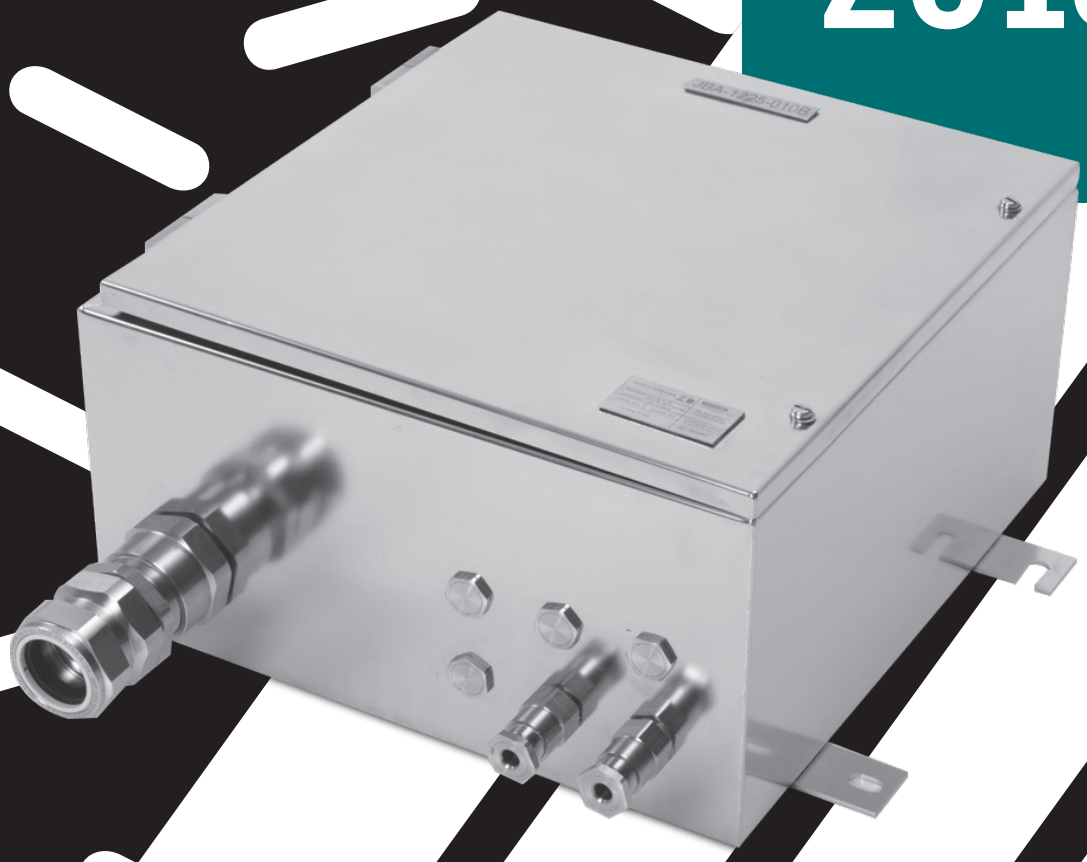
PROGRAM

TRAMONTINA

ex

2018|19



ele_ trik

Tramontina is pleased to introduce its products and solutions for **installation in environments with potentially explosive atmospheres and industrial areas**.

To ensure safety, design, and an excellent finish, all **Ex Division** products are subjected to a thorough inspection and strict processes of quality control.

The **Ex products** are split into five families:

- Ex boxes, panels, and buttons
- Ex light fittings
- Ex outlets and plugs
- Ex accessories and connectors
- Boxes, accessories, and industrial connectors

These products are developed with Tramontina Eletrik S.A. technological enhancements – a Tramontina industrial unit specialized in manufacturing electrical products.

THE COMPANY

TRAMONTINA THE PLEASURE OF DOING BEAUTIFULLY WELL.

For Tramontina, to do things beautifully well is to do them with love, valuing the pleasure people feel when they use the brand's products. This pleasure of making things is the meeting point for the company and its clients. This philosophy has been honored by Tramontina since its foundation over one hundred years ago.

Today the company has seven thousand employees responsible for a wide range of products for different market segments (kitchen utilities and appliances, wooden and plastic furniture, agriculture and garden tools, construction, industrial, and automotive maintenance tools, and electrical hardware).

The posture towards sustainability – doing beautifully well when caring for the environment and collaborating with the communities where the company is present – accompanies the brand in Brazil and in the various continents where it operates, selling products in over 120 countries.

Tramontina's motivation and pleasure lie in the desire to create and do things beautifully well so that its clients can also do beautifully well in their daily lives.

TRAMONTINA ELETRIK

Tramontina Eletrik was founded in 1976 and is located in Carlos Barbosa,RS, Brazil.

With a built area of 40,000m², this industrial unit has over 400 employees and operates in the segment of electrical materials for domestic, industrial, and corporate use, including outlets, switches, extension cables, conduits, and accessories for electrical ducts, showers, and faucets, circuit breakers, switchboards, weatherproof devices, made-to-order aluminum-injected products, and products for potentially explosive atmospheres.

Performance, safety, and aesthetics are aligned in all our products so our customers can do beautifully well when using them.

CONTENTS

PRODUCTS CHART

TRAMONTINA ELETRIK S.A

2017/18 MANUFACTURING PROGRAM

TECHNO PARTS
- ASSOCIATED
- MISCELLA

RESIDENTIAL
- SWITCHES
  - GIZ, LIZ, LIZCOR, TABLET, LUX2, LIZFLEX, IZYFLAT and PRISCUS
- EXTENSIONS
  - EXTENSIONS, MULTIPLE EXTENSIONS, TELEPHONE LINE EXTENSIONS, and MULTIPLE OUTLETS
- FLUSH BOXES
  - FLUSH BOXES and CORRUGATED
- ACCESSORIES
  - CLAMPS, INSULATED TAPE, DOUBLE-SIDED TAPE, SPIRAL TUBE, CONNECTORS, and FISH TAPE
- MISCELLANEOUS
  - EXHIBITORS and DISPLAYS

INDUSTRIA
- CIRCUIT BREAKERS
  - TR3KA and TR6KA CIRCUIT BREAKERS, MOULDED BOX, DR SWITCH, ARRESTER
- SWITCHBOARDS
  - SWITCHBOARDS and DIN STANDARD BUS
- CONDUITS
  - FIXED, MULTIPLE, DOUBLE, and TRIPLE CONDUITS, FLOOR BOXES, PASS-THROUGH BOXES, AMERICAN MODELS, and PLASTIBOX
- ELECTRICAL DUCTS ACCESSORIES
  - STRAIGHT CONNECTORS, CURVED CONNECTORS and CABLE CRIMPS, BUSHINGS, WASHERS, and CLAMPS
- COPPER PRODUCTS
  - GROUNDING RODS, COMPRESSION TERMINALS, SPLICE SLEEVES, and GROUNDING CONNECTORS

ELECTRICAL
- SHOWERS
  - SENSEDAY, SENSEPLUS, and SENSETOP

LIGHTING
- WEATHERPRO OF DEVICES
  - SHIELDED DEVICES, LIGHTING DEVICES, FLUSH DEVICES, DEVICES FOR VISIBLE INSTALLATIONS, and CONDUIT BOXES
- LED LIGHTS
- LIGHT FITTINGS
- CEILING LIGHTS
- REFLECTORS

EX
- EX BOXES, PANELS, AND BUTTONS
  - ACEx, BTEx, CAEx, CBEx, CCEx, CDEx, CEEx, CHEx, CPEx, MCEx, MDEx and PEEx
- EX LIGHT FITTINGS
  - LFEx, LLEx, LSEx, LUEx, PLEx and PREx
- EX OUTLETS AND PLUGS
  - TPEx
- EX ACCESSORIES AND CONNECTORS
  - ACEx, ADEx, BREx, BUEx, DREx, LREx, LVEx, NCEx, NLEx, PCEx, RDEx, TFEx, UNEx and USEx
- BOXES, ACCESSORIES, AND INDUSTRIAL CONNECTORS
  - ABB, ABU, AR, BU, BUI, BUT, BUTI , CDA, CDAi, CH, CR, ELETRODUTO, GU, LV, NP, TP and UN

LEVEL 1 DIVISIONS | LEVEL 2 FAMILIES | LEVEL 3 LINES

CERTIFICATION

The Product Certification guarantees compliance with the safety, reliability, and service standards, as well as compliance with basic health, safety, and environmental protection characteristics.

Certificado de Conformidade Ex

Ex Certificate of Conformity

Modelo com Avaliação do Sistema de Gestão da Qualidade do Processo de Produção e Ensaios no Produto

Model with Assessment of Quality Management System of Production Process and Test on Product

Certificado Nº: *Certificate Nº:* NCC 16.0003 — Emissão/*Issue* nº.: 0

Data de emissão: *Issued date:* **07-01-2016** — Página 1 de 6 *Page 1 of 6*

Data de validade: *Validity date:* **07-01-2019**

Histórico do certificado: *Certificate history:* Emissão No. 0 (07-01-2016)

Solicitante: *Applicant:*
Tramontina Eletrik S.A.
Rod. BR 470, km 230, S/N - Triângulo
Carlos Barbosa, RS
CEP: 95185-000 / CNPJ: 88.674.080/0001-01
Brasil

Produto: *Product:* **Luminária LLEx, LSEx ou LUEx 87*/*-****-****

Tipo principal de proteção: *Main type of protection:* **d, e, t**

Marcação: *Marking:*
Ex d e IIC T6...T3 Gb IP66
Ex tb IIIC T80 °C...T195 °C Db IP66
(-20 °C ≤ T_a ≤ +40 °C / +55 °C)
(-40 °C ≤ T_a ≤ +40 °C / +55 °C)
Ver Tabela 1 para detalhes de classe de temperatura e faixa de temperatura ambiente

Aprovado para emissão em conformidade com o regulamento e normas aplicáveis
Organismo de Certificação: *Approved for issue in conformity with rule and applicable standards Certification body:*

SERGIO TOSHIO YOCHIY:11159173826

Assinado digitalmente por SERGIO TOSHIO YOCHIY:11159173826
Data: 2016.01.07 16:21:12 -0200

Posição: *Position:*
Sérgio Toshio Yochiy
Presidente
President

Certificado emitido conforme requisitos da avaliação da conformidade de equipamentos elétricos para atmosferas explosivas, anexo à Portaria Inmetro nº. 179 de 18 de maio de 2010

Certificate issued in according to Brazilian requirements attached to INMETRO's Rule nº. 179 issued on May 18th, 2010

1. Este certificado somente pode ser reproduzido com todas as folhas. *This certificate may only be reproduced in full.*
2. Este certificado não é transferível e é de propriedade do organismo emissor. *This certificate is not transferable and remains the property of the issuing body.*
3. A situação e autenticidade deste certificado podem ser verificadas no website oficial do Inmetro. *The Status and authenticity of this certificate may be verified by visiting the website of the Inmetro.*
4. Este certificado de conformidade foi emitido por um organismo de certificação acreditado pela CGCRE - Coordenação Geral de Acreditação. *This certificate of conformity was issued by a certification body accredited by CGCRE.*

Certificado emitido por: *Certificate issued by:*

NCC Certificações do Brasil Ltda.
Acreditação CGRE nº0034 (16/10/2003)
www.ncc.com.br

FNCC_205 Rev. 14

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

This is to certify that the management system of

TRAMONTINA ELETRIK S.A.
Rod. BR 470 RS, Km 230 s/nº, 95185-000, Carlos Barbosa, RS, Brazil

has been found to conform to the Quality Management System standard:
ISO 9001:2008

This certificate is valid for the following scope:
Design, development, production and sales of low voltage electrical products, products for explosive atmosphere application and manufacture of aluminum products.

Projeto, desenvolvimento, produção e comercialização de produtos elétricos para baixa tensão, produtos para atmosferas explosivas e fabricação de produtos em alumínio.

OCS 0010

INFRASTRUCTURE

Tramontina Eletrik prioritizes quality and technology, offering high-precision, reliable solutions to the market. Its products are manufactured within the highest quality standards, using certified material sources. The company invests in constant updates and modern, highly efficient technology and equipment.

Low-voltage Electrical Tests Lab

1. TESTING LAB

To make product certification easier and reduce the time needed for testing, Tramontina Eletrik has several labs which enable the company to permanently maintain the quality of its range of products, always evolving according to the market needs.

1.1 Low-voltage Electrical Tests Lab

The **Electrical Lab** has the infrastructure to conduct tests specified by regulating standards regarding plugs, outlets, and switches for domestic use, and plastic electrical ducts for electrical installations. These tests are conducted by INMETRO-accredited labs to obtain certifications.

X-ray equipment

1.2 Metallographic Tests Lab

To comply with the technical demands of the many aluminum alloy-injected products, Tramontina Eletrik has a **Metallographic Tests Lab** – furnished with equipment to measure (tridimensional) coordinates, analyze aluminum alloys, measure profiles, roughness, porosity, infrared radiation, etc.

1. Optical Emission Spectrometer (analysis of aluminum, steel, copper, and zinc alloys)
2. CNC Tridimensional

2. MANUFACTURING PROCESS

To manufacture its products, Tramontina Eletrik has state-of-the-art machinery and equipment to ensure strict quality control.

To manufacture aluminum items, the company has several automated injection cells and a modern machining center, as well as equipment for inspections during the manufacturing process.

Universal traction and compression trials machine

1. Certified material source
2. Smelting furnace

Injecting machines

Parts being extracted by robot

1. Vertical machining center CNC
2. CNC vise

EXPLOSIVE ATMOSPHERES

1. BASIC PROPERTIES OF FLAMMABLE SUBSTANCES

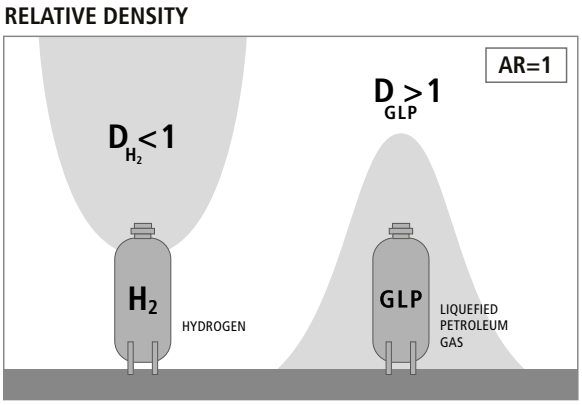
To study the area classification, it is fundamental to know four properties of flammable substances: **gas, vapor, flammable liquid, and combustible dust**.

• Relative density

Ratio between the density of a gas or vapor and the air density.

A relative density **less than 1 (lighter) will rise**.

A relative density of **more than 1 (heavier) will fall**.



• Flash Point

The lowest temperature at which a liquid releases enough vapor to form a flammable substance.

• Ignition temperature

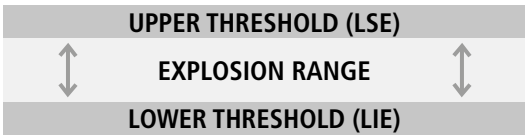
The lowest temperature at which a flammable substance will spontaneously burn without a source of ignition.

• Explosion threshold

Lower threshold (LIE): little flammable substance and/or a lot of oxygen (poor mixture).

Upper threshold (LSE): a lot of flammable substance and/or little oxygen (poor mixture).

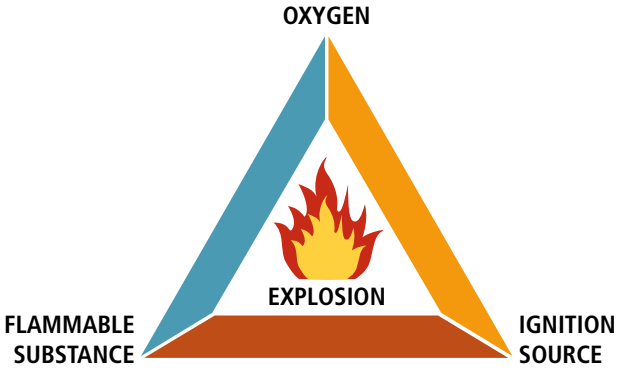
The range between these two thresholds is known as **Explosion Range**



2. EXPLOSIVE ATMOSPHERE

Explosive atmospheres occur when the mixture of oxygen (air) with flammable substances is such that a source of ignition (sparks or hot surfaces) may cause an explosion.

The **explosion will only occur with these three elements at the right ratio.**



3. HAZARDOUS AREAS

Hazardous areas are places with the potential to form explosive atmospheres due to the presence of flammable substances.

4. AREA CLASSIFICATION

The classification of areas is a study to identify the risk in places with potentially explosive atmospheres by assessing the properties of flammable substances, equipment features, ventilation, room temperature, etc.

4.1 Classification of Zones

The **classification of zones** refers to the **frequency and duration of the presence of the explosive atmosphere** in those places.

a] Rated areas for environments with Flammable Gas or Vapor

Zone 0: area in which the explosive atmosphere is continuously present frequently or for long periods.

Zone 1: area in which the explosive atmosphere may be occasionally present under normal conditions of operation.

Zone 2: area in which an explosive atmosphere is unlikely to occur under normal conditions of operation, and if it does, it remains so only for a short time.

b] Rated areas for environments with Combustible Dust

Zone 20: area in which the explosive atmosphere is continuously present frequently or for long periods.

Zone 21: area in which the explosive atmosphere may be occasionally present under normal conditions of operation.

Zone 22: area in which an explosive atmosphere is unlikely to occur under normal conditions of operation, and if it does, it remains so only for a short time.

4.2 Classification of Groups

This is the system that rates the equipment according to their use. Equipment for explosive atmospheres can be divided into three groups:

Group I: equipment for the Underground Mining and Coal Industry.

Group II: equipment for places with potentially explosive atmospheres due to gas or vapor (surface industries). Group II can be subdivided into three sub-groups, according to the characteristics of the gases:

IIA: a representative gas is propane.
IIB: a representative gas is ethylene.
IIC: representative gases are hydrogen and acetylene.

IIA equipment can only be used in IIA areas.
IIB equipment may be used in IIA and IIB areas.
IIC equipment may be used in IIA, IIB, and IIC areas

Group III: equipment for places with potentially explosive atmospheres due to combustible dust. Group III can be subdivided into three sub-groups according to the characteristics of the combustible dust:
IIIA: combustible fibers.

COMPARISON BETWEEN NBR/IEC AND NEC STANDARDS					
NBR/IEC			NEC		FLAMMABLE SUBSTANCE
ZONE 0 AND 1			DIVISION 1		
ZONE 2			DIVISION 2		
I			MINING GASES		Methane (GRISU)
GAS GROUPS	II A	CLASS I	D	SURFACE INDUSTRY	Acetone, benzene, butane, propane, naphtha, hexane, natural gas, ethanol, kerosene, methyl alcohol, ethyl alcohol, ammonia
	II B		C		Ethyl ether, cyclopropane
	II C		B		Hydrogen
			A		Acetylene

IIIB: non-conductive dusts.
IIIC: conductive dusts.

IIIA equipment may only be used in IIIA areas.
IIIB equipment may be used in IIIA and IIIB areas.
IIIC equipment may be used in IIIA, IIIB, and IIIC areas.

EXPLOSIVE ATMOSPHERES

5. TEMPERATURE CLASSES

A system to classify equipment based on its **maximum surface temperature**.

NBR IEC STANDARD		NEC STANDARD		
TEMPERATURE CLASS	MAXIMUM TEMPERATURE CLASS [°C]	TEMPERATURE CLASS	MAXIMUM SURFACE TEMPERATURE	
			°C	°F
T1	450	**T1**	450	842
T2	300	**T2**	300	572
		T2A	280	536
		T2B	260	500
		T2C	230	446
		T2D	215	419
T3	200	**T3**	200	392
		T3A	180	356
		T3B	165	329
		T3C	160	320
T4	135	**T4**	135	275
		T4A	120	248
T5	100	**T5**	100	212
T6	85	**T6**	85	185

The equipment's temperature classification should be lower than the ignition temperature of the flammable substances.

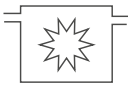
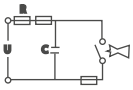
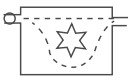
FLAMMABLE SUBSTANCE	IGNITION TEMPERATURE (°C)	ALLOWED TEMPERATURE CLASS OF EQUIPMENT	MAXIMUM SURFACE TEMPERATURE
Hydrogen	560 °C	**T1 A T6**	450°C
Acetylene	305 ° C	**T2 A T6**	300°C
Gasoline	280 °C	**T3 A T6**	200°C
Diethyl ether	185 °C	**T4 A T6**	135°C
Carbon disulfide	102 ° C	**T5 A T6**	100°C
Carbon sulfide	90 °C	**T6**	85°C

6. MAXIMUM SURFACE TEMPERATURE

The highest temperature any part or the entire surface of the equipment may reach under normal operation and fault conditions.

7. TYPES OF EX PROTECTION

Set of specific measures applied to equipment to prevent possible ignition of an explosive atmosphere surrounding it.

PROTECTION	TYPES OF PROTECTION	ZONE CLASSIFICATION	EPL	SYMBOL	CONCEPT	STANDARD
EXPLOSION PROOF	d	Zones 1 and 2	Gb		Type of protection in which the parts that may ignite a potentially explosive atmosphere due to gas or vapor are mounted inside an enclosure. It can withstand the pressure caused during an explosion of an explosive mixture inside the enclosure, and it prevents the release of hot gases generated by this explosion into the external explosive atmosphere.	60079-1
INCREASED SAFETY	e	Zones 1 and 2	Gb		Type of protection applied to electrical equipment to which extra measures are applied to increase the safety of the equipment regarding the possibility of excessive temperatures, arcs, or sparks during normal operation or specified abnormal conditions.	60079-7
NON-SPARKING	n	Zones 2	Gc		Type of protection applied to electrical equipment so that, under normal operation and in specified abnormal conditions, the equipment is not capable of igniting a potentially explosive atmosphere surrounding it.	60079-15
INTRINSICALLY SAFE	ia ib ic	Zone 0 Zone 1 Zone 2	Ga Gb Gc		Type of protection based on restricting the power supply to equipment and interconnecting wiring exposed to explosive atmospheres due to gas to a level below that which may ignite by sparking or heating.	60079-11
OIL IMMERSION	o	Zones 1 and 2	Gb		Type of protection in which the electrical equipment or its parts are immersed in protective liquid in such a way that a potentially explosive atmosphere due to gas or vapor, which may be above the liquid's surface or outside the enclosure, cannot be ignited.	60079-6
SAND FILLING	q	Zones 1 and 2	Gb		Type of protection in which the parts capable of igniting a potentially explosive atmosphere due to gas or vapor are positioned in a specific way and completely surrounded by filling material (granulated material such as quartz powder) to prevent ignition of the external explosive atmosphere.	60079-5
ENCAPSULATION	ma mb mc	Zone 0 Zone 1 Zone 2	Ga Gb Gc		Type of protection in which the parts capable of igniting a potentially explosive atmosphere by sparking or heating are encapsulated by a compound or resin in such a way that the explosive atmosphere cannot be ignited under conditions of operation or installation.	60079-18
PRESSURIZED	px, py pz	Zone 1 Zone 2	Gb Gc		Type of protection which prevents the surrounding external atmosphere from entering an enclosure or internal environment by maintaining a protective gas inside the enclosure at a higher pressure than the external atmosphere.	60079-2
SPECIAL	s	Zone 0 Zone 1 Zone 2	Ga Gb Gc		Type of protection developed for specific conditions that require a new type of protection not yet standardized.	60079-33

EXPLOSIVE ATMOSPHERES

8. EQUIPMENT PROTECTION LEVEL

The EPL is a system used to identify the level of protection of electrical equipment used in potentially explosive atmospheres.

The **first letter** (uppercase) **of the EPL refers to the place where the equipment is installed**, and the **second letter** (lowercase) **refers to the level of protection provided by the EX equipment**.

