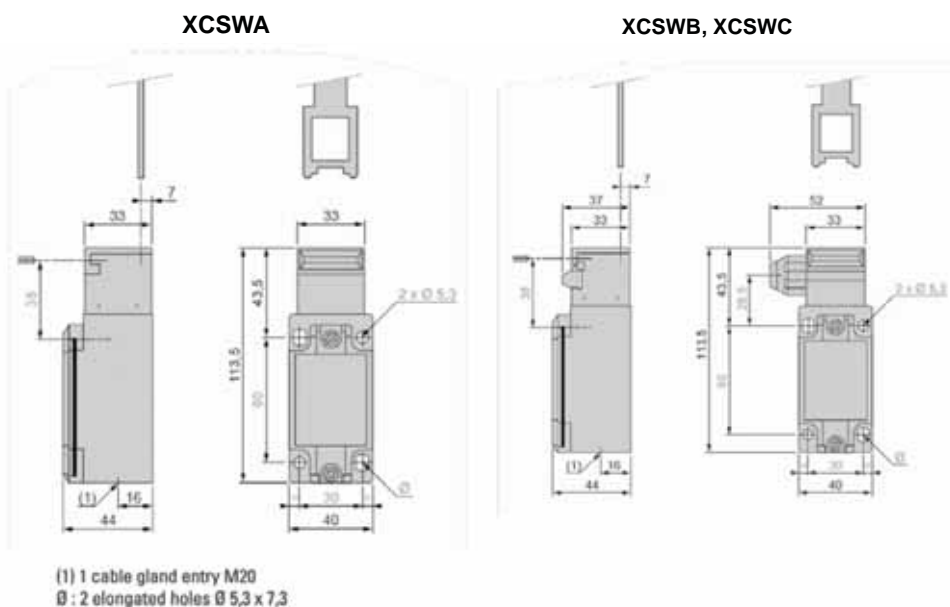
Metal case safety switches incorporate a 2-pole contact block, with positive opening operation, which is actuated by insertion or withdrawal of the operating key. The withdrawal of the operating key opens the N/C safety contact(s), even in the event of the contact sticking or welding.



### Manual locking/unlocking by pushbutton or key operated lock on XCWSB and XCWSC

Their use is not necessary for the normal operation of the limit switch. For ease of access, the pushbutton or lock may be mounted on the right or the left of the limit switch head. For limit switches type XCWSC, when the machine guard is locked (key in position "LOCK"), the resistance to forcible withdrawal of the operating key fitted to the guard is 150 daN. The key is removable from the locking device in the "LOCK" position.

## Dimensions



## XY2WCE

The 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

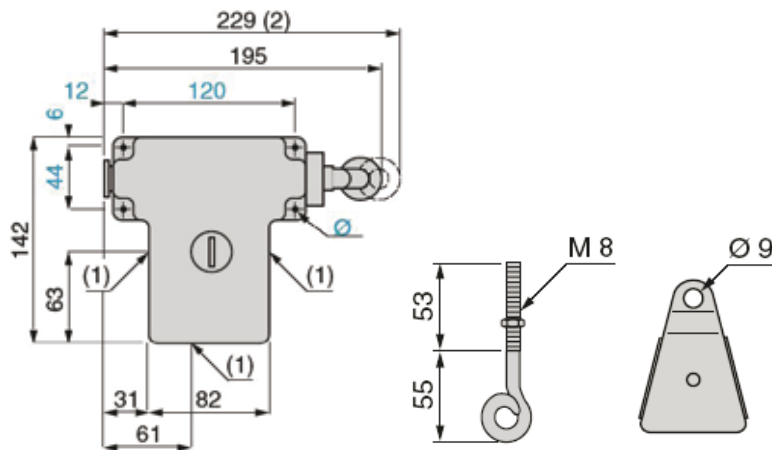
<b>Material (body)</b>	Zink Alloy (ZnAl 4 - Zamak)
<b>IP rating</b>	IP65
<b>Temperature</b>	20°C to +60°C
<b>Approvals</b>	INERIS 04ATEX0040 for XY2W
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	Ex ed IIC T6 IP65 / T85°C ATEX II 2 GD
<b>Work specifications</b>	AC15; A300 (Ue=240V, Ie=3A) / DC13; Q300 (Ue=250V, Ie=0,27 A)
<b>Protection</b>	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 foot switch gives information by foot action so that operators can focus their hands and eyes on other tasks at hand.

### Specifications

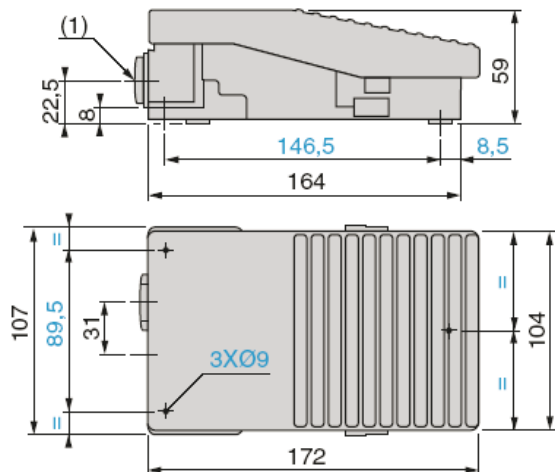
<b>Material</b>	Zink Alloy (ZnAl 4 - Zamak)
<b>IP rating</b>	IP66
<b>Temperature</b>	20°C to +60°C
<b>Approvals</b>	INERIS 04ATEX0042 for XPEW
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	Ex ed IIC T6 IP65/IP66 T85°C ATEX II 2 GD
<b>Work specifications</b>	AC15; A300 (Ue=240V, Ie=3A) / DC13; Q300 (Ue=250V, Ie=0,27 A)
<b>Protection</b>	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

When it is important to control fluids in your installation, Technor Atex pressure switches are the solution. With an extensive range for pressures and fluids, XMLWC pressures switches give you control in your ATEX zone. For further information, please contact our sales office for information.

### Specifications

<b>Material (body)</b>	Zink Alloy (ZnAl 4 - Zamak)
<b>IP Rating</b>	IP66
<b>Temperature</b>	fluidT < +70°C or +70°C < fluidT < +150°C
<b>Approvals Standards</b>	INERIS 04ATEX0007 Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +150°C
<b>Connection</b>	Screw clamp terminals 1/4" gas female
<b>Availability</b>	Corrosive fluids, oil, water, air



Type	Vacuum switch with display		Pressure switch with display	
	- 1 bar		1 bar	1 bar
Conformity	ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1			
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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	



Type Gauge		Pressure switch with display		
		4 bar	4 bar	10 bar
Conformity		ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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 Gauge		Pressure switch with display		
		10 bar	20 bar	20 bar
Conformity		ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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 Gauge		Pressure switch with display	
		35 bar	35 bar
Conformity		ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1	
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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
Fluids controlled		Oil, water, air	Corrosive fluids
Possible differential	Min. at low setting		1 bar
subtract from PH	Min. at high setting		1,5 bar
to give PB	Max. at high setting		22 bar
Single-pole contact N/C+N/O snap action		XMLW-C035B2S12	XMLW-C035C2S12



Type	Pressure switch with display		
Gauge	70 bar	70 bar	70 bar
Conformity	ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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
subtract from PH	Min. at high setting	8,9 bar	8,9 bar
to give PB	Max. at high setting	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
Conformity	ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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
subtract from PH	Min. at high setting	21 bar	21 bar
to give PB	Max. at high setting	110 bar	110 bar
Single-pole contact N/C+N/O snap action	XMLW-C160D2S12	XMLW-C160E2S12	XMLW-C160N2S12

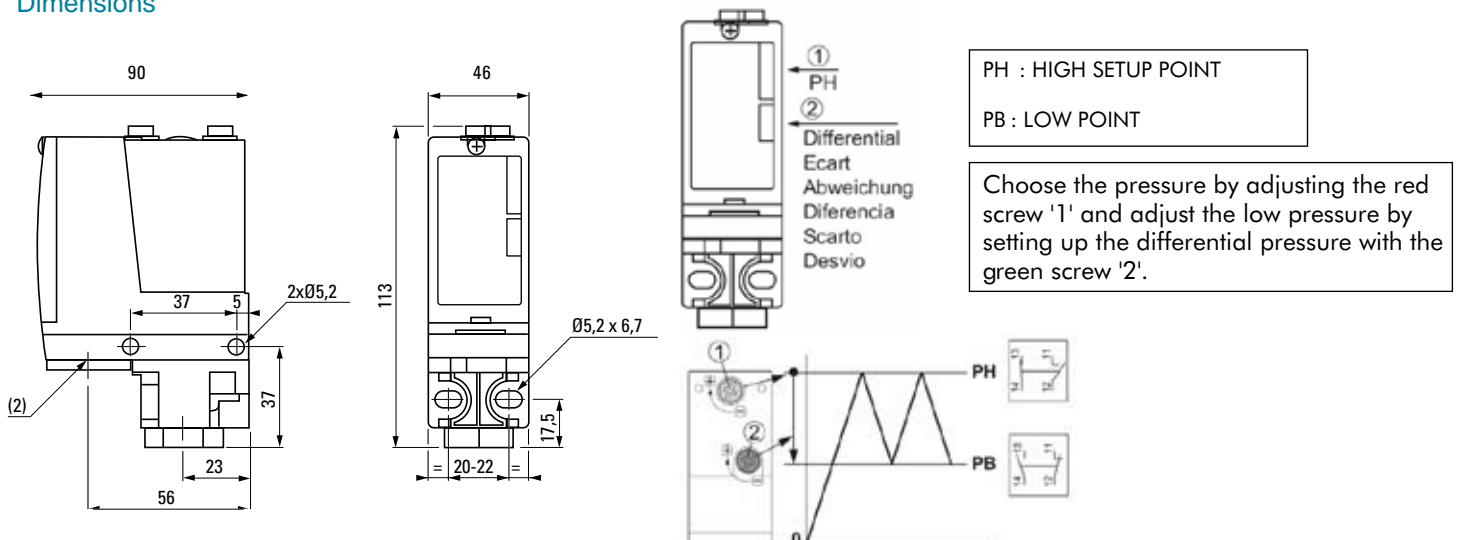


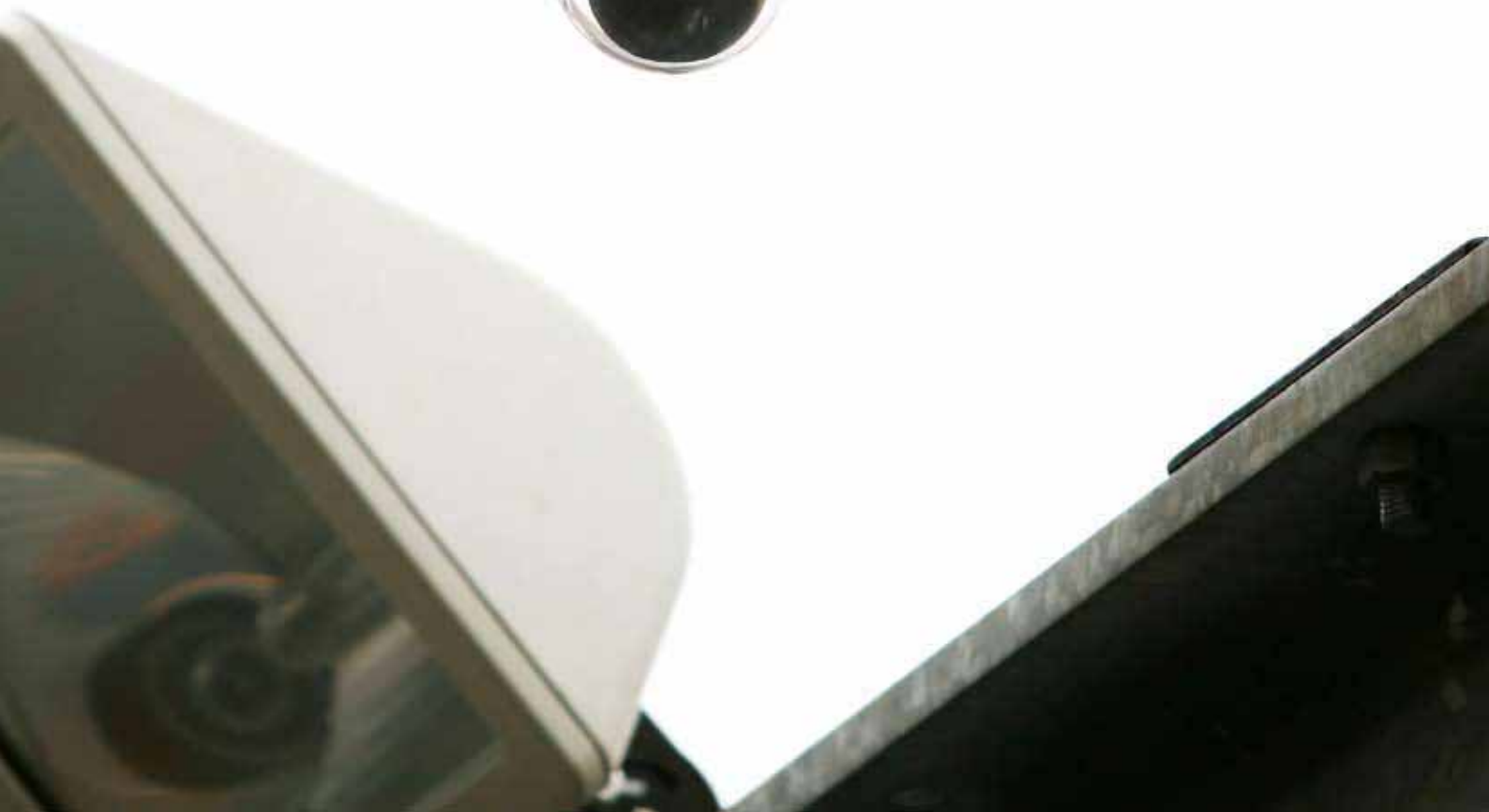


Type Gauge	Pressure switch with display		
	300 bar	300 bar	300 bar
Conformity	ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
Zones	1-2 (Gas) / 21 - 22 (combustible dust)		
EC type examination certificate number	INERIS 04ATEX0007		
Product labeling	ATEX II 2 GD - Ex ed IIC T6 - IP66 - T85°C for fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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 subtract from PH to give PB	Min. at low setting 16 bar	16 bar	16 bar
	Min. at high setting 35 bar	35 bar	35 bar
	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 Gauge	Pressure switch with display		
	500 bar	500 bar	500 bar
Conformity	ATEX Directive 94/9/EC, EN 50014, EN 50018, EN 50019, EN 50281-1-1		
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 fluidT < +70°C ATEX II 2 GD - Ex ed IIC T3 - IP66 - T200°C for +70°C < fluidT < +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 subtract from PH to give PB	Min. at low setting 19 bar	19 bar	19 bar
	Min. at high setting 52 bar	52 bar	52 bar
	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







	<b>TNCD</b> Enclosure, Ex d, AISI 316	102
	<b>TNXCD</b> Cylindrical Enclosure, Ex d, AISI 316	103
	<b>DE8WH</b> Enclosure, Ex d/de, Semi-hardened Steel	104
	<b>DE1WH</b> Enclosure, Ex e/ed, Semi-hardened Steel	105
	<b>GUB Series</b> Enclosures for connection, Ex d IIC, Copper free Aluminium	106
	<b>GUB-QL Series</b> Enclosures for check and control, Ex d IIC, Copper free Aluminium	108
	<b>CP Series</b> Junction Boxes, Ex d IIC, Copper free Aluminium	110
	<b>TNBCD</b> Enclosure, Ex d, AISI 316	115
	<b>DE8BC</b> Enclosure, Ex d/de, Semi-hardened Steel or AISI 316	116
	<b>EJB Series</b> Enclosures for control, check and connection, Ex d IIB + H <sub>2</sub> , Copper free Aluminium	117
	<b>TNDLD</b> Line Bushing, Ex d, Acid Resistant Steel	121
	<b>TNDLD (Fibre optic)</b> Line Bushing, Ex d, Acid Resistant Steel	122
	<b>TNDLDE (Coax cable)</b> Line Bushing, Ex d, Acid Resistant Steel	123

## TNCD

The TNCD range of Enclosures is designed to meet the requirements for Ex d IIC equipment in rigorous environments on- and offshore.

### Specifications

<b>Material</b>	Acid Resistant Stainless Steel SS316
<b>IP Rating</b>	IP66 (IP67 upon request)
<b>Temperature</b>	-20°C to +40°C (T6), Option -40°C to +60°C
<b>Approvals</b>	NEMKO 03ATEX263U
<b>Complete certificate</b>	DNV-2203-OSL-ATEX-0135
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1
<b>Ex-Code</b>	Ex d IIC/IIB T6 – T4 ⊕ II 2 G/D or II 2(1/2)G/D
<b>Lid gasket</b>	Viton
<b>Surface treatment</b>	Glass blasted
<b>Earthing between Ex d and Ex e/i enclosures</b>	Through the flange assembly
<b>Cover</b>	With or without hinges, depending on size



### Measurement table for EEx d IIC Explosion proof enclosures

TNCD	TNCD					Internal dimensions			
	A	B	C	D	Weight	Ø	a	b	c
	Width (mm)	Height (mm)	Depth (mm)	Total depth (mm)	kg	Window (mm)	Width (mm)	Height (mm)	Depth (mm)
191918	190	190	180	213	16	65	170	170	131
282827	280	280	270	300	37	65/100	260	260	217
383827	380	380	270	300	60	65/100	360	360	217
575727	570	570	270	300	125	65/100/154	550	550	213

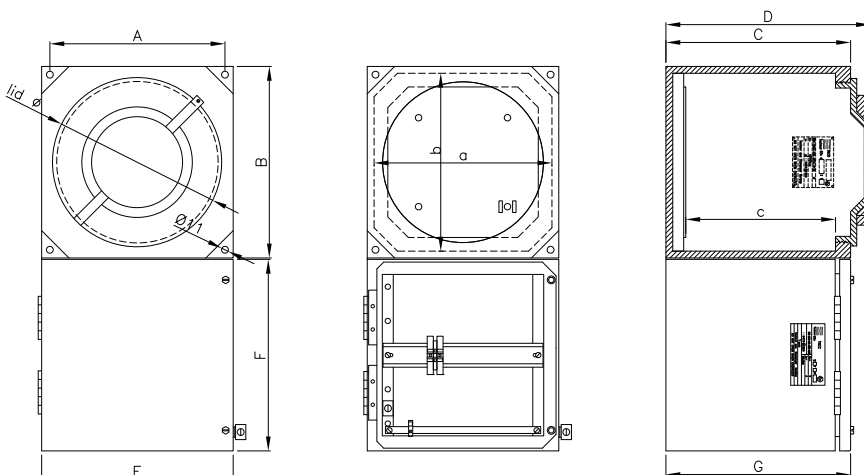
### Viewing window TNCD

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 EEx e connection boxes (optional)

TNCC	E	F	G	Kg
	Width (mm)	Height (mm)	Depth (mm)	Weight
191918	190	190	180	3,0
282827	280	280	270	6,6
383827	380	380	270	10,5
575727	570	570	270	19,7


### Dimensions



## TNXCD

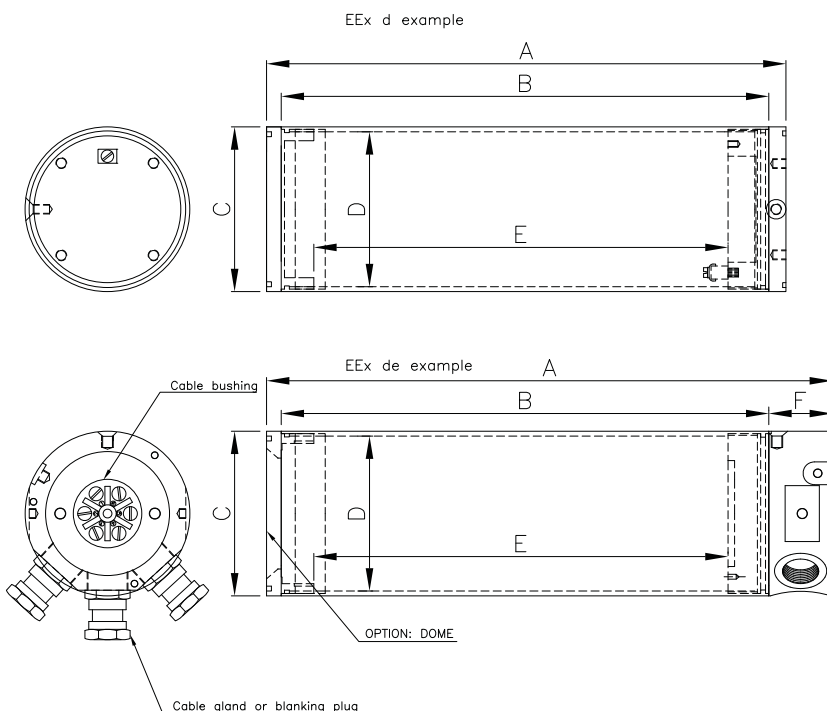
The TNXCD range of enclosures features a slim and compact multipurpose design.  
The enclosures are Ex d IIC approved for use on- and offshore

### Specifications

<b>Material</b>	Acid resistant stainless steel SS316
<b>IP Rating</b>	IP66 (IP67 and IP68 upon request)
<b>Temperature</b>	Various max: -50°C to +60°C
<b>Approvals</b>	
- Empty enclosure	DNV-2003-OSL-ATEX-0436-U
- Complete enclosure	DNV-2004-OSL-ATEX-0115
<b>Standards</b>	Cenelec EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1 EN50019, IEC/EN 60079-7
<b>Ex-Code empty enclosure</b>	Ex IIC,  II 2 G
<b>Earthing between Ex d and Ex e enclosure</b>	Through the flange assembly
<b>Entries</b>	Ex e glands and EEx d bushings, or EEx d glands only
<b>Gland Size EEx e</b>	M25
<b>Gland Size EEx d</b>	According to specification
<b>Bushing EEx d</b>	Max M42, number and core size acc. to spec.



### Dimensions



## DE8WH

Our ATEX enclosures range comprises many standard sizes of enclosures manufactured in painted steel. Each of the enclosures allow for the utilization of standard electrical components inside making subsequent replacement and maintenance of the installed components easier as it may be performed by trained electricians. If required, several enclosures may be assembled on a framework, 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. DE8WH range can be provided in Semi-hardened steel.

### Specifications

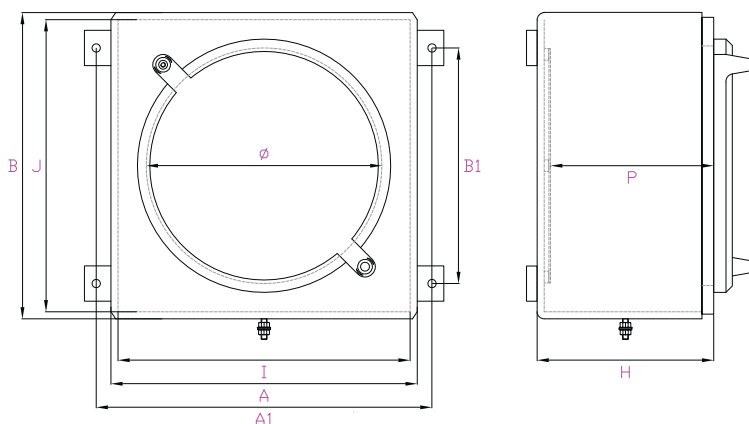
<b>Material</b>	Semi-hardened steel
<b>IP Rating</b>	IP65
<b>Temperature</b>	-20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0121X
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50020, EN500281-1-1
<b>Ex-Code</b>	Ex d IIC or de IIB T6 to T4 IP6X - T85°C to T135°C ATEX II 2 GD or 2 (1) GD Ex d [ia] or d [ia] ia or de [ia] or de [ia] ia IIB T6 IP6X T85°C
<b>Surface treatment</b>	RAL 7032 Painting - Special painting on request.
<b>Drain plug</b>	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

Our ATEX enclosures range comprises many standard sizes of enclosures manufactured in painted steel. Each of the enclosures allows for the utilization of standard electrical components inside making subsequent replacement and maintenance of the installed components easier as they may be performed by trained electricians. If required, several enclosures may be assembled on a framework, 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. DE1WH range can be provided in Semi-hardened steel.

### Specifications

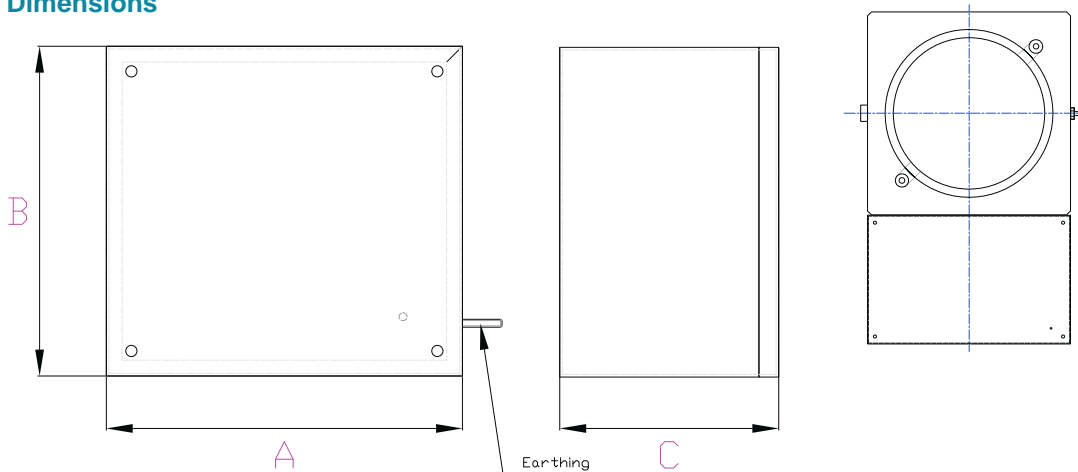
<b>Material</b>	Semi-hardened steel
<b>IP Rating</b>	IP65
<b>Temperature</b>	-20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0006
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50028, EN500281-1-1
<b>Ex-Code</b>	Ex e II or ed IIC or em II or emd IIC T6 to T4 IP6X - T85°C to T135°C ATEX II 2 GD
<b>Surface treatment</b>	RAL 7032 Painting – Special painting on request.
<b>Drain plug</b>	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	250	270	230	9	2	25	6
DE1WH330	250	330	230	18	4	42	8
DE1WH520	330	520	230	40	4	72	13
DE1WH670	520	670	230	108	5	120	22

### Dimensions



The GUB... series of enclosures for control, check, signal, automation, interruption and/or protection units is Ex d IIC certified. Suitable for electric and/or electronic equipment and terminals for the link to the outside circuits. GUB... Enclosure lids may be equipped with an inspection window.

### Specifications

<b>Material</b>	Copper free Aluminium (Cu<0,1%)
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 55°C -30°C to 55°C with glass inspection window
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 00ATEX0033X GOST Certificate POCC IT.F504.B00495
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	<p>⊕ Ex II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP66 T85°C / T100°C / T135°C</p> <p>⊕ Ex II 2(1) GD Ex d [ia] IIC T6 Ex tD [ia] A21 IP66 T85°C</p> <p>According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22</p>
<b>Lid / Door gasket</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	Unpainted
<b>Drain plug</b>	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type.
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Max. Q.ty for entries</b>	Maximum quantity of entries per side A/B: check table's references
<b>Max. Q.ty for terminals</b>	Maximum quantity of terminals per size in sqmm: check table's references
<b>Accessories on request</b>	External polyurethane painting "Standard Cycle" Green RAL 6003 External polyurethane customized painting
<b>Main Applications</b>	GUB...- Lighting / Power Distribution Panel (QADL) GUB-...EMH...Instruments Housing GUB-QL...
<b>Note</b>	<p><b>Bearing in mind the infinite of combinations between:</b></p> <ul style="list-style-type: none"> <li>• quantity of terminals,</li> <li>• relevant cross section,</li> <li>• class of temperature,</li> <li>• ambient temperature</li> </ul> <p>... we suggest using our software <b>CALCUBOX</b> to set up the compatible terminals strips and entries. A free copy of <b>CALCUBOX</b> is usually supplied with the CD version of the product Catalogue and is also available as a download from our website.</p>





### 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

### Indicative maximum quantity of terminals per Size in square mm.

(For specific quantity contact our sales service)

Type mm <sup>2</sup>	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

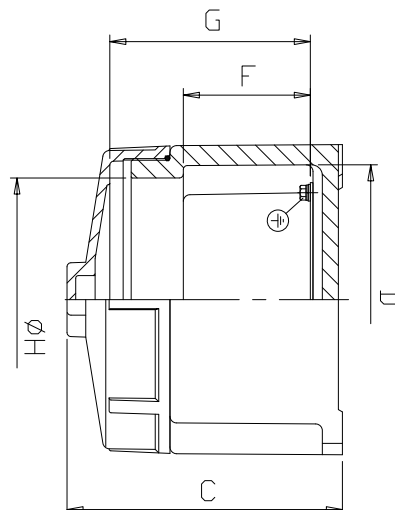
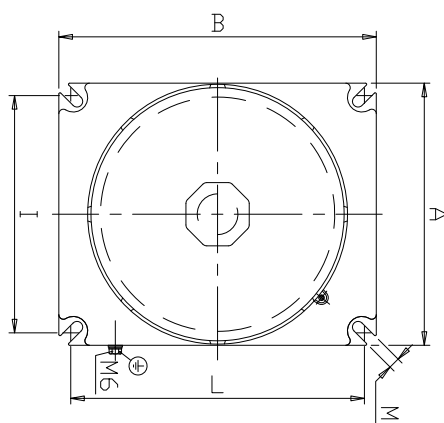
### Maximum quantity of entries per sides A/B Cable Glands Entries (two row)

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

### 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 series of enclosures for control, check, signal, automation, interruption and/or protection units are Ex d IIC certified. Suitable for electric and/or electronic equipment and terminals for the link to the outside circuits. On GUB-QL enclosures, accessories such as pushbuttons, pilot lamps and selector switch operators can be installed.

### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 55°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 00ATEX0033X GOST Certificate POCC IT.ГБ04.В00495
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	<p>⊕ II 2 GD Ex d IIC T6 / T5 / T4 Ex tD A21 IP66 T85°C/T100°C/T135°C</p> <p>⊕ II 2(1) GD Ex d [ia] IIC T6 Ex tD [ia] A21 IP66 T85°C</p> <p>According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22 O-ring made in Nitrile Rubber (NBR)</p>
<b>Lid / Door gasket</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	Unpainted
<b>Drain plug</b>	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type.
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Maximum quantity of entries per side A/B: check table's references
<b>Quantity for terminals</b>	Maximum quantity of terminals per size in sqmm: check table's references
<b>Accessories on Request</b>	External polyurethane painting "Standard Cycle" Green RAL 6003 External polyurethane customized painting
<b>Note</b>	<b>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.</b>



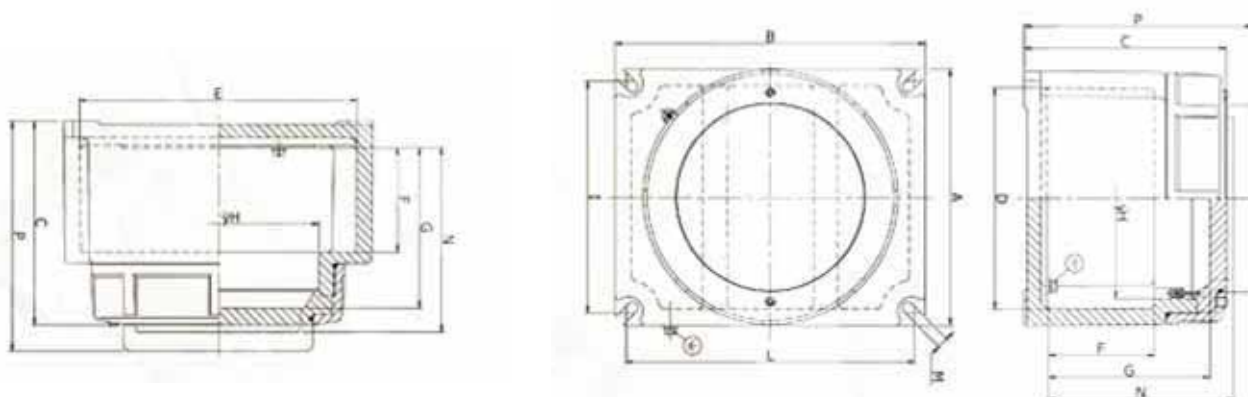


TYPE	Maximun M32 Devices	REFERENCE / QUOTE												
		A	B	C	D	E	F	G	H	I	L	M	N	P
GUB-QL 02	3	190	190	139	160	160	63	104	144	170	170	8	143	179
GUB-QL 03	4	210	210	160	180	180	78	119	167	190	190	8	139	174
GUB-QL 06	10	293	329	235	259	295	140	195	242	305	270	10	/	/

NB. The Enclosures are equipped with an inside thermostat that, when environment 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



The CP... series of Enclosures Ex d IIC certified with or without terminals for the connection to the outside circuits.  
 CP... Enclosures are made of Copper free Aluminium (Cu <0,1%), 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 fittings do not affect inner space, which is fully available for terminals and wirings. Internal and external screws are in Stainless Steel AISI 304

### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)	
<b>IP Rating</b>	IP65	
<b>Temperature</b>	-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	
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 03ATEX0009 GOST Certificate POCC IT.ГБ04.В00508	
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1	
<b>Ex-code</b>	Ⓔ 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	
<b>Lid / Door gasket</b>	O-ring made in Nitrile Rubber (NBR)	
<b>Surface treatment</b>	Unpainted	
<b>Electrical characteristics</b>	Max DC voltage	440 V
	Max AC voltage	1000 V
	Nominal frequency	50 / 60 Hz
	Max current	100 A
<b>Internal diameter</b>	Available from 90 mm to 120 mm	
<b>Entries position</b>	(C) = 2, (T) = 3, (X) = 4 ways	
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125	
<b>Standard identification</b>	Identification nameplate is made of high resistance self-adhesive polyester with thermal transfer inscriptions	
<b>Accessories upon request</b>	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			
<b>Terminal strip type</b>		<b>340/THPN</b>					
		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	Entelec	Phase
11546820	4	3	Spring	Grey	L2	Entelec	Phase
11546820	4	3	Spring	Grey	L3	Entelec	Phase
12546822	4	3	Spring	Blue	N	Entelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entelec	Earth
<b>Terminal strip type</b>		<b>440/THPN</b>					
		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	Entelec	Phase
11547923	4	4	Spring	Grey	L2	Entelec	Phase
11547923	4	4	Spring	Grey	L3	Entelec	Phase
12547925	4	4	Spring	Blue	N	Entelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entelec	Earth

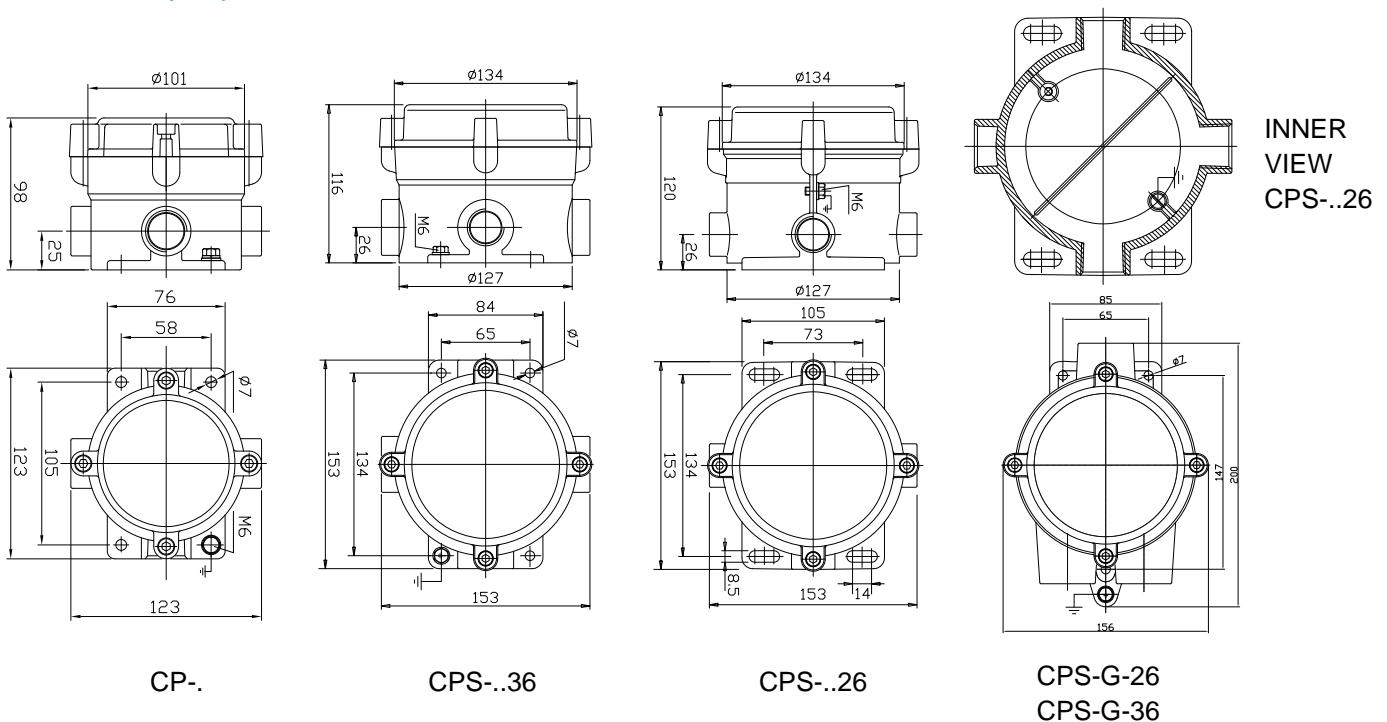
### CPST-36, CPSG-36

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			
<b>Terminal strip type</b>		<b>340/THPN</b>					
		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	Entelec	Phase
11546820	4	3	Spring	Grey	L2	Entelec	Phase
11546820	4	3	Spring	Grey	L3	Entelec	Phase
12546822	4	3	Spring	Blue	N	Entelec	Neutral
19563712	4	3	Spring	Yellow /green	E	Entelec	Earth
<b>Terminal strip type</b>		<b>440/THPN</b>					
		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	Entelec	Phase
11547923	4	4	Spring	Grey	L2	Entelec	Phase
11547923	4	4	Spring	Grey	L3	Entelec	Phase
12547925	4	4	Spring	Blue	N	Entelec	Neutral
19563823	4	4	Spring	Yellow /green	E	Entelec	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			
<b>Terminal strip type</b>		<b>340/THPN</b>					
		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
<b>Terminal strip type</b>		<b>440/THPN</b>					
		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)





## TNBCD

The TNBCD range of enclosures is designed to meet the requirements for Ex d IIB equipment on- and offshore.

### Specifications

<b>Material</b>	Acid Resistant Stainless Steel SS316
<b>IP Rating</b>	IP66 (IP67 and IP68 upon request)
<b>Temperature</b>	-20°C to +50°C (T6) Option -50°C to +60°C
<b>Approvals</b>	NEMKO 03ATEX264U
<b>Complete certificate</b>	DNV-2003-OSL-ATEX-0136
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1
<b>Ex-Code</b>	Ex d IIC/IIB T6 – T4 ⊕ II 2 G/D or II 2(1/2)G/D
<b>Lid gasket</b>	Viton
<b>Surface treatment</b>	Glass blasted
<b>Earthing between EEx d and EEx e/i enclosures</b>	Through the flange assembly
<b>Cover</b>	With or without hinges, depending on size



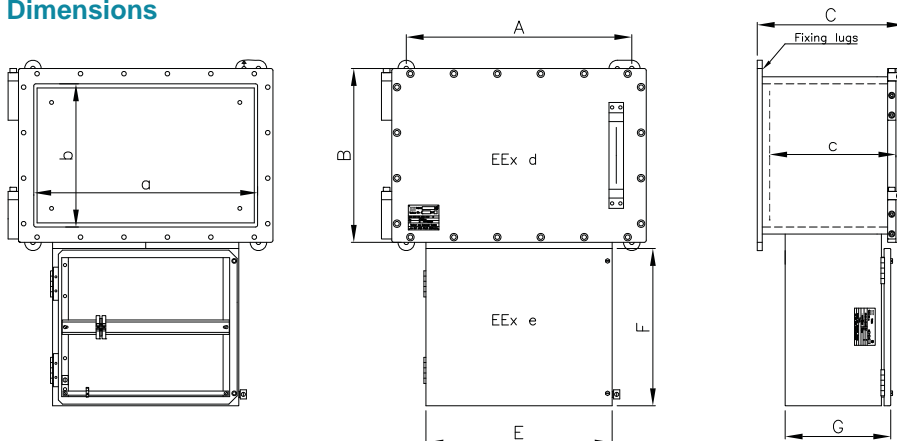
### Range of for EEx d IIB Explosion proof enclosures

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

### Measurement table for EEx e connection boxes (optional)

TNCN/TNCC			
	E (mm)	F (mm)	G (mm)
202025	200	200	255
252015	250	200	155
383821	380	380	255
453825	450	380	255

### Dimensions



## DE8BC

Our ATEX enclosures range comprises many standard sizes of enclosures manufactured in painted carbon steel. Each of the enclosures allow for the utilization of standard electrical components inside, making subsequent replacement and maintenance of the installed components easier as it may be performed by trained electricians. If required, several enclosures may be assembled on a framework, with separate or common Ex e/l junction boxes. The enclosures can be delivered empty with U component certificate or supplied fully assembled according to client demands. DE8BC range can be provided in Semi-hardened steel or stainless steel.

### Specifications

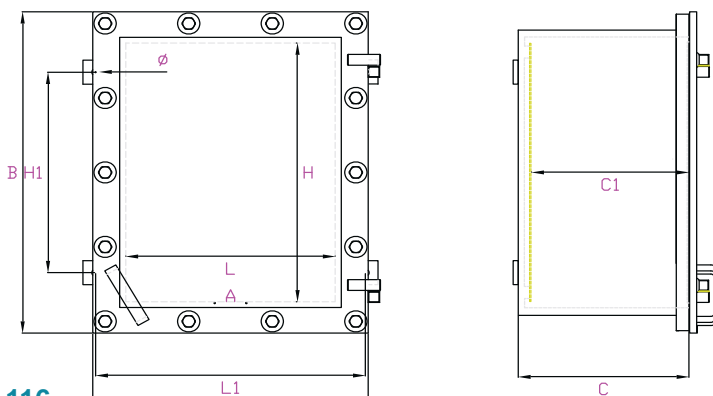
<b>Material</b>	Semi-hardened steel or stainless steel
<b>IP Rating</b>	IP65–IP66
<b>Temperature</b>	–20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0005X
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN50020, EN500281-1-1
<b>Ex-Code</b>	Ex d IIB or de IIB T6 to T4 IP6X +40°C T85°C 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
<b>Surface treatment</b>	RAL 7032 Painting - Special painting on request.
<b>Drain plug</b>	Upon request



### Measurement table for EEx 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
DE8BC148	940	1590	510	425	1200x900	Ø 20	1450x800	1500	1100
DE8BC108	864	1164	425	300	908x868	Ø 20	1000x700	800	580
DE8BC107	864	1164	380	251	908x868	Ø 20	1000x700	800	530
DE8BC86	764	964	365	271	714x734	Ø 20	800x600	600	370
DE8BC75	664	864	320	231	614x630	Ø 20	700x500	590	260
DE8BC64	544	744	310	226	514x526	Ø 20	600x400	470	154
DE8BC54	544	644	305	226	414x526	Ø 20	500x400	410	139
DE8BC44	544	544	295	226	334x526	Ø 12	400x400	380	113
DE8BC43	434	534	290	226	334x526	Ø 12	400x300	300	86
DE8BC351	354	474	240	166	274x346	Ø 12	350x225	200	61
DE8BC32	334	434	240	166	234x326	Ø 12	300x200	260	51

### Dimensions



The EJB... series of enclosures for control, check, signal, automation, interruption and/or protection units provide an Ex d IIB or Ex d IIB+H2 mode of protection, containing electric and/or electronic equipment and terminals, for the link to the outside circuits.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu <0,1%)
<b>IP Rating</b>	IP66/IP67 with flanged joint coated with silicone grease (contact our sales dept. for detailed reference)
<b>Temperature</b>	-50°C to 55°C -50°C to 40°C with intrinsically safe elements "ia" or "ib"
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 00ATEX0021X GOST Certificate POCC IT.ГБ04.В00495
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11 IEC 60079-0 / 60079-1 / 60079-11 / 61241-0 / 61241-1 / 61241-11
<b>Ex-code</b>	<p>⊕ II 2 GD Ex d IIB T6/T5/T4/T3 Ex d IIB+H<sub>2</sub> T6/T5/T4/T3 Ex tD A21 IP66 T85°C/T100°C/T135°C/T200°C</p> <p>⊕ II 2(1) GD Ex d [ia] IIB T6 Ex d [ia] IIB+H<sub>2</sub> T6 Ex tD [ia] A21 IP66 T85°C</p> <p>According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22</p>
<b>Surface treatment</b>	Unpainted
<b>Drain plug</b>	The enclosures can be equipped with drain and/or breather devices: ECR-1; ECR-2 type
<b>Entries thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
<b>Standard identification</b>	Identification nameplate is realized in high resistance self-adhesive polyester with thermal transfer inscriptions
<b>Quantity for entries</b>	Maximum quantity of entries per side A/B: check table's references
<b>Quantity for terminals</b>	Maximum quantity of terminals per size in sqmm check table's references
<b>Accessories on Request</b>	Painted Polyurethane finish (standard) RAL 6003 colours External polyurethane customized painting
<b>Main Applications</b>	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)
<b>Note</b>	<p><b>Bearing in mind the infinite number of combinations between:</b></p> <ul style="list-style-type: none"> <li>• quantity of terminals,</li> <li>• relevant cross section,</li> <li>• class of temperature,</li> <li>• ambient temperature</li> </ul> <p>... we suggest using our software <b>CALCUBOX</b> to set up the compatible terminals strips and entries. A free copy of <b>CALCUBOX</b> is usually supplied together with the CD version of this product Catalogue is also available to download from our website.</p>





### EJB...Instruments Housing (Windows)

EJB...Lids may be equipped with inspection windows made of 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 EJB... Instrument Housing is suitable for use indoor or outdoor, in corrosive and hazardous due to the presence of gases, vapours and dusts...



### EJB...Moulded Case Automatic Circuit Breakers (MCCB)

EJB...Enclosure are compatible with any type of MCCB (Moulded Case Circuit Brakers) when in line with relevant EN/IEC STANDARDS.

### EJB... On Load Switthes (I)

EJB...meet the demands of customer oriented On-Load Switches. EJB...Series of Enclosures are suitable to build Ex d low voltage switchboard, in accordance with the heat dissipation listed in the relevant certificates.

### EJB... Fuse/On-Load Switches (IF)

EJB... meet the needs of customer oriented Fuse/On-Load Switches. EJB...Series of Enclosures are suitable for the set up and the use of Fuses Switches, in accordance with the heat dissipation listed in the relevant certificates.

### EJB...Lighting/Power Distribution Panels (QADL)

EJB...meet the needs of customer oriented Lighting/Power Distribution Panel. EJB...Series of Enclosures are suitable to build Ex d low voltage switchboard, in accordance with the heat dissipation listed in the relevant certificates.

### EJB... Motor Control Starter (TTB)

EJB...meet the needs of a customer oriented D.O.L. Motor Control Starter.

### EJB... Reverse Motor Control Starter (ITB)

EJB... meet the needs of a customer oriented Reverser Motor Control Starter based.

### EJB... Star Delta Motor Control Starter (ITB)

EJB... meet the needs of a customer oriented Star-Delta Motor Control Starter.



### 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

**NB** The Enclosures are equipped with an inside thermostat that, when environment 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.

### 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 mm<sup>2</sup> (For specific quantity contact our sales service)

Size [mm <sup>2</sup> ]	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.../WIN, Instrument Housing

EJB.../WIN is a customer oriented Instrument Housing based on the feature of EJB...Series of Enclosures that is suitable to build EEx 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<sub>2</sub> 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...



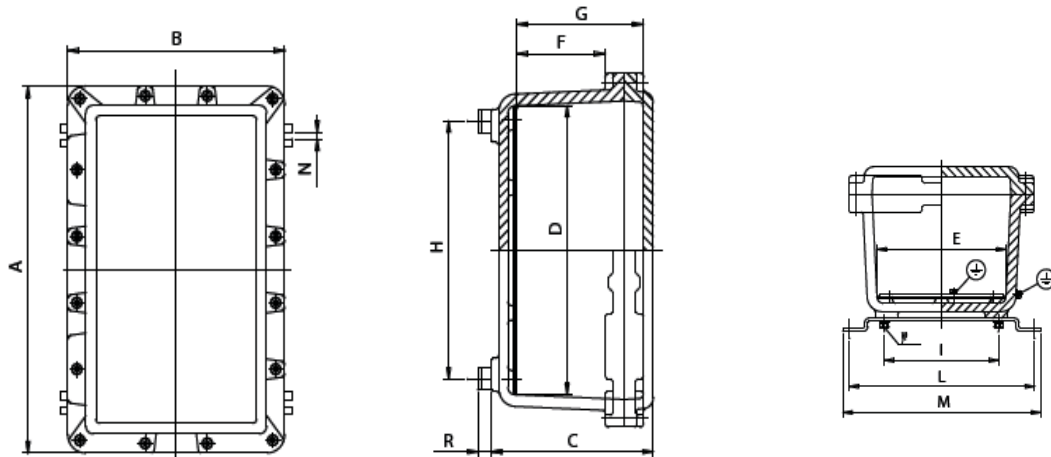
### EJB.../WIN...Series Instruments Housing

Code P0263.26	Code P0263.25	Code P0263.19	Code P0263.17
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	P0263.44	P0263.42	P0263.41	P0263.39	P0263.38	P0263.37	P0263.36	P0263.35

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

### Dimensions



## TNDLD

The range of TNDLD line bushings is designed for use with Ex de applications

### Specifications

<b>Material</b>	Acid resistant stainless steel SS316
<b>Temperature</b>	
<b>TNDLD/TNDLDC/ TNDLDE</b>	-40°C to 110°C
<b>Approvals</b>	NEMKO-01-ATEX-471U
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1
<b>Ex-Code</b>	Ex d II C ⊕ II 2 G
<b>Surface treatment</b>	Machine treated
<b>Rated voltage</b>	Max 1000V
<b>Colour</b>	Standard black or blue wires
<b>Type of wire</b>	Radox 125 halogen free 1250
<b>Options</b>	Other lengths and colours upon request



Type	Number of cores	Wire size mm <sup>2</sup>	Thread size	Wire length in mm EEx e / EEx d	Rated current A with T-amb 60°C
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

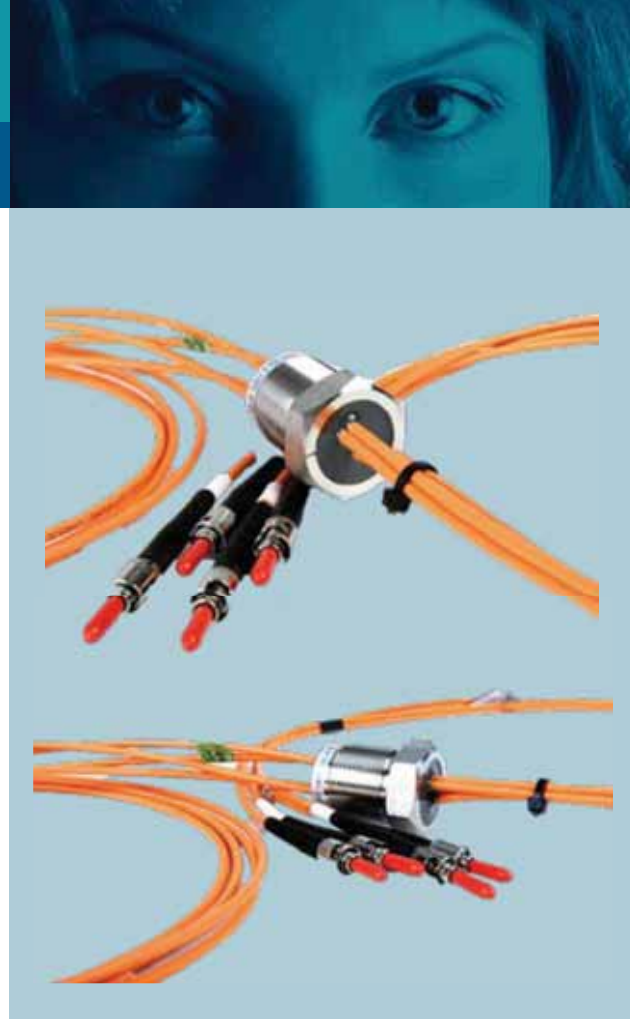
EEx d Line bushings blue, 1000V, -40°C - +110°C					
Type	Number of cores	Wire size mm <sup>2</sup>	Thread size	Wire length in mm EEx e / EEx d	Rated current A with T-amb 60°C
TNDLD 6x0,75B	6	0,75	M24	1000/1000	11
TNDLD 16x0,75B	16	0,75	M42	1000/1000	8
TNDLD 21X0,75B	21	0,75	M42	1000/1000	7
TNDLD 4X1,5B	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

## TNDLD (Fiber)

The range of TNDLD(F) is an Ex d bushing with optical fibres or bushings with combinations of optical fibres, coaxial cables and ordinary wires.

### Specifications

<b>Material</b>	Acid resistant Stainless Steel SS316
<b>Temperature</b>	
<b>TNDLD/TNDLDC/ TNDLDE</b>	-20°C to 76°C
<b>Approvals</b>	NEMKO-01-ATEX-471U
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1
<b>Ex-Code</b>	Ex d II C ⊕ II 2 G
<b>Surface treatment</b>	Machine treaded
<b>Rated voltage</b>	Max 1000V
<b>Colour</b>	Standard black or blue wires
<b>Type of wire</b>	Radox 125 halogen free 1250
<b>Options</b>	Other lengths and colours upon request



Ex d Fibre bushings, -20°C - +76°C

Type	Number of fibres	Fibre type	Thread size	Fibre length in mm EEx e / EEx 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, -20°C - +76°C

Type	Number of fibres	Fibre type	Thread size	Fibre/wire length in mm EEx e/EEx d	Connector	Number of cores	Wire size mm <sup>2</sup>	Rated current A with T-amb 60°C
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

Max energy in fibre is for IIB + IIC T1-T4 and for 5mW/mm<sup>2</sup> or 35mW pr. fibre, IIC T5-T6 5mW/mm<sup>2</sup> or other applications/ connectors can be delivered upon request.

## TNDLDE (Coax)

The range of TNDLDE is an Ex d bushing with coaxial cables, for example RG179 (50Ω), or bushings with more than one cable in the same bushing.

### Technical Data Construction

<b>Centre conductor</b>	Copper 2,25mm diameter
<b>Dielectric</b>	REX (Polyethylene cross-linked) 7,25mm diameter
<b>Outer conductor</b>	Copper, Silver plated, braid, 95%, 8,15mm diameter
<b>Jacket</b>	RADOX (LSFH), RAL 9005 – bk 10,3mm ±0,1
<b>Print</b>	HUBER+SUHNER GX 07272 50W (PA no.)

### Electrical Data

<b>Impedance</b>	50W ±2
<b>Max. Operating frequency</b>	2 GHz
<b>Capacitance</b>	101 pF/m
<b>Velocity of signal propagation</b>	66 %
<b>Signal delay</b>	5,03 ns/m
<b>Insulation resistance</b>	>1 x 108MΩm
<b>Min. screening effectiveness</b>	>41 dB (up to 2 GHz)
<b>Max. operating voltage</b>	5 kVrms (at sea level)
<b>Test voltage</b>	10 kVrms (50Hz/1 min)

### Mechanical Data

<b>Weight</b>	16,1 kg/100 m
<b>Min. bending radius</b>	Static            55 mm Dynamic        154 mm

### Environmental Data

<b>Temperature range</b>	-40°C to 110°
--------------------------	---------------



Ex d Coax bushings, 50W, -40°C- +110°C										
Type	Number of coax	Coax type	Thread size	Coax length in mm EEx e/ EEx 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 EEx e/EEEx d	Connector	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**

Pressurized System, Ex p, AISI 316

126



## **ELB F-351**

Control Unit, Ex e m, GRP, epoxy resin

127

## TNCNP

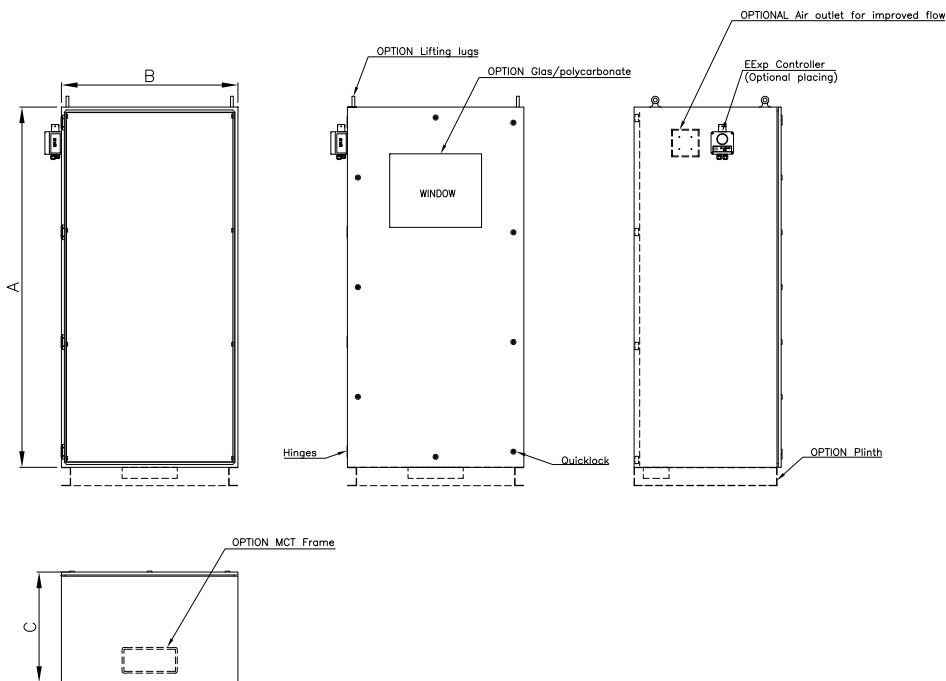
The Ex p pressurized systems are designed and purpose built according to each client's requirements. The equipment allows for use of standard (non-Ex) electrical components in zone 1 and 2. Technor delivers a variety of turn-key solutions with enclosures made in Acid Resistant Stainless Steel SS316, Certified by DNV.