FIRST LETTER	PLACE OF INSTALLATION
M	Underground coal mines
G	Gas
D	Combustible dusts

SECOND LETTER	LEVEL OF PROTECTION
a	Very high
b	High
c	Elevated

Relation between Zones, EPL, and Types of Protection for Flammable Gases

ZONE	EPL	TYPES OF PROTECTION	EX MARKING
0	Ga	Intrinsically safe	**ia**
		Encapsulation	**ma**
		Special protection a	**sa**
1	Gb	Explosion-proof	**d**
		Increased safety	**e**
		Intrinsically safe	**ib**
		Encapsulation	**mb**
		Oil immersion	**o**
		Pressurized	**py, pv**
		Sand filling	**q**
		Special protection **b**	**sb**
2	Gc	Intrinsically safe	**ic**
		Encapsulation	**mc**
		Nonincendive	**nA**
		Restricted breathing	**nR**
		Pressurized	**pz**
		Special protection c	**sc**

Relation between Zones, EPL, and Types of Protection for Combustible Dusts

ZONE	EPL	TYPES OF PROTECTION	EX MARKING
20	Da	Intrinsically safe	**ia**
		Encapsulation	**ma**
		Dust	**ta**
21	Db	Intrinsically safe	**ib**
		Encapsulation	**mb**
		Dust	**tb**
		Pressurized	**p**
22	Dc	Encapsulation	**mc**
		Dust	**tc**
		Pressurized	**p**

9. EQUIPMENT MARKING FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

Example of marking:
Explosion-proof equipment for group IIB with temperature class T5 and EPL Gb:

Ex d IIB T5 Gb

EXPLOSIVE ATMOSPHERE	TYPES OF PROTECTION	GROUP	TEMPERATURE CLASS	LEVEL PROTECTION
Ex	**d** **e** **i** **m** **n** **o** **p** **q** **s** **t**	Underground coal mines	T1 T2 T3 T4 T5 T6	**M** — Ma, Mb — Underground coal Mb mines
		II — II A, II B, II C — Gas or flammable vapor		**G** — Ga, Gb, Gc — Gas or flammable vapor
		III — III A, III B, III C — Combustible dust		**D** — Da, Db, Dc — Combustible dust

10. DEGREE OF PROTECTION (IP)

This is the degree of protection provided by an enclosure against access to hazardous parts and penetration by solid objects, dusts, and/or water.

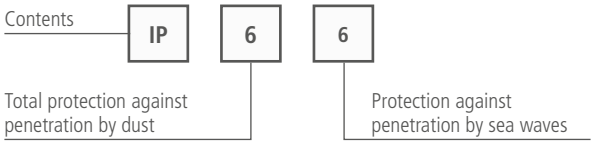
The **NBR IEC 60529** standard is applied to classify the degree of protection provided by the electrical equipment enclosure.

Designation to indicate the degree of protection of an enclosure consists of the characteristic **IP letters followed by two numbers** (characteristic digits), which indicate compliance with the conditions laid out in the table below.

- The **first characteristic number** indicates the degree of protection provided by the enclosure regarding **people and the equipment inside**, representing the level of protection in relation to penetration by solid objects.
- The **second characteristic number** indicates the degree of protection provided by the enclosure against **harmful penetration of water**.

				SECOND CHARACTERISTIC NUMBER: DEGREE OF PROTECTION AGAINST HARMFUL PENETRATION OF WATER 01								
				0	1	2	3	4	5	6	7	8
		DEGREE OF PROTECTION - IP NBR IEC 60529 STANDARD		Not protected	Protected against vertical drops of water	Protected against dripping water (angle 15°)	Protected against spraying water (angle 60°)	Protected against splashing water (angle 360°)	Protected against water jets	Protected against ocean waves or powerful water jets	Protected against immersion	Protected against submersion
				–	Dripping water	Dripping water	Top sprayer	360° rotary sprayer	Nozzle ø 6.3mm flow 12.5l/ min	Nozzle ø 12.5mm flow 100l/ min	1-meter deep container	According to agreement between customer and manufacturer
PRIMEIRO NUMERAL CARACTERÍSTICO: GRAU DE PROTEÇÃO CONTRA A ENTRADA DE CORPOS SÓLIDOS	0	Not protected.	–	IP 00	IP 01	IP 02						
	1	Protected against penetration by solid objects larger than 50 mm.	Sphere Ø50mm	IP 10	IP 11	IP 12	IP 13					
	2	Protected against penetration by solid objects larger than 12.5 mm	Sphere Ø 12.5 mm + test finger	IP 20	IP 21	IP 22	IP 23					
	3	Protected against penetration by solid objects larger than 2.5 mm.	Hard wire Ø 2.5 mm	IP 30	IP 31	IP 32	IP 33	IP 34				
	4	Protected against penetration by solid objects larger than 1 mm.	Hard wire Ø 1 mm	IP 40	IP 41	IP 42	IP 43	IP 44	IP 45	IP 46		
	5	Protected against penetration by dust.	Dust circulation chamber					IP 54	IP 55	IP 56		
	6	Totally protected against penetration by dust.	Dust circulation chamber						IP 65	IP 66	IP 67	IP 68

Example of application of degree of protection



EX BOXES, PANELS, AND BUTTONS

EX BOXES, PANELS, AND BUTTONS

CDEx

CONDUITS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIB – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Conduit with **Ex d** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in copper-free **aluminum alloy** resistant to corrosion.
- **1/2"to 4" NPT or BSP threaded** inlets.
- Cover attached to body with stainless steel hex head bolts.
- E**lectrostatic powder coating** finish in gray Munsell N 6.5 polyester.
- 8 different models. **E, C, LL, LR, LB, T, TB, and X**.
- Used for the passage of electrical ducts.

HOW TO REQUEST

CDEx ***

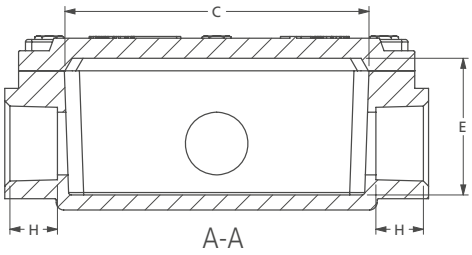
Type of thread
N: NPT
B: BSP

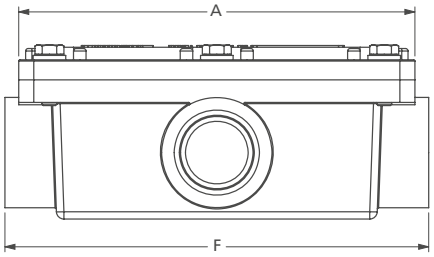
Model
E
C
LL
LR
LB
T
TB
X

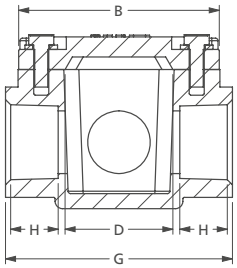
Gauge
01: 1/2"
02: 3/4"
03: 1"
04: 1 1/4"
05: 1 1/2"
06: 2"
07: 2 1/2"
08: 3"
10: 4"

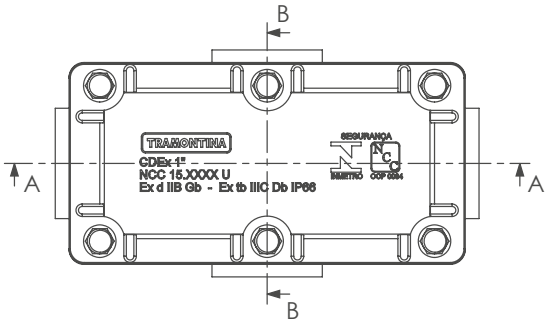
CDEx

TECHNICAL INFORMATION



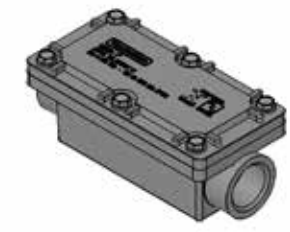


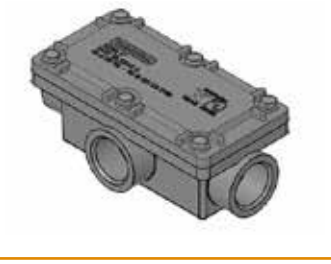




Ø	A	B	C	D	E	F	G	H
1/2"	142	76	107	40	47.5	158	90	19.5
3/4"	142	76	107	40	47.5	158	90	19.5
1"	158	80	121	43	54	174	97	19.5
1.1/4"	185	112	145	63	74	204	121	23
1.1/2"	185	112	145	63	74	204	121	23
2"	207	118	167	78	87	233	144	27
2.1/2"	263	164	212	116	115	275	178	23
3"	263	164	212	116	115	275	178	23
4"	330	182	269	122	143	366	218	40

To request conduit outlets with a BSP thread, change the seventh digit "0" to "2".
Example: 56500/121 - Conduit outlet CDEx-1 and 1/2" BSP.

REFERENCE	MODEL	PRODUCT
56500/101	Conduit outlet CDEx-1 E 1/2 NPT	
56500/102	Conduit outlet CDEx-2 E 3/4 NPT	
56500/103	Conduit outlet CDEx-3 E 1" NPT	
56500/104	Conduit outlet CDEx-4 E 1.1/4NPT	
56500/105	Conduit outlet CDEx-5 E 1.1/2NPT	
56500/106	Conduit outlet CDEx-6 E 2" NPT	
56500/107	Conduit outlet CDEx-7 E 2.1/2NPT	
56500/108	Conduit outlet CDEx-8 E 3" NPT	
56500/109	Conduit outlet CDEx-10 E 4" NPT	
56501/101	Conduit outlet CDEx-1 C 1/2 NPT	
56501/102	Conduit outlet CDEx-2 C 3/4 NPT	
56501/103	Conduit outlet CDEx-3 C 1" NPT	
56501/104	Conduit outlet CDEx-4 C 1.1/4NPT	
56501/105	Conduit outlet CDEx-5 C 1.1/2NPT	
56501/106	Conduit outlet CDEx-6 C 2" NPT	
56501/107	Conduit outlet CDEx-7 C 2.1/2NPT	
56501/108	Conduit outlet CDEx-8 C 3" NPT	
56501/109	Conduit outlet CDEx-10 C 4" NPT	

REFERENCE	MODEL	PRODUCT
56502/101	Conduit outlet CDEx-1 LL 1/2NPT	
56502/102	Conduit outlet CDEx-2 LL 3/4NPT	
56502/103	Conduit outlet CDEx-3 LL 1" NPT	
56502/104	Conduit outlet CDEx-4 LL1.1/4NPT	
56502/105	Conduit outlet CDEx-5 LL1.1/2NPT	
56502/106	Conduit outlet CDEx-6 LL 2" NPT	
56502/107	Conduit outlet CDEx-7 LL2.1/2NPT	
56502/108	Conduit outlet CDEx-8 LL 3" NPT	
56502/109	Conduit outlet CDEx-10 LL 4 NPT	
56503/101	Conduit outlet CDEx-1 LR 1/2NPT	
56503/102	Conduit outlet CDEx-2 LR 3/4NPT	
56503/103	Conduit outlet CDEx-3 LR 1" NPT	
56503/104	Conduit outlet CDEx-4 LR1.1/4NPT	
56503/105	Conduit outlet CDEx-5 LR1.1/2NPT	
56503/106	Conduit outlet CDEx-6 LR 2" NPT	
56503/107	Conduit outlet CDEx-7 LR2.1/2NPT	
56503/108	Conduit outlet CDEx-8 LR 3" NPT	
56503/109	Conduit outlet CDEx-10 LR 4 NPT	
56504/101	Conduit outlet CDEx-1 LB 1/2NPT	
56504/102	Conduit outlet CDEx-2 LB 3/4NPT	
56504/103	Conduit outlet CDEx-3 LB 1" NPT	
56504/104	Conduit outlet CDEx-4 LB1.1/4NPT	
56504/105	Conduit outlet CDEx-5 LB1.1/2NPT	
56504/106	Conduit outlet CDEx-6 LB 2" NPT	
56504/107	Conduit outlet CDEx-7 LB2.1/2NPT	
56504/108	Conduit outlet CDEx-8 LB 3" NPT	
56504/109	Conduit outlet CDEx-10 LB 4 NPT	
56505/101	Conduit outlet CDEx-1 T 1/2 NPT	
56505/102	Conduit outlet CDEx-2 T 3/4 NPT	
56505/103	Conduit outlet CDEx-3 T 1" NPT	
56505/104	Conduit outlet CDEx-4 T 1.1/4NPT	
56505/105	Conduit outlet CDEx-5 T 1.1/2NPT	
56505/106	Conduit outlet CDEx-6 T 2" NPT	
56505/107	Conduit outlet CDEx-7 T 2.1/2NPT	
56505/108	Conduit outlet CDEx-8 T 3" NPT	
56505/109	Conduit outlet CDEx-10 T 4" NPT	
56506/101	Conduit outlet CDEx-1 TB 1/2NPT	
56506/102	Conduit outlet CDEx-2 TB 3/4NPT	
56506/103	Conduit outlet CDEx-3 TB 1" NPT	
56506/104	Conduit outlet CDEx-4 TB1.1/4NPT	
56506/105	Conduit outlet CDEx-5 TB1.1/2NPT	
56506/106	Conduit outlet CDEx-6 TB 2" NPT	
56506/107	Conduit outlet CDEx-7 TB2.1/2NPT	
56506/108	Conduit outlet CDEx-8 TB 3" NPT	
56506/109	Conduit outlet CDEx-10 TB 4 NPT	
56507/101	Conduit outlet CDEx-1 X 1/2 NPT	
56507/102	Conduit outlet CDEx-2 X 3/4 NPT	
56507/103	Conduit outlet CDEx-3 X 1" NPT	
56507/104	Conduit outlet CDEx-4 X 1.1/4NPT	
56507/105	Conduit outlet CDEx-5 X 1.1/2NPT	
56507/106	Conduit outlet CDEx-6 X 2" NPT	
56507/107	Conduit outlet CDEx-7 X 2.1/2NPT	
56507/108	Conduit outlet CDEx-8 X 3" NPT	
56507/109	Conduit outlet CDEx-10 X 4" NPT	

CAEx

CONDUIT AND JUNCTION BOXES FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex tb
ZONES: 1 and 2 –21 and 22
GROUPS: IIC – IIIC
TEMPERATURE CLASS: T6 –T85 °C (Junction boxes)
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

Injected boxes have an excellent finish..

TECHNICAL SPECIFICATIONS

- Junction box with **Ex d** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in copper-free **aluminum alloy** resistant to corrosion.
- **1/2" to 2" NPT or BSP threaded** inlets.
- Cover threaded to the body.
- **Electrostatic powder coating** finish in gray Munsell N 6.5 polyester.
- O'ring seal installed on the cover.
- **Stainless steel** stud bolt to lock the cover.
- Bolts, grounding connectors, and non-rotating **stainless steel** plate.
- **Galvanized steel** box mount.
- Box can be used with terminals (junction box).

HOW TO REQUEST

- **Example 1:** Type C conduit box, 3/4" NPT thread.

  Order by reference: 56501/002 Order by description:: CAEx-2C

- **Example 2:** Type T junction box, 1" NPT thread with 6 2.5mm² terminals with mount.

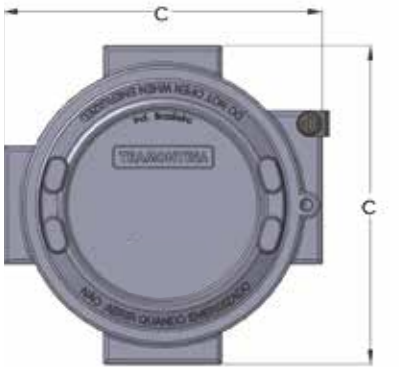
  Order by reference: 56503/003 + 6x2.5mm² + 56702/001
  Order by description:
  CAEx-3T + 6x2.5mm² + MOUNT

TECHNICAL INFORMATION

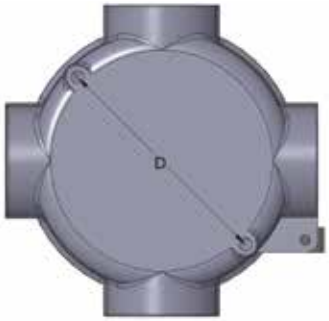
CAEx BOXES

		DIMENSIONS [mm]						
REF.	MODEL	Ø THREAD	Ø A	B	C	WEIGHT [kg]	VOLUME [dm³]	TYPE
56500/001	CAEx-1E	1/2" NPT	88	66	100	0,40	0,22	
56500/002	CAEx-2E	3/4" NPT	88	66	100	0	0,22	
56500/003	CAEx-3E	1" NPT	88	73	100	0,45	0,25	
56500/004	CAEx-4E	1.1/4" NPT	138	111	150	1,65	0,93	E
56500/005	CAEx-5E	1.1/2" NPT	138	111	150	1,65	0,93	
56500/006	CAEx-6E	2" NPT	138	111	150	1,65	0,93	
56501/001	CAEx-1C	1/2" NPT	88	66	100	0,40	0,22	
56501/002	CAEx-2C	3/4" NPT	88	66	100	0,40	0,22	
56501/003	CAEx-3C	1" NPT	88	73	100	0,45	0,25	
56501/004	CAEx-4C	1.1/4" NPT	138	111	150	1,65	0,93	C
56501/005	CAEx-5C	1.1/2" NPT	138	111	150	1,65	0,93	
56501/006	CAEx-6C	2" NPT	138	111	150	1,65	0,93	
56502/001	CAEx-1L	1/2" NPT	88	66	100	0,40	0,22	
56502/002	CAEx-2L	3/4" NPT	88	66	100	0,40	0,22	
56502/003	CAEx-3L	1" NPT	88	73	100	0,45	0,25	
56502/004	CAEx-4L	1.1/4" NPT	138	111	150	1,65	0,93	L
56502/005	CAEx-5L	1.1/2" NPT	138	111	150	1,65	0,93	
56502/006	CAEx-6L	2" NPT	138	111	150	1,65	0,93	
56503/001	CAEx-1T	1/2" NPT	88	66	100	0,40	0,22	
56503/002	CAEx-2T	3/4" NPT	88	66	100	0,40	0,22	
56503/003	CAEx-3T	1" NPT	88	73	100	0,45	0,25	
56503/004	CAEx-4T	1.1/4" NPT	138	111	150	1,65	0,93	T
56503/005	CAEx-5T	1.1/2" NPT	138	111	150	1,65	0,93	
56503/006	CAEx-6T	2" NPT	138	111	150	1,65	0,93	
56504/001	CAEx-1X	1/2" NPT	88	66	100	0,40	0,22	
56504/002	CAEx-2X	3/4" NPT	88	66	100	0,40	0,22	
56504/003	CAEx-3X	1" NPT	88	73	100	0,45	0,25	
56504/004	CAEx-4X	1.1/4" NPT	138	111	150	1,65	0,93	X
56504/005	CAEx-5X	1.1/2" NPT	138	111	150	1,65	0,93	
56504/006	CAEx-6X	2" NPT	138	111	150	1,65	0,93	

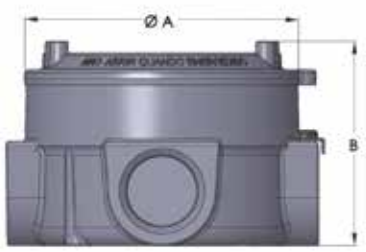
CAEx



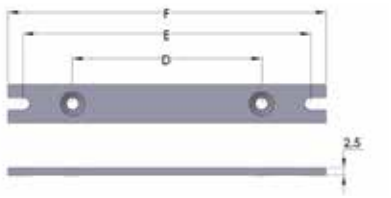
View from above



View from below



Side view



MOUNT FOR BOX

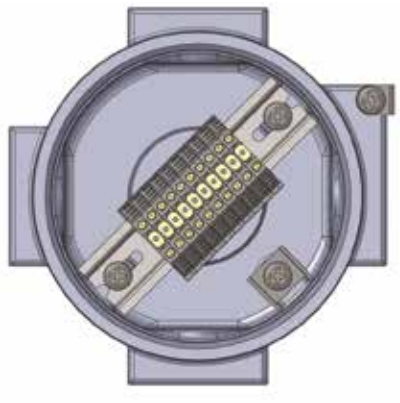
REFERENCE	DESCRIPTION	DIMENSIONS [MM] D	E	F
56702/001	Mount for CAEx boxes 1/2", 3/4", and 1"	76	102	114
56702/002	Mount for CAEx boxes 1.1/4", 1.1/2", and 2"	120	160	176

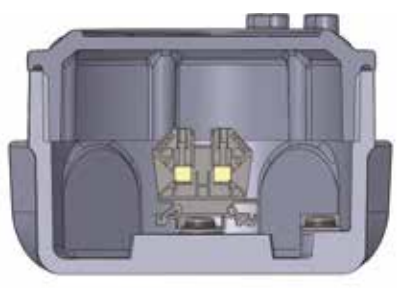
JUNCTION BOXES (WITH TERMINALS)

TABLE A

TYPES OF BOX	GAUGE	VOLUME [cm³]	TERMINALS: SECTION AND QUANTITY (MAXIMUM) 1,5 mm²	2,5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²
CAEx-1 •	1/2"	200	6	6	4	-	-	-	-	-
CAEx-2 •	3/4"									
CAEx-3 •	1"	230								
CAEx-4 •	1 1/4"	1150	9	14	9	6	6	4	4	3
CAEx-5 •	1 1/2"									
CAEx-6 •	2"									
MAXIMUM CURRENT PER TERMINAL (A)			10	12,5	20	24	30	48	75	105
MAXIMUM CURRENT PER TERMINAL (A/MM)			6,6	5	5	4	3	3	3	3
VOLTAGE RATING (V)			750							

• Type of box depending on threaded entries (E, C, L, T, or X)


View from above


Cut side view

CBEx

CONDUIT AND CONTROL BOXES FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMPERATURE CLASS: T6 – T85 °C (control boxes)
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Boxes with **Ex d** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in copper-free aluminum alloy resistant to corrosion.
- **1/2" to 4"** NPT or BSP threaded inlets.
  * The holes are placed according to the customer specifications.
- Cover threaded to the body.
- **Electrostatic powder coating** finish in gray Munsell N 6.5 polyester.
- O'ring seal installed on the cover.
- **Aluminum** or **zinc-plated steel** inner plate.
- **Stainless steel** stud bolt to lock the cover.
- Bolts, grounding connectors, and non-rotating **stainless steel** plate.
- Boxes can be supplied with digital/analog instruments, CLPs, IHMs, switches, fuses, relays, connectors, timers, capacitors, transformers, circuit breakers, switchdisconnectors, frequency inverters, soft-starter, buses, heating elements, control stations, amongst other equipment/component parts according to the customer's project.

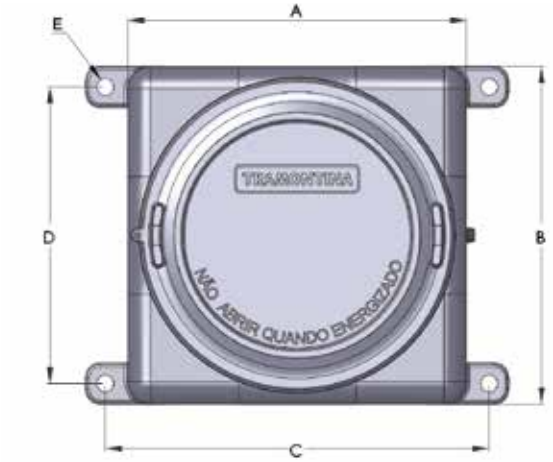
HOW TO REQUEST

- **Example:** Copper-free aluminum explosion-proof conduit box, model CBEx-1 with 3 3/4" NPT threaded inlets.

  Order by reference: **56510/000 + 3x3/4" NPT**
  Order by description:: **CBEx-1 + 3x3/4" NPT**
- **Control boxes** send or request the project from Tramontina with the features of components and necessary internal circuits.

CBEx

TECHNICAL INFORMATION

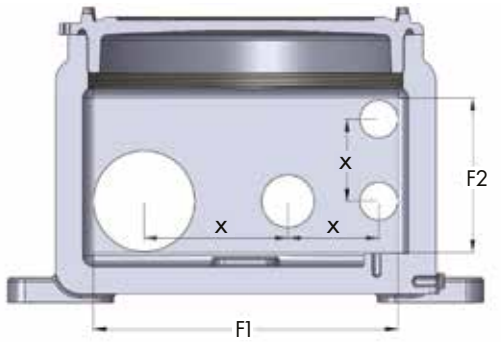


View from above

Cut side view

		MEASUREMENTS										
REF.	BOX MODEL	A	B	C	D	Ø E	F	G	H	I	VOLUME [dm3]	WEIGHT [kg]
56510/000	CBEx-1	161	161	184	136	8	133	132	132	103	1,72	3,25
56511/000	CBEx-2	184	184	204	158	8	142	152	152	112	2,46	4,65
56512/000	CBEx-3	239	239	265	202	10	173	200	200	134	5,35	9,30
56513/000	CBEx-4	309	309	338	275	12	224	267	267	183	13,25	17,40

BOXES WITH THREADED ENTRIES

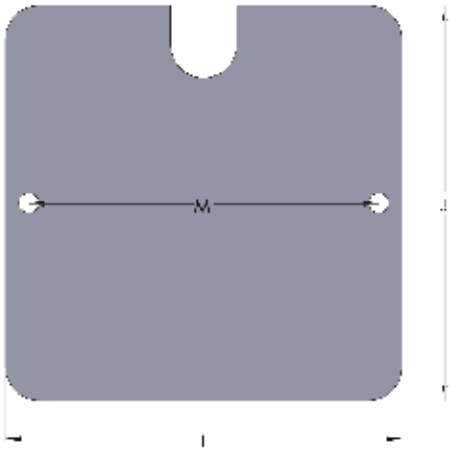


Cut side view

	MINIMUM DISTANCE BETWEEN "X" CENTERS								
GAUGES	1/2" M20	3/4" M25	1" M32	1.1/4 M40	1.1/2" M50	2" M63	2.1/2" M75	3" M80	4"
1/2" - M20	47	53	63	72	75	89	96	106	123
3/4" - M25	53	57	69	77	80	94	100	110	126
1" - M32	63	69	74	83	86	99	106	117	134
1.1/4" - M40	72	77	83	92	95	106	113	126	140
1.1/2" - M50	75	80	86	95	103	114	121	134	146
2" - M63	89	94	99	106	114	125	132	145	157
2.1/2" - M75	96	100	106	113	121	132	148	156	172
3" - M80	106	110	117	126	134	145	156	174	189
4"	123	126	134	140	146	157	172	189	214

BOX MODEL	USEFUL SURFACE			MAXIMUM NUMBER OF HOLES ALLOWED ON EACH SIDE										
	F1	F2	CM2	1/2" M20	- M22	3/4" M25	1" M32	1.1/4" M40	1.1/2" M50	2" M63	2.1/2" M75	3" M80	4"	THREAD, COVER
CBEx-1	118	70	83	4	4	3	3	1	-	-	-	-	-	M 130 X 2
CBEx-2	135	74	100	5	4	3	3	1	1	-	-	-	-	M 150 X 2
CBEx-3	185	90	167	9	8	6	4	2	1	1	-	-	-	M 200 X 2
CBEx-4	250	132	330	18	15	11	7	4	3	2	1	1	1	M 270 X 3

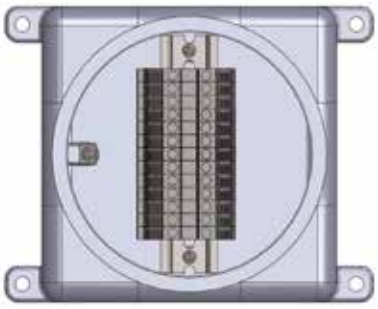
Note: For other configurations, please consult Tramontina.



Aluminum or zinc-plated steel inner plate.

BOX MODEL	DIMENSIONS		
	J	L	M
CBEx-1	120	120	106
CBEx-2	141	141	126
CBEx-3	188	188	175
CBEx-4	256	256	248

JUNCTION BOXES (WITH TERMINALS)

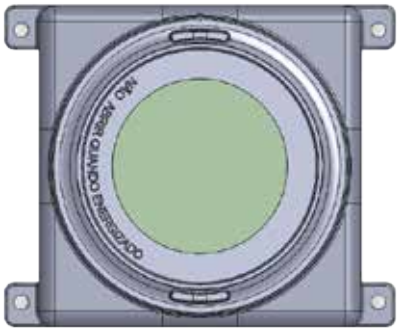


View from above

		TERMINALS: SECTION AND QUANTITY (MAXIMUM)								
BOX MODEL	VOLUME [dm3]	1,5 mm²	2,5 mm²	4 mm²	6 mm²	10 mm²	16 mm²	25 mm²	35 mm²	70 mm²
CBEx-1	1,80	12	12	12	10	8	5	-	-	-
CBEx-2	2,59	20	20	16	12	10	8	4	4	4
CBEx-3	5,47	28	28	24	18	14	12	8	8	6
CBEx-4	13,74	45	45	36	28	22	18	12	12	9
MAXIMUM CURRENT PER TERMINAL [A]		10	12,5	20	24	30	48	75	105	175
MAXIMUM CURRENT DENSITY PER TERMINAL [A/MM2]		6,6	5	5	4	3	3	3	3	2,5
VOLTAGE RATING [V]		750 V								

Note: CBEx boxes are prepared for mounting terminal rails directly on the inner brackets with no need to use the inner plate.

GLASS DISPLAY BOXES



View from above

MODEL	GLASS DISPLAY (Ø)
CBEx-2	90 mm
CBEx-3	130 mm
CBEx-4	180 mm

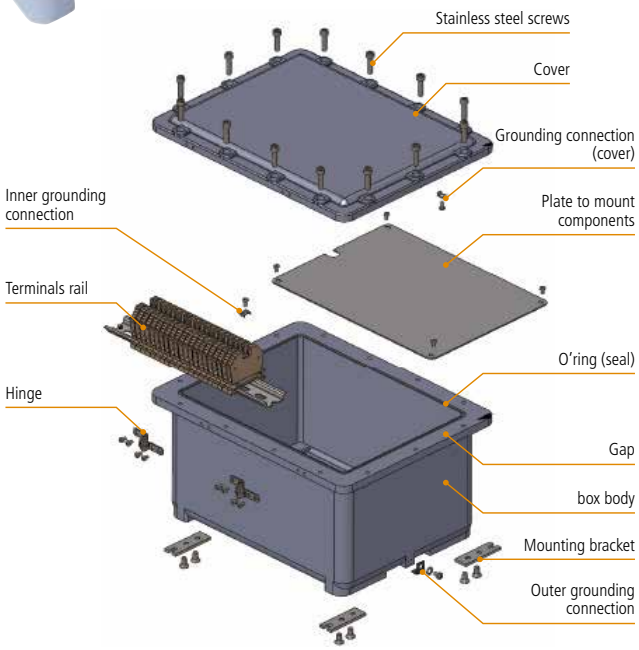
CCEx

PANELS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIB – IIIC
TEMPERATURE CLASS: T6... T5 – T85 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

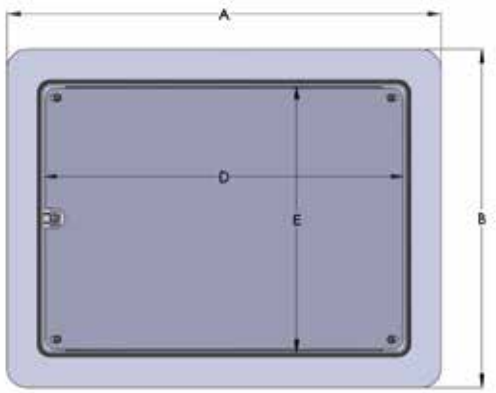
- Panels with **Ex d** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in copper-free aluminum alloy resistant to corrosion.
- **1/2" to 4" NPT** and **M20 to M80 metric** threaded inlets. * The holes are placed according to the customer specifications.
- Cover attached to body with **stainless steel** hex head bolts.
- **Electrostatic powder coating** finish in gray Munsell N 6.5 polyester.
- O'ring seal installed on the box.
- **Aluminum** or **zinc-plated steel** inner plate.
- Stainless steel bolts, grounding connectors, and hinges.
- Bracket to mount the boxes on the wall.
- Panels may be provided with analog/digital instruments, PLCs, IHM, commutators, fuses, relays, contactors, switches, timers, capacitors, transformers, terminals/connectors, circuit breakers, switch-disconnectors, frequency inverters, soft-starter, buses, heating elements, pilot and signaling control, and levers, amongst others, according to the customer's project.



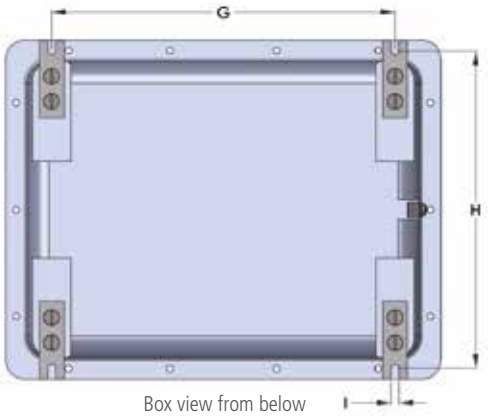
HOW TO REQUEST

Send or request project to Tramontina with the features of components and necessary internal circuits.

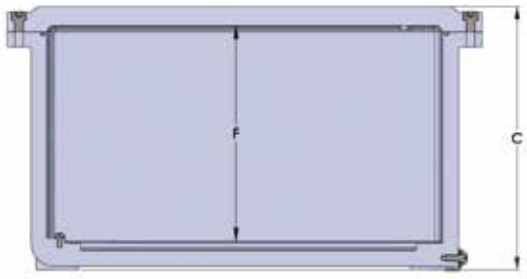
TECHNICAL INFORMATION



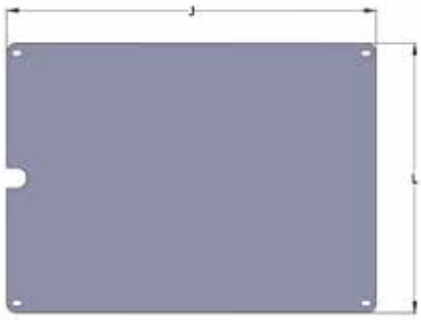
Box view from above



Box view from below



Box and cover cut side view



Plate

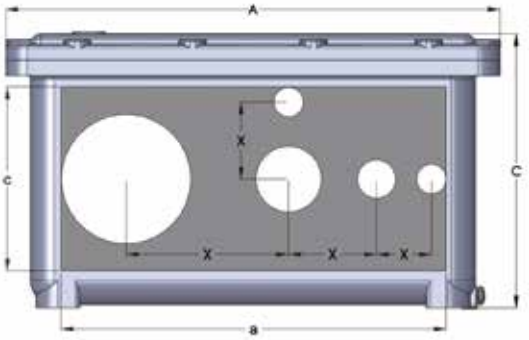
	DIMENSIONS EXTERNAL [mm]			DIMENSIONS INTERNAL[mm]			BRACKET MOUNTING [mm]			PLATE [mm]			
MODEL	A	B	C	D	E	F	G	H	I	J	L	WEIGHT [kg]	VOLUME [dm³]
CCEx-1C	205	205	155	135	135	115	130	190	8	125	125	5,0	2,0
CCEx-2C	305	305	175	230	230	135	215	277	8	220	220	11,4	7,0
CCEx-3C	405	405	205	325	325	160	305	377	8	310	310	22,5	17,0
CCEx-1	315	213	166	240	140	125	225	190	8	230	130	8,0	4,3
CCEx-2B	355	255	210	280	180	165	265	227	8	270	170	11,8	8,4
CCEx-2			255			215						13,5	11,0
CCEx-3B	458	357	210	375	275	160	355	327	8	360	260	22,0	16,4
CCEx-3			255			210						25,0	21,6
CCEx-4B	560	358	210	475	275	155	455	327	8	460	260	27,0	21,0
CCEx-4			260			205						30,5	27,2
CCEx-5B	664	460	268	565	365	200	545	428	10	550	350	54,0	41,0
CCEx-5			310			250						58,5	52,0
CCEx-6B	710	510	257	610	410	190	595	478	10	580	380	70,0	50,0
CCEx-6			310			240						77,0	62,0
CCEx-7B	868	610	255	740	490	225	719	575	10	720	460	135,0	85,5
CCEx-7			355			275						145,0	97,0
CCEx-8B	1120	615	325	990	490	225	979	575	10	970	470	172,0	115,0
CCEx-8			355			275						185,0	130,0

CCEx

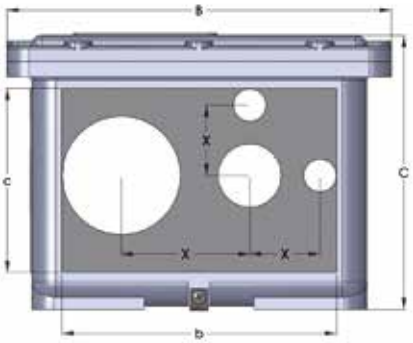
BOXES WITH THREADED ENTRIES

	MAXIMUM NUMBER OF ENTRIES LARGER SIDE									AREA FOR HOLES		MAXIMUM NUMBER OF ENTRIES SMALLER SIDE									AREA FOR HOLES	
MODEL	1/2" M20	3/4" M25	1" M32	1.1/4" M40	1.1/2" M50	2" M63	2.1/2" M75	3" M80	4"	a	c	1/2" M20	3/4" M25	1" M32	1.1/4" M40	1.1/2" M50	2" M63	2.1/2" M75	3" M80	4"	b	c
CCEx-1C	5	3	2	1	1	-	-	-	-	115	80	5	3	2	1	1	-	-	-	-	115	80
CCEx-2C	8	7	3	2	2	1	1	-	-	200	100	8	7	3	2	2	1	1	-	-	200	100
CCEx-3C	18	10	8	3	3	2	1	1	-	300	125	18	10	8	3	3	2	1	1	-	300	125
CCEx-1	10	7	3	2	2	1	1	-	-	210	100	4	4	2	1	1	-	-	-	-	110	100
CCEx-2B	15	8	6	4	3	2	1	1	-	250	135	9	6	4	3	2	1	1	-	-	150	135
CCEx-2	20	12	9	6	5	3	2	1	-	250	185	12	9	6	4	3	2	1	-	-	150	185
CCEx-3B	21	12	10	6	5	3	2	1	-	340	135	15	8	6	4	2	2	1	1	-	240	135
CCEx-3	28	18	10	8	6	4	2	1	1	340	180	20	12	9	6	4	3	2	1	-	240	180
CCEx-4B	27	16	12	8	5	4	2	1	1	440	130	15	8	6	4	3	2	2	1	-	250	130
CCEx-4	36	26	18	10	8	5	3	2	1	440	180	20	12	9	6	5	3	2	1	-	250	180
CCEx-5B	44	27	14	12	10	4	4	2	1	530	170	28	18	10	8	5	3	2	1	1	330	170
CCEx-5	55	36	21	12	10	8	5	3	2	530	220	35	24	15	8	6	5	3	2	1	330	220
CCEx-6B	48	30	16	12	10	5	4	2	1	570	160	32	21	10	8	6	3	2	2	1	370	160
CCEx-6	60	40	24	12	12	8	5	3	2	570	210	40	28	15	8	8	5	3	2	1	370	210
CCEx-7B	60	36	30	16	14	9	5	4	2	690	190	36	24	18	10	8	5	3	2	1	440	190
CCEx-7	75	48	27	23	14	11	8	4	3	690	240	45	32	18	15	8	7	5	3	2	440	240
CCEx-8B	80	48	39	20	18	12	6	5	3	920	190	36	24	18	10	8	5	3	2	1	440	190
CCEx-8	100	64	39	30	18	14	10	5	4	920	240	45	32	18	15	8	7	5	3	2	440	240

Note: For other configurations, please consult TRAMONTINA.



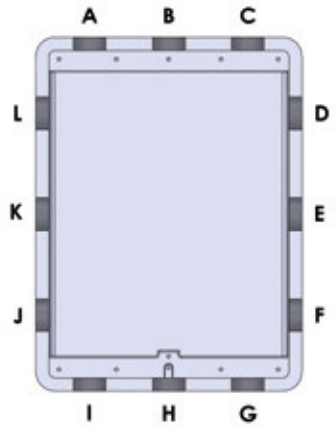
Smaller side view.



Larger side view.

MINIMUM DISTANCE BETWEEN "X" CENTERS

GAUGES	1/2" M20	3/4" M25	1" M32	1.1/4 M40	1.1/2" M50	2" M63	2.1/2" M75	3" M80	4"
1/2" - M20	47	53	63	72	75	89	96	106	123
3/4" - M25	53	57	69	77	80	94	100	110	126
1" - M32	63	69	74	83	86	99	106	117	134
1.1/4" - M40	72	77	83	92	95	106	113	126	140
1.1/2" - M50	75	80	86	95	103	114	121	134	146
2" - M63	89	94	99	106	114	125	132	145	157
2.1/2" - M75	96	100	106	113	121	132	148	156	172
3" - M80	106	110	117	126	134	145	156	174	189
4"	123	126	134	140	146	157	172	189	214



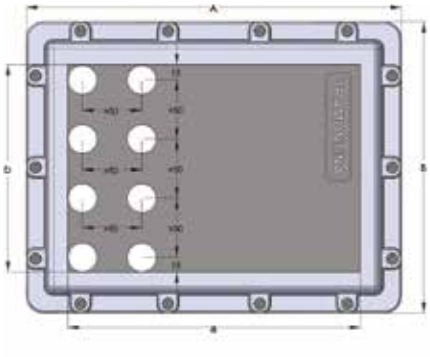
Position of the threaded entries

NOTE: Threaded entries may be requested according to positions illustrated above or according to the customer's needs.

COVERS WITH THREADED ENTRIES

Entries for fixing the control and signaling actuators.

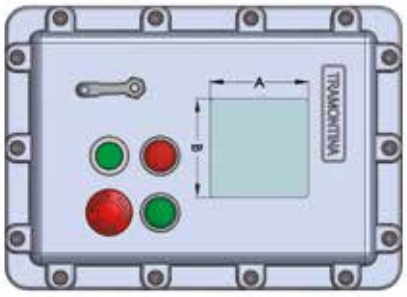
MODEL	MAXIMUM QUANTITY OF HOLES	AREA FOR HOLES [mm]	
		A	B
CCEx-1C	4	115	115
CCEx-2C	9	200	200
CCEx-3C	16	300	300
CCEx-1	6	210	110
CCEx-2B	8	250	150
CCEx-2			
CCEx-3B	15	340	240
CCEx-3			
CCEx-4B	18	440	250
CCEx-4			
CCEx-5B	24	530	330
CCEx-5			
CCEx-6B	35	570	370
CCEx-6			
CCEx-7B	40	690	440
CCEx-7			
CCEx-8B	55	920	440
CCEx-8			



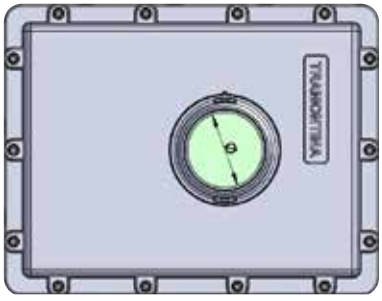
View from above

TEMPERED GLASS COVERS

MODEL	DIMENSION DISPLAY/RECT	DIMENSION DISPLAY/ROUND	
	A X B [mm]	MAXIMUM QUANTITY	Ø [mm]
CCEx-1C	95 x 65	-	-
CCEx-2C	110 x 65	-	-
CCEx-3C		1	90
CCEx-1		-	-
CCEx-2B CCEx-2		-	-
CCEx-3B CCEx-3		1	90
CCEx-4B CCEx-4		1	90
CCEx-5B CCEx-5		1	130
CCEx-6B CCEx-6		1	180
CCEx-7B CCEx-7		1	180
CCEx-8B CCEx-8		1	180

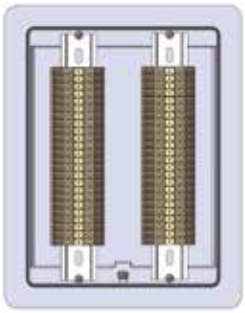


Cover with square/rectangular display



Cover with round display

JUNCTION BOXES (WITH TERMINALS)



Junction boxes with terminals

NOTE: For other terminal sizes or different mounting configurations, please consult Tramontina.

MODEL	TERMINAL 2,5 mm²		TERMINAL 4 mm²		TERMINAL 6 mm²		TERMINAL 10 mm²		TERMINAL 16 mm²		TERMINAL 25 mm²	
	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL
CCEx-1C	1	12	1	12	1	10	1	8	1	8	1	6
CCEx-2C	1	22	1	22	1	18	1	12	1	12	1	8
CCEx-3C	2	30	2	30	1	24	1	26	1	26	1	12
CCEx-1	1	28	1	26	1	21	1	17	1	14	1	12
CCEx-2B	2	38	2	35	2	28	2	23	2	21	1	18
CCEx-2	2	38	2	35	2	28	2	23	2	21	1	18
CCEx-3B	3	48	3	38	3	30	3	29	2	25	2	21
CCEx-3	3	48	3	38	3	30	3	29	2	25	2	21
CCEx-4B	3	70	3	65	3	50	3	35	3	25	2	25
CCEx-4	3	70	3	65	3	50	3	35	3	25	2	25
CCEx-5B	3	80	3	70	3	60	3	50	3	40	2	30
CCEx-5	3	80	3	70	3	60	3	50	3	40	2	30
CCEx-6B	3	90	3	80	3	70	3	54	3	42	2	34
CCEx-6	3	90	3	80	3	70	3	54	3	42	2	34
CCEx-7B	4	120	4	100	4	80	4	60	4	50	3	40
CCEx-7	4	120	4	100	4	80	4	60	4	50	3	40
CCEx-8B	4	150	4	120	4	120	4	85	4	70	3	65
CCEx-8	4	150	4	120	4	120	4	85	4	70	3	65
MAX. CURRENT PER TERMINAL [A]	12.5		20		24		30		48		75	
MAX. CURRENT DENSITY PER TERMINAL [A/mm2]	5		5		4		3		3		3	
VOLTAGE RATING [V]	750		750		750		750		750		750	

MODEL	TERMINAL 35 mm²		TERMINAL 70 mm²		TERMINAL 95 mm²		TERMINAL 120 mm²		TERMINAL 185 mm²		TERMINAL 240 mm²	
	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL	RAILS	TERMINALS IN EACH RAIL
CCEx-1C	-	-	1	-	1	-	1	-	1	-	1	-
CCEx-2C	1	6	1	-	1	-	1	-	1	-	1	-
CCEx-3C	1	8	1	4	1	4	1	4	1	-	1	-
CCEx-1	1	10	1	3	1	10	1	-	1	-	1	-
CCEx-2B	1	14	1	6	1	14	1	4	1	3	1	3
CCEx-2	1	14	1	6	1	14	1	4	1	3	1	3
CCEx-3B	2	18	1	13	1	18	1	6	1	6	1	6
CCEx-3	2	18	1	13	1	18	1	6	1	6	1	6
CCEx-4B	2	20	1	20	1	20	1	10	1	8	1	8
CCEx-4	2	20	1	20	1	20	1	10	1	8	1	8
CCEx-5B	2	28	1	28	1	22	1	10	1	10	1	8
CCEx-5	2	28	1	28	1	22	1	10	1	10	1	8
CCEx-6B	2	30	1	30	1	25	1	12	1	12	1	9
CCEx-6	2	30	1	30	1	25	1	12	1	12	1	9
CCEx-7B	3	35	1	35	1	30	1	15	1	15	1	10
CCEx-7	3	35	1	35	1	30	1	15	1	15	1	10
CCEx-8B	3	55	1	55	1	42	1	24	1	20	1	12
CCEx-8	3	55	1	55	1	42	1	24	1	20	1	12
MAX. CURRENT PER TERMINAL [A]	105		175		190		240		315		400	
MAX CURRENT DENSITY PER TERMINAL [A/mm2]	3		2.5		2.5		2		2		1,65	
VOLTAGE RATING [V]	750		750		750		750		750		750	

CCEx

CCEX PANELS

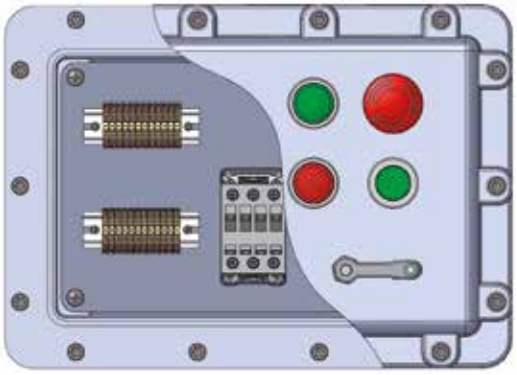
Analog and digital instruments Electronic Circuits
PLCs IHM
Commutators
Fuses
Relays
Contactors
Switches
Timers Capacitors
Transformers
Elements Connectors / Terminals Circuit
Breakers
Switch-Disconnectors
Frequency Inverters Softstarter
Buses Actuators
Pilot and Control Stations Amplifiers
Others

Features of equipment and components allowed to be mounted on **Panels in CCEx boxes**:

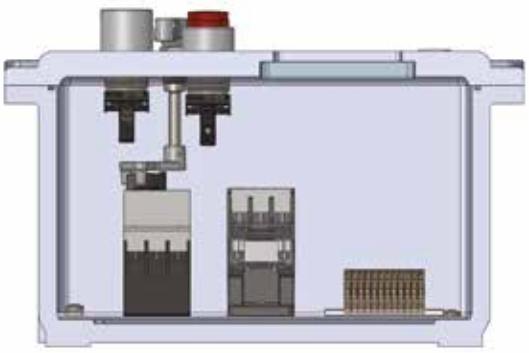
TECHNICAL SPECIFICATIONS

Explosion-proof CCEx panels have been designed to assemble with internal equipment and components according to users' and project needs.