### Specifications

<b>Material</b>	Acid resistant stainless steel SS316
<b>IP Rating</b>	IP66/IP67
<b>Temperature</b>	-40°C to +60°C
<b>Approvals</b>	
- Complete enclosures	DNV-2003-OSL-ATEX-0028
- Empty enclosures	DNV-2003-OSL-ATEX-0027U
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50016, IEC/EN 60079-2
<b>Ex-Code</b>	Ex p II ⊕ II 2 G
<b>Lid/Door gasket</b>	Neoprene (temp. -40°C to +100°C) Silicone (temp. -40°C to +200°C)
<b>Surface treatment</b>	Acidized as standard Electro polished as option
<b>Earthing</b>	Internal earth bar/bracket External earth bracket



### Dimensions



## ELB F-351

The Control boxes/stations in GRP 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

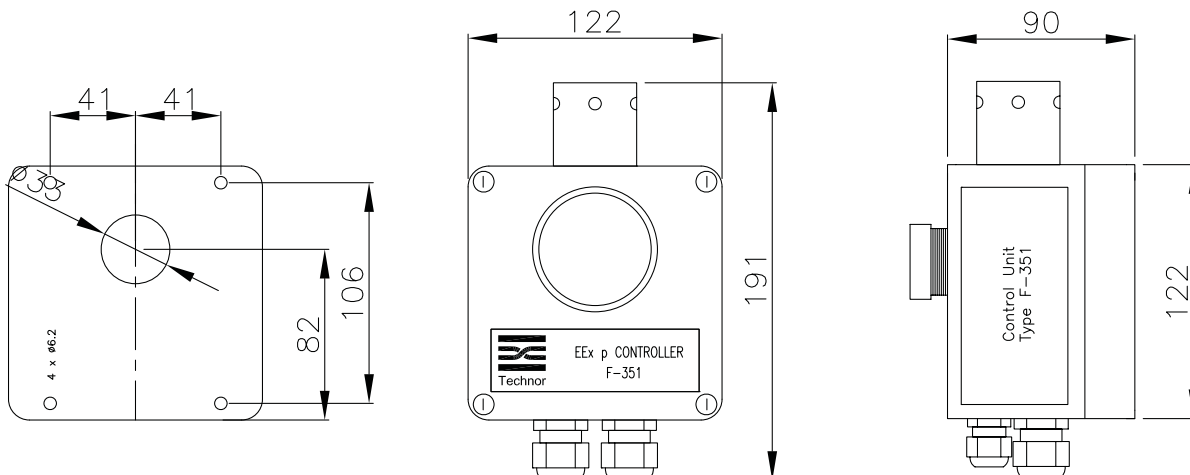
<b>Material</b>	GRP, epoxy resin, black
<b>IP Rating</b>	IP65
<b>Operating temperature</b>	-30°C to +60°C, without condensation
<b>Approvals</b>	TÜV 02ATEX1801
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50016, IEC/EN 60079-2 EN50018, IEC/EN 60079-1 EN50019, IEC/EN 60079-7 EN50020, IEC/EN 60079-11 EN50028 EN954-1
<b>Ex-code</b>	II 2 G Ex e m ia [p] [ia] IIC T4
<b>Dimensions</b>	122mm x 122mm x 90mm
<b>Measure range</b>	0-25 mbar
<b>Security class</b>	Duo-tec technology. Fail safe, meets AK4 (according to EN945-1, cat.3)



### Electrical Specifications













<b>Current consumption</b>	30mA at 230VAC/ 60mA at 115VAC/ 300mA at 24VAC/ 200mA at 24VDC
<b>Mains Voltage</b>	12VDC, 24VDC, 24VAC, 115VAC, 230VAC, 48...62 Hz
<b>Contact load</b>	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
<b>Intrinsic Safe Connector (5pole)</b>	Intrinsic safe connector for external temperature and pressure sensor F-470, remote unit F-411 or by-pass-keyswitch f-480

### Dimensions







	<b>TNFCD, TNFAD, TNFCDM</b> Flashing beacons, Ex d/de, Acid Resistant Steel	130
	<b>EVde-ROT 4 Series</b> Rotating Signalling Lights, Ex de, Copper free Aluminium	132
	<b>EVde-XN / EVde-MXN / EVcc-MXN Series</b> Flashing Signalling Lights, Ex de/d, Copper free Aluminium	134
	<b>WA.. Series</b> LIOL (Low Intensity aviation Obstruction Lights), Steady	137
	<b>EVcc-5 / LED Series</b> MIOL (Medium Intensity aviation Obstruction Lights), long life, Steady, Ex d, Glass / Copper free Aluminium	138
	<b>EV-MIOL-LED 90+90</b> MIOL (Medium Intensity aviation Obstruction Lights), long life, Flashing, Ex nC, Glass / Copper free Aluminium, with electronic adjustable control unit	140
	<b>TNDSP-25 Ex bell</b> Ex bell, Ex des, Antistatic Polyamide	142
	<b>V6, YO6, YL6</b> Signalling products, Ex ed/d, Aluminium	143
	<b>YO9S</b> Sounder, Ex d, GRP	144
	<b>YO3, YO4, YO5</b> Sounders, Ex ia, Flame retardant plastic	145
	<b>Voyants V4</b> LED beacon, Ex ia, Flame retardant plastic	146
	<b>XAWS</b> Fire Alarm Station, Ex ed, GRP	147

## TNFCD/TNFAD/TNFCDM

TNFCD flashing beacons is designed to meet the most rigorous 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, Ex d only or as Non-Ex-Special application upon request

### Specifications

#### Material

**TNFCD/TNFCDM**

Acid resistant stainless steel SS316

**TNFAD**

Seawater resistant aluminium

**IP Rating**

IP66 (IP67 upon request)

**Temperature**

-50°C - +60°C

**Approvals**

NEMKO 01ATEX430

**Standards**

EN50014, IEC/EN 60079-0

EN50018, IEC/EN 60079-1

EN50019, IEC/EN 60079-7

**Ex-Code**

Ex d IIC T4 or EEx 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**

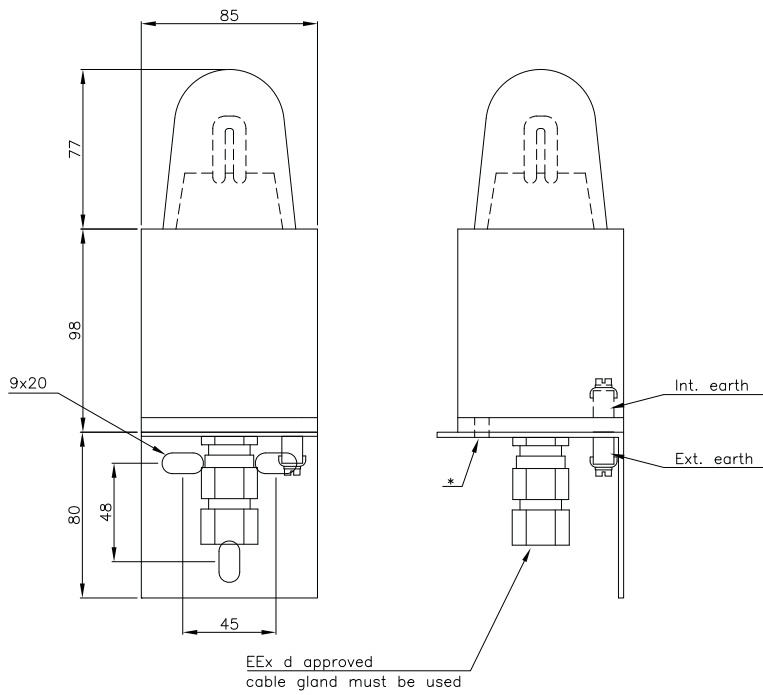
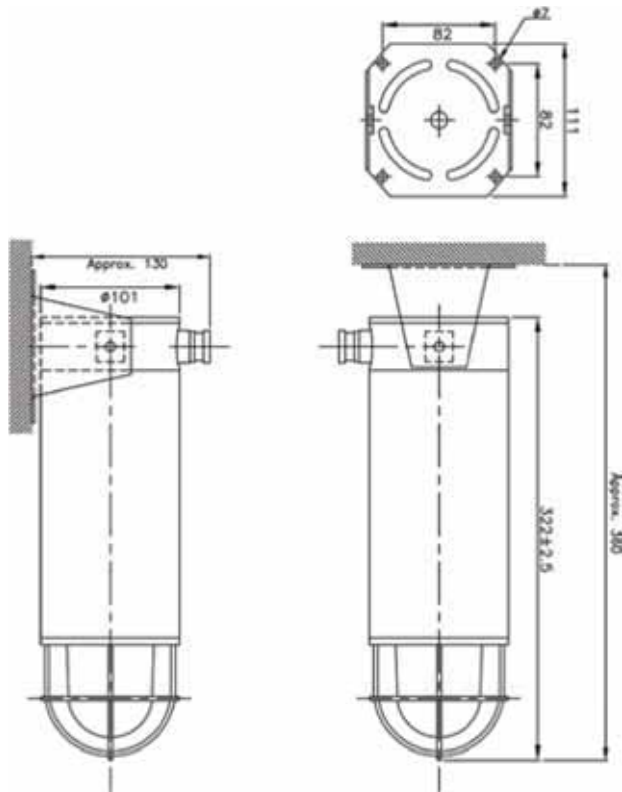
2,5 Kg



Electrical data TNFCD/TNFAD					
Rated Voltage	220-254 VAC	110-120 VAC	110VDC	24-48VDC	
Voltage Range	±10%	±10%	±20%	±20%	
Rated current	110mA	220mA	135mA	24VDC: 670mA	48VDC: 330mA
Power consumption	24VA	24VA	15VA	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



## EVde-ROT 4 Series

Copper free Aluminium signalling fixtures with rotating light, painted RAL 6003, with 2 ea. M25 entries. Evde-ROT-4... is available in different colours: blue / orange / red / green / yellow / transparent.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu <0,1%)
<b>Temperature</b>	-50°C to 60°C
<b>IP Rating</b>	IP65
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	<p>Ⓔ 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</p> <p>According to European Directive 94/9/EC (ATEX)                      For Zone 1 &amp; 2 and Zone 21 &amp; 22</p>
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Lamp included
<b>Lamps Wattage</b>	25W
<b>Ballast</b>	N.A.
<b>Rated operation voltage (UE)</b>	12Vac / 24Vac / 48Vac / 110Vac / 230Vac / 240Vac 12Vdc / 24Vdc / 48Vdc
<b>Frequency</b>	50/60 Hz
<b>Accessories</b>	Customized colours
<b>Note</b>	<b>Continuous Running</b>



### 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



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

Signalling Lighting Fixtures with Flashing Light and Fresnel lens, assembled in a Copper free Aluminium body, painted RAL 6003 and with 2 ea M25 entries. EVde-...XN is available in different colours and voltages.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>Temperature</b>	-50°C to 60°C
<b>IP Rating</b>	IP65
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Lamp included
<b>Lamps Wattage</b>	10W, 25W, 50W
<b>Rated operation voltage (UE)</b>	110Vac / 230Vac / 240Vac  12Vdc / 24Vdc
<b>Frequency</b>	50/60 Hz
<b>Note</b>	<b>Continuous Running</b>



### 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



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





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

Obstruction aircraft warning light in Copper free Aluminium with incandescent reinforced filament lamp, painted RAL 6003 and with red metacrilate dome.

### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to +40°C (Temp. class T4) -50°C to +60°C (Temp. class T3)
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.B00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 1 or Nr.2 M25 entry
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Incandescent reinforced filament Lamp included
<b>Lamps Wattage</b>	1 x 100W or 2 x 100W
<b>Rated operation voltage (UE)</b>	220V
<b>Accessories</b>	Customized colours
<b>Note</b>	<b>Red Metacrilate Dome</b>



Code	Model	Type	Mode of Protection	Power (W)	Voltage	Weight (kg)
A042102	EVde-2 / I 100	EVde-WAR 1x100W	Ex de	1 x 100 W	220-240V	3,35
A042002	EVCC-2 / I 100	EVCC-WAR 1x100W	Ex d	1 x 100 W	220-240V	3,00
A042202	EVA-2 / I 100	EVA-WAD 2x100W	Ex d	2 x 100 W	220-240V	7,50

## EVcc-5 / LED Series

EVCC-5/...LED type represents the top of technology among M.I.O.L. (Medium Intensity Obstruction Lighting) devices, suitable for providing: low heat dissipation, low watt consumption and up to 100.000/hours maintenance free. Aircraft warning lighting fixtures EVCC-5/...LED is a multi light source power LED's with wide beam and is fully compliant with ICAO Annex 14, which foreseen for structures over 45 mt. high the application of medium intensity lighting fixtures, therefore a lighting output of 1600 cd minimum, light colour RED.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>Temperature</b>	-50°C to 60°C
<b>IP Rating</b>	IP65
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	Ⓔ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Lamps included
<b>Lamps Wattage</b>	High intensity power LED's: 1W each x 60
<b>Rated operation voltage (UE)</b>	110Vac / 220Vac / 240Vac
<b>Frequency</b>	50/60 Hz
<b>Accessories</b>	Available upon request

**Note** Up to 100.000/hours Maintenance Free Unit

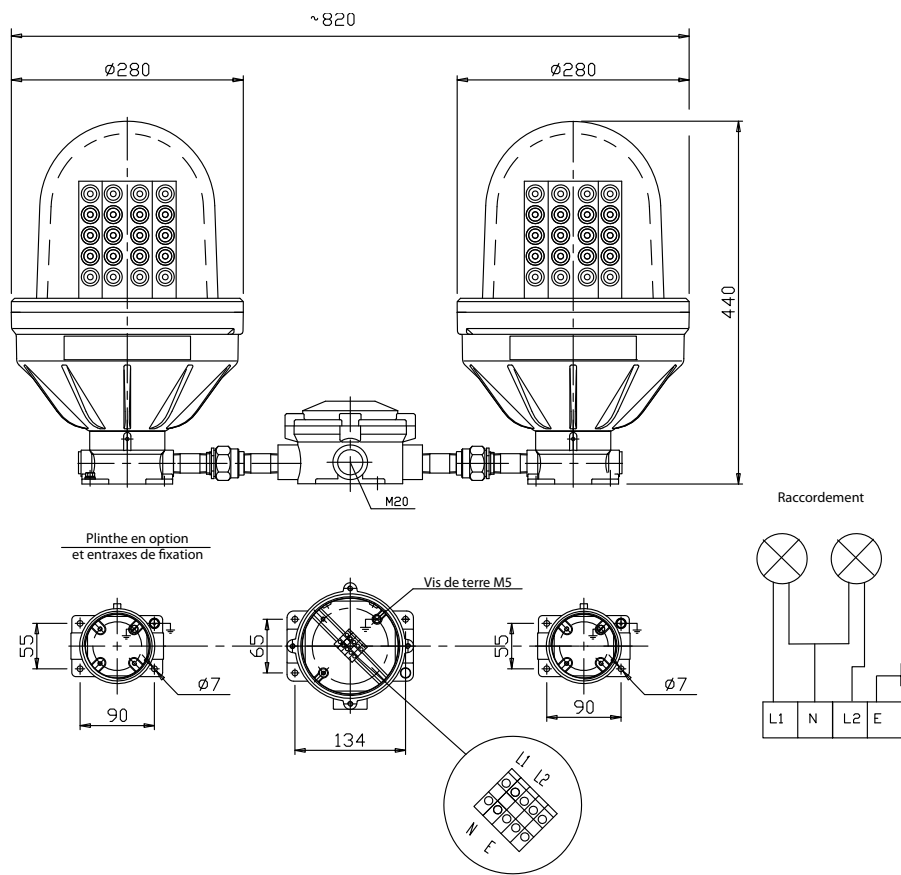


### Steady aircraft warning lighting fixtures medium intensity - power LED

Type	Code	Power (W)	Voltage	Dimension (ØA x C)	Weight (kg)
EVCC-5/LED-1x60	0414.37	1Wx60	110 Vac	280 x 440	13.1
EVCC-5/LED-1x60	0414.35	1Wx60	220÷240Vac	280 x 440	13.1
EVCC-5/LED-2x60	0414.36	2x(1Wx60)	220÷240Vac	820 x 467	13.1



Dimensions



### EV-MIOL-LED 90+90

Medium Intensity Aviation Obstruction Light with LED's sources. EV-MIOL-LED type represents the top of technology among M.I.O.L. (Medium Intensity Obstruction Lighting) devices, suitable for providing: low heat dissipation, low watt consumption and up to 100.000/hours maintenance free or up to 50.000/hours at constant light output.

Over the long life of LED's, EV-MIOL-LED is designed to house a double beam in a single gang lighting fixtures. This means that the typical twin light (one spare to the other) normally in two separate housing, with consequent big dimension, are condensed in a single housing, saving over 50% in weight.

Aircraft warning lighting fixtures EV-MIOL-LED is a multi light source power LED's with wide beam and it is fully compliant with ICAO Annex 14, which foreseen for structures over 45 mt. high the application of medium intensity lighting fixtures, therefore a lighting output of 1600 cd minimum, light colour RED.

#### Specifications

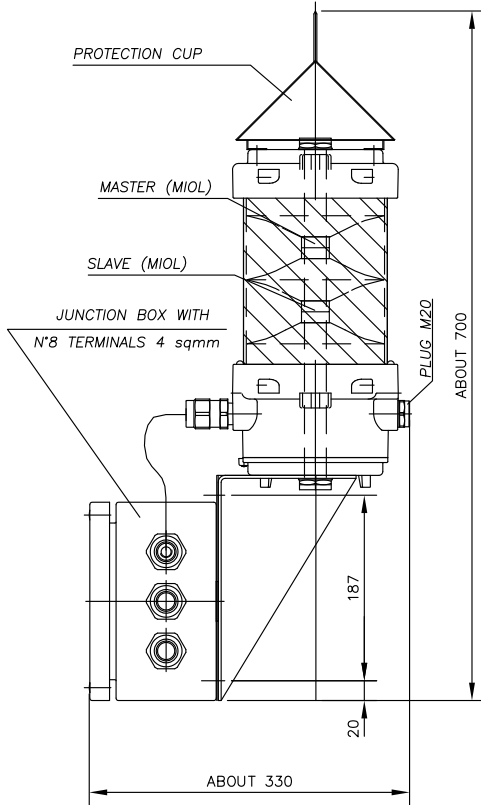
<b>Material</b>	Aluminium end-cups and cover painted by green colour polyurethane painting cycle (RAL 6003)
<b>IP Rating</b>	IP66
<b>Temperature</b>	-30°C to 50°C
<b>Certification &amp; Approvals</b>	02ATEXQ402
<b>Standards</b>	EN 60079-0 / 60079-15 IEC 60079-0 / 60079-15
<b>Ex-code</b>	Ⓔ II 3 GD Ex-nC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

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



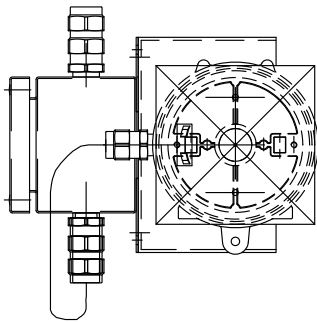
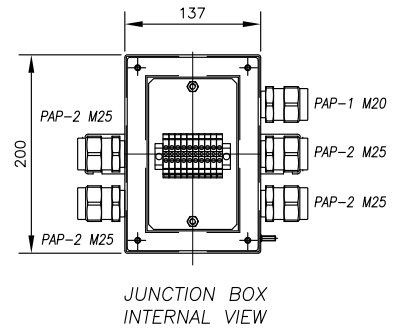
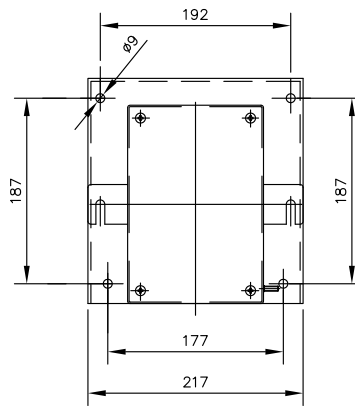


Dimensions



RED OBSTRUCTION LIGHTS (MIOL)  
720x60x52 + 720x60x52

JUNCTION BOX  
FIXING DETAILS



## TNDSP-25 Ex bell

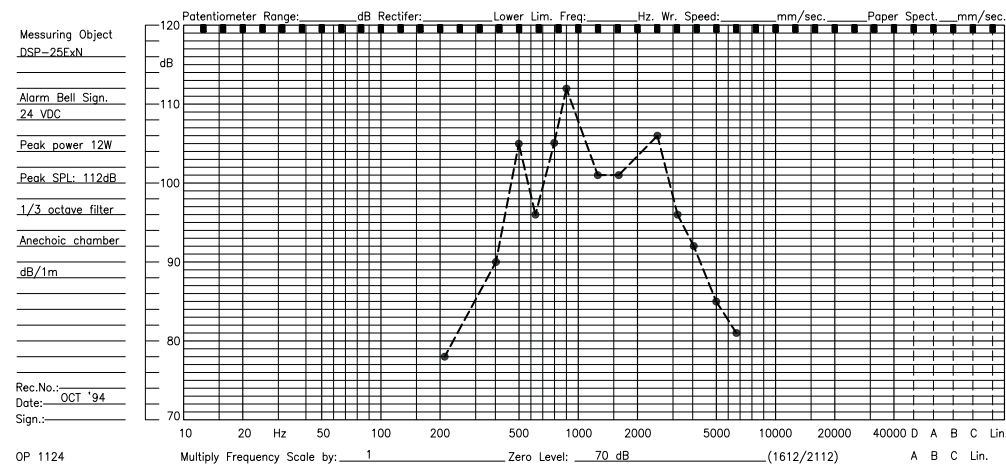
Flameproof electronic speaker with traditional rumbling bell sound. With no moving parts it is suitable for replacement of standard mechanical Ex protected alarm bells or fire alarm bells.

### Specifications

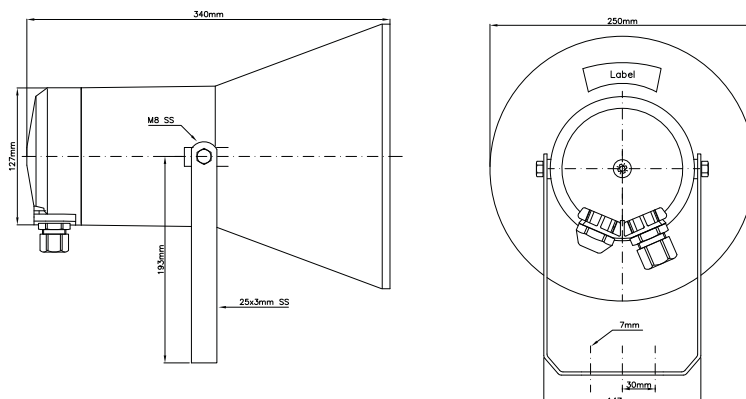
<b>Material</b>	Antistatic polyamide, bracket in SS316
<b>IP Rating</b>	IP66
<b>Operating temperature</b>	-20°C to +40°C
<b>Approvals</b>	Nemko 03ATEX1357
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50018, IEC/EN 60079-1 EN50019, IEC/EN 60079-7
<b>Ex-Code</b>	Ex des IIB + H2 T6 Ⓔ II 2 G
<b>Earthing</b>	Internal M4
<b>Entries</b>	1xM20 + 1xM25 plugged
<b>Connections</b>	2,5mm <sup>2</sup> max
<b>Power</b>	25W
<b>Power consumption</b>	19,6W (8W, 1kHz sine wave)
<b>Sound level</b>	P112 dB
<b>Rated current</b>	Max 2 Amp.
<b>Operating voltage</b>	24VDC (19,2 – 28VDC)
<b>EMC protection</b>	EN50082-2 / EN50081-2
<b>Upon request</b>	Other sound effects
<b>Colour</b>	Black



### Sound Characteristics for TNDSP-25-Ex bell



### Dimensions



## V6/YO6/YL6

The Yodalex V6, YO6 and YL6 signaling products are designed for use in Ex Zone 1 and 2, and meet the requirements for common approvals. The range is suitable for use in applications as fire alarms, security alarms, increased urgency, evacuation alarms etc.

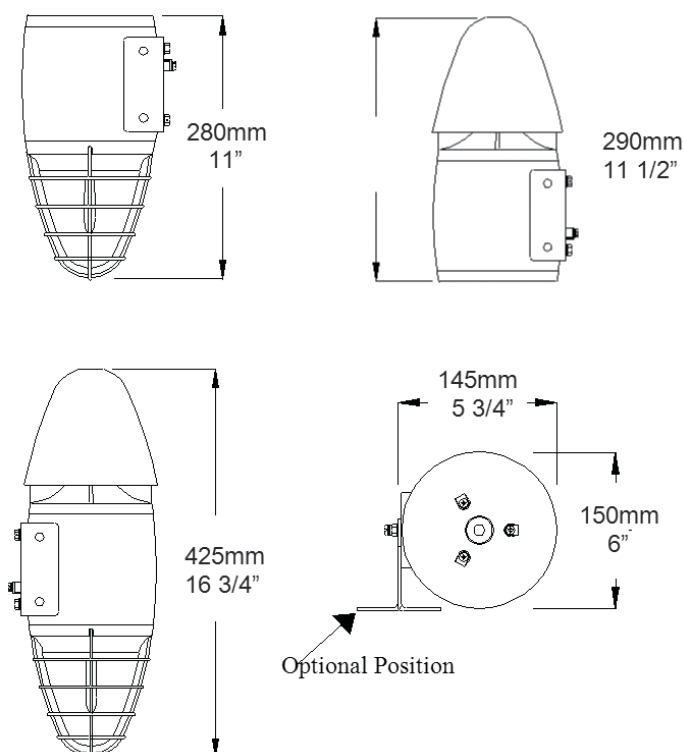
The sounders are omni-directional and come pre-programmed with 32 selectable tones. The strobe and combination units are both delivered complete with lens guard, and there are several available lens colors. The Yodalex V6, YO6 and YL6 all delivered with mounting brackets.

### Specifications

<b>Material</b>	Aluminium enclosure with stainless steel fasteners
<b>IP Rating</b>	IP66
<b>Operating temperature</b>	-35°C to +60°C (European IIB) -20°C to +60°C (European IIB+H2)
<b>Approvals</b>	ATEX / UL / GOST / IECEX
<b>Ex-Code</b>	Ex ed IIB T4 / Ex d IIB + H2 T4
<b>Operating voltage</b>	24Vdc UL/ATEX/GOST approved 48Vdc ATEX 115Vac or 230Vac ATEX/GOST approved
<b>Lens colours</b>	Clear, Opal, Yellow, Red, Amber, Blue, Green
<b>Tone</b>	32 slectable tones meeting international regulations
<b>Weight</b>	V6: 4,6 kg YO6: 4,7 kg YL6: 5,6 kg



### Dimensions



## YO9S

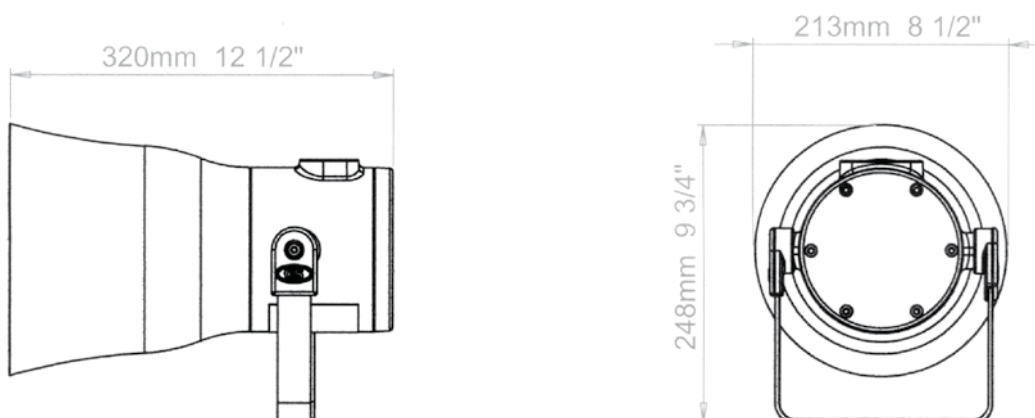
The YO9S is a high sound output (115dB) light weight GRP sounder designed for use in Ex Zones 1 and 2. The sounder comes pre-programmed with 32 selectable tones meeting international regulations. Sound selection is easily achieved by DIL switches, and is suitable for fire alarms, security alarms, increased urgency, evacuation alarms etc. A Stainless Steel mounting bracket is delivered as standard with the YO9S.

### Specifications

<b>Material</b>	Light weight GRP enclosure
<b>IP Rating</b>	IP66
<b>Operating temperature</b>	-35°C to +60°C IIB -20°C to +60°C IIC
<b>Approvals</b>	Standards for Explosion Proof Sounders
<b>Ex-Code</b>	Ex d IIB T6 / Ex d IIC T6
<b>Operating voltage</b>	24Vdc, 48Vdc, 115Vac, 230Vac
<b>Tone</b>	32 selectable tones meeting international regulations
<b>Sound output</b>	115dB(A) at 1 mtr.
<b>Weight</b>	approx. 5Kg



### Dimensions



## YO3/YO4/YO5

The EEx ia YO3 / YO4 / YO5 IS sounders are widely used in any application that requires a rugged and reliable sounder in an IS environment.

With high sound output, monitoring facilities and with 32 selectable tones (selectable via DIL switch), the series of sounders are popular for several requirements: as fire alarms, security alarms, increased urgency, evacuation alarms etc.

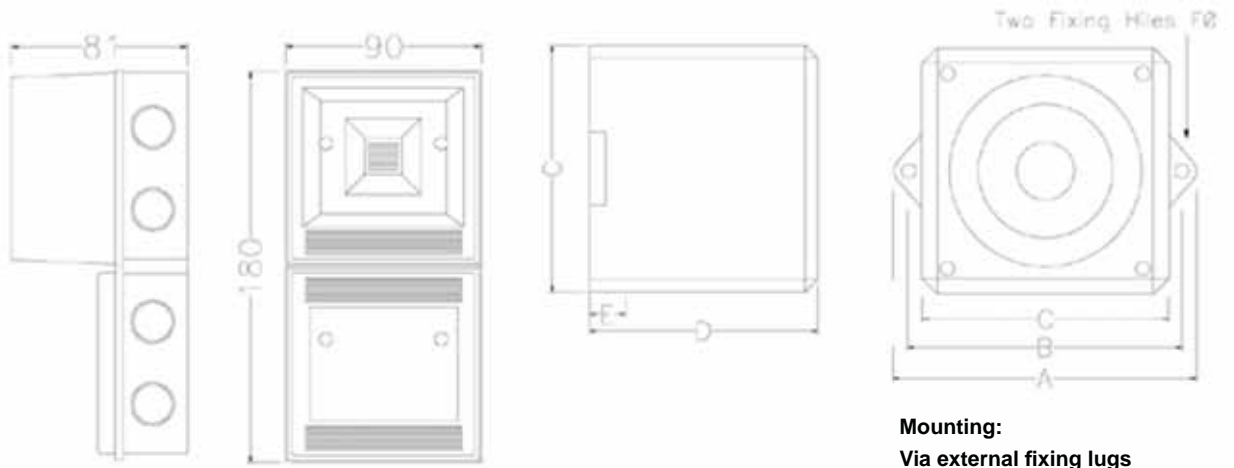
The YO IS sounders are delivered either for use with European Approved Barriers or in Opto-coupled version.

### Specifications

<b>Material</b>	ABS flame retardant plastic
<b>IP Rating</b>	IP55 (YO3/4) IP56 (YO5)
<b>Operating temperature</b>	-25°C to +40°C
<b>Approvals</b>	BAS02ATEX1190X
<b>Standards</b>	EN50014:1997 + Amendments 1 & 2 EN50020:1994, EN50284:1999
<b>Ex-Code</b>	Ex ia IIC, T4 and T6
<b>Operating voltage</b>	12Vdc, 18Vdc or 24Vdc via barriers
<b>Sound output</b>	YO3/4 100dB(A) @ 1 mtr Max YO5 105dB(A) @ 1 mtr Max
<b>Weight</b>	YO3is 0,40Kg YO4is 0,43Kg YO5is 0,70Kg



### Dimensions



**Mounting:**  
Via external fixing lugs

Dimensions (mm)						
	A	B	C	D	E	F
YO3is	118	102	89	85	18	6
YO5is	169	153	134	128	23	8

M20 Cable Mounting hole at Dim E

The Intrinsically Safe LED Beacon V4 is a long life designed high-light intensity beacon, with 8 LEDs and 360 deg. visibility. The unit is produced with an antistatic ABS plastic enclosure, and is delivered with flame retardant polycarbonate lenses. A flush mounting base is also available.

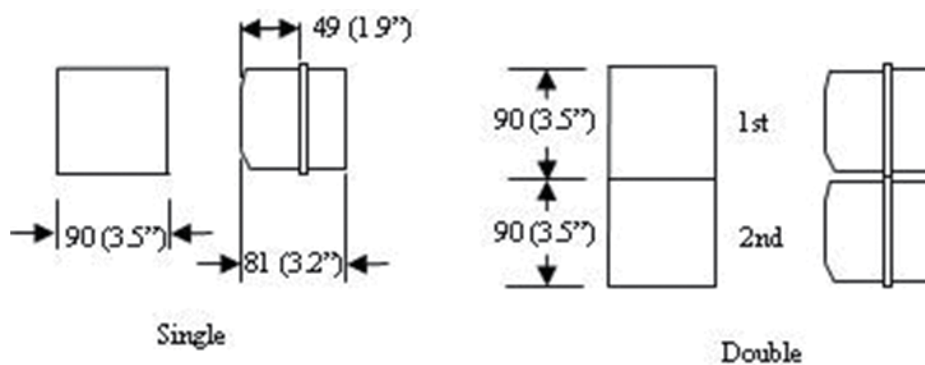
Commonly used as warning signal for applications such as: fire alarms, security alarms, increased urgency, evacuation alarms etc.

### Specifications

<b>Material</b>	Flame retardant plastic (red/white)
<b>IP Rating</b>	IP65
<b>Operating temperature</b>	-25°C to +40°C
<b>Storage Temperature</b>	-40°C to +70°C
<b>Operating voltage</b>	12Vdc, 18Vdc, 24Vdc via ATEX approved barriers
<b>Approvals &amp; Certification</b>	BASEEFA (ATEX) approved BAS05ATEX0075
<b>Standards</b>	EN50014:1997 + Amendments 1 & 2 EN50020:2002 and EN50284:1999
<b>Ex-Code</b>	Ex ia IIC T4
<b>Operating voltage</b>	12Vdc, 18Vdc, 24Vdc via ATEX approved barriers
<b>Lens colour</b>	Red and Amber. Clear, Opal, Blue, Yellow and Green upon request
<b>Relative humidity</b>	90% @ 40°C
<b>Weight</b>	0,15Kg



### Dimensions



## XAWS

Technor Atex fire alarm station in, Ex e model of protection, is an easy way to secure locals. Provided with the device is a hammer for glass breakage in case of emergency. The fire alarm station is available in 2 modes of operation:

- Automatic: The contact block is held in the “operated” position by the glass. The contact change over when breaking the glass, the plunger is released.
- Manual: The contacts are in the “rest” position and must be operated after breaking the glass.

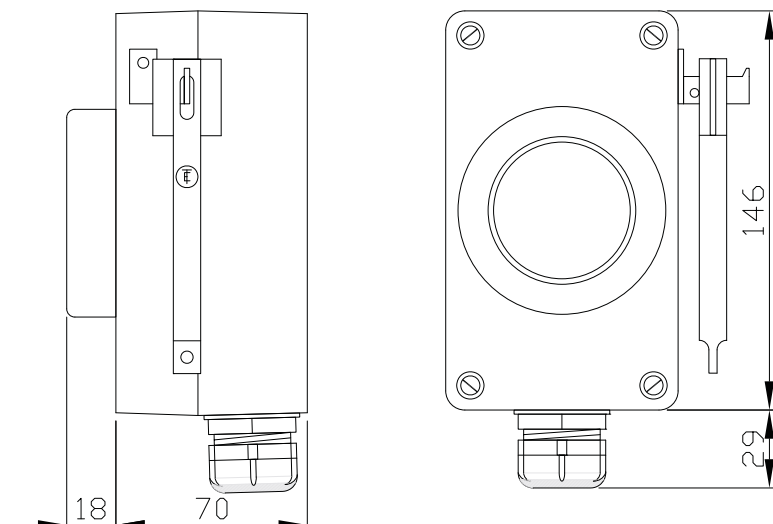
### Specifications

<b>Material</b>	GRP
<b>IP Rating</b>	IP 65 – IP 66
<b>Temperature</b>	-20°C to +40°C (+50°C, +60°C)
<b>Approvals</b>	INERIS 03ATEX0122
<b>Standards</b>	Cenelec EN50014, EN50018, EN50019, EN500281-1-1
<b>Ex-Code</b>	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	XAWS111	XAWS121	XAWS151
Accessories and spare parts			
Slow break contact block	NO	ZBWE101	
	NC	ZBWE102	
Glass	XAWS901		

### Dimensions







	<b>RMS 540 Series</b> Fluorescent lamps, IP65, AISI 304	150
	<b>RMS 550 Series</b> Fluorescent lamps, Ex nA, AISI 304	151
	<b>RMS 560 Series</b> Fluorescent lamps, Ex de, AISI 304	153
	<b>TNAML</b> Fluorescent light, Ex me, Seawater resistant anodized aluminium	157
	<b>EVF-P Series</b> Fluorescent lamps, Ex d, end-cups in Copper free Aluminium	159
	<b>EVF-P Endurance Series</b> Fluorescent lamps long life, Ex d, end-cups in Copper free Aluminium	161
	<b>EVde HID Series</b> Lighting fixtures for HID lamps, Ex de, Copper free Aluminium	163
	<b>EVde I/HA Series</b> Lighting fixtures for incandescent / halogen lamps, Ex de, Copper free Aluminium	166
	<b>TNXCX</b> Floodlight, Ex e/de, Acid Resistant Steel	168
	<b>FL Series</b> Floodlights, Ex de, Copper free Aluminium / AISI 316L	169
	<b>EVde-LED / EVde-PT Series</b> Spot Lights, Ex de, Copper free Aluminium	171
	<b>EVcc-PR Series</b> Tank Lighting fixtures, Ex d, Copper free Aluminium	172
	<b>EVA Series</b> Hand lamps for incandescent lamps, Ex d, Copper free Aluminium	173
	<b>TNCLS</b> Level Gauges, Ex em, AISI 316	174

Due to the body in Stainless Steel AISI 304, with a tempered glass window and a glass-frame done in one unit without welding, RMS series are ideal for Onshore, Offshore, Marine applications and for all kinds of industry where a high level of corrosion resistance is required. Moreover, the shapes of RMS lighting fixtures have been designed to allow the operator to work with no need to support any part of lighting fixtures. One person can take care of start-up or maintenance of a RMS lighting fixture without any assistance.

### Specifications

<b>Material</b>	Stainless Steel AISI 304, 0.8 mm thickness and transparent part in tempered glass
<b>IP Rating</b>	IP66/67 Industrial waterproof IP 65 CLASS I
<b>Temperature Standards</b>	-30°C / 55°C Compliance with Electromagnetic Compatibility (EMC) according to European Directive 2004/108/EC
<b>Gaskets</b>	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
<b>Entries</b>	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.
<b>Hardware and Screw Lamps</b>	AISI 304 Stainless Steel external hardware and screws RMS Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent (lamps excluded)
<b>Lamps Wattage</b>	18 / 36 W
<b>Ballast</b>	Electromechanical ballast
<b>Rated operation voltage (UE)</b>	230 V
<b>Frequency</b>	50 Hz
<b>Power factor</b>	> 0,9
<b>Accessories</b>	Wiring with High frequency electronic ballast (220-240V 50/60 Hz.)
<b>Available upon request</b>	Suspension mounting kit "G1" AISI 304 made Pole mounting kit "P12" 1 1/2" size AISI 304 made Wall mounting kit "H1" AISI 304 made
<b>Emergency Service</b>	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

Due to the body in Stainless Steel AISI 304, with a tempered glass window and a glass-frame done in one unit without welding, RMS series are ideal for Onshore, Offshore, Marine applications and for all kinds of industry where a high level of corrosion resistance is required. Moreover, the shapes of RMS lighting fixtures have been designed to allow the operator to work with no need to support any part of lighting fixtures. One person can take care of start-up or maintenance of a RMS lighting fixture without any assistance.

### Specifications

<b>Material</b>	Stainless Steel AISI 304, 0.8 mm thickness and transparent part in tempered glass
<b>IP Rating</b>	IP66/67
<b>Temperature</b>	-30°C to 55°C
<b>Certification &amp; Approvals</b>	Type Examination Certificate INERIS 01ATEX3002X GOST Certificate POCC IT.ГБ04.В00509
<b>Standards</b>	EN 60079-15 / EN 60079-0 / EN 61241-0 / EN 61241-1 IEC 60079-15 / IEC 60079-0 / IEC 61241-0 / IEC 61241-1
<b>Ex-code</b>	<p>⊕ II 3 GD</p> <p>Ex nA II T5 Tamb. -30°C to 50°C</p> <p>Ex nA II T4 Tamb -30°C to 55°C</p> <p>Ex tD A22 T90° Tamb -30°C to 40°C</p> <p>Ex tD A22 IP66/67 T100° Tamb -30°C to 50°C</p> <p>Ex tD A22 IP66/67 T105° Tamb -30°C to 55°C</p> <p>According to European Directive 94/9/EC (ATEX) For Zone 2 and Zone 22</p>
<b>Gaskets</b>	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
<b>Entries</b>	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.
<b>Hardware and Screw Lamps</b>	AISI 304 Stainless Steel external hardware and screws RMS Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent. (lamps excluded)
<b>Lamps Wattage</b>	18 / 36 W
<b>Ballast</b>	High-frequency electronic ballast conforming with EN 60079-15 and IEC 60079-15
<b>Rated operation voltage (UE)</b>	220-240 V
<b>Frequency</b>	50 ÷ 60 Hz
<b>Power factor</b>	> 0,95
<b>Accessories Available upon request</b>	Suspension mounting kit "G1" AISI 304 made Pole mounting kit "P12" 1 ½" size AISI 304 made Wall mounting kit "H1" AISI 304 made
<b>Emergency Service</b>	RMS 550 lighting fixtures for Emergency Service are available: RMS 550...PNL/LE-P
<b>Note</b>	<p><b>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.</b></p> <p><b>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.</b></p>





**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



Due to the body in Stainless Steel AISI 304, with a tempered glass window and a glass-frame done in one unit without welding, RMS series are ideal for Onshore, Offshore, Marine applications and for all kinds of industry where a high level of corrosion resistance is required. Moreover, the shapes of RMS lighting fixtures have been designed to allow the operator to work with no need to support any part of lighting fixtures. One person can take care of start-up or maintenance of a RMS lighting fixture without any assistance. The RMS560 is EOL FREE !!!

### Specifications

<b>Material</b>	Stainless Steel AISI 304, 0.8 mm thickness and transparent part in tempered glass
<b>IP Rating</b>	IP66/67
<b>Temperature</b>	-20°C to 60°C
<b>Certification &amp; Approvals</b>	Type Examination Certificate INERIS 01ATEX0060 GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0/EN 60079-1/EN 60079-7/EN 61241-0/EN 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 62141-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	Special cross section tightness gasket, silicon rubber made (close cells) located in housing channel between body and window frame.
<b>Entries</b>	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.
<b>Hardware and Screw</b>	AISI 304 Stainless Steel external hardware and screws
<b>Lamps</b>	Lampholder suitable for fluorescent two pins lamp type PHILIPS TL-D or similar (lamps excluded)
<b>Lamps Wattage</b>	18 / 36 W
<b>Ballast</b>	high-frequency electronic ballast
<b>Rated operation voltage (UE)</b>	220-240 V
<b>Frequency</b>	50 ÷ 60 Hz
<b>Power factor</b>	> 0,95
<b>Accessories</b>	Suspension mounting kit "G1" AISI 304 made
<b>Available upon request</b>	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
<b>Emergency Service</b>	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]			WEIGHT [kg]
				A	B	C	
* 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

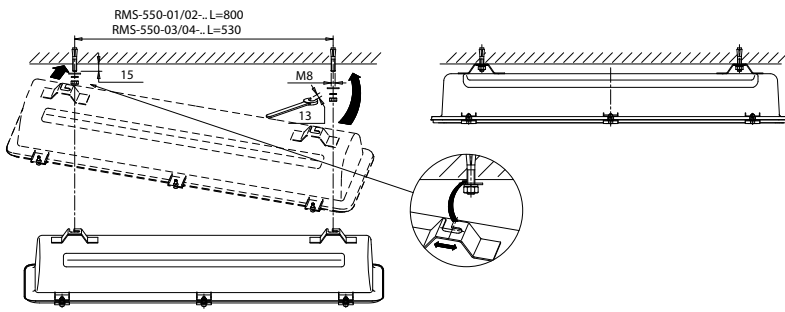
MS: with Micro-Switch

## Lighting Fixtures for Emergency Service

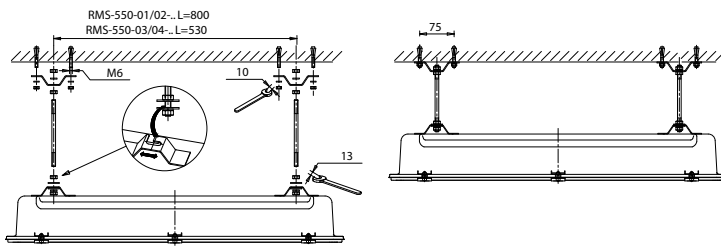
TYPE RMS 560*	CODE	LAMPS Num.	POWER [W]	Overall dimensions [mm]			WEIGHT [kg]
				A	B	C	
* 03/PNL/LE – P	A.2227.02	1	1x18W TL-D	737	239	173	9,50
* 04/PNL/LE – P	A.2230.02	2	2x18W TL-D	737	239	173	9,60
* 01/PNL/LE – P	A.2231.02	1	1x36W TL-D	1347	239	173	14,10
* 02/PNL/LE – P	A.2232.02	2	2x36W TL-D	1347	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

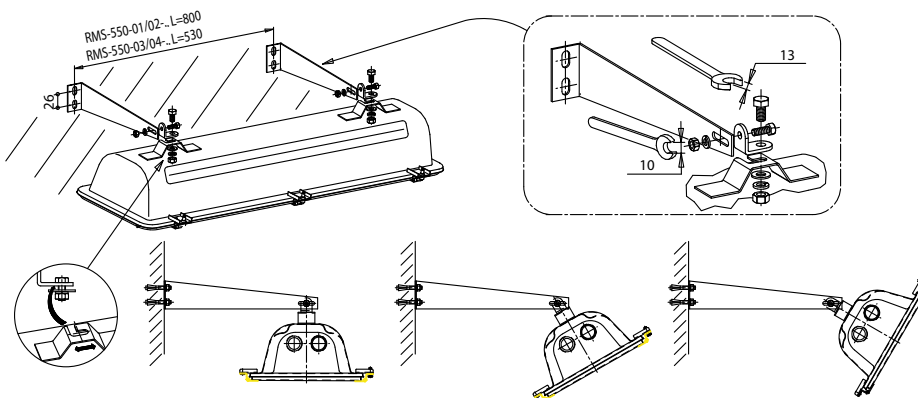




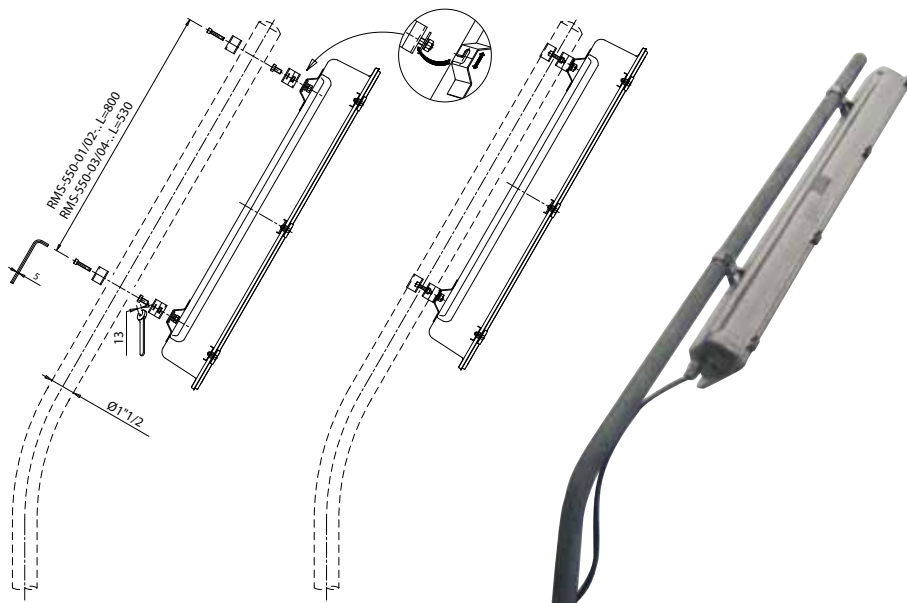
Ceiling mounting included in standard version



Suspension mounting kit "G1" type on request code: A 0530 75\*



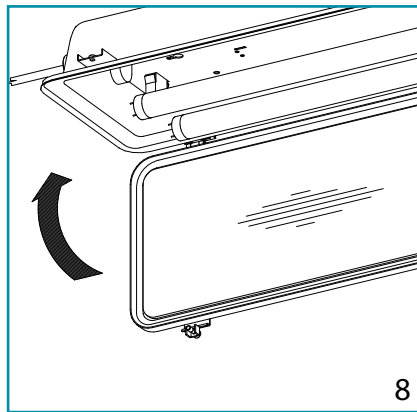
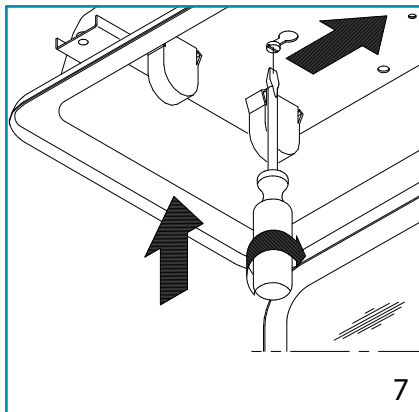
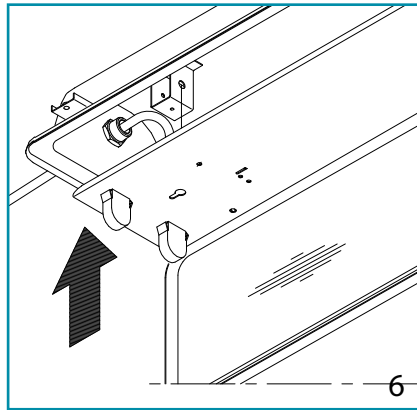
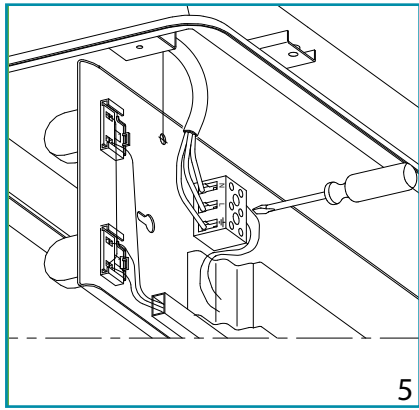
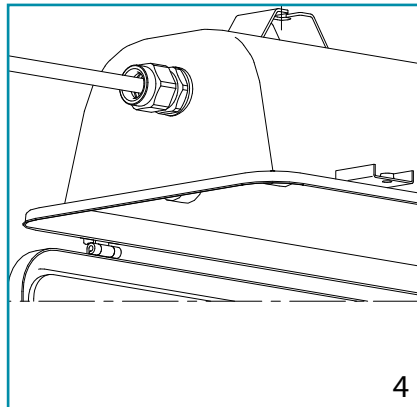
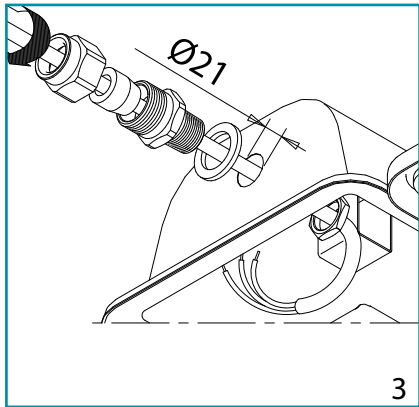
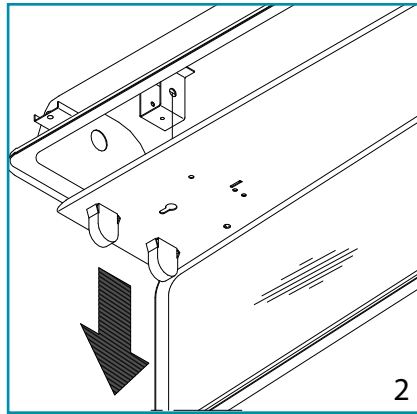
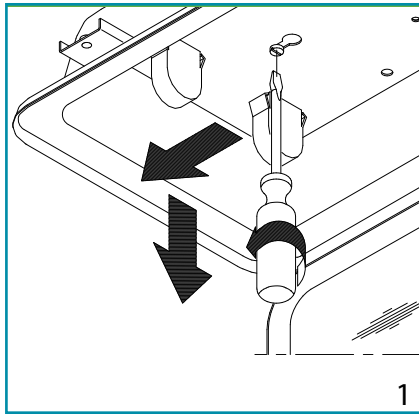
Wall mounting kit "H1" type on request code: A 0530 70\*



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

- 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
- Optional incorporated battery powered LED emergency lighting

### Characteristics

- Maintenance free
- Sealed-for-life concept
- Fit and forget
- 10 year operational warranty\*
- Patented solution

### General specifications:

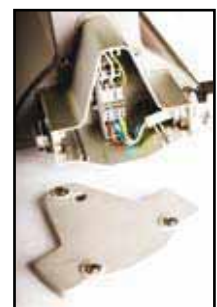
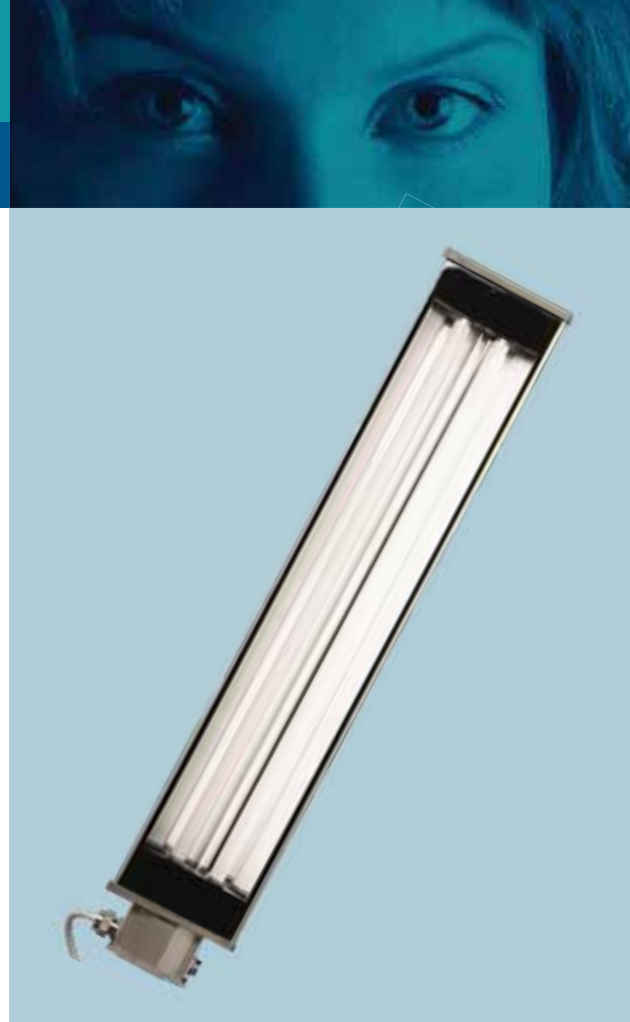
<b>Modes of protection</b>	Ex e mb, Ex tDA21
<b>ATEX classification</b>	Group II Category 2 G D
<b>Zones</b>	Zone 1, 2, 21, 22
<b>Applied standards</b>	EN 60079-0, EN 60079-7, EN 60079-18 EN, EN/IEC 61241-0, EN/IEC 61241-1
<b>Certificate</b>	KEMA08ATEX0163
<b>Ex code</b>	⊕ II 2 G Ex e mb II T6 ⊕ II 2 D Ex tD A21 IP66 T80°C
<b>Inspection</b>	Visual inspection in accordance with EN/IEC 60079-17

### Product specifications:

<b>Housing</b>	Seawater resistant anodized (25 micron) aluminum with toughened glass
<b>Lamps</b>	Pre-mounted long life lamps, color 840
<b>IP Rating</b>	IP66
<b>Temperature range</b>	-20°C to +55°C
<b>Voltage</b>	220-264VAC 50/60Hz
<b>Electrical connection</b>	0,5-6mm <sup>2</sup> spring terminals through integrated external junction box (sealed by resin)
<b>Entries</b>	2 entries M25 with built-in lock nut
<b>Ballast</b>	Electronic with end of life protection
<b>Mounting</b>	Brackets on guidance rail for easy and quick installation

### Optional:

<b>Voltage</b>	110/120VAC
<b>Lamps</b>	Color 830
<b>Electrical connection</b>	8 meter braided flying permanent lead
<b>LED Emergency lighting</b>	90 minute back-up for 36W and 58W
<b>Mounting brackets</b>	Pole and ceiling mounting brackets
<b>Cable glands</b>	M25

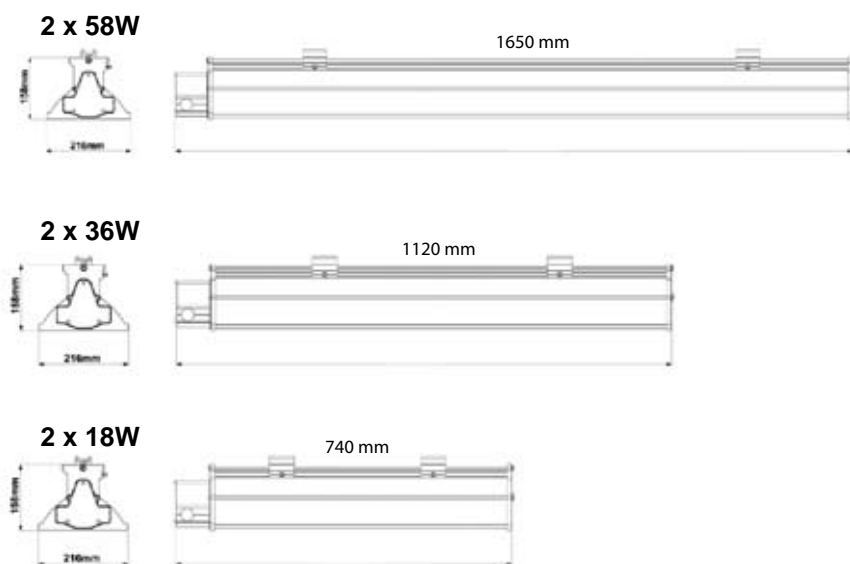




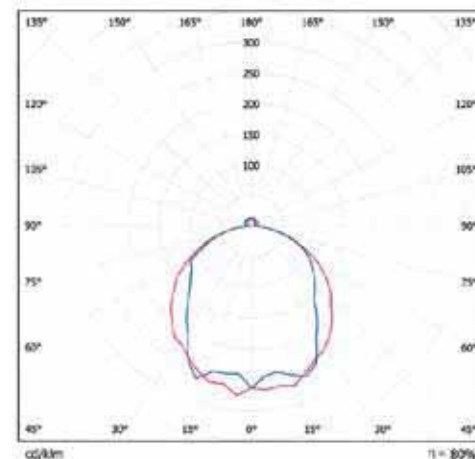
Article code	Wattage	Voltage	Weight	Lumen
TNAML218	2 x 18W	220-264VAC	5,0 kgs	2.600 Lumen
TNAML236	2 x 36W	220-264VAC	6,5 kgs	6.000 Lumen
TNAML258	2 x 58W	220-264VAC	8,0 kgs	10.400 Lumen
TNAML236E	2 x 36W	220-264VAC	6,5 kgs	6.000 Lumen
TNAML258E	2 x 58W	220-264VAC	8,0 kgs	10.400 Lumen

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

Drawings



Light distribution curve



Universal mounting system



Luminaires for fluorescent lamps with a circular shape polycarbonate-made light housing and two end-cups in copper-free aluminium.