The chart to the side shows the features of equipment and components allowed to be mounted on panels.



Cut view from above



Cut view from the side

CPEx

CONTROL AND SIGNALING BUTTONS FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIB – IIIC
TEMPERATURE CLASS: T6 –T85 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

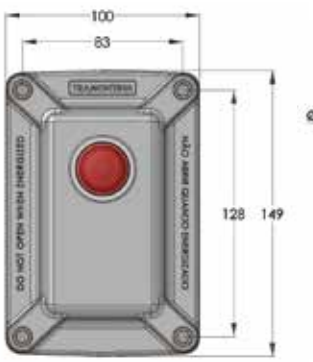
Injected boxes feature an excellent finish.

TECHNICAL SPECIFICATIONS

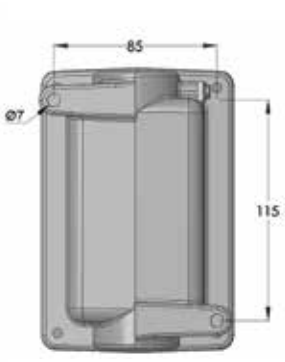
- Buttons with **Ex d** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in copper-free **aluminum alloy** resistant to corrosion.
- **3/4" or 1"** NPT threaded entries.
- Cover attached to body with internal **stainless steel** hex head bolts.
- **Electrostatic powder coating** finish in gray Munsell N 6.5 polyester.
- O'ring seal installed on the cover.
- Bolts, grounding connectors, and non-rotating stainless steel plate.
- 3 different models: **single, double, and triple boxes**.

TECHNICAL INFORMATION

CPEx-1 **Weight:** 0,85 kg - **Volume:** 0,33 dm³



View from above



View from below

Side view

Example of CPEx-1 box mounted with 1 actuator.

CPEx-2 **Weight:** 0,88 kg - **Volume:** 0,33 dm³

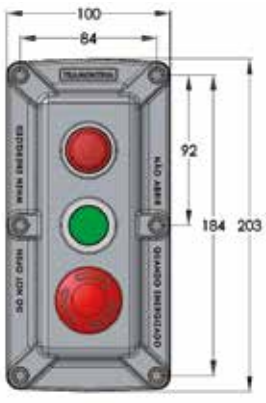
View from above

View from below

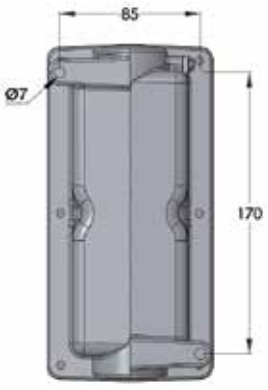
Side view

Example of CPEx-2 box mounted with 2 actuators.

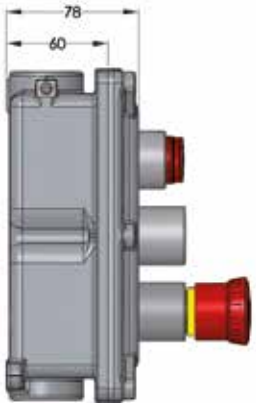
CPEx-3 **Weight:** 1,21 kg - **Volume:** 0,50 dm³



View from above



View from below



Side view

Example of CPEx-3 box mounted with 3 actuators.

CPEx

HOW TO REQUEST

BOX REFERENCE

MODEL		ENTRIES	REF.
	CPEx-1	2 x 3/4"NPT	**CPEx11**
		2 x 1"NPT	**CPEx12**
	CPEx-2	2 x 3/4"NPT	**CPEx21**
		2 x 1"NPT	**CPEx22**
	CPEx-3	2 x 3/4"NPT	**CPEx31**
		2 x 1"NPT	**CPEx32**

+

ACTUATOR REFERENCE

MODEL		REF.
	Single push button	**PS ...**
	Emergency push button Pull to Release	**PEP ...**
	Rotary emergency push button	**PEG ...**
	Rotary emergency push button with key	**PEC ...**
	Indicator light with LED	**IL ...**

Example 1:

COMPONENTS	REF.	REF. FINAL
CPEx-2 box with two 3/4" NPT entries	CPEx21	**CPEx21 + PSVD10 + PSVM01**
Single push button green NA	PSVD10	
Single push button red NF	PSVM01	

Example 2:

COMPONENTS	REF.	REF. FINAL
CPEx-3 box with two 1" NPT entries	CPEx32	**CPEX32 + ILVM22 + PSVD10 + PEG11**
Indicator LED light red 220 V	ILVM22	
Single push buton green NA	PSVD10	
Rotary emergency push button NA+NF	PEG11	

Note:
Pages 167, 168, and 169 include supplementary technical information (colors, contacts, and voltage) of specific buttons.

CEEx

CONTROL STATIONS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES [STAINLESS STEEL AND CARBON STEEL]

PROTECTION: Ex e – Ex i – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6 – T5 – T4
CLASS COMBUSTIBLE DUSTS:T85ºC - T135ºC
EPL: Ga – Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-11 | ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Control stations with **Ex e** (increased safety), **Ex i** (intrinsically safe), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **stainless steel (304, 316, or 316L) or carbon steel**.
- **1/2"** to **4"** (NPT or BSP) **M12** to **M90** inlets.
  * The holes are placed according to the customer specifications.
- Sealing junction to ensure degree of protection.
- Control stations may be supplied with **hinges** and **flanges.**
- **Stainless steel** grounding connectors.
- Control stations may be supplied with terminals, actuating and signaling controls, ammeters, voltmeters, circuit breakers, gauges, relays, proximitors, insulating barriers, zener barriers, signal conditioners, digital and analog transponders, digital and analog drivers, speed monitor, signal converters, and movement monitors, amongst others, all **certified** for potentially **explosive atmospheres** in **compliance with SBAC** (Brazilian Conformity Assessment System).

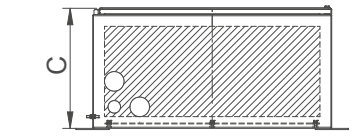
HOW TO REQUEST

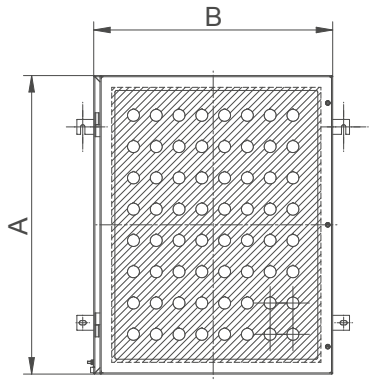
Send and request the project to Tramontina with the required components and internal circuits features.

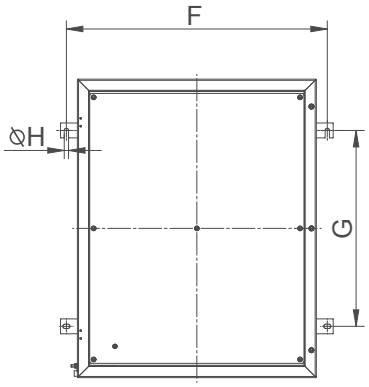
CEEx

TECHNICAL INFORMATION

	EXTERNAL DIMENSIONS [mm]			MOUNTING [mm]		
MODEL	A	B	C	F	G	H (Ø)
CEEx-1-S*	120	120	95	152	85	8,2
CEEx-2-S*	180	120	95	152	140	8,2
CEEx-3-S*	180	180	95	212	140	8,2
CEEx-4-S*	260	220	150	247	220	8,2
CEEx-5-S*	300	300	210	327	260	8,2
CEEx-6-S*	380	220	210	247	340	8,2
CEEx-7-S*	380	260	210	287	340	8,2
CEEx-8-S*	380	300	165	327	240	11
CEEx-9-S*	380	380	210	436	220	11
CEEx-10-S*	400	330	210	386	240	11
CEEx-11-S*	455	380	210	436	295	11
CEEx-12-S*	500	420	210	476	338	11
CEEx-13-S*	600	380	210	436	338	11
CEEx-14-S*	600	600	210	656	338	11
CEEx-15-S*	762	380	210	436	500	11
CEEx-16-S*	762	610	210	666	500	11
CEEx-17-S*	762	610	305	666	500	11
CEEx 35.00 22 09	200	250	97	194	230	10,2
CEEx 35.00 22 15	200	250	157	194	230	10,2
CEEx 35.00 32 09	350	250	97	194	380	10,2
CEEx 35.00 33 16	300	300	167	244	330	10,2
CEEx 35.00 44 16	380	380	167	324	410	10,2
CEEx 35.00 44 21	380	380	217	324	410	10,2
CEEx 35.00 53 16	500	300	167	244	530	10,2
CEEx 35.00 63 16	600	300	167	244	630	10,2
CEEx 35.00 64 21	600	300	217	324	630	10,2
CEEx 35.10 10 06	100	100	61	43,5	130	10,2
CEEx 35.15 10 06	150	100	61	43,5	180	10,2
CEEx 35.15 15 08	150	150	81	93,5	180	10,2
CEEx 35.20 10 06	200	100	61	43,3	230	10,2
CEEx 35.20 20 08	200	200	81	143,5	230	10,2
CEEx 35.20 20 12	200	200	121	143,5	230	10,2
CEEx 35.30 15 08	300	150	81	93,5	330	10,2
CEEx 35.30 20 08	300	200	81	143,5	330	10,2
CEEx 35.30 20 12	300	200	121	143,5	330	10,2
CEEx 35.30 30 12	300	300	121	243,5	330	10,2
CEEx 35.30 30 16	300	300	161	243,5	330	10,2
CEEx 35.38 38 16	380	380	161	323,5	410	10,2
CEEx 35.40 15 08	400	150	81	93,5	430	10,2
CEEx 35.40 20 12	400	200	121	143,5	430	10,2
CEEx 35.40 30 16	400	300	161	243,5	430	10,2
CEEx 35.50 30 16	500	300	161	243,5	530	10,2
CEEx 35.50 40 16	500	400	161	343,5	530	10,2
CEEx 35.60 20 12	600	200	121	243,5	630	10,2
CEEx 35.06 02 00	260	260	205	please consult		11
CEEx 35.06 03 00	306	306	205			11
CEEx 35.06 04 00	380	260	205			11
CEEx 35.06 05 00	458	382	205			11
CEEx 35.06 06 00	480	480	205			11
CEEx 35.06 07 00	500	350	205			11
CEEx 35.06 08 00	620	450	205			11
CEEx 35.06 09 00	740	550	205			11
CEEx 35.06 10 00	762	508	205			11
CEEx 35.06 11 00	860	640	205			11
CEEx 35.06 12 00	914	610	205			11
CEEx 35.06 13 00	980	740	205			11







***** Boxes made in stainless steel (304, 316, or 316L) or carbon steel. Other models in stainless steel only.

THREADED ENTRIES

Placement of entries is defined by the client specifications.

	LARGER SIDE ENTRY										SMALLER SIDE ENTRY									
MODEL	M12	M16	M20	M25	M32	M40	M50	M63	M75	M90	M12	M16	M20	M25	M32	M40	M50	M63	M75	M90
CEEx-1-S			8	2	2	2	1						8	2	2	1	1			
CEEx-2-S			6	3	3	2	1						8	2	2	1	1			
CEEx-3-S			6	3	2	2	1						6	3	2	1				
CEEx-4-S			10	8	4	3	2	2	1				8	6	4	2	2	1	1	
CEEx-5-S			18	15	8	6	3	2	2	1			18	15	8	3	2	2	1	
CEEx-6-S			24	18	10	8	4	3	2	2			12	9	6	4	2	1	1	
CEEx-7-S			24	18	10	8	4	3	2	2			15	12	6	6	3	2	1	
CEEx-8-S			24	18	10	8	4	3	2	2			18	10	8	4	2	2	2	
CEEx-9-S			24	18	10	8	4	3	2	2			24	18	10	4	3	2	2	
CEEx-10-S			27	21	12	8	5	3	2	2			21	15	9	6	4	2	2	2
CEEx-11-S			30	24	12	10	5	3	3	2			24	18	10	8	4	3	2	2
CEEx-12-S			33	27	14	12	6	3	3	2			27	21	12	10	5	3	3	2
CEEx-13-S			42	33	18	14	8	4	4	3			24	18	10	8	4	3	2	2
CEEx-14-S			42	33	18	14	8	4	4	3			42	33	18	8	4	4	3	
CEEx-15-S			51	42	22	18	10	6	5	4			24	18	10	8	4	3	2	2
CEEx-16-S			51	42	22	18	10	6	5	4			42	33	18	14	7	4	4	3
CEEx-17-S			102	70	44	27	15	12	10	5			84	55	36	21	12	8	8	4
CEEx 35.00 22 09	38	20	12	5	3	3					36	17	8	6						
CEEx 35.00 22 15	76	35	30	12	8	6	3	3			75	36	30	15	8	5	3	3		
CEEx 35.00 32 09	74	24	24	11	7	5					36	17	8	6						
CEEx 35.00 33 16	110	55	48	23	15	8	7	5			88	52	38	21	11	8	5	4		
CEEx 35.00 44 16	160	70	60	27	21	12	9	7			140	56	48	27	14	10	6	5		
CEEx 35.00 44 21	220	98	84	45	28	18	12	9			200	84	72	36	21	14	9	8		
CEEx 35.00 53 16	216	92	85	36	26	14	12	9			88	52	38	21	11	8	5	4		
CEEx 35.00 63 16	231	115	100	45	33	17	16	11			88	52	38	21	11	8	5	4		
CEEx 35.00 64 21	330	176	140	75	44	27	20	15			200	84	72	36	21	14	9	8		
CEEx 35.10 10 06	6	2	2								4									
CEEx 35.15 10 06	11	4	3								4									
CEEx 35.15 15 08	15	8	6	3	2						12	5	4	3						
CEEx 35.20 10 06	16	6	5								4									
CEEx 35.20 20 08	24	12	10	4	3						18	7	6	4						
CEEx 35.20 20 12	48	22	16	8	5	2	2	2			45	20	18	8	4	2	2	2		
CEEx 35.30 15 08	42	20	17	7	5						12	6	4	3						
CEEx 35.30 20 08	42	20	17	7	5						18	7	6	4						
CEEx 35.30 20 12	84	38	28	14	9	4	3	3			45	20	18	8	4	2	2	2		
CEEx 35.30 30 12	84	38	28	14	9	4	3	3			75	32	27	14	7	4	3	3		
CEEx 35.30 30 16	112	54	45	22	14	8	6	5			120	50	45	21	12	8	6	4		
CEEx 35.38 38 16	152	75	58	30	18	10	8	6			152	65	58	27	17	10	8	5		
CEEx 35.40 15 08	57	29	24	9	7						12	6	4	3						
CEEx 35.40 20 12	120	52	40	20	13	6	5	4			45	20	18	8	4	2	2	2		
CEEx 35.40 30 16	160	102	60	32	20	11	9	7			120	50	45	21	12	8	6	4		
CEEx 35.50 30 16	208	102	80	42	28	14	12	9			120	50	45	21	12	8	6	4		
CEEx 35.50 40 16	208	102	80	42	28	14	12	9			164	70	63	28	18	12	8	6		
CEEx 35.60 20 12	192	64	64	32	22	10	8	7			45	20	18	8	4	2	2	2		
CEEx 35.06 02 00	98	43	34	18	10	6	4	4			75	34	25	13	7	4	4	2		
CEEx 35.06 03 00	125	58	43	24	13	8	6	6			98	43	34	18	10	6	4	4		
CEEx 35.06 04 00	98	43	34	18	10	6	4	4			125	58	43	24	13	8	6	6		
CEEx 35.06 05 00	147	67	53	28	16	8	8	6			179	79	63	34	19	9	8	8		
CEEx 35.06 06 00	201	91	70	38	22	12	10	8			179	79	63	34	19	9	8	8		
CEEx 35.06 07 00	147	67	53	28	16	8	8	6			201	91	70	38	22	12	10	8		
CEEx 35.06 08 00	201	91	70	38	22	12	10	8			255	115	88	48	28	16	14	12		
CEEx 35.06 09 00	255	115	88	48	28	16	14	12			323	148	113	62	37	20	18	14		
CEEx 35.06 10 00	201	91	70	38	22	12	10	8			323	148	113	62	37	20	18	14		
CEEx 35.06 11 00	250	116	86	48	26	16	12	12			358	158	126	68	38	18	16	16		
CEEx 35.06 12 00	250	116	86	48	26	16	12	12			358	158	126	68	38	18	16	16		
CEEx 35.06 13 00	294	134	106	56	32	16	16	12			402	182	140	76	44	24	20	16		

CEEx

TERMINALS

Maximum number of terminals on each box.

		TERMINALS														
MODEL	SECTION (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
CEEx-1-S	MAXIMUM QUANTITY OF TERMINALS	21	19	16												
CEEx-2-S		25	20	20	15	12	10									
CEEx-3-S		60	44	40	36	22	18		9							
CEEx-4-S		86	80	70	56	44	18		14							
CEEx-5-S		106	100	90	68	54	22		15	12						
CEEx-6-S		67	62	56	42	34	28		21	16						
CEEx-7-S		67	62	56	42	34	28		21	16						
CEEx-8-S		180	174	150	111	90	50		27	30	28					
CEEx-9-S		180	174	150	111	90	70		27	30	28	12				
CEEx-10-S		186	180	156	117	96	70		27	32	30	12				
CEEx-11-S		216	213	183	138	103	70		27	36	34	30				
CEEx-12-S		492	486	255	185	103	70		27	42	40	34				
CEEx-13-S		390	315	250	182	100	70		27	54	48	44				
CEEx-14-S		606	390	240	176	100	70		27	104	75	63				
CEEx-15-S		396	390	237	176	100	69		27	34	33	27				
CEEx-16-S		680	390	230	170	100	69		27	136	99	75				
CEEx-17-S		680	370	230	170	100	69		27	136	99	75				
CEEx 35.00 22 09		76	60	50	38	24	13	10	10							
CEEx 35.00 22 15		76	60	50	38	24	13	10	10							
CEEx 35.00 32 09		150	125	100	74	36	30	20	20							
CEEx 35.00 33 16		126	102	87	63	51	40	16	16	12						
CEEx 35.00 44 16		240	195	162	123	99	81	44	44	17	13	13				
CEEx 35.00 44 21		240	195	162	123	99	81	44	44	17	13	13				
CEEx 35.00 53 16		214	172	144	108	88	72	29	29	26	18	18				
CEEx 35.00 63 16		260	210	176	134	106	90	36	36	27	22	22				
CEEx 35.00 64 21		393	318	267	201	162	135	72	72	27	22	22				
CEEx 35.10 10 06		11	11	7	7											
CEEx 35.15 10 06		20	20	16	12											
CEEx 35.15 15 08		24	20	16	12	10	8									
CEEx 35.20 10 06		30	30	24	18											
CEEx 35.20 20 08		76	60	50	38	30	13									
CEEx 35.20 20 12		76	60	50	38	30	13	10	10							
CEEx 35.30 15 08		61	50	41	31	25	21									
CEEx 35.30 20 08		120	96	80	60	24	20									
CEEx 35.30 20 12		120	96	80	60	24	20	16	16							
CEEx 35.30 30 12		120	96	80	60	48	20	16	16	12						
CEEx 35.30 30 16		126	102	87	63	51	40	16	16	12						
CEEx 35.38 38 16		240	195	162	123	99	81	44	44	17	13	13				
CEEx 35.40 15 08		85	69	58	43	35	29									
CEEx 35.40 20 12		172	138	116	88	70	29	23	23	18						
CEEx 35.40 30 16		172	138	116	88	70	29	23	23	18	14	14				
CEEx 35.50 30 16		214	172	144	108	88	72	29	29	26	18	18				
CEEx 35.50 40 16		425	345	290	215	140	87	46	46	36	14	14	11	11		
CEEx 35.60 20 12		262	212	178	134	54	45	36	36	27						
CEEx 35.06 02 00		99	81	66	51	26	22	9	9	7	5					
CEEx 35.06 03 00		176	144	90	66	54	30	12	12	9	7	7				
CEEx 35.06 04 00		186	150	126	93	52	42	18	18	13	5	5	4			
CEEx 35.06 05 00		400	325	252	192	132	84	44	44	26	13	13	8	8	7	7
CEEx 35.06 06 00		602	483	348	264	175	116	69	69	36	14	14	11	11	10	10
CEEx 35.06 07 00		450	365	244	184	111	93	50	50	22	15	15	7	7	6	6
CEEx 35.06 08 00		714	576	424	320	196	164	84	84	50	26	26	16	16	13	13
CEEx 35.06 09 00		1184	952	700	525	300	250	120	120	63	34	34	20	20	17	17
CEEx 35.06 10 00		1071	861	620	470	315	217	126	126	64	30	30	20	20	17	17
CEEx 35.06 11 00		1612	1300	952	720	459	360	192	192	111	60	60	32	32	28	28
CEEx 35.06 12 00		1701	1377	1024	776	468	325	208	208	117	62	62	30	30	26	26
CEEx 35.06 13 00		2255	1815	1300	975	600	490	240	240	155	72	72	40	40	34	34

Note: For terminal configurations with different sections, please consult Tramontina.

CEEx

CONTROL STATIONS FOR EXPLOSIVE ATMOSPHERES [POLYESTER]

PROTECTION: Ex e – Ex i – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: – T4
CLASS COMBUSTIBLE DUSTS:T85 °C - T135°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-11 | ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Control stations with **Ex e** (increased safety), **Ex i** (intrinsically safe), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **polyester** reinforced with fiberglass.
- **M12 to M63** entries. Placement of holes according to the customer specifications.
- Sealing junction to ensure degree of protection.
- **Stainless steel** grounding connectors.
- Control stations may be supplied with terminals, actuating and signaling controls, ammeters, voltmeters, circuit breakers, gauges, relays, proximitors, insulating barriers, zener barriers, signal conditioners, digital and analog transponders, digital and analog drivers, speed monitors, signal converters, and movement monitors, amongst others, all **certified** for **potentially explosive atmospheres** in **compliance with SBAC** (Brazilian Conformity Assessment System).

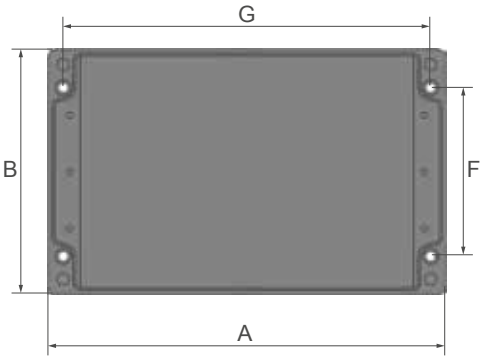
HOW TO REQUEST

Send or request project to Tramontina with required components and internal strength and control circuits features.

CEEx

TECHNICAL INFORMATION

	EXTERNAL DIMENSIONS [mm]			MOUNTING [mm]	
MODEL	A	B	C	F	G
CEEx 06.08 08 06	80	75	56	45	68
CEEx 06.08 08 08	80	75	75	45	68
CEEx 06.08 11 06	110	75	56	45	98
CEEx 06.08 11 08	110	75	75	45	98
CEEx 06.08 16 06	160	75	56	45	148
CEEx 06.08 16 08	160	75	75	45	148
CEEx 06.08 19 06	190	75	56	45	178
CEEx 06.08 19 08	190	75	75	45	178
CEEx 06.08 23 06	230	75	56	45	218
CEEx 06.08 23 08	230	75	75	45	218
CEEx 06.12 12 09	122	120	91	82	106
CEEx 06.12 22 09	220	120	91	82	204
CEEx 06.16 16 09	160	160	91	110	140
CEEx 06.16 26 09	260	160	91	110	240
CEEx 06.16 36 09	360	160	91	110	340
CEEx 06.16 56 09	560	160	91	110	540
CEEx 06.25 26 12	255	250	121	200	235
CEEx 06.25 26 16	255	250	161	200	235
CEEx 06.25 40 12	400	250	121	200	380
CEEx 06.25 40 16	400	250	161	200	380
CEEx 06.25 60 12	600	250	121	200	580
CEEx 06.36 36 09	360	360	91	310	340
CEEx 06.41 40 12	400	405	121	355	380
CEEx 06.41 40 20	400	405	201	355	380
CEEx 06.88 01 00	81	81	75	69	69
CEEx 06.88 02 00	121	121	75	100	100
CEEx 06.88 03 00	161	161	93	140	140
CEEx 06.88 04 00	201	201	121	175	175
CEEx 06.14 01 00	270	170	136	140	240
CEEx 06.14 02 00	270	270	136	240	240
CEEx 06.14 03 00	541	270	136	240	511
CEEx 06.20 20 00	200	200	168	187	135
CEEx 06.20 30 00	300	200	168	187	235
CEEx 06.30 40 00	305	405	202	220	300
CEEx 06.40 60 00	405	605	252	320	500
CEEx 06.01 22 15	177	177	145	154	152,5
CEEx 06.01 24 15	360	177	145	154	335,5
CEEx 06.01 44 15	360	360	145	337	335,5



THREADED ENTRIES

Placement of entries is defined by the client specifications.

	LARGER SIDE ENTRY								SMALLER SIDE ENTRY							
MODEL	M12	M16	M20	M25	M32	M40	M50	M63	M12	M16	M20	M25	M32	M40	M50	M63
CEEx 06.08 08 06	6	2	2	1					3	1	1					
CEEx 06.08 08 08	9	5	4	1	1				5	2	2	1	1			
CEEx 06.08 11 06	6	3	2	1					3	1	1					
CEEx 06.08 11 08	15	6	6	2	2				5	2	1	1	1			
CEEx 06.08 16 06	12	5	4	3					3	1	1					
CEEx 06.08 16 08	18	8	8	3	2				5	2	2	1	1			
CEEx 06.08 19 06	16	7	5	4					4	1	1	1				
CEEx 06.08 19 08	28	12	12	5	3				6	2	2	1	1			
CEEx 06.08 23 06	22	10	8	4					3	1	1	1				
CEEx 06.08 23 08	30	16	12	6	4				6	2	2	1	1			
CEEx 06.12 12 09	12	5	4	2	1	1			12	5	4	2	1	1		
CEEx 06.12 22 09	32	14	12	6	3	2			12	5	4	2	1	1		
CEEx 06.16 16 09	26	14	9	6	3	2	2		18	8	6	3	2	1	1	
CEEx 06.16 26 09	50	26	17	11	5	3	3		16	8	6	3	2	1		
CEEx 06.16 36 09	72	38	26	16	7	5	4		18	8	6	3	2	1	1	
CEEx 06.16 56 09	112	58	40	24	12	8	6		18	8	6	3	2	1	1	
CEEx 06.25 26 12	69	32	24	12	8	4	3	3	51	24	18	10	7	3	3	2
CEEx 06.25 26 16	69	32	24	12	8	4	3	3	52	24	18	10	7	3	3	2
CEEx 06.25 40 12	117	56	42	21	14	7	5	5	50	22	18	10	6	3	2	2
CEEx 06.25 40 16	117	56	42	21	14	7	5	5	50	24	18	10	7	3	3	2
CEEx 06.25 60 12	108	52	36	30	12	6	4	4	50	24	18	10	7	3	3	2
CEEx 06.36 36 09	72	38	26	16	7	5	4		52	24	20	10	6	5		
CEEx 06.41 40 12	117	56	42	21	14	7	5	5	95	46	36	18	13	6	5	4
CEEx 06.41 40 20	210	98	88	45	28	17	12	9	190	91	77	43	26	15	11	8
CEEx 06.88 01 00	3	1	1						3	1	1					
CEEx 06.88 02 00	8	3	2	1					8	3	2	1				
CEEx 06.88 03 00	15	8	5	2	2				15	8	5	2	2			
CEEx 06.88 04 00	36	16	12	6	4	2	2	1	36	16	12	6	4	2	2	1
CEEx 06.14 01 00	63	28	22	12	8	3	3	2	33	16	12	6	4	2	1	1
CEEx 06.14 02 00	63	28	22	12	8	3	3	2	63	28	22	12	8	3	3	2
CEEx 06.14 03 00	63	28	22	12	8	3	3	2	63	28	22	12	8	3	3	2
CEEx 06.20 20 00	39	18	13	6	5	3	2	1	53	25	20	10	6	4	2	2
CEEx 06.20 30 00	77	38	28	15	9	6	4	3	53	25	20	10	6	4	2	2
CEEx 06.30 40 00	109	48	40	21	12	8	5	4	144	65	54	30	17	12	7	5
CEEx 06.40 60 00	215	102	81	43	26	18	11	10	256	158	123	65	40	27	18	14
CEEx 06.01 22 15	36	16	12	6	4	2	1	1	36	16	12	6	4	2	1	1
CEEx 06.01 24 15	109	50	40	21	12	9	5	4	36	16	12	6	4	2	1	1
CEEx 06.01 44 15	109	50	40	21	12	9	5	4	109	50	40	21	12	9	5	4

CEEx

TERMINALS

Maximum number of terminals on each box.

MODEL	SECTION (mm^2)	TERMINALS														
		1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
CEEx 06.08 08 06	MAXIMUM QUANTITY OF TERMINALS	7	7													
CEEx 06.08 08 08		8	8	7												
CEEx 06.08 11 06		13	13													
CEEx 06.08 11 08		14	14	11												
CEEx 06.08 16 06		23	23													
CEEx 06.08 16 08		23	23	20												
CEEx 06.08 19 06		28	28													
CEEx 06.08 19 08		29	29	24												
CEEx 06.08 23 06		36	36													
CEEx 06.08 23 08		37	37	31												
CEEx 06.12 12 09		19	15	13	10	8	6									
CEEx 06.12 22 09		42	34	29	21	17	14									
CEEx 06.16 16 09		28	23	19	14	11	9	7	7							
CEEx 06.16 26 09		52	42	35	26	21	18	14	14							
CEEx 06.16 36 09		76	61	51	39	31	26	21	21							
CEEx 06.16 56 09		123	100	83	63	50	42	34	34							
CEEx 06.25 26 12		102	82	68	52	21	17	14	14	10						
CEEx 06.25 26 16		102	82	68	52	21	17	14	14	10	8					
CEEx 06.25 40 12		170	138	116	86	35	29	23	23	18						
CEEx 06.25 40 16		170	138	116	86	35	29	23	23	18	14					
CEEx 06.25 60 12		266	214	180	136	54	45	36	36	28						
CEEx 06.36 36 09		288	183	153	78	62	52	42	42							
CEEx 06.41 40 12		255	207	174	129	70	58	23	23	18						
CEEx 06.41 40 20		255	207	174	129	70	58	23	23	28	14	14	11	11		
CEEx 06.88 01 00		8	8													
CEEx 06.88 02 00		14	12	10	7	6										
CEEx 06.88 03 00		24	19	16	12	10	8									
CEEx 06.88 04 00		111	90	75	57	30	24	10	10	7						
CEEx 06.14 01 00		54	44	37	28	22	18	15	15							
CEEx 06.14 02 00		108	88	74	56	44	36	30	30							
CEEx 06.14 03 00		238	192	160	122	98	82	64	64	50	40					
CEEx 06.20 20 00		35	28	24	18	14	12	9	9							
CEEx 06.20 30 00		62	50	42	31	25	21	17	17	13						
CEEx 06.30 40 00		172	140	116	88	70	29	24	24	18	14	14	11	11		
CEEx 06.40 60 00		402	324	273	136	110	92	37	37	28	22	22	18	18	10	10
CEEx 06.01 22 15		23	18	15	11	9	7	6	6							
CEEx 06.01 24 15		66	53	45	34	27	22	18	18							
CEEx 06.01 44 15		264	212	135	102	81	44	36	36	28	11	11				

CEEx

CONTROL STATIONS FOR EXPLOSIVE ATMOSPHERES [ALUMINUM]

PROTECTION: Ex e – Ex i – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6 – T5 – T4
CLASS COMBUSTIBLE DUSTS:T85 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-11 | ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Control stations with **Ex e** (increased safety), **Ex i** (intrinsically safe), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in aluminum alloy.
- **M12 to M63** entries.
  * The holes are placed according to the customer specifications.
- Sealing junction to ensure degree of protection.
- Stainless steel grounding connectors.
- Boxes may be supplied with terminals, actuating and signaling controls, ammeters, voltmeters, circuit breakers, gauges, relays, proximitors, insulating barriers, zener barriers, signal conditioners, digital and analog transponders, digital and analog drivers, speed monitor, signal converters, and movement monitors, amongst others, all **certified** for **potentially explosive atmospheres in compliance with SBAC** (Brazilian Conformity Assessment System).

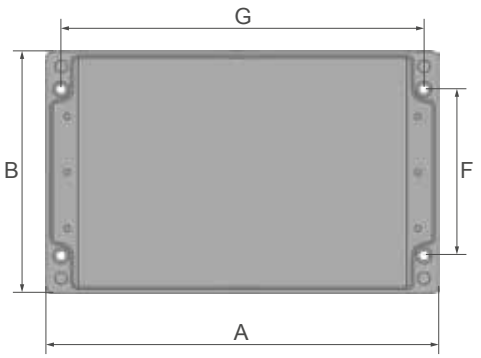
HOW TO REQUEST

Send or request project to Tramontina with required components and internal control circuits features.

CEEx

TECHNICAL INFORMATION

	EXTERNAL DIMENSIONS [mm]			MOUNTING [mm]	
MODEL	A	B	C	F	G
CEEx 05.06 06 03	58	64	34	36	46
CEEx 05.06 10 03	98	64	34	36	86
CEEx 05.06 15 03	150	64	34	36	138
CEEx 05.08 08 06	75	80	57	52	63
CEEx 05.08 13 06	125	80	57	52	113
CEEx 05.08 18 06	175	80	57	52	163
CEEx 05.08 25 05	250	80	52	52	238
CEEx 05.10 10 08	100	100	81	66	86
CEEx 05.10 16 08	160	100	81	66	146
CEEx 05.10 20 08	200	100	81	66	186
CEEx 05.12 12 08	122	120	81	82	106
CEEx 05.12 12 09	122	120	91	82	106
CEEx 05.12 22 08	220	120	81	82	204
CEEx 05.12 22 09	220	120	91	82	204
CEEx 05.12 36 08	360	120	81	82	344
CEEx 05.14 14 09	140	140	91	93	120
CEEx 05.14 20 09	200	140	91	93	180
CEEx 05.16 16 09	160	160	91	110	140
CEEx 05.16 26 09	260	160	91	110	240
CEEx 05.16 36 09	360	160	91	110	340
CEEx 05.16 56 09	560	160	91	110	540
CEEx 05.18 18 10	180	180	101	130	160
CEEx 05.18 28 10	280	180	101	130	260
CEEx 05.23 10 11	100	230	111	80	180
CEEx 05.23 20 11	202	232	111	180	180
CEEx 05.23 20 18	202	232	181	180	180
CEEx 05.23 28 11	280	230	111	180	260
CEEx 05.23 33 11	330	230	111	180	310
CEEx 05.23 33 18	330	230	181	180	310
CEEx 05.23 40 11	400	230	111	180	380
CEEx 05.23 40 23	400	230	225	180	380
CEEx 05.23 60 11	600	230	111	180	580
CEEx 05.31 40 11	404	313	111	262	382
CEEx 05.31 40 14	403	312	141	262	382
CEEx 05.31 40 18	404	313	181	262	382
CEEx 05.31 40 23	404	313	227	262	382
CEEx 05.31 60 11	600	310	111	260	580
CEEx 05.31 60 18	600	310	181	260	580
CEEx 05.60 60 20	600	600	202	525	555



THREADED ENTRIES

Placement of entries is defined by the client specifications.

	LARGER SIDE ENTRY								SMALLER SIDE ENTRY							
MODEL	M12	M16	M20	M25	M32	M40	M50	M63	M12	M16	M20	M25	M32	M40	M50	M63
CEEX 05.06 06 03	2								1							
CEEX 05.06 10 03	4								1							
CEEX 05.06 15 03	8								1							
CEEX 05.08 08 06	3	1	1	1					5	2	2	1				
CEEX 05.08 13 06	9	4	3	2					5	2	2	1				
CEEX 05.08 18 06	14	6	5	3					5	2	2	1				
CEEX 05.08 25 05	23	9	8	5					6	2	2	1				
CEEX 05.10 10 08	12	6	5	2	1				9	4	3	1	1			
CEEX 05.10 16 08	24	11	10	4	3				9	4	3	1	1			
CEEX 05.10 20 08	32	14	12	5	3				9	4	3	1	1			
CEEX 05.12 12 08	10	5	4	2	1				11	5	4	2	1			
CEEX 05.12 12 09	10	5	4	2	1				11	5	4	2	1			
CEEX 05.12 22 08	30	12	12	5	3				11	6	4	2	1			
CEEX 05.12 22 09	34	15	14	6	4				11	6	4	2	1			
CEEX 05.12 36 08	58	26	24	10	7				11	5	4	2	1			
CEEX 05.14 14 09	18	8	8	3	2				12	6	4	2	1			
CEEX 05.14 20 09	28	12	12	5	3				12	6	4	2	1			
CEEX 05.16 16 09	26	12	9	5	3	2	2		16	8	6	3	2	1		
CEEX 05.16 26 09	50	24	17	10	5	3	3		16	8	6	3	2	1		
CEEX 05.16 36 09	72	36	24	15	7	5	4		16	8	6	3	2	1		
CEEX 05.16 56 09	104	58	40	24	12	8	6		16	8	6	3	2	1		
CEEX 05.18 18 10	30	15	11	6	3	2	2		20	9	8	3	2	2		
CEEX 05.18 28 10	52	26	18	11	5	4	3		22	10	8	4	2	2		
CEEX 05.23 10 11	15	8	6	3	2	1	1		45	18	17	8	5	3	2	2
CEEX 05.23 20 11	45	22	18	8	6	3	2	2	45	18	17	8	5	3	2	2
CEEX 05.23 20 18	90	42	33	18	10	6	5	4	81	36	33	16	9	6	5	4
CEEX 05.23 28 11	70	32	24	12	9	4	3	3	45	18	17	8	5	3	2	2
CEEX 05.23 33 11	84	42	30	15	11	5	4	4	45	18	17	8	5	3	2	2
CEEX 05.23 33 18	165	77	60	30	18	11	8	8	81	36	33	16	9	9	5	4
CEEX 05.23 40 11	103	50	39	20	14	6	5	5	45	18	17	8	5	3	2	2
CEEX 05.23 40 23	240	122	100	54	30	18	15	12	108	48	44	21	13	9	6	5
CEEX 05.23 60 11	150	72	54	28	20	10	8	6	43	18	17	8	4	3	2	2
CEEX 05.31 40 11	105	50	39	20	14	6	5	5	68	28	26	12	7	4	3	3
CEEX 05.31 40 14	147	70	55	28	17	12	7	6	95	43	32	18	10	7	4	3
CEEX 05.31 40 18	205	98	78	40	22	15	11	8	122	54	51	24	15	9	6	6
CEEX 05.31 40 23	246	126	100	54	30	18	15	12	162	72	68	33	20	12	9	8
CEEX 05.31 60 11	150	76	60	30	20	10	8	6	68	28	24	12	7	4	3	3
CEEX 05.31 60 18	270	140	108	56	32	22	16	12	122	54	48	24	15	9	6	6
CEEX 05.60 60 20	270	140	108	56	32	22	16	12	270	140	108	56	32	22	16	12

CEEx

TERMINALS

Maximum number of terminals on each box.

MODEL	SECTION (mm²)	TERMINALS														
		1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
CEEX 05.06 06 03	MAXIMUM QUANTITY OF TERMINALS	3	3													
CEEX 05.06 10 03		6	6													
CEEX 05.06 15 03		10	10													
CEEX 05.08 08 06		6	6	5												
CEEX 05.08 13 06		12	12	9												
CEEX 05.08 18 06		25	25	21												
CEEX 05.08 25 05		40	40	33												
CEEX 05.10 10 08		14	11	9	7											
CEEX 05.10 16 08		28	23	19	14											
CEEX 05.10 20 08		38	30	25	19											
CEEX 05.12 12 08		19	15	13	10	8	6									
CEEX 05.12 12 09		19	15	13	10	8	6									
CEEX 05.12 22 08		42	34	29	21	17	14									
CEEX 05.12 22 09		42	34	29	21	17	14									
CEEX 05.12 36 08		76	61	51	39	31	26									
CEEX 05.14 14 09		23	19	16	12	9	8	6								
CEEX 05.14 20 09		38	30	25	19	15	13	10								
CEEX 05.16 16 09		28	23	19	14	11	9	7	7							
CEEX 05.16 26 09		52	42	35	26	21	18	14	14							
CEEX 05.16 36 09		76	61	51	39	31	26	21	21							
CEEX 05.16 56 09		123	100	83	63	50	42	34	34							
CEEX 05.18 18 10		33	26	22	17	13	11	9	9							
CEEX 05.18 28 10		57	46	38	29	23	19	15	15							
CEEX 05.23 10 11		45	36	30	23											
CEEX 05.23 20 11		76	62	52	38	15	13	10	10							
CEEX 05.23 20 18		76	62	52	38	15	13	10	10	8						
CEEX 05.23 28 11		114	92	76	58	46	19	15	15							
CEEX 05.23 33 11		138	110	92	70	56	23	19	19							
CEEX 05.23 33 18		138	110	92	70	56	23	19	19	14						
CEEX 05.23 40 11		170	138	116	86	70	29	23	23							
CEEX 05.23 40 23		170	138	116	86	70	29	23	23	18						
CEEX 05.23 60 11		266	214	180	136	54	45	36	36							
CEEX 05.31 40 11		258	210	174	132	70	58	23	23							
CEEX 05.31 40 14		258	207	174	132	70	58	23	23	18	14	14				
CEEX 05.31 40 18		258	210	174	132	70	58	23	23	18	14	14				
CEEX 05.31 40 23		258	210	174	132	70	58	23	23	18	14	14				
CEEX 05.31 60 11		399	321	270	204	108	90	36	36							
CEEX 05.31 60 18		399	321	270	204	108	90	36	36	28	22	22				
CEEX 05.60 60 20		532	428	360	204	162	135	108	108	56	22	22	18	18	15	15

Note 1: The maximum current in the terminals varies according to the specified quantity

Note 2: For terminal configurations with different sections, please consult Tramontina.

CEEx

INCREASED SAFETY
JUNCTION BOXES - 521/4 AND 522/4 SERIES

PROTECTION: Ex e
ZONES: 1 and 2
GROUPS: IIC
TEMP. CLASS GASES AND VAPORS: T6
EPL: Ga – Gb
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7

CEEx 521/4

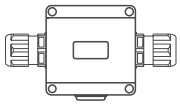
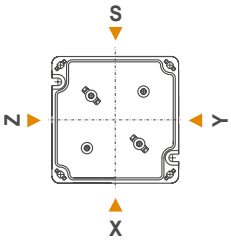
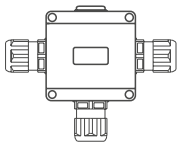
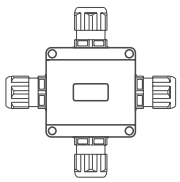
TECHNICAL SPECIFICATIONS

- Junction boxes with **Ex e** (increased safety) protection for installation in potentially explosive atmospheres.
- Made in **polyester** reinforced with **fiberglass**.
- **M20, M25,** or **M32** entries.
- Supplied with terminals.