The high resistance polycarbonate light-housing is made of 3 different layers-extrusion to grant the best possible protection against direct sun heating and radiation effect while the circular shape is aimed to grant the best possible "CX" factor and to avoid pollution and dirty bunching on surfaces.

These technical features make the EVF-P Series suitable for marine environment

### Specifications

<b>Material</b>	Two end-cups in copper-free aluminium (Cu<0,1%) mounted on a circular shape polycarbonate made
<b>IP Rating</b>	IP66
<b>Temperature</b>	-20°C to 50°C
<b>Certification &amp; Approvals</b>	Type Examination Certificate INERIS 02ATEX0039 GOST Certificate POCC IT.ГБ04.B00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	Aluminium end-cups and cover painted by green colour polyurethane painting cycle (RAL 6003)
<b>Thread</b>	Num. 2 opposite M20 pitch 1.5 metric threaded entries. One plugged-off by brass nickel plated EEx-d plug with relevant gasket
<b>Hardware and Screw</b>	AISI 304 Stainless Steel external hardware and screws
<b>Lamps</b>	EVF-P Series is suitable for two pins fluorescent lamps G13 socket PHILIPS TL-D or equivalent (lamps excluded)
<b>Lamps Wattage</b>	18 / 36 / 58 W
<b>Ballast</b>	High Frequency Electronic ballast
<b>Rated operation voltage (UE)</b>	220-240 V
<b>Frequency</b>	50 ÷ 60 Hz
<b>Power factor</b>	> 0,95
<b>Accessories</b>	Pole mounting Kit AISI 304 made, type P14
<b>Available upon request</b>	Ceiling mounting Kit AISI 304 made, type G3 3° bottom entry M20
<b>Emergency Service</b>	EVF-P lighting fixtures for Emergency Service are available, see: EVF-P...LE-P
<b>Note</b>	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	
423.00	EVF-P 118	1	1x18W	764	176	194	6
424.00	EVF-P 136	1	1x36W	1374	176	194	8
425.00	EVF-P 158	1	1x58W	1680	176	194	9
426.00	EVF-P 218	2	2x18W	764	176	194	6
427.00	EVF-P 236	2	2x36W	1374	176	194	8
428.00	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	
423.10	EVF-P 118 LE P	1	1 x 18W	764	176	194	8
426.10	EVF-P 218 LE P	2	2 x 18W	764	176	194	8
424.10	EVF-P 136 LE P	1	1 x 36W	1374	176	194	10
427.10	EVF-P 236 LE P	2	2 x 36W	1374	176	194	10
425.10	EVF-P 158 LE P	1	1 x 58W	1680	176	194	11
428.10	EVF-P 258 LE P	2	2 x 58W	1680	176	194	11
423.11	EVF-P 118 LE NP	1	1 x 18W	764	176	194	7.7
424.11	EVF-P 136 LE NP	1	1 x 36W	1374	176	194	9.7
425.11	EVF-P 158 LE NP	1	1 x 58W	1680	176	194	10.7

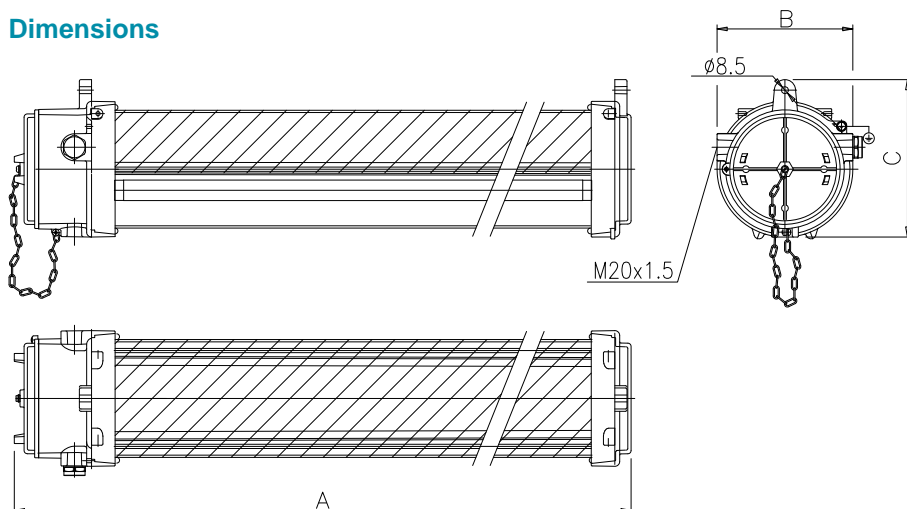
(P) Permanent Emergency Lighting Apparatus  
 (NP) NON Permanent Emergency Lighting Apparatus

Typical mounting kit for EVF-P Series Lighting Fixtures

Specifications	
<b>KIT "G3"</b>	CEILING MOUNTING KIT "G3" Type for lighting fixtures: EVF-P Series STAINLESS STEEL AISI 304
<b>KIT "P14"</b>	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

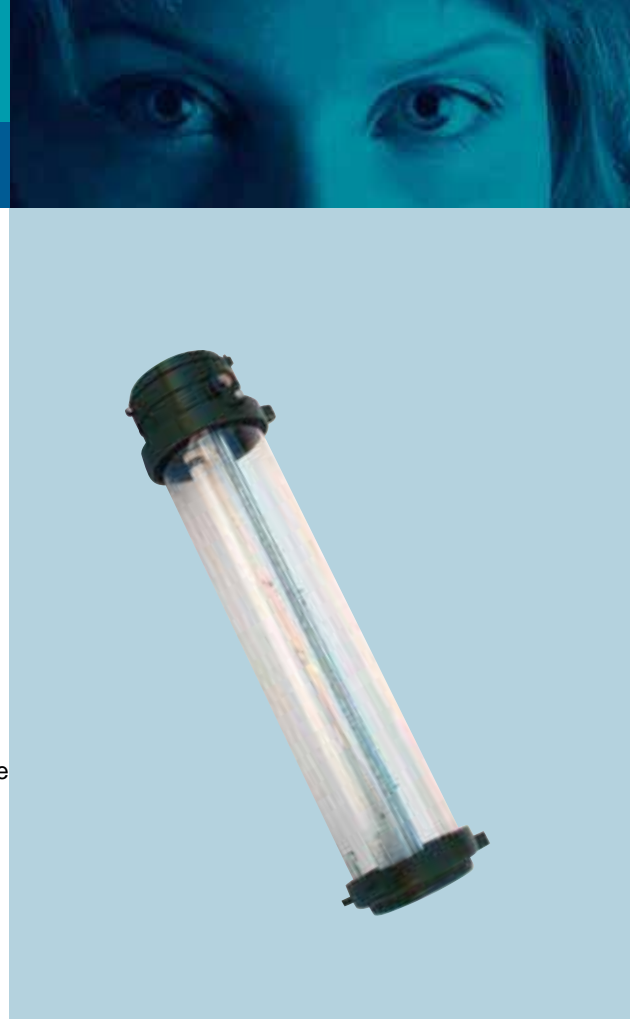
The EVF-P ENDurance Series has been specifically engineered to properly house the fluorescent lamps and relevant high frequency ballast of "Xtreme Technology" by Philips and grant, by way of this, over 40.000 hours of maintenance free operating lifetime.

In EVF-P ENDurance Series, patented technology by Philips like: Master TL-D Xtreme Lamps and relative HF-Performer II Xtreme high frequency ballast, meet benefits of EVF-P Series like: a circular shape of high resistance 3 layers-extrusion polycarbonate and two end-cups in copper-free aluminium that grant the best possible protection against direct sun heating and radiation effects.

### Specifications

<b>Material</b>	Two end-cups in Copper free Aluminium mounted on a circular shape polycarbonate made
<b>IP Rating</b>	IP66
<b>Operating Temperature</b>	-20°C to 50°C
<b>Certification &amp; Approvals</b>	Type Examination Certificate INERIS 02ATEX0039 GOST Certificate POCC IT.ГБ04.В00510 EN 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Standards</b>	
<b>Ex-code</b>	⊕ 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 O-ring made in Nitrile Rubber (NBR)
<b>Gaskets</b>	
<b>Surface treatment</b>	Aluminium end-cups and cover painted by green colour polyurethane painting cycle (RAL 6003)
<b>Thread</b>	Num. 2 opposite M20 pitch 1,5 metric threaded entries. One plugged-off by brass nickel plated EEx-d plug with relevant gasket
<b>Hardware and Screw</b>	AISI 304 Stainless Steel external hardware and screws
<b>Lamps</b>	EVF-P ENDurance Series is suitable for two pins fluorescent socket: MASTER TL-D Xtreme PHILIPS Low- Pressure mercury discharge lamp with tubular 26 mm. envelope Extreme long reliable lifetime and higher efficacy are achieved with HF-PERFORMER II Xtreme electronic gear (lamps excluded).
<b>Lamps Wattage</b>	18 / 36 / 58 W
<b>Ballast</b>	HF- PERFORMER II Xtreme High Frequency Ballast Philips (36W and 58W) Smart power: constant light independent 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
<b>Rated operation voltage (UE)</b>	220-240 V
<b>Frequency</b>	50 ÷ 60 Hz
<b>Power factor</b>	> 0,95
<b>Accessories</b>	Pole mounting Kit AISI 304 made, type P14
<b>Available upon request</b>	Ceiling mounting Kit AISI 304 made, type G3 3° bottom entry M20
<b>Emergency Service</b>	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 maintenance





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	
423.11	EVF-P 118 LE-LP / LED-END	1 + LEDS	1 x 18 + x1	764	176	194	8
426.11	EVF-P 218 LE-LP / LED-END	2 + LEDS	2 x 18 + x1	764	176	194	8
424.11	EVF-P 136 LE-LP / LED-END	1 + LEDS	1 x 36 + x1	1374	176	194	10
427.11	EVF-P 236 LE-LP / LED-END	2 + LEDS	2 x 36 + x1	1374	176	194	10
425.11	EVF-P 158 LE-LP / LED-END	1 + LEDS	1 x 58 + x1	1680	176	194	11
428.11	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	
A042301	EVF-P 118-END	1	1x18W	764	176	194	6
A042401	EVF-P 136-END	1	1x36W	1374	176	194	8
A042501	EVF-P 158-END	1	1x58W	1680	176	194	9
A042601	EVF-P 218-END	2	2x18W	764	176	194	6
A042701	EVF-P 236-END	2	2x36W	1374	176	194	8
A042801	EVF-P 258-END	2	2x58W	1680	176	194	10

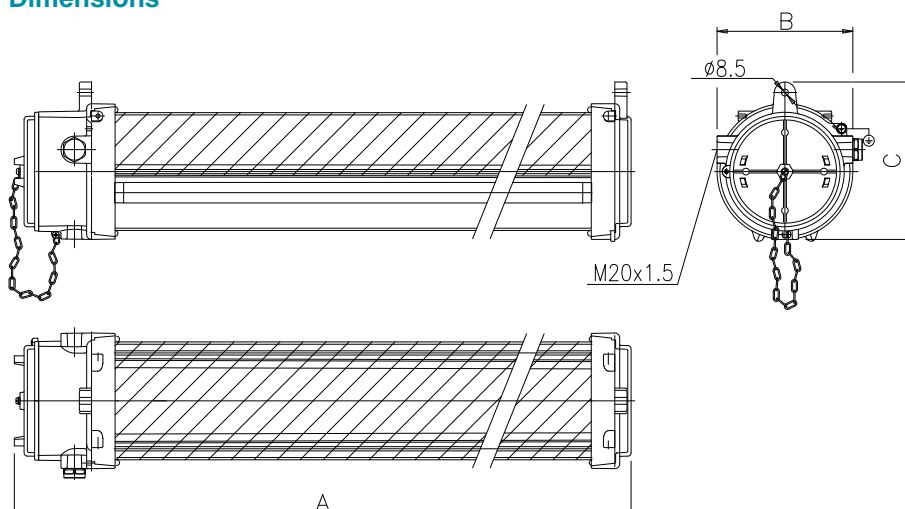
EVF-P

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 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



## EVde HID Series

EVde-...H.I.D. Series Lighting Fixtures 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.

Due to the corrosion resistant body, cast copper-free aluminium construction (Cu<0.1%) and tempered glass for lamp compartment, EVde-...H.I.D. Lighting fixtures can provide small dimensions/low weight combined with a wide range of wattage: from 50W up to 400W.

The EVde-...H.I.D. solution, with its built-in control gear on plate and the top side Ex-e Junction box, allows End Users and Contractors to save almost: 1 Junction Box, 2 cable glands and a minimum of 30 minutes of man power cost during the light installation process.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>Temperature</b>	-50°C to 60°C, See specific limitations in the relative tables for lamps typology
<b>IP Rating</b>	IP65
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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 22v
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Lighting apparatus EVde series can be equipped with: High Pressure Sodium, Mercury Vapour, Metal Halide lamps (included)
<b>Lamps Wattage</b>	From 50W to 400W
<b>Ballast</b>	Ballast technical features depend on lamp type
<b>Rated operation voltage (UE)</b>	230 V
<b>Frequency</b>	50 Hz
<b>Ignitor and Capacitor</b>	Ignitor and Capacitor technical features depend on ballast type
<b>Power factor</b>	> 0,9
<b>Accessories</b>	GEV-...Protection guard
<b>Available upon request</b>	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
<b>Lampholder</b>	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 100*	A.0405.53	100	Mercury Vapour	7.00	T3
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.0405.71	EVde-4/IM-B 250	250	Metal Halide	15.00	T3 Tamb. -20°C / 40°C
A.0405.73	EVde-5/IM-B 250	250	Metal Halide	16.70	T4 Tamb. -20°C / 40°C T3 Tamb. -20°C / 60°C
A.0405.74	EVde-5/IM-B 400	400	Metal halide	16.70	T3 Tamb. -20°C / 60°C

**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-1	A.0504.01	EVde-1 ...	320 x 89	0.270
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-1*	A.0505.01	EVde-1 ...	138 x 104	0,160
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



**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



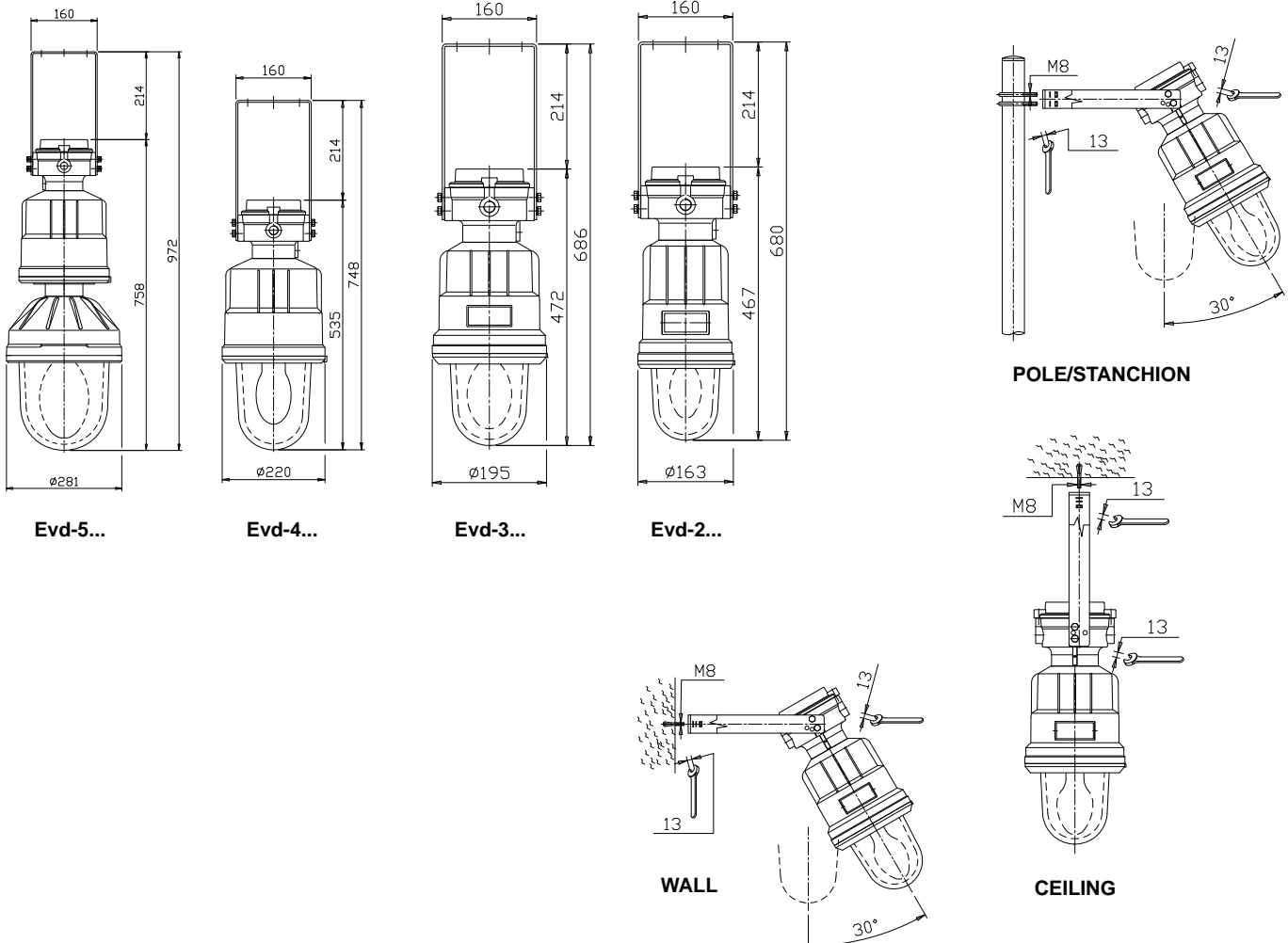
**VERTEVA-... Prismatic refractor made of virgin acrylic**

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**



## EVde I/HA Series

EVde- . I /HA Series Lighting Fixtures have been designed to house Incandescent and halogen lamps and to manage the light source, driving it where required by way of suitable reflectors and refractors.

Due to the corrosion resistant body, cast Copper free Aluminium construction (Cu<0,1%) and tempered glass for lamp compartment, EVde-.I./HA

Lighting fixtures can provide small dimensions/low weight combined with wattages up to 300W. The EVde-...I./HA solution, with its top side Ex e Junction box, allows End Users and Contractors to save 1 Junction Box, 2 cable glands and a minimum of 30 minutes of man power cost during the installation process.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>Temperature</b>	-50°C to 60°C See specific limitations in the relative tables for lamps typology
<b>IP Rating</b>	IP65
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Lamp included: Incandescent / Halogen
<b>Lamps Wattage</b>	Up to 300W
<b>Rated operation voltage (UE)</b>	230 V
<b>Accessories</b>	GEV-...Protection guard
<b>Available upon request</b>	REV-...Standard reflector made of 99.85 aluminium painted white RAL 9003
<b>Lampholder</b>	Ceramic lamp holder
<b>Note</b>	<b>Adjustable stainless steel mounting bracket (included), suitable for ceiling; pendant; wall; pole installation</b> <b>4x4sqmm+E mains terminal in Ex-e compartment (included)</b>





**(I.) Incandescent Lamps**

TYPE	CODE	LAMP [W]	LAMP TYPE	WEIGHT [kg]	TEMP. CLASS
EVde-1/I 60	A.0400.51	60	Incandescent	2.90	T4
EVde-1/I 100	A.0400.52	100	Incandescent	2.90	T4
EVde-2/I 150	A.0400.53	150	Incandescent	3.10	T3
EVde-3/I 150		150	Incandescent	4.40	T4
EVde-3/I 200	A.0400.54	200	Incandescent	4.40	T3
EVde-4/I 200		200	Incandescent	7.00	T4
EVde-4/I 300	A.0400.55	300	Incandescent	7.00	T3

**(HA.) Halogen Lamps**

TYPE	CODE	LAMP [W]	LAMP TYPE	WEIGHT [kg]	TEMP. CLASS
EVde-1/HA 60		60	Halogen	2.90	T4
EVde-2/HA 100		100	Halogen	3.10	T4
EVde-3/HA 150		150	Halogen	4.40	T4
EVde-4/HA 200		200	Halogen	7.00	T4



**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-1	A.0504.01	EVde-1 ...	320 x 89	0.270
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

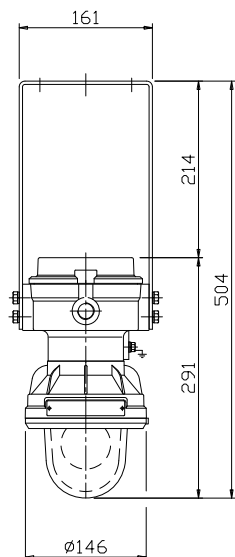
**GEV... Protection guard**

TYPE	CODE	For Lighting Fixtures TYPE	DIMENSION ØA X B [mm]	WEIGHT [kg]
GEV-1*	A.0505.01	EVde-1 ...	138 x 104	0,160
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

\* available on request

**Dimensions**

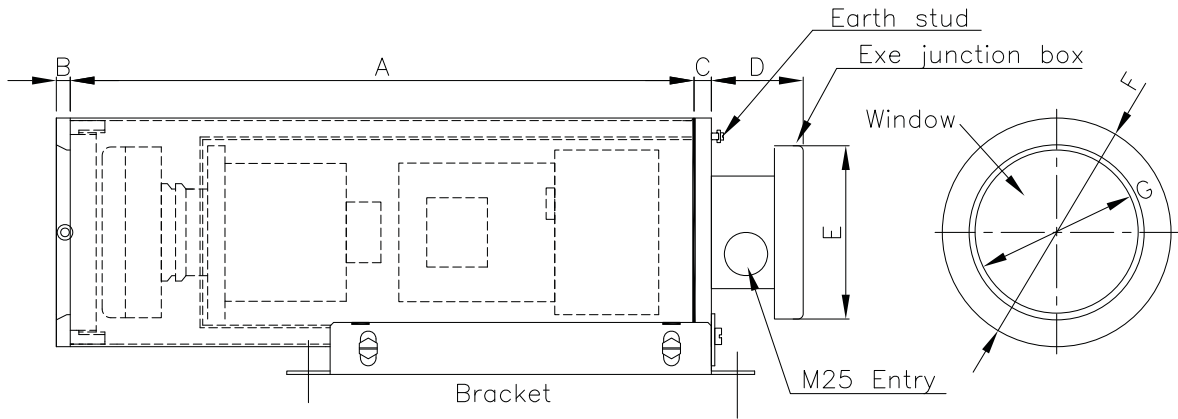




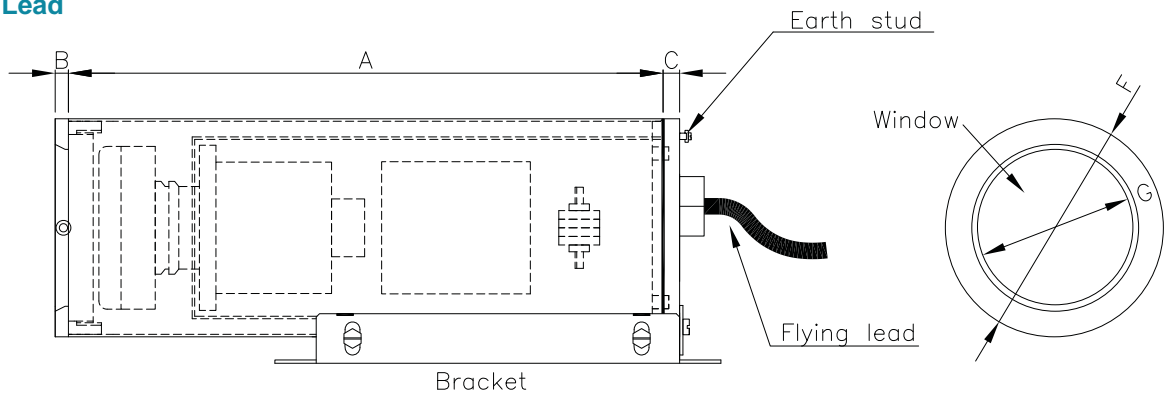


Dimensions

Ex de

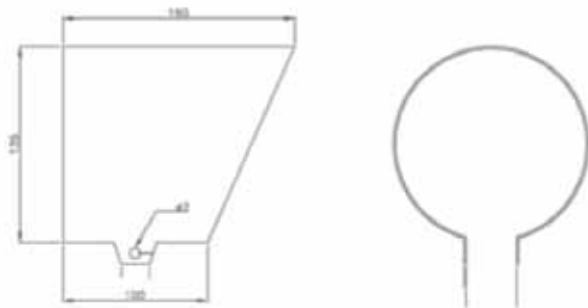
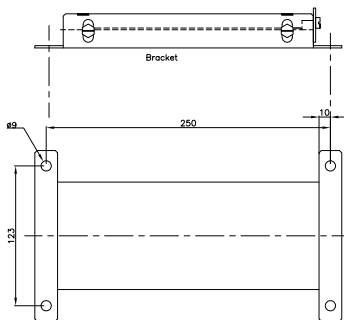


Ex d Flying Lead



Mounting bracket SS316 material  
Ordering code: TPS14007

Canopy for extra protection against glaring (optional) SS316 Material  
Ordering code: TPS14003



Copper free Aluminium floodlight for halogen and discharge lamps, external painting RAL 6003 and internal anticondensation paint.  
FL...Series Floodlight are completed with lamp, ballast, HPF capacitor and ignitor.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%) Stainless Steel AISI 316 L
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to 55°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 00ATEX0023X GOST Certificate POCC IT.ГБ04.В00501
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	Ⓔ II2 GD  Ex de IIB T3 Ex de IIB+H <sub>2</sub> 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
<b>Gaskets</b>	Nitrile rubber gasket on flat joint
<b>Surface treatment</b>	External Painting: polyuretane RAL 6003  Internal anticondensation paint
<b>Thread</b>	No. 2 M25 entries: one plugged off and one completed with a single seal cable gland our type PNA 2, brass nichel plated.
<b>Hardware and Screw</b>	Captive stainless steel screws and stainless steel adjustable bracket
<b>Lamps</b>	Halogen and discharge lamps
<b>Lamps Wattage</b>	150, 250, 400, 500, 2x70
<b>Ballast</b>	Low losses integral ballast
<b>Rated operation voltage (UE)</b>	230 V
<b>Frequency</b>	50 Hz
<b>Power factor</b>	> 0,9
<b>Lampholder</b>	Ceramic lampholder E-40 with antiloosening terminals
<b>Reflector</b>	Internal reflector, symmetrical distribution with narrow beam pure polished aluminium, fixed to body by a safe wire even when removed during maintenance.
<b>Accessories</b>	Off -shore version with surface treatment for oil platforms and corrosive environments
<b>Available upon request</b>	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 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
<b>Note</b>	<b>Hinged window on cover</b> <b>Connection to electric network via the backside through the Ex-e connection box with 4 terminals (4 sqmm.) bridged 2 by 2</b>





## Floodlight

CODE	TYPE	LAMPS TYPE	POWER [W]	VOLTAGE [V]	WEIGHT [kg]
418.14	FL 15 SA	High Pressure Sodium	150	220/230 [50Hz]	24,7
418.15	FL 25 SA	High Pressure Sodium	250	220/230 [50Hz]	25,8
418.19	FL 40 SA	High Pressure Sodium	400	220/230 [50Hz]	27,0
418.20	FL 25 IM	Metal Halide	250	220/230 [50Hz]	25,8
418.25	FL 40 IM	Metal Halide	400	220/230 [50Hz]	24,8
418.30	FL 25 HG	Mercury Vapours	250	220/230 [50Hz]	25,7
418.35	FL 40 HG	Mercury Vapours	400	220/230 [50Hz]	22,9
418.40	FL 50 HA	Halogen	500	220	21,0
418.45	FL 14 HA	Halogen	2x70	48	22,0

## FL...316 Floodlight

CODE	TYPE	LAMPS TYPE	POWER [W]	SHAPE	Wght. [kg]	WEIGHT Package [kg]	O.D. Packing [mm]
418.14	FL 15 SA	S.A.P.	150	TUBOLAR	48,2	50,2	560x360x320
418.15	FL 25 SA	S.A.P.	250	TUBOLAR	49,3	51,3	560x360x320
418.19	FL 40 SA	S.A.P.	400	TUBOLAR	50,5	52,5	560x360x320
418.20	FL 25 IM	I.M.	250	TUBOLAR	49,3	51,3	560x360x320
418.25	FL 40 IM	I.M.	400	TUBOLAR	48,3	50,3	560x360x320
418.30	FL 25 HG	V.M.	250	ELLIPS-OIDAL	49,2	51,2	560x360x320
418.35	FL 40 HG	V.M.	400	TUBOLAR	45,5	47,5	560x360x320
418.40	FL 50 HA	A.L.	500	T.D.E.			560x360x320
418.45	FL 14 HA	2 A.L.	2x70	QUARTS UV FILTER			560x360x320

## 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 thickness of Aluminum version also reducing to the lowest possible the weight.