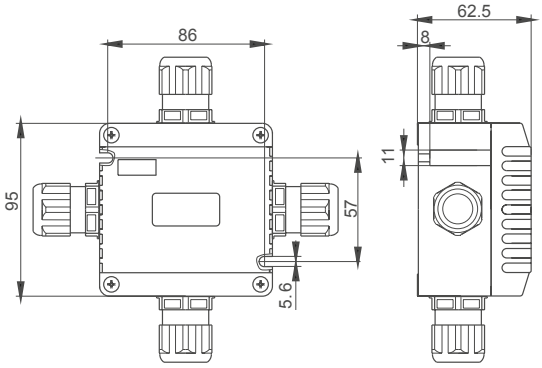
CEEx 522/4

CEEx

TECHNICAL INFORMATION

PRODUCT	LAYOUT	TYPES OF PROTECTION	QUANTITY CRIMPING RANGE	QUANTITY PLUGS	CODE
					CEEX 521 0000 4000
		Ex e	2 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521e/4-2120-A64
			2 x M25 / Φ 8-17 mm	1 x M25	CEEx 521e/4-2125-A64
		Ex i	2 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521i/4-2120-A64
			2 x M25 / Φ 8-17 mm	1 x M25	CEEx 521i/4-2125-A64
		Ex e	3 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521e/4-3120-A64
			3 x M25 / Φ 8-17 mm	1 x M25	CEEx 521e/4-3125-A64
		Ex i	3 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521i/4-3120-A64
			3 x M25 / Φ 8-17 mm	1 x M25	CEEx 521i/4-3125-A64
		Ex e	4 x M20 / Φ 5.5-13 mm		CEEx 521e/4-4020-A64
			4 x M25 / Φ 8-17 mm		CEEx 521e/4-4025-A64
		Ex i	4 x M20 / Φ 5.5-13 mm		CEEx 521i/4-4020-A64
			4 x M25 / Φ 8-17 mm		CEEx 521i/4-4025-A64

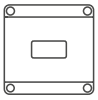
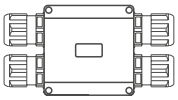
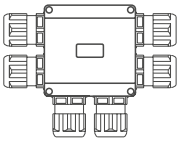
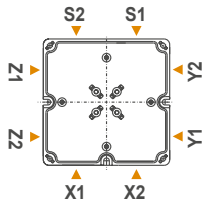
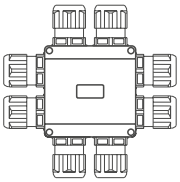
EXTERNAL DIMENSIONS:



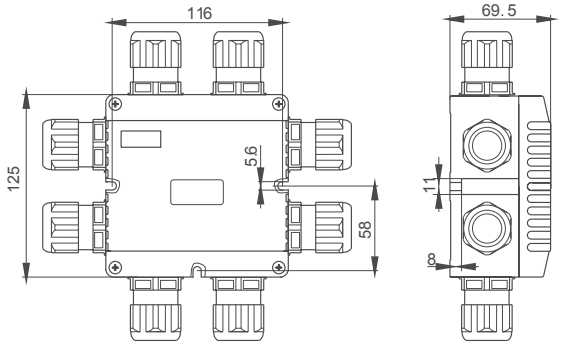
HOW TO REQUEST

CEEx 521 */4 - * - ***

- **Number of terminals**
- **Terminals section** 6:6 mm²
- **Pillartype terminal**
- **Cable crimp thread/plugs** 20:M20 / 25:M25
- **Quantity plugs**
- **Quantity cable crimp**
- **Type of protection e:** Ex e
- **Box model**

PRODUCT	LAYOUT	TYPES OF PROTECTION	QUANTITY CRIMPING RANGE	QUANTITY PLUGS	CODE
					CEEx 522 0000 4000
		Ex e	4 x M20 / Φ 5.5-13 mm	0	CEEx 522e/4-4020-A68
			4 x M25 / Φ 8-17 mm		CEEx 522e/4-4025-A68
			4 x M32 / Φ 12-21 mm		CEEx 522e/4-4032-A68
		Ex i	4 x M20 / Φ 5.5-13 mm		CEEx 522i/4-4020-A68
			4 x M25 / Φ 8-17 mm		CEEx 522i/4-4025-A68
			4 x M32 / Φ 12-21 mm		CEEx 522i/4-4032-A68
		Ex e	6 x M20 / Φ 5.5-13 mm	0	CEEx 522e/4-6020-A68
			6 x M25 / Φ 8-17 mm		CEEx 522e/4-6025-A68
			6 x M32 / Φ 12-21 mm		CEEx 522e/4-6032-A68
		Ex i	6 x M20 / Φ 5.5-13 mm		CEEx 522i/4-6020-A68
			6 x M25 / Φ 8-17 mm		CEEx 522i/4-6025-A68
			6 x M32 / Φ 12-21 mm		CEEx 522i/4-6032-A68
		Ex e	8 x M20 / Φ 5.5-1 3mm	0	CEEx 522e/4-8020-A68
			8 x M25 / Φ 8-17 mm		CEEx 522e/4-8025-A68
			8 x M32 / Φ 12-21 mm		CEEx 522e/4-8032-A68
		Ex i	8 x M20 / Φ 5.5-13 mm		CEEx 522i/4-8020-A68
			8 x M25 / Φ 8-17 mm		CEEx 522i/4-8025-A68
			8 x M32 / Φ 12-21 mm		CEEx 522i/4-8032-A68

EXTERNAL DIMENSIONS:



HOW TO REQUEST

CEEx 522 */4 - * - ***

- Box model
- Type of protection e: Ex e
- Quantity cable crimp
- Quantity plugs
- Cable crimp thread/plugs
  20:M20 / 25:M25 / 32:M32
- Pillartype terminal
- Terminals section
  6:6 mm2
- Number of terminals

CEEx

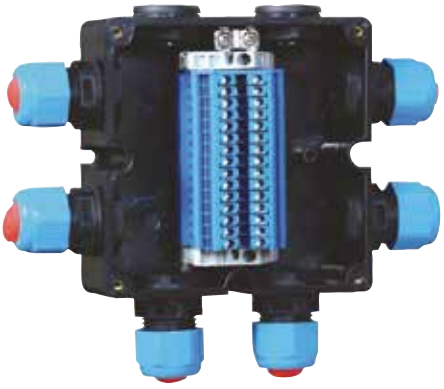
INCREASED SAFETY
JUNCTION BOXES - 521/3 AND 522/3 SERIES

PROTECTION: Ex e
ZONES: 1 and 2
GROUPS: IIC
TEMP. CLASS GASES AND VAPORS: T6 ou T5
EPL: Ga – Gb
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7

CEEx 521/3

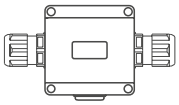
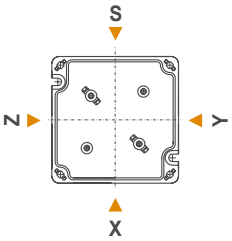
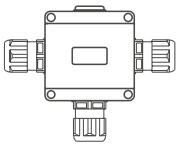
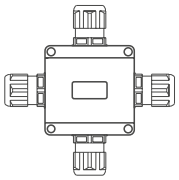
TECHNICAL SPECIFICATIONS

- Box with **Ex e** (increased safety) protection for installation in potentially explosive atmospheres.
- Made in **polyester** reinforced with **fiberglass**.
- **M20, M25, or M32** entries.
- Supplied with terminals.

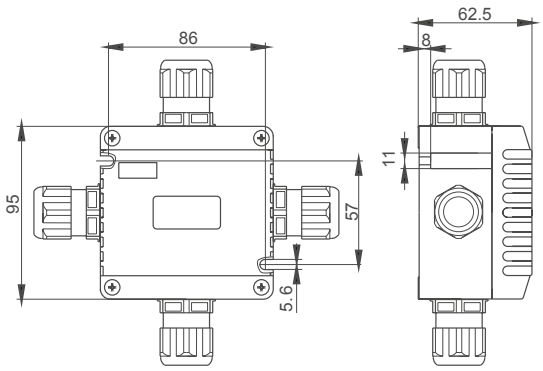


CEEx 522/3

TECHNICAL INFORMATION

PRODUCT	LAYOUT	TYPE OF PROTECTION	TERMINAL MODEL	TERMINAL SECTION	NUMBER OF TERMINALS	QUANTITY OF CABLE CRIMPS CRIMPING RANGE	QUANTITY PLUGS	CODE
								CEEx 521 0000 3000
		Ex e	C	2,5 mm²	4	2 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521e/3-2120-C24
						2 x M25 / Φ 8-17 mm	1 x M25	CEEx 521e/3-2125-C24
		Ex i				2 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521i/3-2120-C24
						2 x M25 / Φ 8-17 mm	1 x M25	CEEx 521i/3-2125-C24
		Ex e	C	2,5 mm²	4	3 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521e/3-3120-C24
						3 x M25 / Φ 8-17 mm	1 x M25	CEEx 521e/3-3125-C24
		Ex i				3 x M20 / Φ 5.5-13 mm	1 x M20	CEEx 521i/3-3120-C24
						3 x M25 / Φ 8-17 mm	1 x M25	CEEx 521i/3-3125-C24
		Ex e	C	2,5 mm²	4	4 x M20 / Φ 5.5-13 mm		CEEx 521e/3-4020-C24
						4 x M25 / Φ 8-17 mm		CEEx 521e/3-4025-C24
		Ex i				4 x M20 / Φ 5.5-13 mm		CEEx 521i/3-4020-C24
						4 x M25 / Φ 8-17 mm		CEEx 521i/3-4025-C24

EXTERNAL DIMENSIONS:

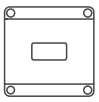
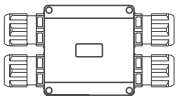
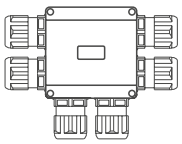
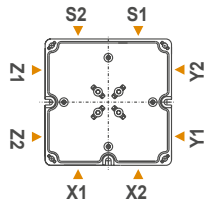
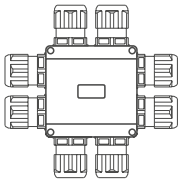


HOW TO REQUEST

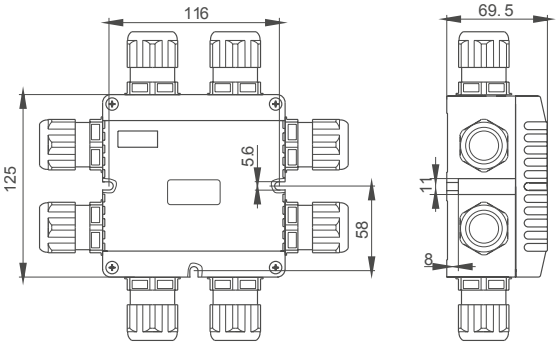
CEEx 521 */3 - * - ***

- **Box model**
- **Type of protection e:** Ex e
- **Quantity cable crimp**
- **Quantity plugs**
- **Cable crimp thread/plugs**
  20:M20 / 25:M25
- **Terminals**
  B: [1,5 mm²]
  C: Miniatura [2,5 ou 6 mm²]
- **Terminals section**
  1: 1,5 mm²
  2: 2,5 mm²
  6: 6 mm²
- **Number of terminals**

CEEx

PRODUCT	PRODUCT	TYPE OF PROTECTION	TERMINAL MODEL	TERMINAL SECTION	NUMBER OF TERMINALS	QUANTITY OF CABLE CRIMPS CRIMPING RANGE	CODE
							CEEx 522 0000 3000
		Ex e Ex i	C	2,5 mm²	8	4 x M20 / Φ 5.5-13 mm	CEEx 522e/3-4020-A28
						4 x M25 / Φ 8-17 mm	CEEx 522e/3-4025-A28
						4 x M32 / Φ 12-21 mm	CEEx 522e/3-4032-A28
						4 x M20 / Φ 5.5-13 mm	CEEx 522i/3-4020-A28
						4 x M25 / Φ 8-17 mm	CEEx 522i/3-4025-A28
						4 x M32 / Φ 12-21 mm	CEEx 522i/3-4032-A28
		Ex e Ex i	C	2,5 mm²	8	6 x M20 / Φ 5.5-13 mm	CEEx 522e/3-6020-A28
						6 x M25 / Φ 8-17 mm	CEEx 522e/3-6025-A28
						6 x M32 / Φ 12-21 mm	CEEx 522e/3-6032-A28
						6 x M20 / Φ 5.5-13 mm	CEEx 522i/3-6020-A28
						6 x M25 / Φ 8-17 mm	CEEx 522i/3-6025-A28
						6 x M32 / Φ 12-21 mm	CEEx 522i/3-6032-A28
		Ex e Ex i	C	2,5 mm²	8	8 x M20 / Φ 5.5-13 mm	CEEx 522e/3-8020-A28
						8 x M25 / Φ 8-17 mm	CEEx 522e/3-8025-A28
						8 x M32 / Φ 12-21 mm	CEEx 522e/3-8032-A28
						8 x M20 / Φ 5.5-13 mm	CEEx 522i/3-8020-A28
						8 x M25 / Φ 8-17 mm	CEEx 522i/3-8025-A28
						8 x M32 / Φ 12-21 mm	CEEx 522i/3-8032-A28

EXTERNAL DIMENSIONS:



HOW TO REQUEST

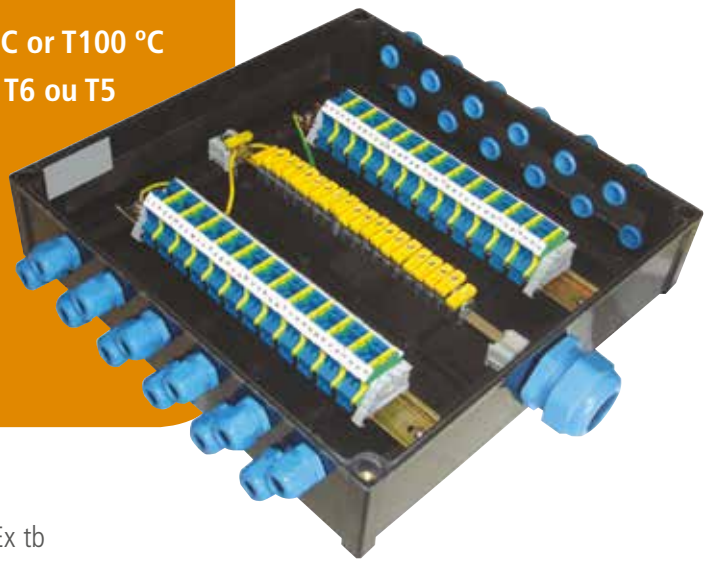
CEEx 522 */3 - * - ***

- **Box model**
- **Type of protection e:** Ex e / Ex tb
- **Quantity cable crimp**
- **Quantity plugs**
- **Cable crimp thread/plugs**
  20:M20 / 25:M25 / 32:M32
- **Terminals**
  B: [1,5 mm²]
  C: Miniatura [2,5 ou 6 mm²]
- **Terminals section**
  1: 1,5 mm²
  2: 2,5 mm²
  6: 6 mm²
- **Number of terminals**

PEEx

INCREASED SAFETY CONNECTION BOXES - F20 SERIES

PROTECTION: Ex e ,EX tb
ZONES: 1 and 2, 21 and 22
GROUPS: IIC, IIIC
CLASS COMBUSTIBLES DUST: T85 °C or T100 °C
TEMP. CLASS GASES AND VAPORS: T6 ou T5
EPL: Gb, Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31



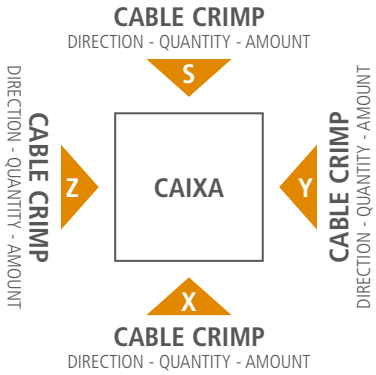
TECHNICAL SPECIFICATIONS

- Boxes with **Ex e** (increased safety) and Ex tb (combustible dust) for installation in potentially explosive atmospheres.
- Made in **polyester reinforced with fiberglass**.
- Supplied with terminals section **1.5 mm²** to **150 mm²**.

HOW TO REQUEST

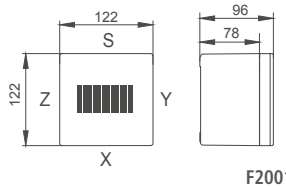
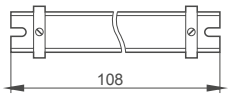
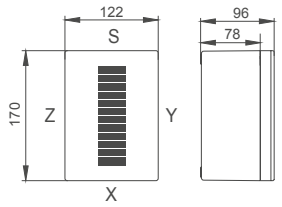
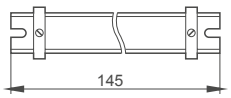
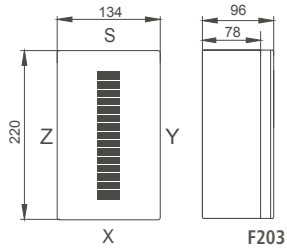
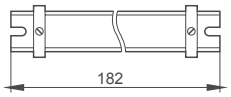
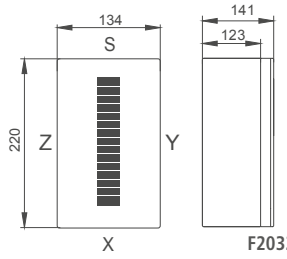
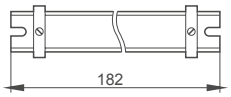
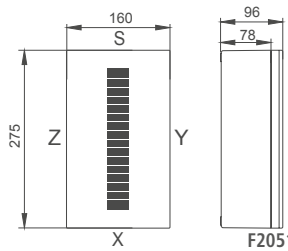
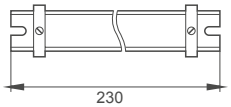
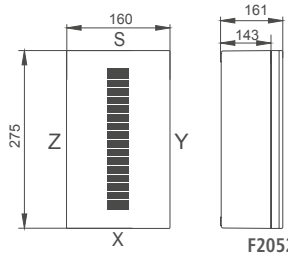
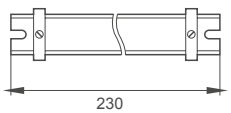
f2 **-* x * / S*-* / X*-*** / Z*-*** / Y*-*****

- Number of connectors
- Number of entries
- Placement of entries
  - S - top
  - X - bottom
  - Z - left side
  - Y - right side
- Terminal specifications
- Quantity terminals
- **Type of protection e:** Ex e / Ex tb
- Box code
- Box model

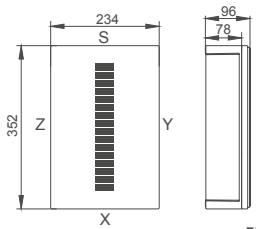
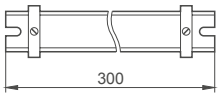
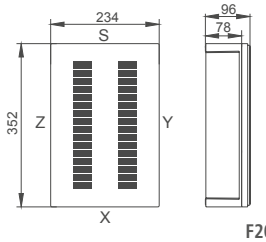
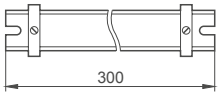
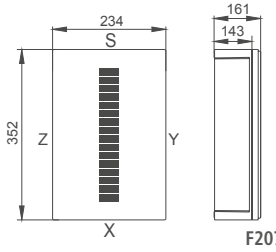
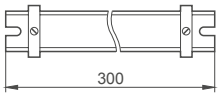
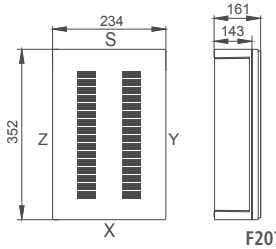
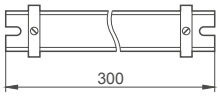
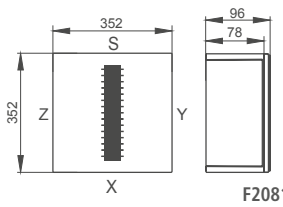
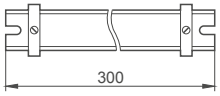
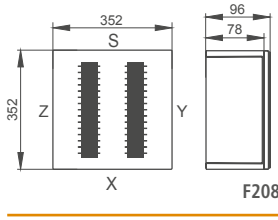
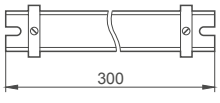


CEEx

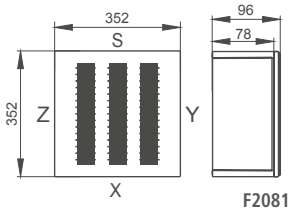
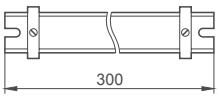
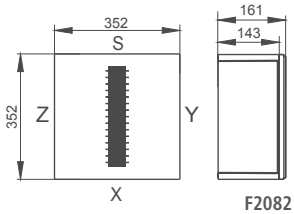
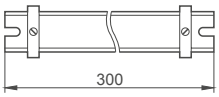
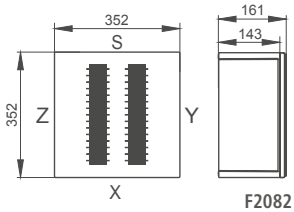
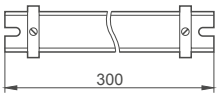
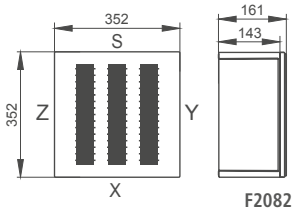
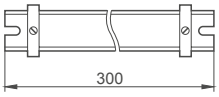
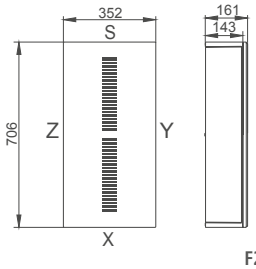
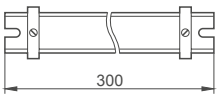
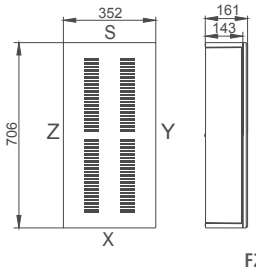
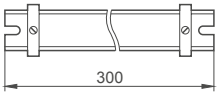
TECHNICAL INFORMATION

BOX MODEL	DIMENSIONS RAIL TS35X7.5	SPECIFICATION AND QUANTITY OF TERMINALS									
		2,5mm²	4mm²	6mm²	10mm²	16mm²	35mm²	50mm²	95mm²	150mm²	240mm²
 F2001		14	12	10							
 F2011		22	18	12	10	8					
 F2031		26	22	16	12	10	8				
 F2032		26	22	16	12	10	8				
 F2051		40	34	25	20	17	13				
 F2052		40	34	25	20	17	13				

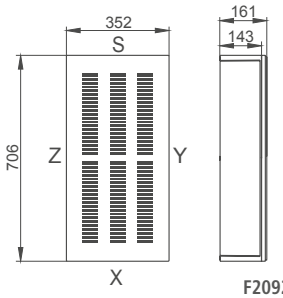
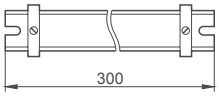
TECHNICAL INFORMATION

BOX MODEL	DIMENSIONS RAIL TS35X7.5	SPECIFICATION AND QUANTITY OF TERMINALS									
		2,5mm²	4mm²	6mm²	10mm²	16mm²	35mm²	50mm²	95mm²	150mm²	240mm²
 F2071		50	41	31	25	21	18				
 F2071		100	82								
 F2072		50	41	31	25	21	18				
 F2072		100	82								
 F2081		50	41	32	26	22	18				
 F2081		100	82	64	52	44					

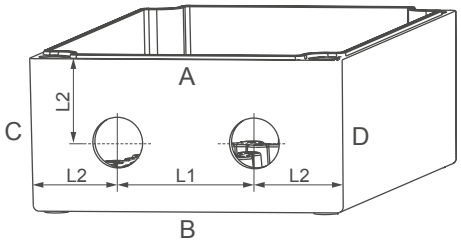
CEEx

BOX MODEL	DIMENSIONS RAIL TS35X7.5	SPECIFICATION AND QUANTITY OF TERMINALS									
		2,5mm²	4mm²	6mm²	10mm²	16mm²²	35mm²	50mm²	95mm²	150mm²	240mm²
 F2081		150	123								
 F2082		50	41	32	26	22	18	12	10	8	7
 F2082		100	82	64	52	44					
 F2082		150	123								
 F2092		100	82	64	52	44	36	24	20	16	14
 F2092		200	164	128	104	88					

TECHNICAL INFORMATION

BOX MODEL	DIMENSIONS RAIL TS35X7.5	SPECIFICATION AND QUANTITY OF TERMINALS									
		2,5mm²	4mm²	6mm²	10mm²	16mm²²	35mm²	50mm²	95mm²	150mm²	240mm²
 F2092		300	246								

MINIMUM DISTANCE BETWEEN L1 CENTERS							
L1 [mm]	M16	M20	M25	M32	M40	M50	M63
M16	24	27	29	33	39	45	51
M20	27	29	32	36	42	48	54
M25	29	32	34	38	44	50	56
M32	33	36	38	42	48	54	60
M40	39	42	44	48	53	60	66
M50	45	48	50	54	60	63	72
M63	51	54	54	60	66	72	77



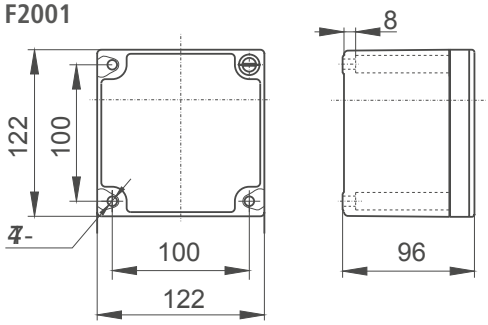
MINIMUM DISTANCE BETWEEN L2 CENTERS AND SIDES							
L2 [mm]	M16	M20	M25	M32	M40	M50	M63
A	13	16	18	22	28	34	40
B	18	21	23	27	33	39	45
C	36	37	41	45	51	57	63
D	36	37	41	45	51	57	63

Note: For boxes of models F207, F208, and F209, add 5 mm.