## EVde-LED / EVde-PT Series

Long life maintenance free High Intensity Power LEDs with narrow beam lenses. EVde-...LED Spot Lights are used as local spot lights where high illumination is required day and night. Due to their LED based technology, Evde-...LED Spot Lights are shock/vibration resistant and free from infrared and ultraviolet effects. These spot Lights are used when blinding effect for operator and no light pollution is required. The lights are also available as tank light and portable light, ideal for demanding Onshore and Offshore applications e.g. cleaning, grit blasting and inspection of confined spaces.

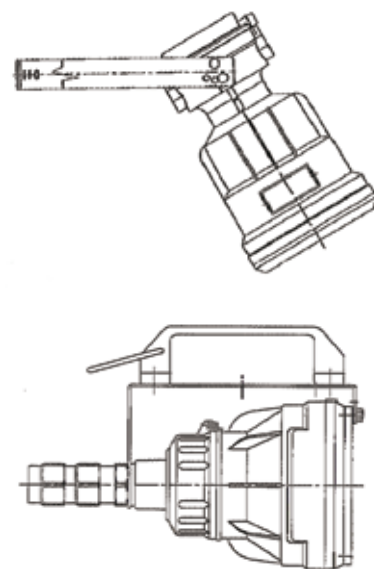
### Specifications

<b>Material</b>	Copper free Aluminium (Cu <0,1%)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to 60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	Ⓔ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 M25 entries
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	18 or 48 LED's
<b>Lamps Wattage</b>	High Intensity Power LED's: 1W each
<b>Rated operation voltage (UE)</b>	24Vdc or 240Vac models available
<b>Frequency</b>	50/60 Hz.
<b>Accessories Available upon request</b>	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-3/18-LED	A.0416.52	18W	18 LED's x 1W each	220Vac-240Vac	50/60 Hz	5.00		195 x 336
EVde-5/48-LED	A.0416.53	48W	48 LED's X 1W each	220Vac-240Vac	50/60 Hz			281 X 288

## EVcc-PR Series

Copper free Aluminium Lighting Fixtures for tank inspection, painted RAL 6003 and complete with incandescent lamp and 2 ea M25 cable entries. Flange upon request.

### Specifications

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to 40°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 2 entries diam. M25
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Incandescent Lamp included
<b>Lamps Wattage</b>	100 watt
<b>Rated operation voltage (UE)</b>	230 V
<b>Accessories</b>	Fixing flange available upon request



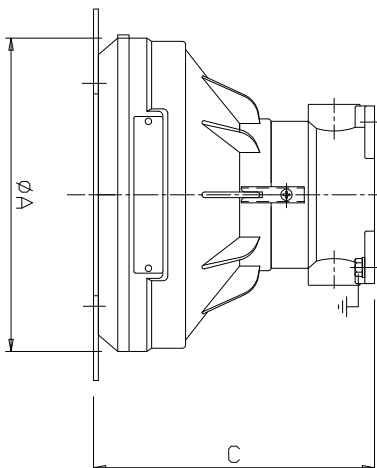
### Lighting fixtures for tank inspections

Type	Code	Lamp (W)	Lamp Type	Voltage	Dimension ØAxC	Weight kg
EVcc-PR2/I100*	414.52	100	Incandescent	230	163x152	3,100
EVcc-PR3/I100**	414.53	100	Incandescent	230	195x168	4,400

\* The only lamp compatible Philips Mushroom E60 100W

\*\* Standard Philips Lamp A-shape clear A60 100W

### Dimensions



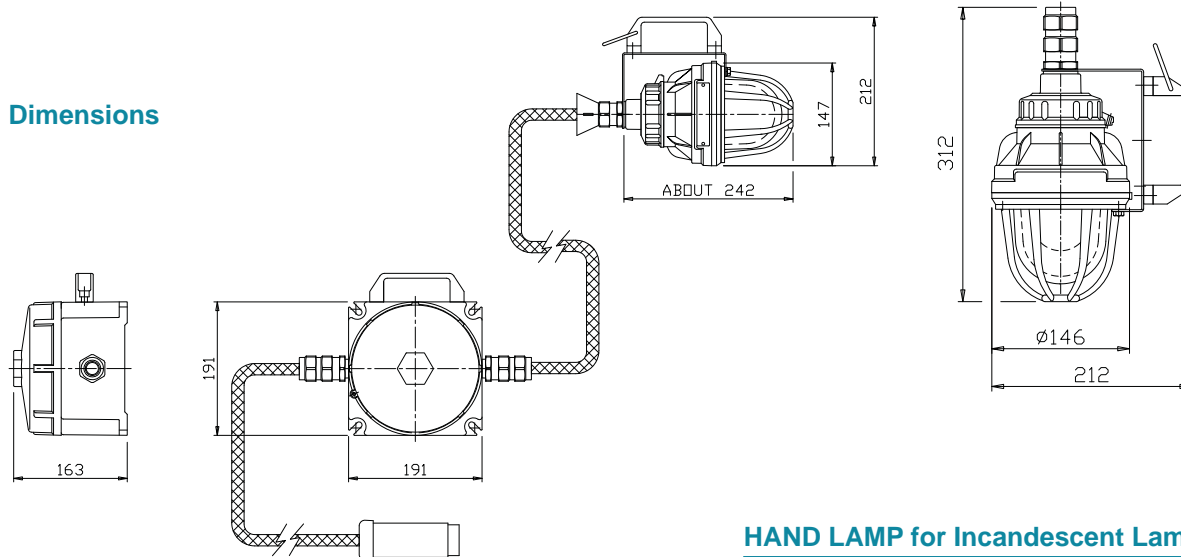
Copper free Aluminium hand-lamp, complete with handle made of insulating material, protection guard and incandescent lamp.

**Specifications**

<b>Material</b>	Copper-free aluminium (Cu<0,1%)
<b>IP Rating</b>	IP65
<b>Temperature</b>	-50°C to 60°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 01ATEX0019X GOST Certificate POCC IT.ГБ04.В00510
<b>Standards</b>	EN 60079-0 / 60079-1 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	O-ring made in Nitrile Rubber (NBR)
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Entries</b>	Nr. 1 entry with cable gland PAT2
<b>Hardware and Screw</b>	Stainless steel external hardware
<b>Lamps</b>	Incandescent Lamp included
<b>Lamps Wattage</b>	60 or 100 watt
<b>Rated operation voltage (UE)</b>	230 V
<b>Accessories</b>	transformer 240/24V 100VA available upon request



**Dimensions**



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

**HAND LAMP for Incandescent Lamp**

Type	Code	Lamp W	Lamp Type	Voltage V	Weight kg
EVA-1-160-(EVP 60)	413.01	60	Incandescent	230	2,700
EVA-1-1100-(EVP 100)	413.02	100	Incandescent	230	2,900

TNCLS Backlights are designed for use with Level Gauges in all kinds of industry where an explosive atmosphere may be present.

### Specifications

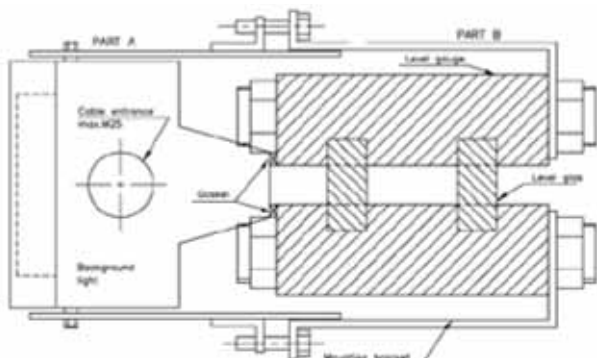
<b>Material</b>	Acid resistant stainless steel SS316
<b>IP Rating</b>	IP66
<b>Temperature</b>	-20°C + 45°C (T4)
<b>Approvals</b>	DNV-2002-OSL-ATEX-0195
<b>Standards</b>	EN50014, IEC/EN 60079-0 EN50019, IEC/EN 60079-7 EN50028, IEC/EN 60079-18
<b>Ex-Code</b>	Ex em II T4 ⊕ II 2 G
<b>Surface treatment</b>	Acidized
<b>Earthing</b>	M6 inside and outside
<b>Cable entry</b>	Max. 2xM25 in top and / or bottom, and/or sides
<b>Power consumption</b>	Approx. 3VA per module
<b>Voltage</b>	220-240VAC or 254VAC
<b>Frequency</b>	50-60 Hz
<b>Humidity</b>	100%
<b>Terminals</b>	Minimum 4x2,5 m <sup>2</sup>
<b>Lumination colour</b>	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 assembled to one column

Type key: TNCLS L-X

L = Module length








X = No. of modules

Total length: A = L\*X

Other sizes upon request





	<b>PC Workstation</b> PC Workstation, Ex d, 6082 High grade Aluminium	178
	<b>Remote Terminal</b> Remote Terminal, Ex d, 6082 High grade Aluminium	179
	<b>ISIS 450</b> Terminal, Ex mdeib(ib), High grade Aluminium	180
	<b>Monitor</b> Monitor, Ex d, 6082 High grade Aluminium	181
	<b>Ex-Drive</b> USB Mobile-Disk, Ex de	183
	<b>Explosionproof Barrier</b> Explosion Proof Wifi Barrier, Ex dm[ia], 300 Series Stainless housing	184
	<b>Keyboard</b> Keyboard, Ex ib, Powder coated billit 6082 Aluminium	185

## PC Workstations

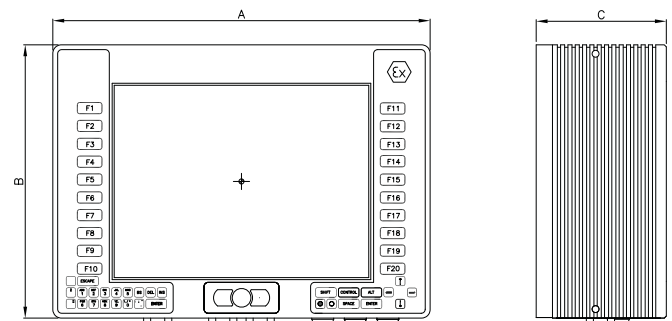
- Ex d high performance, stand alone industrial computers for zone 1,2 & 21
- Simple to install and will run with any PC operating system.
- Configurable with fiber optic, cat 5 and/or Wireless communications
- Available with a range of standard mounts and stands.
- Wide range of interface and keyboard options available.
- Custom solutions available from 1 – 1000 units.
- Transreflective LCD options

### Specifications

<b>Type of protection</b>	II 2 G, Ex d(ib) IIB T6
<b>Certification</b>	DNV-2002-OSL-ATEX-0104
<b>Display size</b>	700: 12,1" 800: 15" 900: 19"
<b>Display type</b>	LCD
<b>Display resolution</b>	700: 800x600 800: 1024x768 900: 1280 x 1024
<b>Colours</b>	700: 260K 800: 16,2M 900: 16,7M
<b>Brightness</b>	700: 400 cdm/nits 800: 400 cdm/nits 900: 250 cdm/nits 900: High Bright: 500cdm/nits, Transreflective
<b>Contrast</b>	700: 500:1 800: 400:1 900: 500:1 High Bright: 1000:1
<b>Processor</b>	700: Refer to datasheet 800/900: 1,8GHz Pentium M
<b>Flash Drive</b>	700: Refer to datasheet 800/900: 64GB
<b>Memory</b>	700: Refer to datasheet 800/900: 1GB
<b>Communication</b>	700: Refer to datasheet 800/900: CAT 5, RS232, RS422, RS485, USB
<b>Keyboard</b>	Optional membrane Mouse & Keypad and external EEx i Interface
<b>Supply Voltage</b>	90-264VAC, 50-60Hz Optional 24VDC
<b>Operating temperature</b>	(-20°C) 0°C to +50°C
<b>Storage temperature</b>	-25°C to +55°C
<b>Housing</b>	6082 High grade aluminium
<b>Environmental protection</b>	IP66
<b>Weight</b>	700: 25Kg / 53lbs 800: 32Kg / 68lbs 900: 44Kg / 88lbs
<b>Overall dimensions</b>	700: 369 x 283 x 160 mm 800: 465 x 337 x 160 mm 900: 521 x 390 x 165 mm
<b>Available network options</b>	WiFi/Fibre Optic/Cat 5



### Dimensions



## Remote Terminal

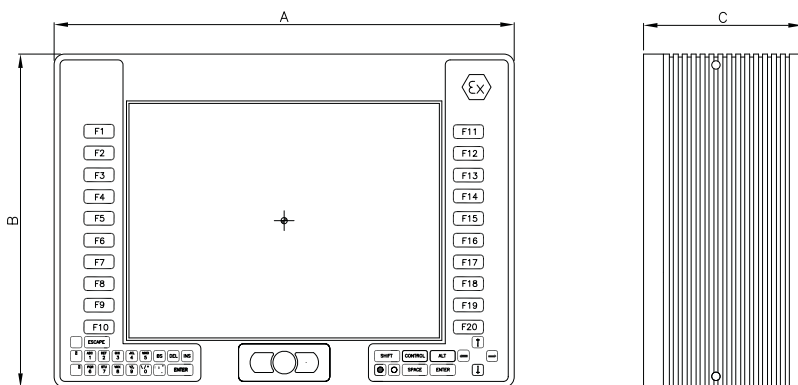
- Ex d remote terminals for zone 1,2 & 21
- No need for purging
- Configurable with fiber optic, cat 5
- Extending range up to 10.000 meters
- Available with a range of standard mounts and stands.
- Wide range of interface and keyboard options available.
- Transreflective LCD option

### Specifications

<b>Type of protection</b>	II 2 G EEx d (ib) IIB T6
<b>Certification</b>	DNV-2002-OSL-ATEX-0104
<b>Display size</b>	700: 12,1" 800: 15" 900: 19"
<b>Display type</b>	LCD
<b>Display resolution</b>	700: VGA 800 x 600 800: VGA 1024 x 768 900: VGA 1280 x 1024
<b>Colours</b>	700: 260K 800: 16,2M 900: 16,7M
<b>Brightness</b>	700: 400cdm/nits 800: 400cdm/nits 900: 250cdm/nits 900: High Bright: 500 cdm/nits, Transreflective
<b>Contrast</b>	700: 500:1 800: 400:1 900: 1000:1 High Bright: 1000:1
<b>Available KVM options</b>	Cat5 or Fibre Optic
<b>Keyboard</b>	Optional membrane Mouse and keypad and external EEx i interface
<b>Supply Voltage</b>	90-264VAC, 50-60Hz Optional 24VDC
<b>Operating temperature</b>	(-20°C) 0°C to +45°C
<b>Storage temperature</b>	-25°C to +55°C
<b>Housing</b>	6082 High grade aluminium
<b>Environmental protection</b>	IP66
<b>Weight</b>	700: 25Kg / 53lbs 800: 32Kg / 68lbs 900: 44Kg / 88lbs
<b>Overall dimensions</b>	700: 369 x 283 x 160 mm 800: 465 x 337 x 160 mm 900: 521 x 390 x 165 mm



### Dimensions



## ISIS 450, Terminal

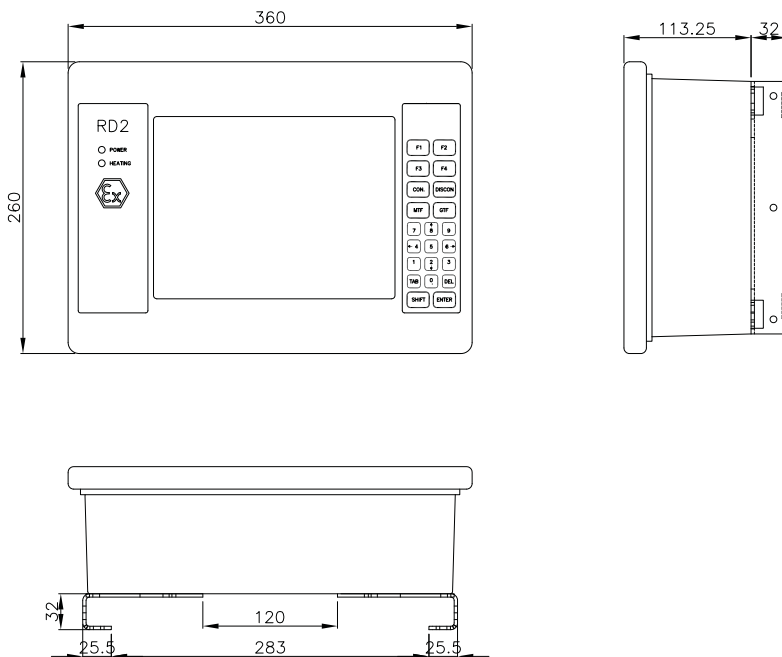
Technor ISIS Windows CE.net operator terminal represent a cost efficient state of the art unit for process control and monitoring in hazardous areas

### Specifications

<b>Type of protection</b>	II 2 G EEx mdeib(ib) IIB+H T4
<b>Display size</b>	10,4"
<b>Display type</b>	Transreflective TFT LCD
<b>Display resolution</b>	VGA 640 x 480
<b>Colours</b>	256K colours
<b>Brightness</b>	250cdm/nits
<b>Processor</b>	300 MHz low power
<b>Flash drive</b>	32Mb (higher optional)
<b>Memory</b>	64Mb SRAM
<b>Available comm. Options</b>	WiFi / Cat 5 / Fiber Optic
<b>Keyboard</b>	Functional keyboard (F1 – F8) 0-9 Numeric pad
<b>Supply voltage</b>	90-260VAC, 50-60Hz
<b>Operating temperature</b>	-40°C to +50°C
<b>Storage temperature</b>	-25°C to +55°C
<b>Housing</b>	High grade aluminium
<b>Environmental protection</b>	IP65
<b>Weight</b>	12,5kg / 28lbs
<b>Overall dimensions</b>	360w x 260h x 153d mm
<b>Vibration</b>	Yes
<b>FCC</b>	Yes
<b>CE</b>	Yes



### Dimensions



## Monitor

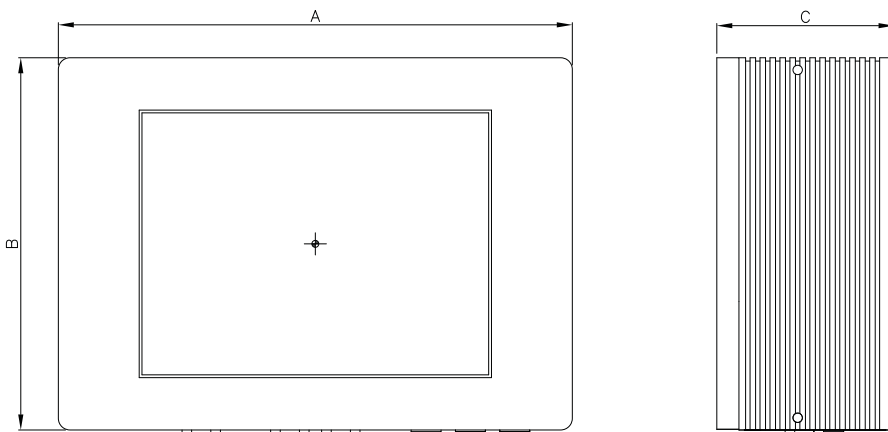
- Ex d monitor for zone 1,2 & 21
- Accepts DVI, VGA, RGB, Composite and S-video input signals
- Available with a range of standard mounts and stands.

### Specifications

<b>Type of protection</b>	II 2 G EEx d (ib) IIB T6
<b>Approvals</b>	EEx d IIB T5
<b>Certification</b>	DNV-2202-OSL-ATEX-0104
<b>Display size</b>	700: 12,1" 800: 15" 900: 19"
<b>Display resolution</b>	700: VGA 800 x 600 800: VGA 1024x768 900: VGA 1280 x 1024
<b>Colours</b>	700: 260K 800: 16,2M 900: 16,7M
<b>Brightness</b>	700: 400 cdm/nits 800: 400 cdm/nits 900: 250 cdm/nits
<b>Contrast</b>	900: High Bright: 500 cdm/nits, Transreflective 700: 500:1 800: 400:1 900: 500:1 High Bright: 1000:1
<b>Input options</b>	DVI, VGA, RGB, Composite and S-video input
<b>Supply voltage</b>	90-264VAC, 50-60Hz Optional 24VDC
<b>Operating temperature</b>	-20°C to +50°C
<b>Storage temperature</b>	-25°C to +55°C
<b>Housing</b>	6082 High grade aluminium
<b>Environmental protection</b>	IP66
<b>Weight</b>	700: 25Kg / 53lbs 800: 32Kg / 68lbs 900: 44Kg / 88lbs
<b>Overall dimensions</b>	700: 369 x 283 x 160 mm 800: 465 x 337 x 160 mm 900: 521 x 390 x 165 mm



### Dimensions





## Ex-Drive, USB Mobile-Disk

Ex-Drive is a standard USB 2.0 based device for hazardous area Zone 1 and 2. Logging of data for evaluation or backup is used more extensively at industrial sites, onshore and offshore. By using Technor ISIS Ex-Drive products your organization can immediately start securing data in hazardous area, allowing easy access Ex-Drive is designed for harsh environments with IP66 protection.

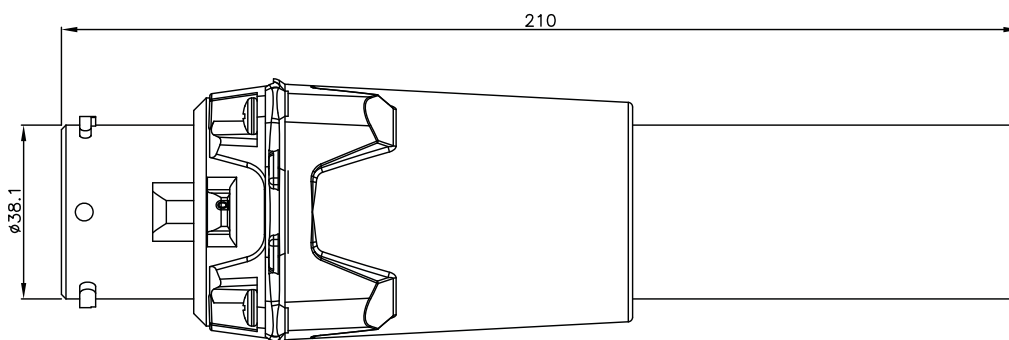
- Data logging & retrieval
- Portable data capture
- Diagnostics
- Remote systems monitoring
- Black box applications

### Specifications

<b>Type of protection</b>	II 2G Ex de IIC T6
<b>Certification</b>	NEMKO 01ATEX158
<b>Compatibility</b>	USB 2.0
<b>Memory</b>	2-4GB
<b>Environmental Protection</b>	IP66
<b>Weight</b>	0,5 kg
<b>Length</b>	210 mm
<b>Operating temperature</b>	0°C to +50°C



### Dimensions



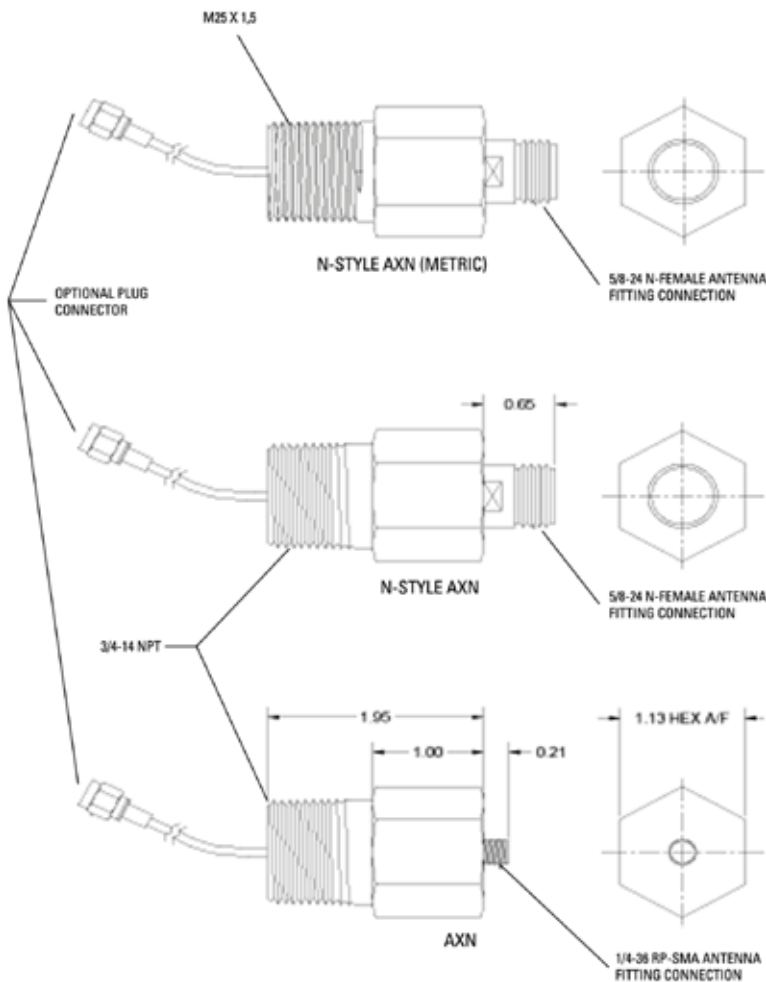
## Explosion Proof Wifi Barrier

The New Patented Radio signal barrier, allows for easy mounting of any WIFI antenna. This fitting is designed to be used directly in any explosion proof housing or fitting without the need of a seal. The barrier is a cost effective solution to hazardous area radio equipment. Various connector options available.

### Specifications

**Ex-code** Ex dm[ia] IIC T5  
**Certificate** DNV-2006-OSL-ATEX-0183X

Maximum fault voltage RMS 250 Volts  
 Maximum Radio Power Output 2.0 Watts  
 Frequency Range up to 2.4 GHz  
 50 Ohm impedance  
 3/4 Male NPT or M25 x 1.5 connection  
 300 Series Stainless housing  
 RP-SMA or N style Connector  
 6000 PSI Hydro tested, no Lead seal required



Dimensional Outline  
Metric M25 "N" Connector

Dimensional Outline  
NPT 3/4" "N" Connector

NPT 3/4" RP-SMA Connector

This need to be certified (and verified) together with the used transmitter/receiver/antenna and the actual enclosures.

## Keyboard

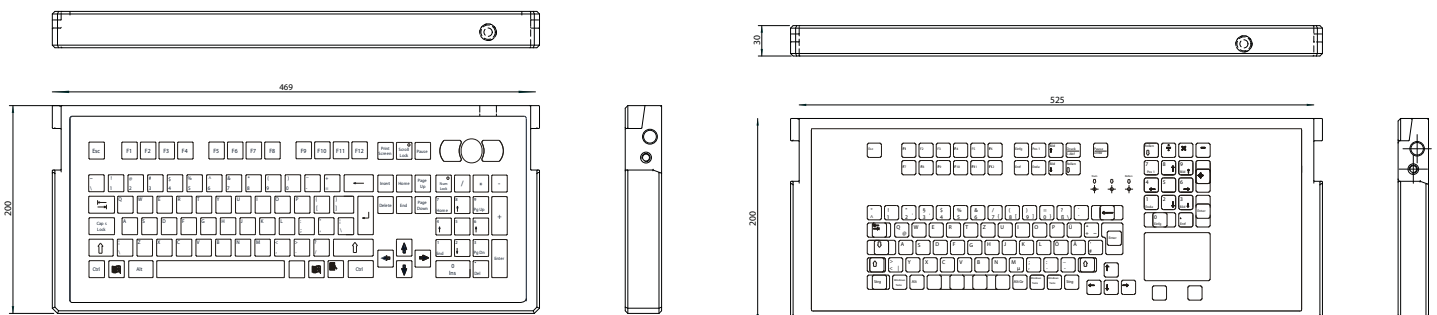
The Technor ISIS intrinsically safe, billet aluminium keyboards are manufactured to the same high quality specifications as our ISIS HMI range. Available with touchpad or joystick mouse operation the keyboard may be mounted directly on the unit with a practical fold away hinge or used as an independent desk top unit.

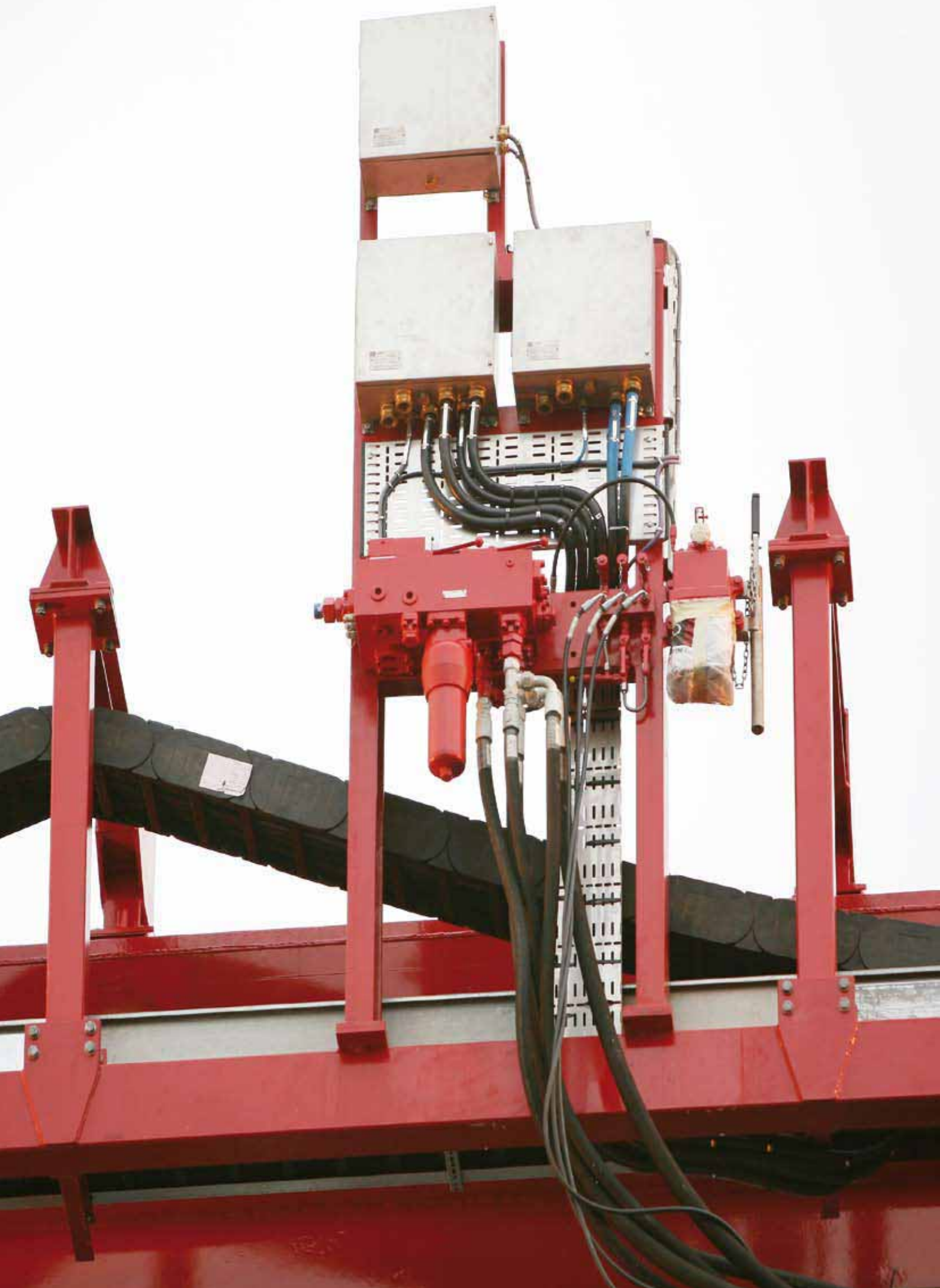
### Specifications

<b>Type of protection</b>	II 2 G Ex ib IIC T4
<b>Degree of protection</b>	IP66
<b>Use</b>	Within Zone 1 & 2 and Ex area
<b>Technical details</b>	Rafi short stroke keyboard No of keystrokes > 1 Mio operations Using a force of 2,55 to 0,65 N Travel 0,3 +0,2 -0,1 mm
<b>Keyboard type</b>	MF2 (102 keys) keyboard with integrated Touch-Pad (2 keys)
<b>Interface</b>	PC AT, PS/2 compatible
<b>Cable length</b>	1,50 m
<b>Language versions</b>	English US-layout, German and French
<b>Supply voltage</b>	5 V
<b>Ambient temperature</b>	max. -30°C to +60°C at T4
<b>Ware temperature</b>	-40° to +70°C (Pad)
<b>Safety Values</b>	Ui = 5,4 V, li = 250mA, Pi = 0,7W, Li = is negligible, Ci = 59,4 µF
<b>Details, touch pad</b>	Foilcovered capacitive Touch-Pad (62x47 mm) with 2 keys
<b>Material</b>	Powder coated billit 6082 aluminium
<b>Surface</b>	Acid, alkaline, solvent- and chemical resistant Polyester foil 0,3 mm thick with rimmed keys
<b>Overall dimensions</b>	32mm x 525mm x 200mm (Pad)
<b>Weight</b>	5,6kg



### Dimensions







	<b>PAP Series</b> Double seal, armoured cable, Ex d/e, Brass / AISI 316L	188
	<b>PNA Series</b> Single seal, armoured cable, Ex d/e, Brass / AISI 316L	190
	<b>PSF Series</b> Single seal, armoured cable, Male-Female, Ex d/e, Brass / AISI 316L	192
	<b>PSM Series</b> Single seal, armoured cable, Male-Male, Ex d/e, Brass / AISI 316L	194
	<b>PBD Series</b> Double seal, lead sheath unarmoured cable, Ex d/e, Brass / AISI 316L	198
	<b>PBS Series</b> Single seal, lead sheath unarmoured cable, Ex d/e, Brass / AISI 316L	200
	<b>PDB Series</b> Double seal, lead sheath armoured cable, Ex d/e, Brass / AISI 316L	202
	<b>PSB Series</b> Single seal, lead sheath armoured cable, Ex d/e, Brass / AISI 316L	204
	<b>PBAX Series</b> Single seal barrier type, armoured cable, Ex d/e, Brass / AISI 316L	206
	<b>PND Series</b> Double seal, unarmoured cable, Ex d/e, Brass / AISI 316L	208
	<b>PNS Series</b> Single seal, unarmoured cable, Ex d/e, Brass / AISI 316L	210
	<b>PABAX Series</b> Double seal barrier type, armoured cable, Ex d/e, Brass / AISI 316L	212
	<b>PMS Series</b> Single seal barrier type, unarmoured cable, Ex d/e, Brass / AISI 316L	214
	<b>PMD Series</b> Double seal barrier type, unarmoured cable, Ex d/e, Brass / AISI 316L	216
	<b>Fitting Accessories</b>	219

### PAP

Double seal cable glands suitable for armoured cables. Nickel-chrome plated brass made, hexagon shape, anti-age EPDM oil resistant gaskets. PAP-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

#### Specifications

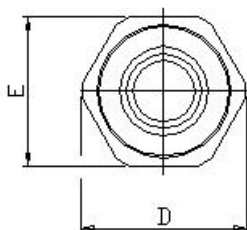
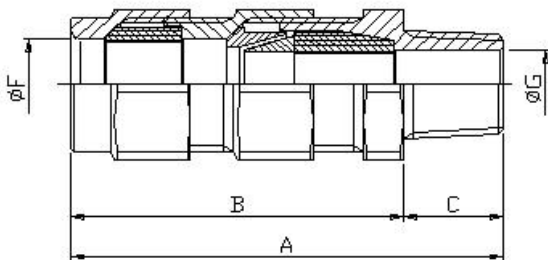
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.B00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	<b>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)</b>





Type	Cable under armour (inner seal)	Cable overall diameter (outer seal)	Ø External cable F	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
									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 made, hexagon shape, anti-age EPDM oil resistant gaskets. PNA-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

### Specifications

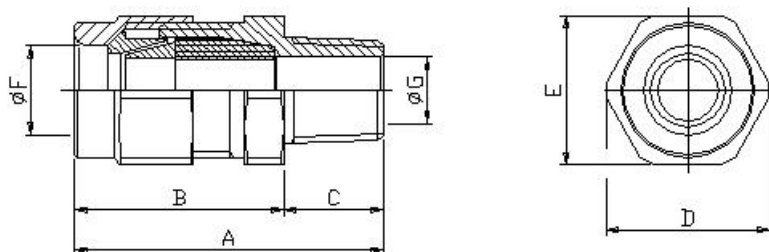
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.B00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	Ⓔ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PNA-1-A1/304 Cable glands made of Stainless steel AISI 316: 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 AI. Example PNA-1-A1/AI
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	<b>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)</b>





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
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 ¾"	A.1502.01	NPT ¾"	A.1502.51
PNA-2/A2	9-12	24	62	42	20	40	36	M25	A.1502.22	UNI 6125 ¾"	A.1502.02	NPT ¾"	A.1502.52
PNA-2/A3	11-14	24	62	42	20	40	36	M25	A.1502.23	UNI 6125 ¾"	A.1502.03	NPT ¾"	A.1502.53
PNA-2/A4	14-17	24	62	42	20	40	36	M25	A.1502.24	UNI 6125 ¾"	A.1502.04	NPT ¾"	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 reversible assembling of 2 enclosures: Ex d / Ex d or Ex d / Ex e by adding a rigid or flexible tube to the cable gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PSF-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

#### Specifications

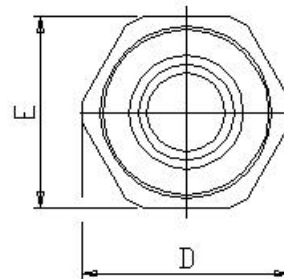
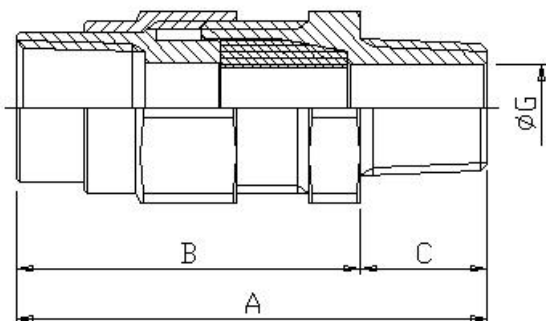
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.B00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PSF-1-A1/304 Cable glands made Stainless steel AISI 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	<b>Female sleeve cilindric ISO 228</b>





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	1/2"	73	53	20	33	30	M20	A.2821.01	UNI 6125 1/2"	A.2801.01	NPT 1/2"	A.2811.01
PSF-1/A2	9-12	1/2"	73	53	20	33	30	M20	A.2821.02	UNI 6125 1/2"	A.2801.02	NPT 1/2"	A.2811.02
PSF-2/A1	6-9	3/4"	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	3/4"	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	3/4"	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	3/4"	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 1/2"	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 1/2"	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 1/2"	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 1/2"	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 1/2"	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 1/2"						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 1/2"						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 1/2"						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 unarmoured cable, suitable for reversible assembling side by side of 2 enclosures: Ex d/Ex d or Ex d/Ex e by adding a rigid or flexible tube to the cable gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets.

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

### Specifications

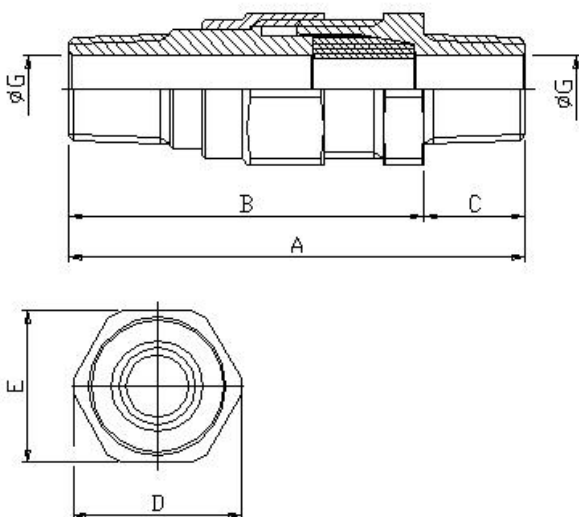
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.B00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	<b>Free nipple is always UNI 6125 threaded</b>





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 ¾"	A.2902.01	NPT ¾"	A.2912.01	
PSM-2/A2	9-12	¾"	90	70	20	40	36	M25		UNI 6125 ¾"	A.2902.02	NPT ¾"	A.2912.02	
PSM-2/A3	11-14	¾"	90	70	20	40	36	M25		UNI 6125 ¾"	A.2902.03	NPT ¾"	A.2912.03	
PSM-2/A4	14-17	¾"	90	70	20	40	36	M25		UNI 6125 ¾"	A.2902.04	NPT ¾"	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 ½"	A.2905.02	NPT 1 ½"	A.2915.02	
PSM-5/A3	26-29	1 ½"	104	79	25	65	58	M50		UNI 6125 1 ½"	A.2905.03	NPT 1 ½"	A.2915.03	
PSM-5/A4	29-32	1 ½"	104	79	25	65	58	M50		UNI 6125 1 ½"	A.2905.04	NPT 1 ½"	A.2915.04	
PSM-5/A5	32-36	1 ½"	104	79	25	65	58	M50		UNI 6125 1 ½"	A.2905.05	NPT 1 ½"	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 ½"	A.2907.02	NPT 2 ½"	A.2917.02	
PSM-7/A3	48-52	2 ½"						M75		UNI 6125 2 ½"	A.2907.03	NPT 2 ½"	A.2917.03	
PSM-7/A4	52-56	2 ½"						M75		UNI 6125 2 ½"	A.2907.04	NPT 2 ½"	A.2917.04	
PSM-7/A5	56-60	2 ½"						M75		UNI 6125 2 ½"	A.2907.05	NPT 2 ½"	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







ARCTIC LADY  
HULL 10112

### PBD

Double seal cable glands for lead sheath unarmoured cable. It guarantees equipotentiality between enclosure and armour/lead sheet in the gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PBD-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

#### Specifications

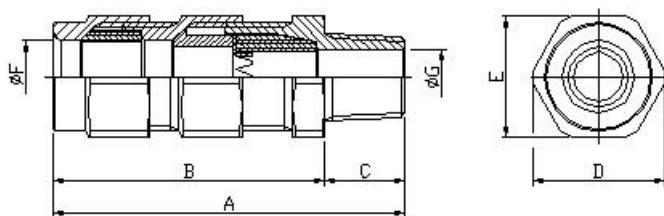
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection





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 1/2"	A.5001.01	NPT 1/2"	A.5011.01	
PBD-1/A1B2	11-14	18	85	65	20	33	30	M20	A.5021.02	Uni 6125 1/2"	A.5001.02	NPT 1/2"	A.5011.02	
PBD-1/A2B3	14-17	18	85	65	20	33	30	M20	A.5021.03	Uni 6125 1/2"	A.5001.03	NPT 1/2"	A.5011.03	
PBD-2/A1B1	14-17	24	85	65	20	33	36	M25	A.5022.01	Uni 6125 3/4"	A.5002.01	NPT 3/4"	A.5012.01	
PBD-2/A2B1	14-17	24	85	65	20	33	36	M25	A.5022.02	Uni 6125 3/4"	A.5002.02	NPT 3/4"	A.5012.02	
PBD-2/A3B2	17-20	24	85	65	20	33	36	M25	A.5022.03	Uni 6125 3/4"	A.5002.03	NPT 3/4"	A.5012.03	
PBD-2/A4B3	20-23	24	85	65	20	33	36	M25	A.5022.04	Uni 6125 3/4"	A.5002.04	NPT 3/4"	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 equipotentiality between enclosure and armour/lead sheet in the gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PBS-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

### Specifications

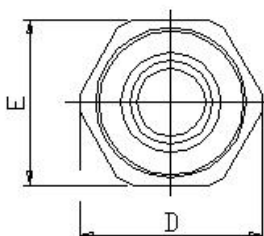
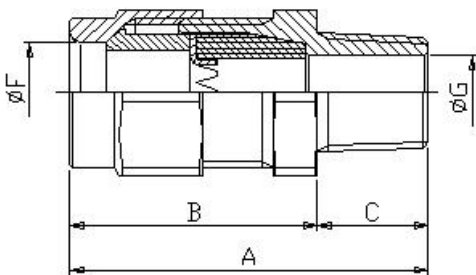
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.B00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 1241-0 / 61241-1
<b>Ex-code</b>	Ⓔ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection





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 equipotentiality between enclosure and armour/lead sheet in the gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PDB-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

#### Specifications

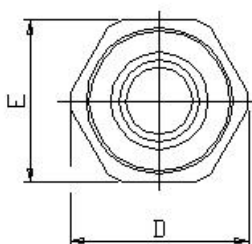
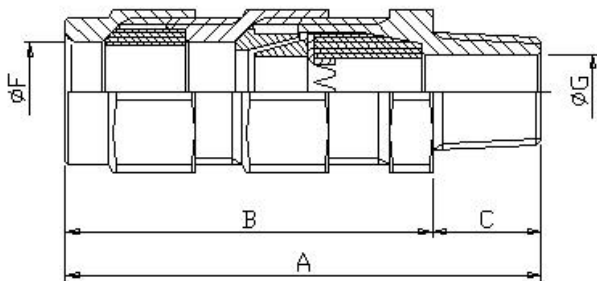
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	<b>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)</b>





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
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 equipotentiality between enclosure and armour/lead sheet in the gland. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PSB-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

### Specifications

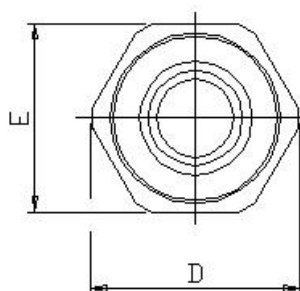
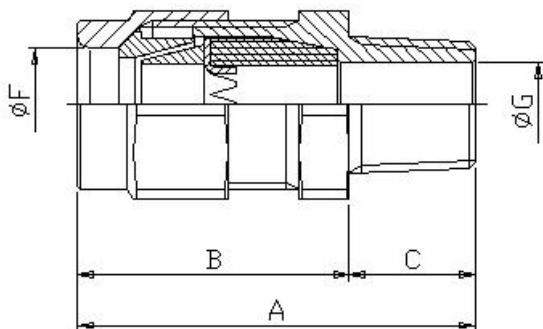
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection
<b>Note</b>	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)





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 1/2"	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 1/2"	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. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age 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

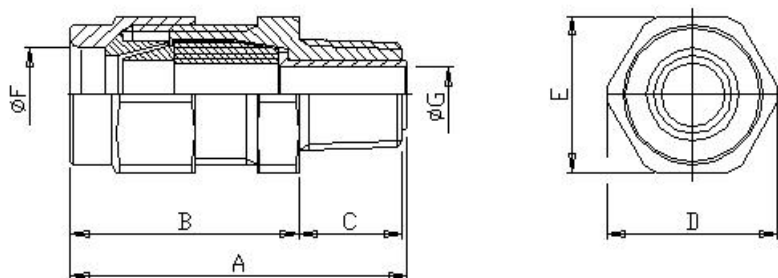
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	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
<b>Note</b>	<b>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)</b>





Type	Cable under armour (inner seal)	Ø External cable	Maximum o.d.					THREAD TYPE					
								Metric Pitch		UNI 6125		NPT	
								Size	Code	Size	Code	Size	Code
PBAX-1/A1	6-9	18	62	42	20	33	30	M20	A.5321.01	UNI 6125 1/2"	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 1/2"	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. Made of Nickelchrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PND-... Series cable glands are used in classified area Zone 1 & 2 and Zone 21 & 22.

### Specifications

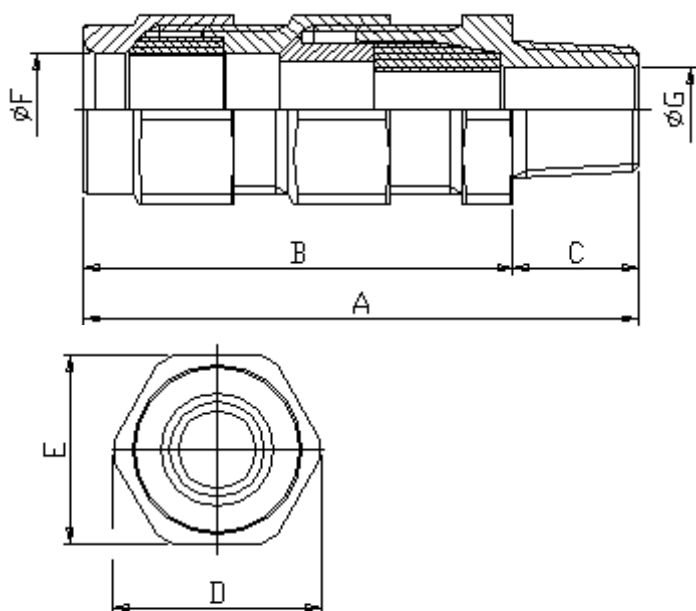
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 ⊕ II 2 GD or I M2 Ex d IIC / Ex e II / Ex d I
<b>Ex-code</b>	Ex tD A21 IP66 According to European Directive 94/9/EC (ATEX) For Zone 1 / Zone 2, Zone 21 / Zone 22
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125 Cable glands made of Stainless steel AISI 304: type number will assume the ending 304. Example PND-1-A1/304
<b>Version on Request</b>	Cable glands made of Stainless steel AISI 316: 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 AI. Example PND-1-A1/AI
<b>Accessories</b>	Rubber Shroud for cable glands protection





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
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. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age EPDM gaskets. PNS-... Series cable glands are used in classified Area Zone 1 & 2 and Zone 21 & 22.

### Specifications

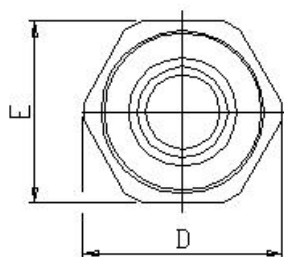
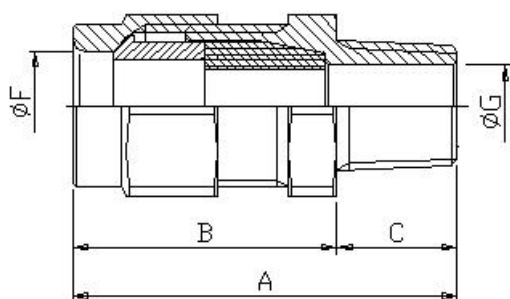
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	Rubber Shroud for cable glands protection





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
PNS-1/A1	6-9	18	62	42	20	33	30	M20	A.1701.21	UNI 6125 1/2"	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 1/2"	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. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age 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.

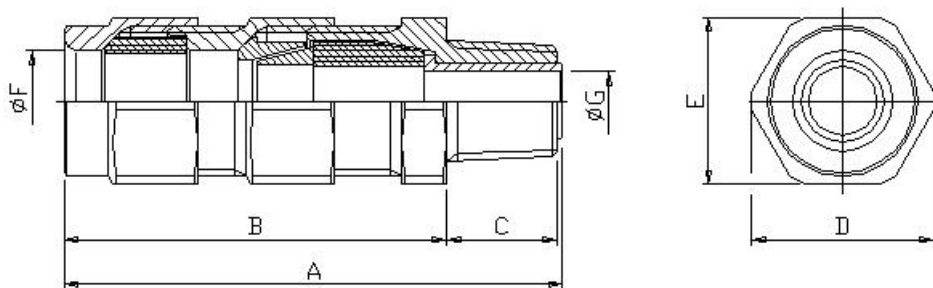
### Specifications

<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	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
<b>Note</b>	<b>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)</b>



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
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. Made of Nickel-chrome plated brass, hexagon shaped, oil resistant anti-age 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

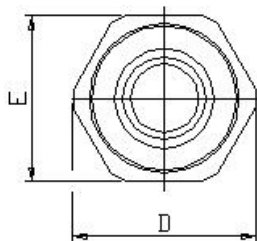
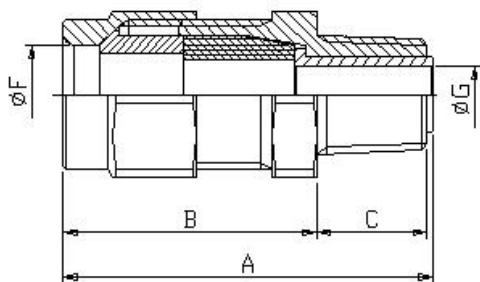
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	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





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 ¾"	A.5402.01	NPT 6125 ¾"	A.5412.01	
PMS-2/A2	9-12	24	62	42	20	40	36	M25	A.5422.02	UNI 6125 ¾"	A.5402.02	NPT 6125 ¾"	A.5412.02	
PMS-2/A3	11-14	24	62	42	20	40	36	M25	A.5422.03	UNI 6125 ¾"	A.5402.03	NPT 6125 ¾"	A.5412.03	
PMS-2/A4	14-17	24	62	42	20	40	36	M25	A.5422.04	UNI 6125 ¾"	A.5402.04	NPT 6125 ¾"	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

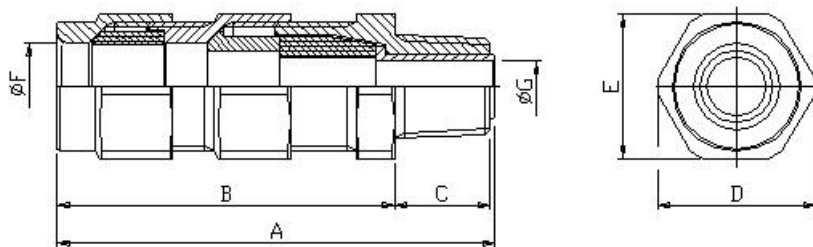
<b>Material</b>	Brass
<b>IP Rating</b>	IP66
<b>Temperature</b>	-50°C to 110°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 02ATEX0084 GOST Certificate POCC IT.ГБ04.В00494
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1 IEC 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Gaskets</b>	EPDM
<b>Surface treatment</b>	Nickel-chrome Plated
<b>Thread</b>	ANSI B1.20.1 NPT (normally in stock): type number will assume the ending NPT Metric pitch 1.5 UNI 6125
<b>Version on Request</b>	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 316: 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
<b>Accessories</b>	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





Type	Cable overall diameter (2nd insulation)	Cable overall diameter (1st insulation)	Ø External cable	Maximum o.d.					THREAD TYPE					
									Metric Pitch		UNI 6125		NPT	
									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





## Fitting Accessories

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

RE... Series Reducers: Larger External Male Thread/Smaller Inner Female Thread

All the Reducers are designed for Explosion Proof Ex d mode of protection and for increased safety Ex e mode of protection. Different types and sizes are indicated on the "Reducers 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)
50.1	50.61	RE 21	3/4" X 1/2"	0,04
50.2	50.62	RE 31	1" X 1/2"	0,08
50.3	50.63	RE 32	1" X 3/4"	0,08
50.7	50.67	RE 51	1 1/2" X 1/2"	0,27
50.8	50.68	RE 52	1 1/2" X 3/4"	0,27
50.9	50.69	RE 53	1 1/2" X 1"	0,27
50.12	50.72	RE 62	2" X 3/4"	0,48
50.13	50.73	RE 63	2" X 1"	0,48
50.15	50.75	RE 65	2" X 1 1/2"	0,48
50.17		RE 72	2 1/2" X 3/4"	0,80
50.18	50.78	RE 73	2 1/2" X 1"	0,80
50.20	50.80	RE 75	2 1/2" X 1 1/2"	0,80
50.21	50.81	RE 76	2 1/2" X 2"	0,80
50.23		RE 82	3" X 3/4"	1,00
50.24	50.84	RE 83	3" X 1"	1,00
50.26	50.86	RE 85	3" X 1 1/2"	1,00
50.27	50.87	RE 86	3" X 2"	1,00
50.28	50.88	RE 87	3" X 2 1/2"	1,00

Reducers ordering examples: E.g. Type RE31 = Male Thread 1" / Female Thread 1/2"



## Fitting Accessories

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

REB... Series Adaptors: Larger Female Thread/Smaller Male Thread

All the adaptors are designed for explosion Proof Ex d mode of protection and for increased safety Ex e mode of protection. Different Types and sizes are indicated on the "Adaptors 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)
51.1	51.71	REB 21	3/4" X 1/2"	0,12
51.2	51.40	REB 31	1" X 1/2"	0,15
51.3	51.73	REB 32	1" X 3/4"	0,15
51.8	51.78	REB 52	1 1/2" X 3/4"	0,27
51.9	51.79	REB 53	1 1/2" X 1"	0,27
51.13	51.41	REB 63	2" X 1"	0,35
51.15	51.42	REB 65	2" X 1 1/2"	0,35
51.18	51.43	REB 73	2 1/2" X 1"	0,60
51.20	51.80	REB 75	2 1/2" X 1 1/2"	0,60
51.21	51.81	REB 76	2 1/2" X 2"	0,60
51.24	51.84	REB 83	3" X 1"	0,70
51.26	51.86	REB 85	3" X 1 1/2"	0,70
51.27	51.87	REB 86	3" X 2"	0,70
51.28	51.88	REB 87	3" X 2 1/2"	0,70

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

### Fitting Accessories

Male Taper NPT / Female Taper UNI 6125 threads Adaptors provide a connection between equipment with dissimilar thread sizes and type. All the adaptors are Ex d and Ex e certified. Different types and sizes are indicated in the “Adaptor Selection Table”.

All the adaptors are designed for explosion Proof Ex d mode of protection and for increased safety Ex e mode of protection. Different Types and sizes are indicated on the “Reducers 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)
51.52	52.60	REB 16/1	½" X PG 16	0,12
51.50	52.61	REB 16/2	¾" X PG 16	0,15
51.53	52.62	REB 21/2	¾" X PG 21	0,27
51.51	52.63	REB 21/3	1" X PG 21	0,27
51.54	52.64	REB 29/3	1" X PG 29	0,30
51.55	52.65	REB 36/5	1 ½" X PG 36	0,35
51.56	52.66	REB 42/6	2" X PG 42	0,60
51.57	52.67	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)
51.61	REB m16/1	M 16 X 1/2"	0,12
51.62	REB m20/1	M 20 X 1/2"	0,15
51.63	REB m20/2	M 20 X 3/4"	0,27
51.64	REB m25/2	M 25 X 3/4"	0,27
51.65	REB m25/3	M 25 X 1"	0,30
51.66	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 equipment. The Stopping Plugs are Ex d and Ex e certified. Different Types and sizes are indicated in the "Plugs Selection Tables".