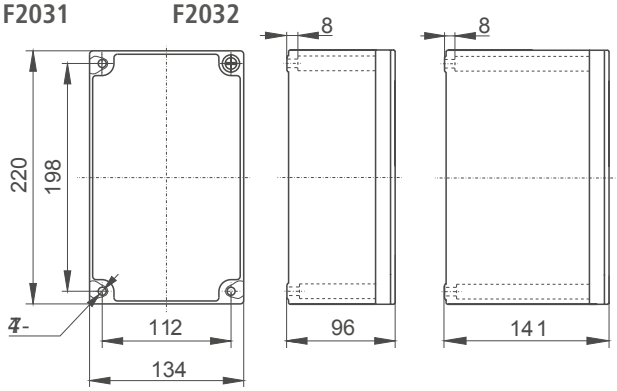
CEEx

EXTERNAL DIMENSIONS

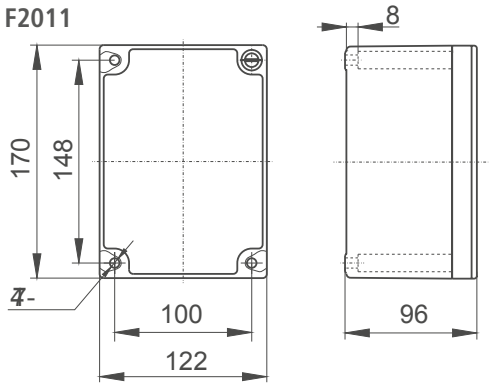
F2001



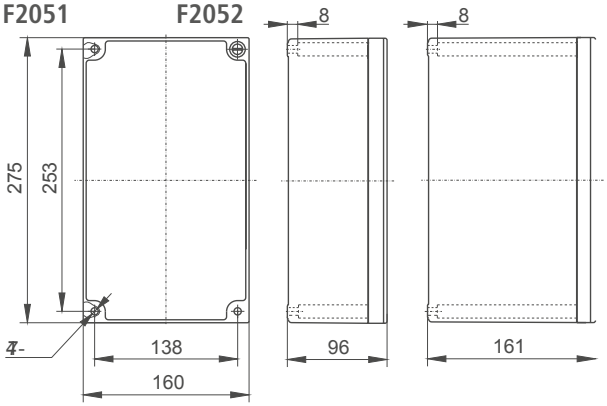
F2031 F2032

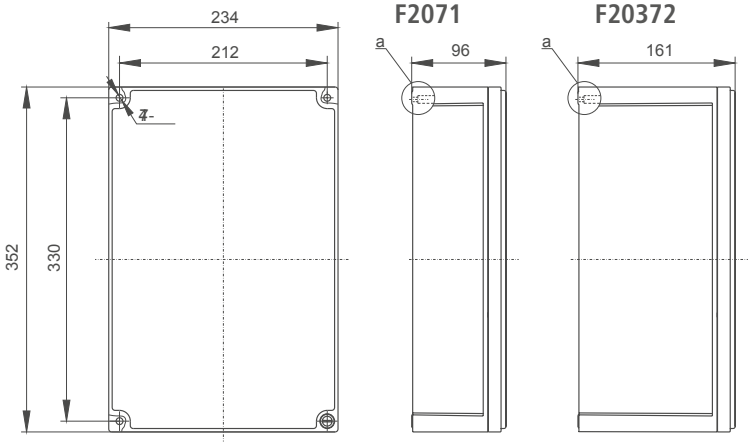


F2011



F2051 F2052

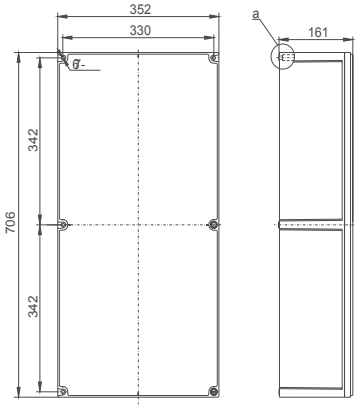


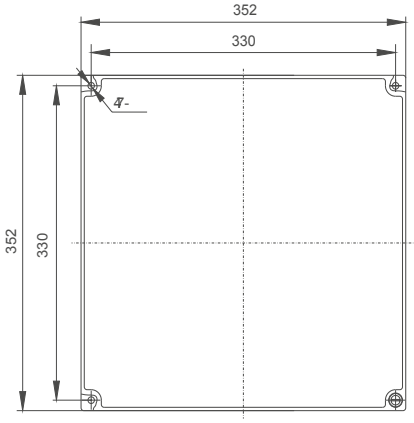


F2071

F20372

F2092





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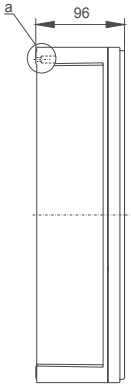
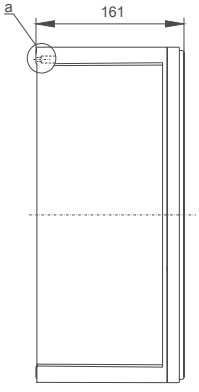


F2082



BTEx

CONTROL AND SIGNALING BUTTONS FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex e – Ex d e – Ex d e ia
ZONES: 1 and 2
GROUPS: IIC
TEMP. CLASS GASES AND VAPORS: T6
EPL: Gb
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7 | ABNT NBR IEC 60079-18

BTEx-240/1

BTEx-240/2

BTEx-240/3

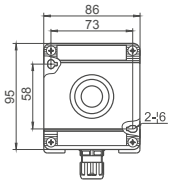
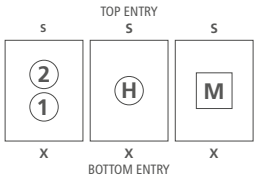
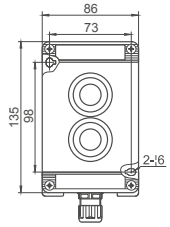
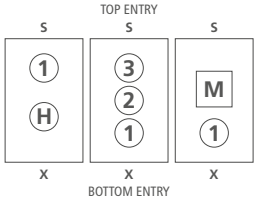
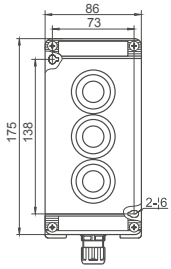
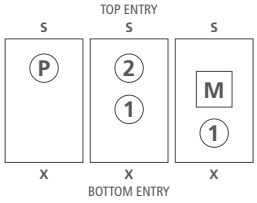
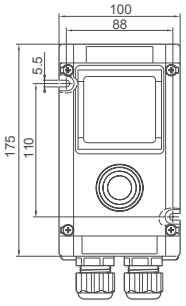
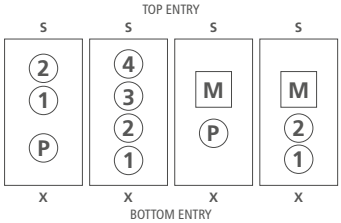
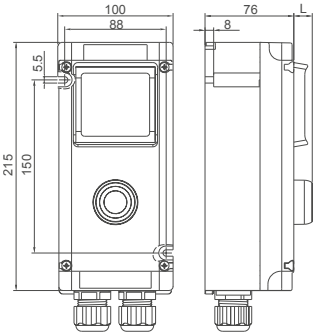
BTEx-240/5

BTEx-240/6

TECHNICAL SPECIFICATIONS

- Boxes with **Ex e** (increased safety) for installation in potentially explosive atmospheres.
- Made in **black polyamide**.
- Lid fastened with **stainless steel bolts**.
- Internal grounding terminal.
- Sealing unit.
- Top and bottom entries supplied with cable crimp **M20, M25, or M32**.

BTEx

MODEL	BOTTOM ENTRY (X) CODE	BOTTOM ENTRY (X) CABLE CRIMP	TOP ENTRY (S) CODE	TOP ENTRY (S) CABLE CRIMP	COMBINATIONS AND QUANTITIES	DIMENSIONS
BTEx 240/1	X-A02	1 x M20	S-A02	1 x M20		
	X-A03	1 x M25	S-A03	1 x M25		
BTEx 240/2	X-A02	1 x M20	S-A02	1 x M20		
	X-A03	1 x M25	S-A03	1 x M25		
BTEx 240/3	X-A02	1 x M20	S-A02	1 x M20		
	X-A03	1 x M25	S-A03	1 x M25		
BTEx 240/5	X-A03	1 x M25	S-A03	1 x M25		
	X-A04	1 x M32	S-A04	1 x M32		
	2X-A02	2 x M20	2S-A02	2 x M20		
	2X-A03	2 x M25	2S-A03	2 x M25		
BTEx 240/6	X-A03	1 x M25	S-A03	1 x M25		
	X-A04	1 x M32	S-A04	1 x M32		
	2X-A02	2 x M20	2S-A02	2 x M20		
	2X-A03	2 x M25	2S-A03	2 x M25		

Types of actuation: 2-pole actuation = (1) (2) (3) (4) (P)

4-pole actuation = (H)

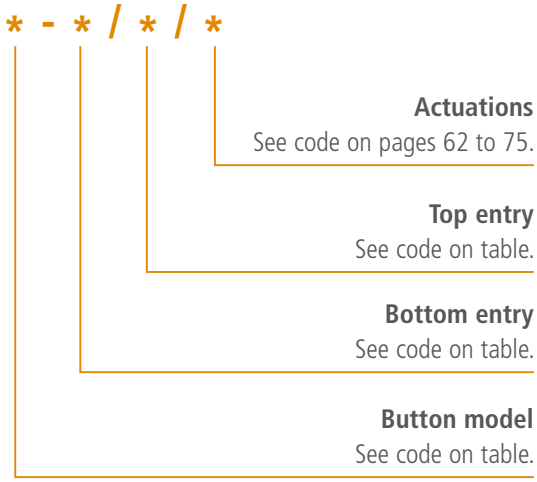
Measuring equipment (ammeter and voltmeter) = [M]

Cable crimp: M20: crimping range from Ø 5.5 to 13mm

M25: crimping range from Ø 8 to 17 mm

M32: crimping range from Ø 12 to 21 mm

HOW TO REQUEST



ACTUATION	L (mm)
Single push button 1.5	15,5
Double push button 1.5	15,5
Emergency push button 40.5	40,5
Commutator 31	31
Pilot Light 23,5	23,5
Potentiometer 31	31
Cap (ammeter and voltmeter) 12	12
Single push button with pilot light 17.5	17,5
Emergency push button with key 28	28
Push button with key 24	24

- **Example 1:** Control station with 1 red push button 1NA+1NF with "STOP" engraving, supplied with 1 M20 cable crimp in the bottom entry.

  Order:
  BTEx-240/1 - X-A02 / ACEx 201 P1 60 24

- **Example 2:** Control station with 1 green 220V pilot light, 1 220V red pilot light, and 1 emergency push button 1NA+1NF, supplied with 1 M25 cable crimp in the top entry and 1 M25 cable crimp in the bottom entry.

  Order:
  BTEx-240/3 - X-A03 - S-A03 / ACEx 202 LG 601 ACEx 202 LR 601 / ACEx 201 P3 60

ACEx

SIGNALING AND CONTROL ACTUATORS FOR EXPLOSIVE ATMOSPHERES - 201, 202, 203, AND 212 SERIES

PROTECTION: Ex d e
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7

ACEx 201

TECHNICAL SPECIFICATIONS

- Actuators made in **polyamides**.
- For installation in control stations.

ACEx 202

ACEx 203

ACEx 212

ACEx 201

VOLTAGE	CATEGORY OF USE	CURRENT	TERMINALS	PRODUCT LIFE
250V	AC12	16A	2 x 2,5 mm²	100.000 maneuvers
250V	AC15	10A		
110V	DC13	0,5A		
24V	DC13	1A		

MODEL	ASSEMBLY	CODE	CONTACT		
Single push button	For control station (rail TS35)	**ACEx 201 P1 60 _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P1 61 _	11 21 / 12 22	2NF	
		ACEx 201 P1 62 _	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 P1 70 _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P1 71 _	11 21 / 12 22	2NF	
		ACEx 201 P1 72 _	13 23 / 14 24	2NA	
Double push button	For control station (rail TS35)	**ACEx 201 P2 60 _ / _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P2 61 _ / _	11 21 / 12 22	2NF	
		ACEx 201 P2 62 _ / _	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 P2 70 _ / _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P2 71 _ / _	11 21 / 12 22	2NF	
		ACEx 201 P2 72 _ / _	13 23 / 14 24	2NA	

LABEL CODES	ENGRAVINGS	COLOR	ENGRAVING COLOR
01	WHITE	Green	---
02	I	Green	White
03	ON	Green	White
04	START	Green	White
21	WHITE	Red	---
22	O	Red	White
23	OFF	Red	White
24	STOP	Red	White
41	WHITE	White	---
42	II	White	Black
43	↑	White	Black
44	START	White	Black
45	STOP	White	Red
46	FW	White	Black
47	BW	White	Black
48	STOP	White	Red
49	↑↑	White	Black
61	WHITE	Yellow	---
62	II	Yellow	White
81	WHITE	Black	---

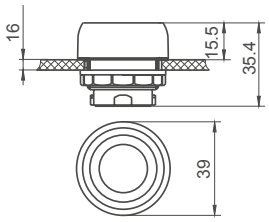
ACEx

MODEL	ASSEMBLY	CODE	CONTACT		
Emergency push button	For control station (rail TS35)	**ACEx 201 P3 60**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P3 61	11 21 / 12 22	2NF	
		ACEx 201 P3 62	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 P3 70**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P3 71	11 21 / 12 22	2NF	
		ACEx 201 P3 72	13 23 / 14 24	2NA	
Pulsador Cogumelo de Emergência	For control station (rail TS35)	**ACEx 201 P4 60 _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P4 61 _	11 21 / 12 22	2NF	
		ACEx 201 P4 62 _	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 P4 70 _**	11 23 / 12 24	1NF/1NA	
		ACEx 201 P4 71 _	11 21 / 12 22	2NF	
		ACEx 201 P4 72 _	13 23 / 14 24	2NA	
Pulsador de Emergência com chave	For control station (rail TS35)	**ACEx 201 Y0 60**	11 23 / 12 24	1NF/1NA	
		ACEx 201 Y0 61	11 21 / 12 22	2NF	
		ACEx 201 Y0 62	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 Y0 70**	11 23 / 12 24	1NF/1NA	
		ACEx 201 Y0 71	11 21 / 12 22	2NF	
		ACEx 201 Y0 72	13 23 / 14 24	2NA	
Push button with key	For control station (rail TS35)	**ACEx 201 Y1 60**	11 23 / 12 24	1NF/1NA	
		ACEx 201 Y1 61	11 21 / 12 22	2NF	
		ACEx 201 Y1 62	13 23 / 14 24	2NA	
	For control panel	**ACEx 201 Y1 70**	11 23 / 12 24	1NF/1NA	
		ACEx 201 Y1 71	11 21 / 12 22	2NF	
		ACEx 201 Y1 72	13 23 / 14 24	2NA	

For emergency push button model ACEx 201 P4, define color (G = green / R = red / B = black).

EXTERNAL DIMENSIONS

P1



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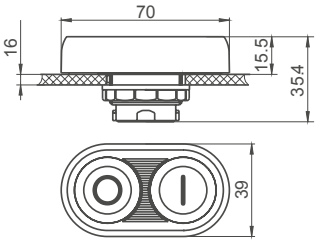

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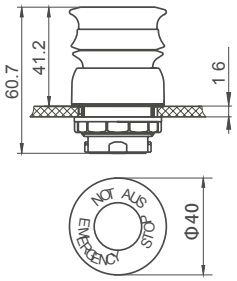

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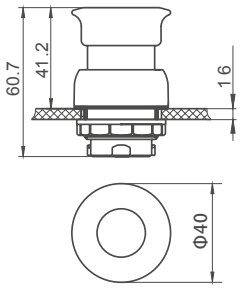
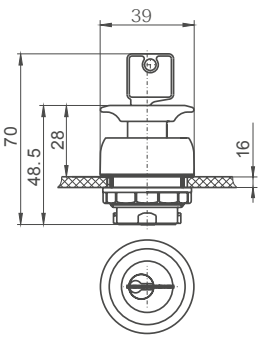
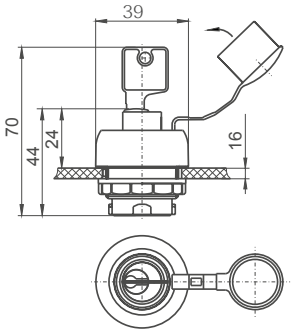


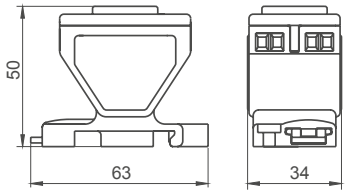
Y0



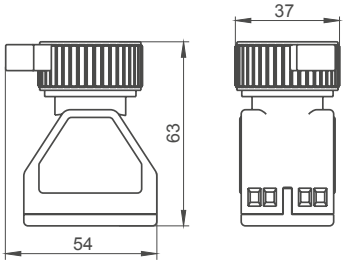
Y1



ACEX 201 FOR CONTROL STATION



ACEX 201 FOR CONTROL PANEL



ACEx

MODEL	LABEL	CODE	ELECTRICAL DIAGRAM
2-pole commutator	0 I II	ACEx 201 _ 4 _ 0 03	
	I 0 II	ACEx 201 _ 4 _ 2 04	
	I 0 II	ACEx 201 _ 5 _ 2 04	
	0 I II	ACEx 201 _ 5 _ 0 03	
	0 I	ACEx 201 _ 6 _ 2 01	
	I II	ACEx 201 _ 6 _ 0 02	
	0 • II	ACEx 201 _ 8 _ 0 05	

For control station (rail TS35)

For control panel

Commutator
- K: small (ø39 mm)
- S: large (ø60 mm)

Assembly
- 6: control station (rail TS35)
- 7: control panel

CODE LABELS	ENGRAVINGS	COLOR	ENGRAVING COLOR
01	0 I	BLACK	WHITE
02	I II	BLACK	WHITE
03	0 I II	BLACK	WHITE
04	I 0 II	BLACK	WHITE
05	0 • II	BLACK	WHITE

Small commutator (K)

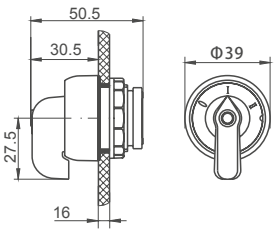
Large commutator (S)

Label model

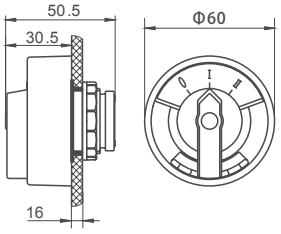
Label model

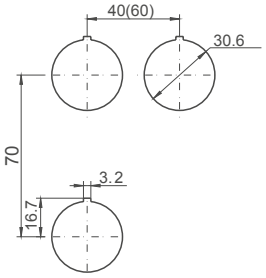
EXTERNAL DIMENSIONS

K

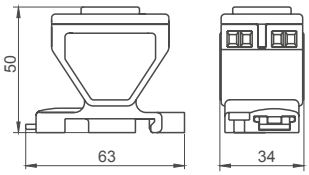


S

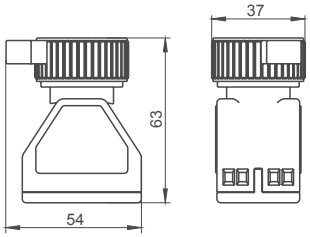


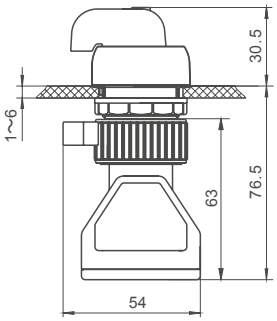


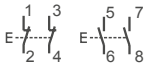
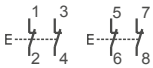
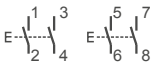
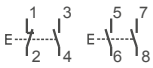
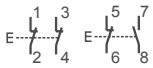
ACEx 201 FOR CONTROL STATION



ACEx 201 FOR CONTROL PANEL





MODEL	CODE	CONTACT	
4-pole actuator	ACEx 201 _ _ 50 _		2NF/2NA
	ACEx 201 _ _ 51 _		4NF
	ACEx 201 _ _ 52 _		4NA
	ACEx 201 _ _ 53 _		1NF/3NA
	ACEx 201 _ _ 54 _		3NF/1NA

For control stations [rail TS35)]

For control panel

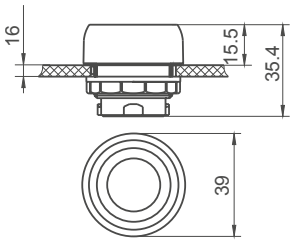
Assembly
- **6: control station (rail TS35)**
- **7: control panel**

Label: see code on page 63.