### Specifications

<b>Material</b>	Brass /Stainless Steel
<b>IP Rating</b>	IP67
<b>Temperature</b>	-50°C to 130°C
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 04ATEX9006U GOST Certificate POCC IT.ГБ04.В00507
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	⊕ 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
<b>Thread</b>	Metric pitch 1.5, ANSI B1.20.1 NPT, UNI 6125
<b>Version on Request</b>	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
G121100	G141100	T1	½"
G121200	G141200	T2	¾"
G121300	G141300	T3	3 1"
G121500	G141500	T5	1 ½"
G121600	G141600	T6	2"
G121700	G141700	T7	2 ½"
G121800	G141800	T8	3"

Code-Brass Nickechrome	Code-Stainless Steel	Type	NPTThreaded
G123100	G143100	T1N	½" NPT
G123200	G143200	T2N	¾" NPT
G123300	G143300	T3N	1" NPT
G123500	G143500	T5N	1 ½" NPT
G123600	G143600	T6N	2" NPT
G123700	G143700	T7N	2 ½" NPT
G123800	G143800	T8N	3" NPT

Code-Brass Nickelchrome	Code-Stainless Steel	Type	Metric Threaded
G122100	G142100	T20	M20
G122200	G142200	T25	M25
G122300	G142300	T32	M32
G122400	G142400	T40	M40
G122500	G142500	T50	M50
G122600	G142600	T63	M63
G122700	G142700	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
1500.10	DL 20	M20
1500.11	DL 25	M25
1500.12	DL 32	M32
1500.13	DL 40	M40
1500.14	DL 50	M50
1500.15	DL 63	M63
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

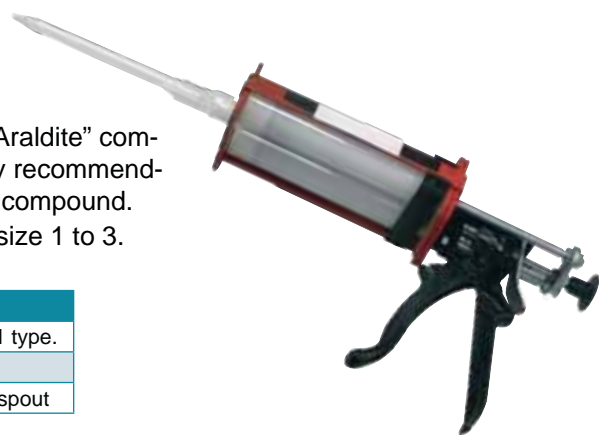
Black Rubber Shroud PGA for cable glands protection.

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
299.10	2012 / PT	Manual mixer gun for two components cartridges 200 ml., 2012/1 type.
299.15	2012 / 1	Single 200 ml. cartridge with mixer spout
299.20	2012/6	Standard carton with 6x200 ml. cartridges completed with mixer spout







## **FSX**

Socket outlet & Welding Receptacles, Ex ed, GRP

226



## **FSAL**

Socket outlet & Welding Receptacles, Ex ed, AISI 316L

228



## **FSR**

Socket outlet & Welding Receptacles, Ex ed, Copper free Aluminium

230



## **FPR**

Plugs, Ex ed, GRP

232



## **Explosionproof Connector**


Starline Explosion Proof Connector, Ex d/de, Hard anodic coating

235

## FSX

FSX Stainless Steel AISI 316 housing and Glass fibre Reinforced Polyester block contact socket outlets & welding receptacles. The design of the block contact that turns on suitable hinges, allows an easy wiring and maintenance. When open, all space corresponding to surface O.D. of apparatus is available for wiring. Also, by the twin terminal for each polarity, provided it is possible the loop of power cable, the costs for one extra junction box, two cable glands and man power may be saved for one wiring in between junction box and socket outlet. The cross section of looping terminal strip allows the use of cable size over the socket full load.

### Specifications

<b>Material</b>	Stainless Steel AISI 316L Housing
<b>IP Rating</b>	IP65 / IP66 (see attached table)
<b>Temperature</b>	-40°C to 60°C (see attached table)
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 06ATEX0015
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	 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

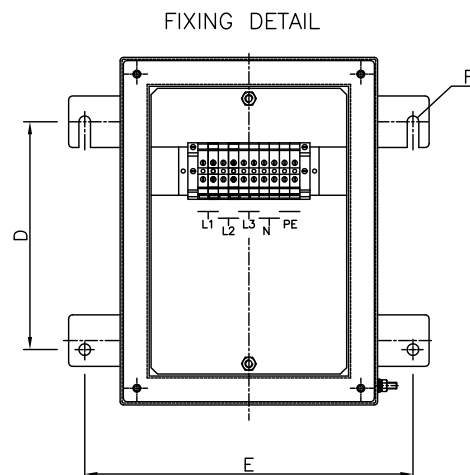
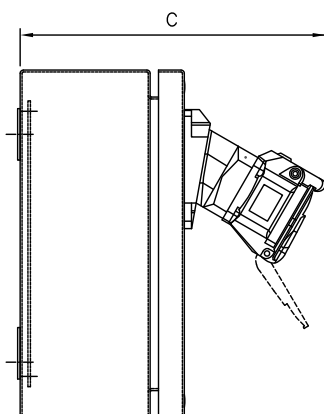
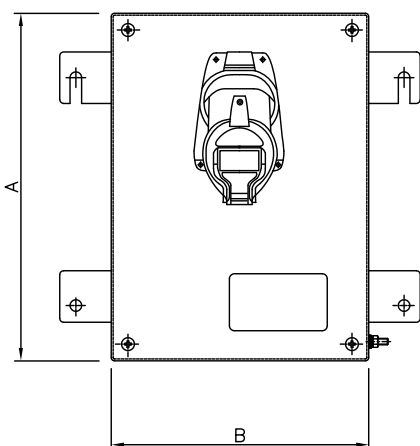
**Lid / Door gasket** POR 303/F/GR/CIG

**Quantity for entries** Nr. 1 double seal EEx-e stainless steel AISI 316 cable gland  
Nr. 1 EEx-e stainless steel AISI 316 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



ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE [V]	CONTACT ARRANGEMENTS	CURRENT [A]	Earth Pin Position	FQ [Hz]	CONNECTION 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 ARRANGEMENTS	CURRENT (A)	Earth Pin Position	FREQUENCY (HZ)	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) mmq	ENTRIES	OVERALL DIMENSIONS (AxBxC)	MOUNTING INTERAXES (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

FSAL Copper free Aluminium housing and Glass fibre Reinforced Polyester block contact socket outlets & welding receptacles. The design of the block contact that turns on suitable hinges, allows an easy wiring and maintenance. When open, all space corresponding to surface O.D. of apparatus is available for wiring. Also, by the twin terminal for each polarity, provided it is possible the loop of power cable, the costs for one extra junction box, two cable glands and man power may be saved for wiring in between junction box and socket outlet. The cross section of looping terminal strip allows the use of cable size over the socket full load.

#### Specifications

<b>Material</b>	Copper Free Aluminum Housing
<b>IP Rating</b>	IP65 / IP66 (see attached table)
<b>Temperature</b>	-40°C to 60°C (see attached table)
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 06ATEX0015
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	Ⓔ 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
<b>Lid / Door gasket</b>	Silicone seal
<b>Surface treatment</b>	External polyurethane painting "Standard Cycle" Green RAL 6003
<b>Quantity for entries</b>	Nr. 1 single seal EEx-e brass nickel chrome plated cable gland for armoured cable Nr. 1 EEx-e brass nickel chrome plated blank plug
<b>Note</b>	<b>Detailed description of DXN contact system is available in following chapter concerning FPR plugs.</b> <b>Rated voltage identification by colour code as per IEC/EN 60-309-1</b> <b>Interior keying system with 24 non interchangeable positions to avoid accidental connection of apparatus having a non compatible voltage.</b>





ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE [V]	CONTACT ARRANGEMENTS	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 ARRANGEMENTS	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

FSR is a Glass fibre Reinforced Polyester housing and block contact socket outlets & welding receptacles. The design of the block contact that turns on suitable hinges, allows an easy wiring and maintenance. When open, all space corresponding to surface O.D. of apparatus is available for wiring. Also, by the twin terminal for each polarity, provided it is possible the loop of power cable, the costs for one extra junction box, two cable glands and man power may be saved for wiring in between junction box and socket outlet. The cross section of looping terminal strip allows for use of cable size over the socket full load.

### Specifications

**Material** Glass Fibre Reinforced Polyester  
**IP Rating** IP65 / IP66 (see attached table)  
**Temperature** -40°C to 60°C (see attached table)  
**Certification & Approvals** EC-Type Examination Certificate  
 INERIS 06ATEX0015  
**Standards** EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1  
**Ex-code** ⚡ II 2 GD

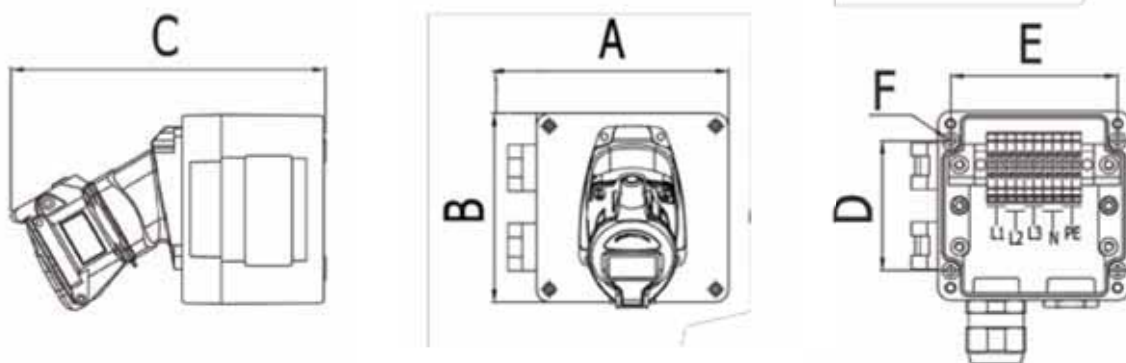
Ex ed IIC T6/T5/T4  
 Ex tD A21 IP66 T85°C/T100°C/T135°C  
 According to European Directive 94/9/EC (ATEX)  
 For Zone 1 / Zone 21, Zone 2 / Zone 22

**Lid / Door gasket** Silicone seal  
**Surface treatment** Black Glass Fibre  
**Quantity for entries** Nr. 1 single seal EEx-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





ITEM TYPE	ITEM CODE	COLOR CODE	VOLTAGE (V)	CONTACT ARRANGEMENTS	CURRENT (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	CURRENT (A)	Earth Pin Position	FQ (HZ)	CONNECTION TERMINALS CROSS SECTION FLEXIBLE CORES (RIGID CORES) mmq	ENTRIES	OVERALL DIMENSIONS (AxBxC)	MOUNTING INTERAXES (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

FPR (Glass fiber Reinforced Polyester handle) are plugs based on DXN System are compatible with socket outlet & welding receptacles FSR, FSX and FSAL series. DXN Deconnectors, thanks to their self-extinguishing non-static Glass Reinforced Polyester (PBT), can withstand heavy duty, severe mechanical stress and presence of chemical aggressive products.

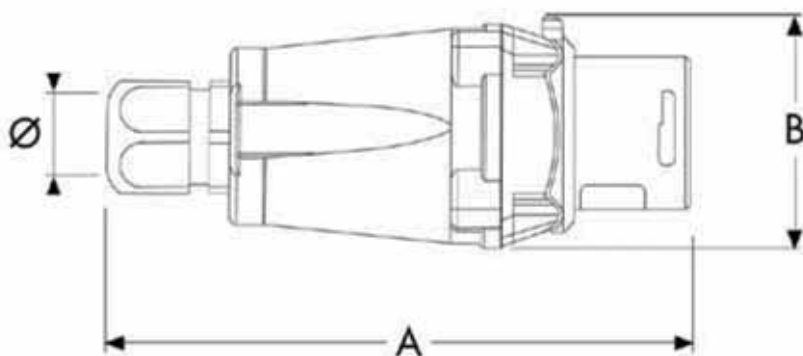
DXN Deconnectors are plugs and socket-outlets for use in explosive atmosphere with an integral switching device, as defined in clause 2.8 of IEC/ EN 60309-1 Standard.

### Specifications

<b>Material</b>	Glass Fibre Reinforced Polyester
<b>IP Rating</b>	IP65 / IP66 (see attached table)
<b>Temperature</b>	-40°C to 60°C (see attached table)
<b>Certification &amp; Approvals</b>	EC-Type Examination Certificate INERIS 06ATEX0015
<b>Standards</b>	EN 60079-0 / 60079-1 / 60079-7 / 61241-0 / 61241-1
<b>Ex-code</b>	 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
<b>Quantity for entries</b>	Cable entry c/w single seal EEx-e GRP Resin Cable Gland



### Dimensions



TYPE	CODE	COL. CODE	CABLE GLAND EEx-e	VOLTAGE [V]	CONTACT ARRANGEMENT	CURRENT [A]	EARTH PIN POSITION	FREQUENCY [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)

TYPE	CODE	COLOR CODE	CABLE GLAND EEx-e	VOLTAGE (V)	CONTACT ARRANGEMENT	CURRENT (A)	EARTH PIN POSITION	FREQUENCY (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

### Explosion proof Connectors

- Technor is an approved distributor of the Starline Ex product's.
- Heavy duty, environmental cylindrical for high power applications with harsh/potentially explosive environments.
- Rugged, double lead threaded,

### EX designations.

- Mass Transportation.
- Petro-chemical.
- Off-shore oil drilling.
- Automotive paint booths.
- Aircraft Refueling Pits.
- Pharmaceutical Mfg. Equip.
- ATEX approved.

### Specifications

#### Performance environment/Electrical

- Operating temperature from -20°C to +40°C
- IP68 rating for environmental sealing
- Hard anodic coating provides dielectric strength with heat and corrosion resistance.
- Up to high amperage of 1135 Amps at 1000VAC or DC rating available.

### Contact termination

- Solder, crimp and pressure terminals.
- Circuit braking power and control types.

### Standards/Requirements

Hybrid form of the Star-Line series with higher temperature ranges. Cenelec Certified for use in Zone 1-IIc hazardous environment. Certificate SIRA03ATEX1101X

Ex II 2 GD

Ex d IIC T6

Ex de IIC T6

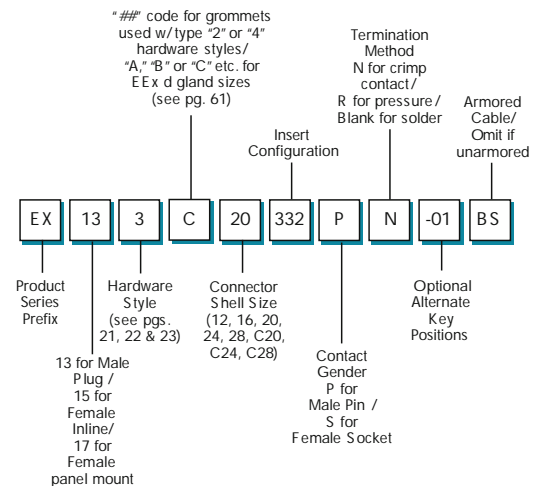
### Coupling / mounting

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



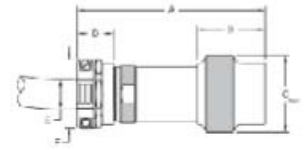
- Example:
- EX-13-3-C-20-332PN  
Male Plug with EEX gland for a cable with 0.95"/24.1mm O.D., 20ea #12/4.0mm male contacts
  - EX-15-4-1620-332SN  
Female Inline with basket weave grip for a cable with 0.95"/24.1mm O.D., 20ea #12/4.0mm female contacts
  - EX-17-1-20-332SN  
Female Panel Mount. 20ea #12/4.0mm female contacts.
  - EX-13-3-C-16-22PR-BS  
Male Plug with EEX 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 Panel Mount with cable adapter with and EEX gland for an armored cable to match above.



### Plug with Mechanical Clamp

### EX - 13 - 2 Style

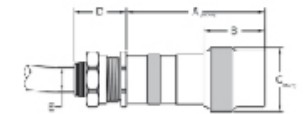
Dimension Shell	A	B	C	D	E	F	G
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)	N/A
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)	N/A
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)	N/A
24	8-15/16 (227.0)	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 EEx d Gland

### EX - 13 - 3 Style

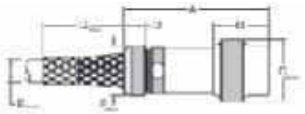
Dimension Shell	A	B	C	D	E	F	G
12	7-5/8 (193.7)	1-3/4 (44.5)	1-1/2 (38.1)	N/A	N/A	N/A	N/A
16	7-5/8 (193.7)	1-3/4 (44.5)	2 (50.8)	N/A	N/A	N/A	N/A
20	7-5/8 (193.7)	1-3/4 (44.5)	2-1/2 (63.5)	N/A	N/A	N/A	N/A
24	7-5/8 (193.7)	1-3/4 (44.5)	3 (76.2)	N/A	N/A	N/A	N/A
28	7-5/8 (193.7)	1-3/4 (44.5)	3-1/2 (88.9)	N/A	N/A	N/A	N/A



### Plug with Kellems Grip

### EX - 13 - 4 Style

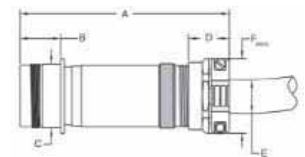
Dimension Shell	A	B	C	D	E	F	G
12	7-3/8 (187.3)	1-3/4 (44.5)	1-1/2 (38.1)	1-1/4 (31.8)	15/16 (23.8)	1-1/2 (38.1)	8 (203.2)
16	7-3/8 (187.3)	1-3/4 (44.5)	2 (50.8)	1-1/4 (31.8)	1-7/16 (36.5)	2 (50.8)	10-1/2 (266.7)
20	7-3/8 (187.3)	1-3/4 (44.5)	2-1/2 (63.5)	1-1/4 (31.8)	1-15/16 (49.2)	2-1/2 (63.5)	14-1/2 (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

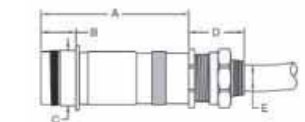
Dimension Shell	A	B	C	D	E	F	G
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)	N/A
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)	N/A
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)	N/A
24	8-15/16 (227.0)	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 EEx d Gland

### EX - 15 - 3 Style

Dimension Shell	A	B	C	D	E	F	G
12	7-5/8 (193.7)	1-3/4 (44.5)	1-1/2 (38.1)	N/A	N/A	N/A	N/A
16	7-5/8 (193.7)	1-3/4 (44.5)	2 (50.8)	N/A	N/A	N/A	N/A
20	7-5/8 (193.7)	1-3/4 (44.5)	2-1/2 (63.5)	N/A	N/A	N/A	N/A
24	7-5/8 (193.7)	1-3/4 (44.5)	3 (76.2)	N/A	N/A	N/A	N/A
28	7-5/8 (193.7)	1-3/4 (44.5)	3-1/2 (88.9)	N/A	N/A	N/A	N/A



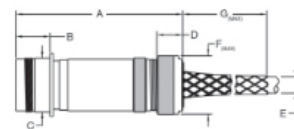
Starline Explosion Proof Connector



In-line Receptacle with Kellems Grip

EX - 15 - 4 Style

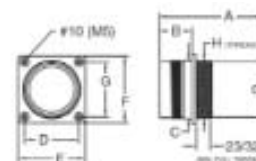
Dimension Shell	A	B	C	D	E	F	G
12	7-3/8 (187.3)	1-3/4 (44.5)	1-1/2 (38.1)	1-1/4 (31.8)	15/16 (23.8)	1-1/2 (38.1)	8 (203.2)
16	7-3/8 (187.3)	1-3/4 (44.5)	2 (50.8)	1-1/4 (31.8)	1-7/16 (36.5)	2 (50.8)	10-1/2 (266.7)
20	7-3/8 (187.3)	1-3/4 (44.5)	2-1/2 (63.5)	1-1/4 (31.8)	1-15/16 (49.2)	2-1/2 (63.5)	14-1/2 (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

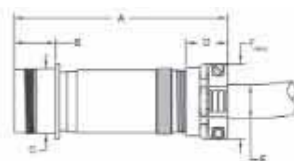
Dimension Shell	A	B	C	D	E	H
12	4-3/4 (120.7)	1-3/4 (44.5)	1-1/2 (38.1)	1.654 (42)	2-1/4 (57.2)	M40
16	4-3/4 (120.7)	1-3/4 (44.5)	2 (50.8)	2.047 (52)	2-5/8 (66.7)	M50
20	4-3/4 (120.7)	1-3/4 (44.5)	2-1/2 (63.5)	2.441 (62)	3 (76.2)	M63
24	4-3/4 (120.7)	1-3/4 (44.5)	3 (76.2)	2.835 (72)	3-1/2 (88.9)	M75
28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

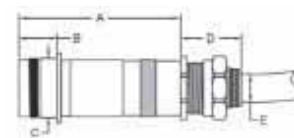
Dimension Shell	A	B	C	D	E	F
12	8-3/4 (222.3)	1-3/4 (44.5)	1-1/2 (38.1)	2 (50.8)	15/16 (23.8)	2-3/8 (60.3)
16	8-13/16 (223.8)	1-3/4 (44.5)	2 (50.8)	2-1/16 (52.4)	1-7/16 (36.5)	3 (76.2)
20	8-7/8 (225.4)	1-3/4 (44.5)	2-1/2 (63.5)	2-1/8 (54.0)	1-15/16 (49.2)	3-3/4 (95.3)
24	8-15/16 (227.0)	1-3/4 (44.5)	3 (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 EEx d Gland

EX - 17 - 3 Style

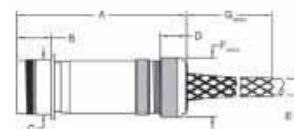
Dimension Shell	A	B	C
12	7-5/8 (193.7)	1-3/4 (44.5)	1-1/2 (38.1)
16	7-5/8 (193.7)	1-3/4 (44.5)	2 (50.8)
20	7-5/8 (193.7)	1-3/4 (44.5)	2-1/2 (63.5)
24	7-5/8 (193.7)	1-3/4 (44.5)	3 (76.2)
28	7-5/8 (193.7)	1-3/4 (44.5)	3-1/2 (88.9)

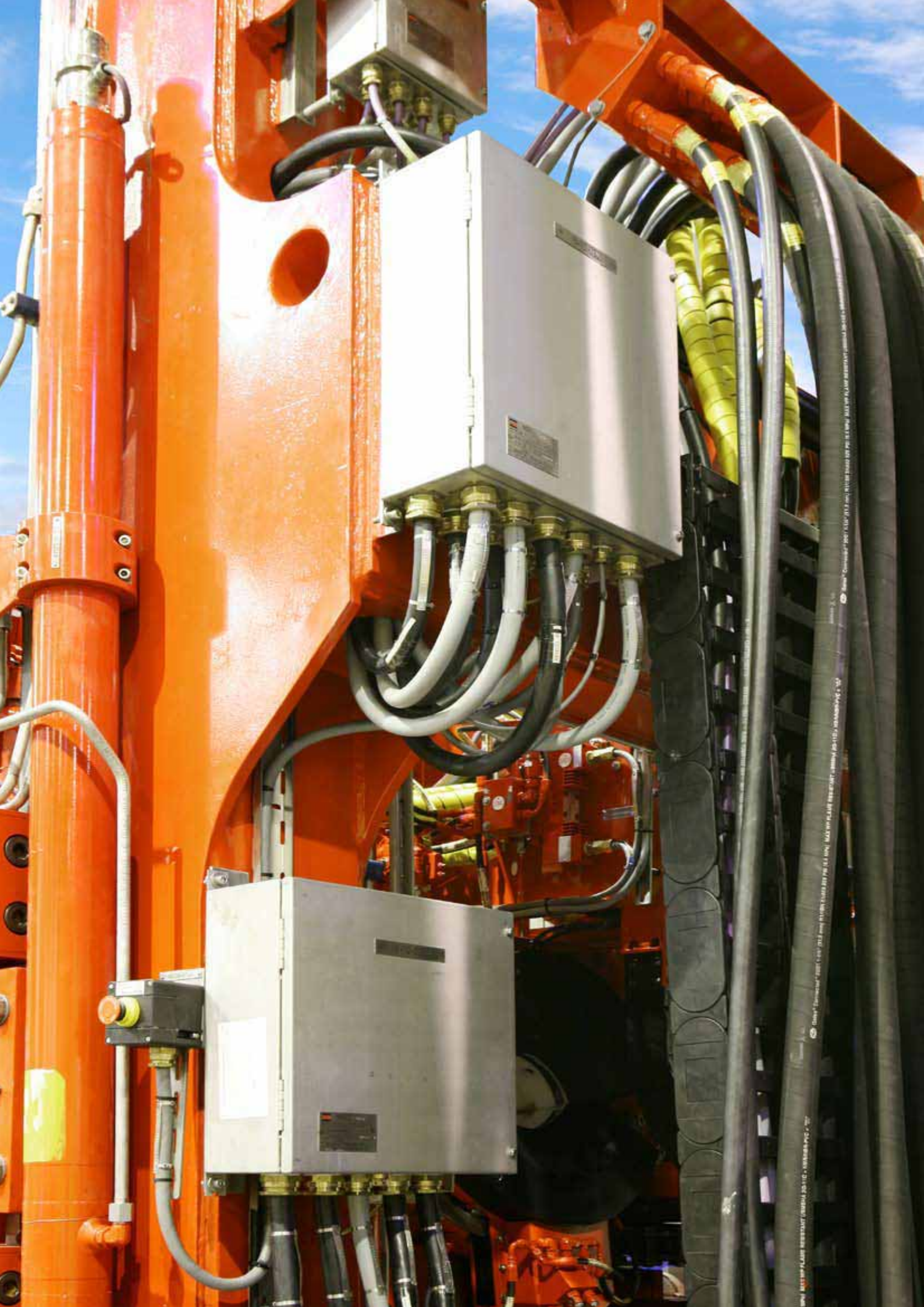


Fixed In-line Receptable with Kellems Grip

EX - 17 - 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)







**TN 2000-4**  
Mobile Gas Detection System, Ex de, AISI 316

240

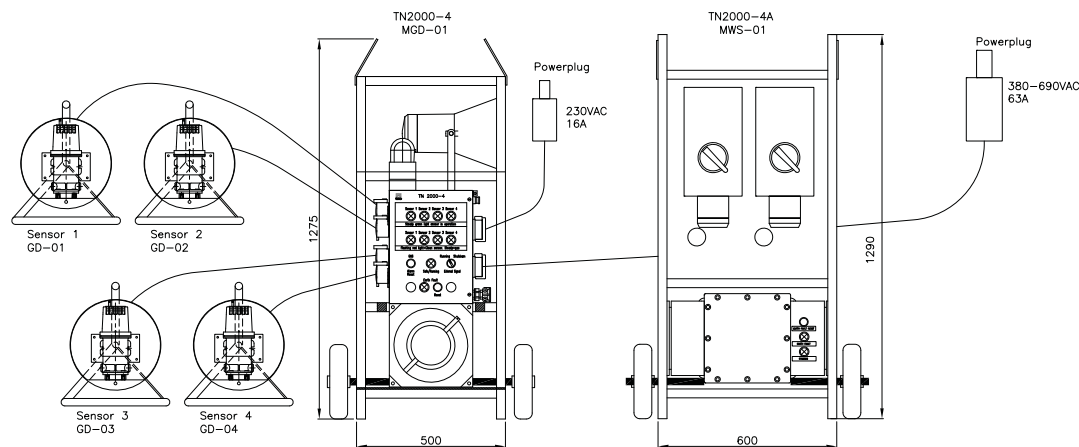
The Mobile Gas Detection System is specially designed as a protection and shutdown system for use in connection with hot work in Ex Zones 1 and 2 at on- and offshore installations. The unit is designed to shut down the connected electrical equipment and give acoustic and visual alarm when gas is detected.

### Specifications

<b>Material sensor unit</b>	Stainless steel DIN 1.4572 / SS316
<b>Material trolley</b>	SS316
<b>Operating temperature</b>	-20°C to +40°C
<b>Approvals</b>	Upon request
<b>Approval lifting lugs</b>	2
<b>Ex protection control unit</b>	Ex de IIC T5 ⊕ II 2 G
<b>Ex protection sensor</b>	Ex de IIC T6 ⊕ II 2 G
<b>Sensor cable</b>	Radox GKW-LW/S EMC
<b>Dimension trolley incl. equipment</b>	H x W 1275 x 500mm
<b>Total weight (control unit)</b>	105 kg
<b>Mobility (control unit)</b>	Wheeled, lifted
<b>PLC</b>	OMRON
<b>Sensor</b>	Simrad Optronics GD10, Other sensors upon request
<b>Rated voltage</b>	220 – 240 VAC
<b>Max. current</b>	16A
<b>Frequency</b>	50/60 Hz
<b>Gas monitoring</b>	0 – 100% LEL
<b>Earth fault monitoring/ shut off</b>	30mA



### Dimensions



**WWW.CABLEJOINTS.CO.UK**  
**THORNE & DERRICK UK**  
**TEL 0044 191 490 1547 FAX 0044 477 5371**  
**TEL 0044 117 977 4647 FAX 0044 977 5582**  
**WWW.THORNEANDDERRICK.CO.UK**







**WWW.CABLEJOINTS.CO.UK**  
**THORNE & DERRICK UK**  
**TEL 0044 191 490 1547 FAX 0044 477 5371**  
**TEL 0044 117 977 4647 FAX 0044 977 5582**  
**WWW.THORNEANDDERRICK.CO.UK**