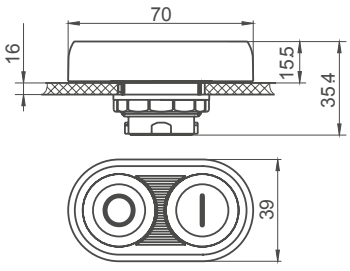
CODE	P1	P2	P3	P4	Y0	Y1
	 Single push button	 Double push button	 Emergency push button	 Mushroom emergency push button	 Emergency push button with key	 Push button with key

EXTERNAL DIMENSIONS

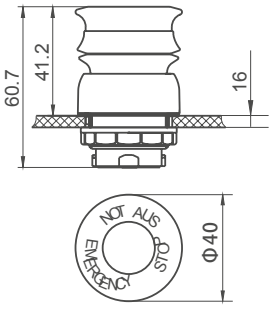
P1



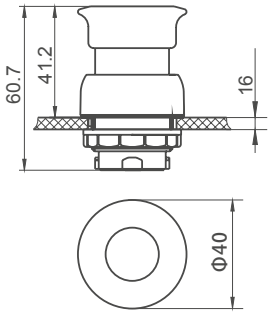
P2



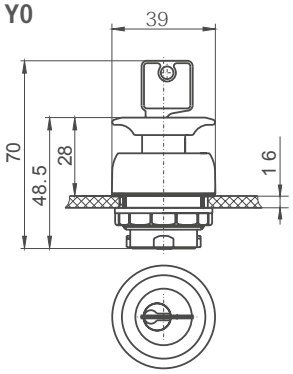
P3



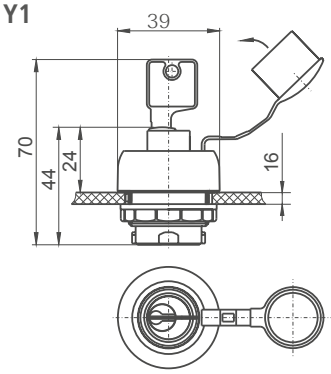
P4



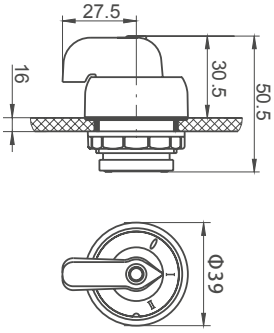
Y0



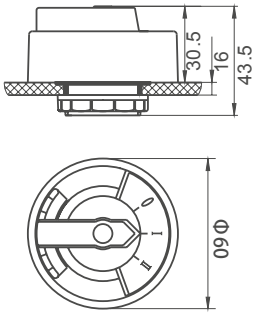
Y1



K



S



ACEx

MODEL	LABEL	CODE	CONTACT
Large 4-pole commutator	I II	ACEx 201 S6 _ 50 02	
	0 I	ACEx 201 S6 _ 52 01	
	0 I	ACEx 201 S6 _ 54 01	
	I 0 II	ACEx 201 S4 _ 52 04	
	I 0 II	ACEx 201 S5 _ 52 04	
	I 0 II	ACEx 201 S8 _ 52 04	
	0 I II	ACEx 201 S4 _ 50 03	
	0 I II	ACEX 201 S5 _ 50 03	
	0 • II	ACEx 201 S8 _ 50 05	

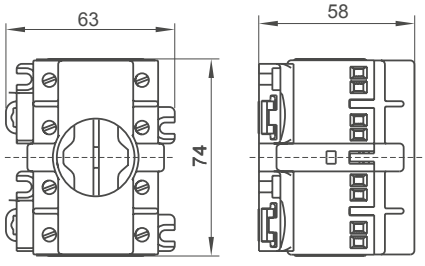
For control station (rail TS35)

For control panel

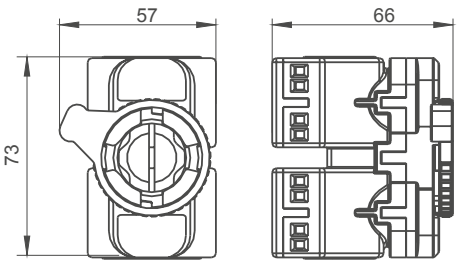
Assembly
- 6: control station (rail TS35)
- 7: control panel

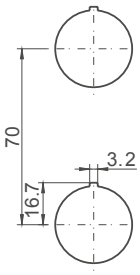
EXTERNAL DIMENSIONS

FOR CONTROL STATION



FOR CONTROL PANEL





MODEL	LABEL	CODE	CONTACT
Large 4-pole commutator	0 I	ACEx 201 H _ 0101	
	0 I	ACEx 201 H _ 0201	
	0 I	ACEx 201 H _ 0301	
	0 I	ACEx 201 H _ 0401	
	I II III IV	ACEx 201 H _ 0504	
	I 0 II	ACEx 201 H _ 0603	
	0 I II	ACEx 201 H _ 0702	
	0 I II	ACEx 201 H _ 0802	
	0 • II	ACEx 201 H _ 0905	
	I 0 II	ACEx 201 H _ 1003	
	0 I II	ACEx 201 H _ 1103	
	I II III IV	ACEx 201 H _ 1204	
	I 0 II	ACEx 201 H _1303	

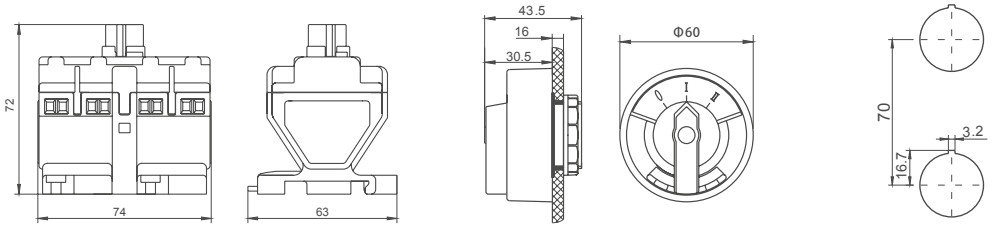
For control station (rail TS35)

For control panel

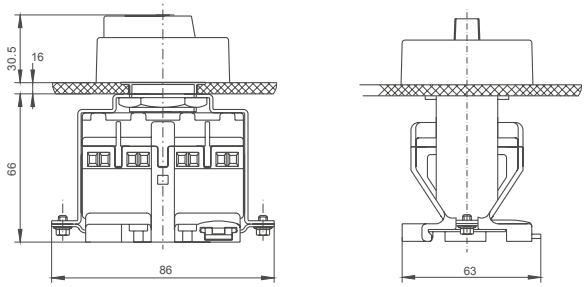
Assembly
- 6: control station (rail TS35)
- 7: control panel

EXTERNAL DIMENSIONS

FOR CONTROL STATIONS



FOR CONTROL PANEL



ACEx

ACEx 202

VOLTAGE	TYPE OF LIGHT	CONSUMPTION	TERMINALS	PRODUCT LIFE
20-250V AC/DC 250V-400V AC	LED	Pmax<1W	2 x 2,5 mm²	100.000 hours

MODEL	CODE	VOLTAGE	COLOR
Pilot Light	ACEx 202 VM _ 1	12-250V AC/DC	Red
	ACEx 202 VD _ 1		Green
	ACEx 202 AM _ 1		Yellow
	ACEx 202 AZ _ 1		Blue
	ACEx202 BR _ 1		White
	ACEx 202 VM _ 2	250-400V AC	Red
	ACEx 202 VD _ 2		Green
	ACEx 202 AM _ 2		Yellow
	ACEx 202 AZ _ 2		Blue
	ACEx 202 BR _ 2		White

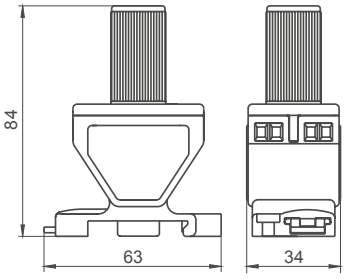
For control station (rail TS35)

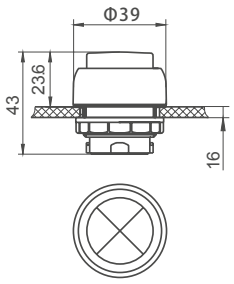
For control panel

Assembly
- 6: control station (rail TS35)
- 7: control panel

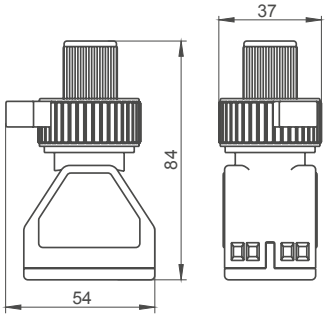
EXTERNAL DIMENSIONS

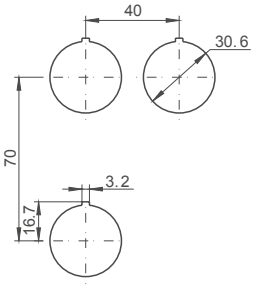
FOR CONTROL STATION





FOR CONTROL PANEL





ACEx 203

VOLTAGE	POWER
200V DC or power, whichever is lower.	0,1 W

MODEL	CODE	RESISTANCE
Potentiometer	**ACEx 203 DW _ 01**	100
	ACEx 203 DW _ 02	200
	ACEx 203 DW _ 03	500
	ACEx 203 DW _ 04	1000
	ACEx 203 DW _ 05	2000
	ACEx 203 DW _ 06	5000
	ACEx 203 DW _ 07	10000
	ACEx 203 DW _ 08	20000
	ACEx 203 DW _ 09	50000
	ACEx 203 DW _ 10	100000
	ACEx 203 DW _ 11	200000
	ACEx 203 DW _ 12	500000
	ACEx 203 DW _ 13	1000000
	ACEx 203 DW _ 14	2000000

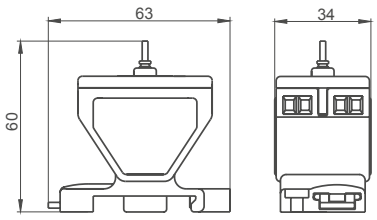
For control station (rail TS35)

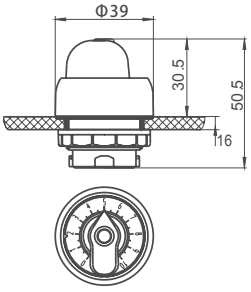
For control panel

Assembly
- **6: control station (rail TS35)**
- **7: control panel**

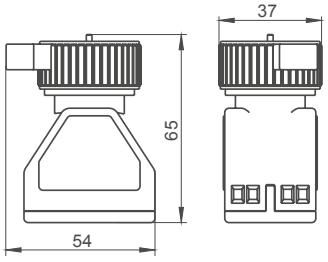
EXTERNAL DIMENSIONS

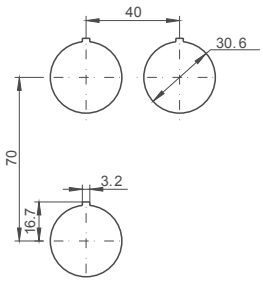
FOR CONTROL STATIONS





FOR CONTROL PANEL

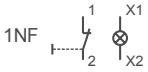
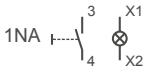




ACEx

ACEx 212

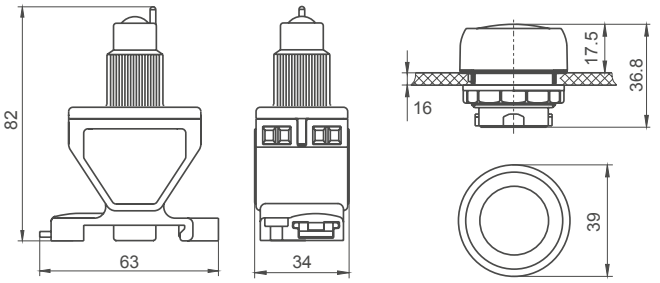
TERMINALS	PUSH BUTTON	PILOT LIGHT
2 x 2,5 mm²	**Nominal current:** 10A **Voltage:** 250V / 24V **Category of use:**AC15 / DC13 **Operation current:** 6A / 1A **Lifespan:** 300.000 maneuvers	**Type of light:** LED **Consumption:** Pmax < 1W **Voltage:** 12V - 250 V AC/DC **AC/DC Lifespan:** 100.000 hours

MODEL	CODE	VOLTAGE	COLOR	
Single push button with pilot light	**ACEx 212 VM _ NF**	1NF  12-250V AC/DC	Red	 For control station (rail TS35)
	ACEx 212 VD _ NF		Green	
	ACEx 212 AM _ NF		Yellow	
	AACEx 212 AZ _ NF		Blue	
	ACEx 212 BR _ NF		White	
	ACEx 212 VM _ NA	1NA  12-250V AC/DC	Red	 For control panel
	ACEx 212 VD _ NA		Green	
	ACEx 212 AM _ NA		Yellow	
	ACEx 212 AZ _ NA		Blue	
	ACEx 212 BR _ NA		White	

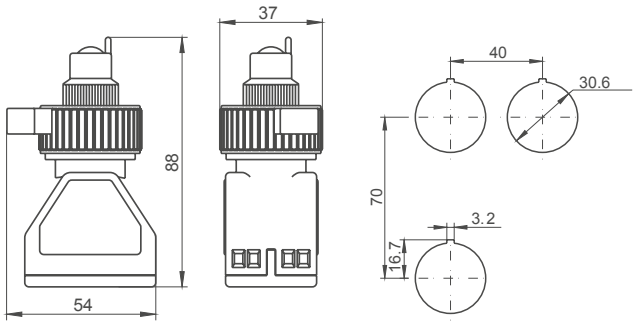
Assembly
- **6: control station (rail TS35)**
- **7: control panel**

EXTERNAL DIMENSIONS

FOR CONTROL STATION



FOR CONTROL PANEL



ACEx

ACEX 205 - AMPMETER AND VOLTMETER FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex e mb [for ampmeters in the "mA" scale and voltmeters]
Ex e [for ampmeters in the "A" scale]
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-18

Ampmeter

TECHNICAL SPECIFICATIONS

- Made in **polyamide** with glass display.
- For installation in control stations or panels.

Voltmeter

ACEx

MODELO	MODES OF MEASURING	OVERLOAD SCALE	CODE	MEASUREMENT RANGE	IMAGE
Ampmeter	Direct measurement	2	**ACEx 205 M _ DA 1**	0-1/2A	
			ACEx 205 M _ DA 5	0-5/10A	
			ACEx 205 M _ DA 10	0-1/20A	
	For current transformer	2	**ACEx 205 M _ DA WA 01/ _ - 2**	0-1/2A	 For control station (rail TS35)
			ACEx 205 M _ DA WA 2.5/ _ - 2	0-2,5/5A	
			ACEx 205 M _ DA WA 5/ _ - 2	0-5/10A	
			ACEx 205 M _ DA WA 15/ _ - 2	0-15/30A	
			ACEx 205 M _ DA WA 25/ _ - 2	0-25/50A	
			ACEx 205 M _ DA WA 40/ _ - 2	0-40/80A	
			ACEx 205 M _ DA WA 50/ _ - 2	0-50/100A	
			ACEx 205 M _ DA WA 60/ _ - 2	0-60/120A	
			ACEx 205 M _ DA WA 75/ _ - 2	0-75/150A	
			ACEx 205 M _ DA WA 100/ _ - 2	0-100/200A	
			ACEx 205 M _ DA WA 150/ _ - 2	0-150/300A	
			ACEx 205 M _ DA WA 200/ _ - 2	0-200/400A	
			ACEx 205 M _ DA WA 250/ _ - 2	0-250/500A	
			ACEx 205 M _ DA WA 300/ _ - 2	0-300/600A	
			ACEx 205 M _ DA WA 400/ _ - 2	0-400/800A	
			ACEx 205 M _ DA WA 500/ _ - 2	0-500/1000A	
			ACEx 205 M _ DA WA 600/ _ - 2	0-600/1200A	
	For current transformers	5	**ACEx 205 M _ DA WA 01/ _ - 5**	0-1/5A	 For control panel
			ACEx 205 M _ DA WA 2.5/ _ - 5	0-2,5/12,5A	
			ACEx 205 M _ DA WA 5/ _ - 5	0-5/25A	
			ACEx 205 M _ DA WA 15/ _ - 5	0-15/75A	
			ACEx 205 M _ DA WA 25/ _ - 5	0-25/125A	
			ACEx 205 M _ DA WA 40/ _ - 5	0-40/200A	
			ACEx 205 M _ DA WA 50/ _ -5	0-50/250A	
			ACEx 205 M _ DA WA 60/ _ - 5	0-60/300A	
			ACEx 205 M _ DA WA 75/ _ - 5	0-75/375A	
			ACEx 205 M _ DA WA 100/ _ - 5	0-100/500A	
			ACEx 205 M _ DA WA 150/ _ - 5	0-100/750A	
			ACEx 205 M _ DA WA 200/ _ - 5	0-200/1000A	
			ACEx 205 M _ DA WA 250/ _ - 5	0-250/1250A	
			ACEx 205 M _ DA WA 300/ _ - 5	0-300/1500A	
			ACEx 205 M _ DA WA 400/ _ - 5	0-400/2000A	
			ACEx 205 M _ DA WA 500/ _ - 5	0-500/2500A	
			ACEx 205 M _ DA WA 600/ _ - 5	0-600/3000A	

6: control station (rail TS35)
7: control panel
Assembly

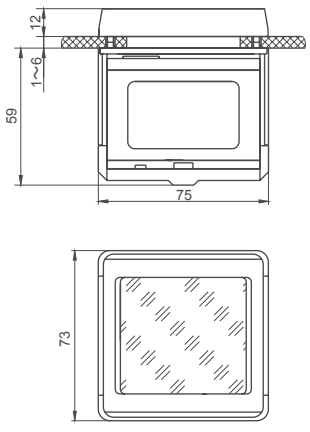
Connect to secondary of current transformer
5: 5A
1: 1A

MODEL	CODE	SPECIFICATION (AC)	IMAGE
Ampmeter	**ACEx 205 M _ mA 11**	0-20/40mA	 For control station (rail TS35)
	ACEx 205 M _ mA 12	4-20/40mA	
Voltmeter	**ACEx 205 M _ V 25**	0-25V	
	ACEx 205 M _ V 40	0-40V	
	ACEx 205 M _ V 100	0-100V	 For control panel
	ACEx 205 M _ V 150	0-150V	
	ACEx 205 M _ V 250	0-250V	
	ACEx 205 M _ V 500	0-500V	

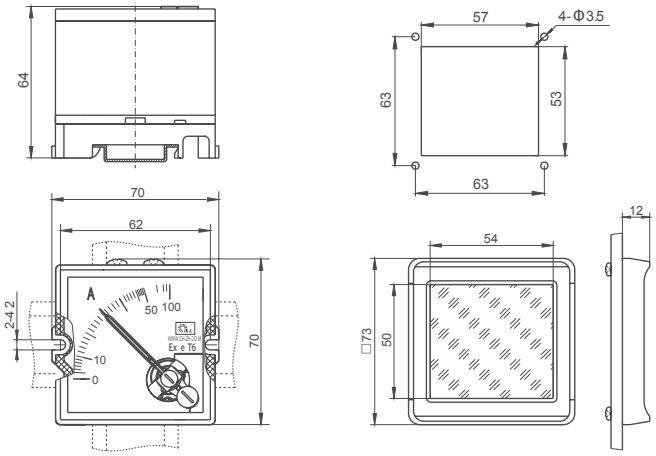
Assembly
- **6: control station (rail TS35)**
- **7: control panel**

EXTERNAL DIMENSIONS

FOR CONTROL PANEL



FOR CONTROL STATION



ACEx

ACCESSORIES REPLACEMENT

DESCRIPTION			CODE	DIRECTION OF POINT	IMAGE
Single push button front head (with tag included)			P1 _		P1
Double push button front head (with tag included)			P2 _		
Emergency push button front head (with tag included)			P3		P2
Mushroom emergency push button front head (with tag included)			P4 _		
Emergency push button with key front head			Y02		P3
Push button with key front head			Y12		
Commutator front head	**0** Automatic return to the center **II** Automatic return to the center		K41 _ S41 _		P4
			K42 _ S42 _		Y0
	0 With lock **II** Automatic return to the center		K51 _ S51 _		
			K52 _ S52 _		Y1
	0 + I With lock		K61 _ S61 _		
			K62 _ S62 _		K _
	0 with lock **I** automatic return to the center		K81 _ S81 _		S _ H _
			K82 _ S82 _		
4-pole commutator front head			H11 _		L _
			H12 _		
Pilot light front head	Red Green Yellow Blue White		LR LG LY LB LW		P _
Push button with pilot light front head	Red Green Yellow Blue White		PR PG PY PB PW		DW1
Potentiometer front head			DW1		B1
			DW2		
Plug (to cover control panel entries)			B1		EXM
Cap (protective window)			EXM		

Note: See labels code on page 63.

ACEx 201 - Switch module

CONTACT	CODE	IMAGE
1NF / 1NA	ACEx 201- _ 0	
2NF	ACEx 201- _ 1	
2NA	ACEx 201- _ 2	

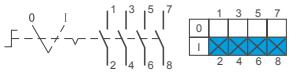
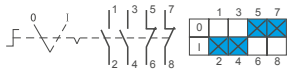
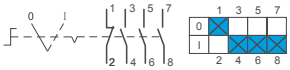
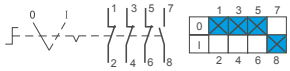
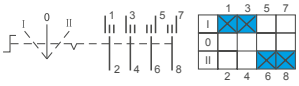
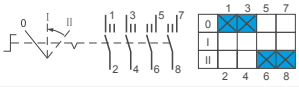
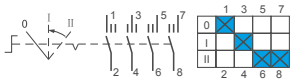
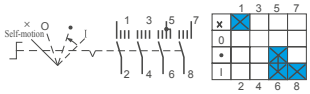
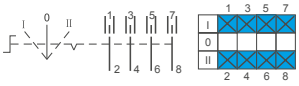
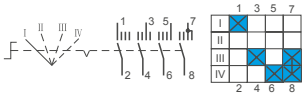
ACEx 201 - 4-pole switch module

6: control station
7: control panel

CONTACT	CODE	IMAGE
2NF / 2NA	ACEx 201- _ 50	
4NF	ACEx 201- _ 51	
4NA	ACEx 201- _ 52	
1NF / 3NA	ACEx 201- _ 53	
3NF / 1NA	ACEx 201- _ 54	

ACEx 201 - Module

6: control station
7: control panel

ELECTRIC DIAGRAM	CODE	IMAGE
	ACEx 201 - H _ 01	
	ACEx 201 - H _ 02	
	ACEx 201 - H _ 03	
	ACEx 201 - H _ 04	
	ACEx 201 - H _ 05	
	ACEx 201 - H _ 06	
	ACEx 201 - H _ 07	
	ACEx 201 - H _ 08	
	ACEx 201 - H _ 09	
	ACEx 201 - H _ 10	
	ACEx 201 - H _ 11	
	ACEx 201 - H _ 12	
	ACEx 201 - H _ 13	

ACEx

ACEx 202 - Pilot light module

VOLTAGE	CODE	COLOR	IMAGE
20V - 250V AC/DC	**ACEx 202 - _ 01**	White	
250V - 400V AC	**ACEx 202 - _ 02**		

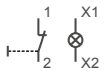
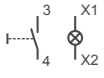
6: control station
7: control panel

ACEx 203 - Potentiometer module

RESISTANCE	CODE	IMAGE
100 Ω	**ACEx 203 - _ 01**	
200 Ω	**ACEx 203 - _ 02**	
500 Ω	**ACEx 203 - _ 03**	
1000 Ω	**ACEx 203 - _ 04**	
2000 Ω	**ACEx 203 - _ 05**	
5000 Ω	**ACEx 203 - _ 06**	
10000 Ω	**ACEx 203 - _ 07**	
20000 Ω	**ACEx 203 - _ 08**	
50000 Ω	**ACEx 203 - _ 09**	
100000 Ω	**ACEx 203 - _ 10**	
200000 Ω	**ACEx 203 - _ 11**	
500000 Ω	**ACEx 203 - _ 12**	
1000000 Ω	**ACEx 203 - _ 13**	
2000000 Ω	**ACEx 203 - _ 14**	

6: control station
7: control panel

ACEx 212 - Push button with pilot light

VOLTAGE	CODE	COLOR	IMAGE
1NF  12V - 250V AC/DC	**ACEx 212 - _ 301**	White	
1NA  200V - 400V AC	**ACEx 212 - _ 401**		

6: control station
7: control panel

ACEx 205 - Ampmeter module

MEASUREMENT MODE	SCALE OVERLOAD	MEASURING RANGE	CODE	IMAGE
Direct measurement	2	0-1 / 2A	**ACEx 205 - DA 1**	
		0-4 / 8A	**ACEx 205 - DA 4**	
		0-5 / 10A	**ACEx 205 - DA 5**	
		0-10 / 20A	**ACEx 205 - DA 10**	
		0-15 / 30A	**ACEx 205 - DA 15**	
For current transformer	2	0-1 / 2A	**ACEx 205 - WA 1 / _ - 2**	
		0-2.5 / 8A	**ACEx 205 - WA 2.5 / _ - 2**	
		0-5 / 10A	**ACEx 205 - WA 5 / _ - 2**	
		0-15 / 30A	**ACEx 205 - WA 15 / _ - 2**	
		0-25 / 50A	**ACEx 205 - WA 25 / _ - 2**	
		0-40 / 80A	**ACEx 205 - WA 40 / _ - 2**	
		0-50 / 100A	**ACEx 205 - WA 50 / _ - 2**	
		0-60 / 120A	**ACEx 205 - WA 60 / _ - 2**	
		0-75 / 150A	**ACEx 205 - WA 75 / _ - 2**	
		0-100 / 200A	**ACEx 205 - WA 100 / _ - 2**	
		0-150 / 300A	**ACEx 205 - WA 150 / _ - 2**	
		0-200 / 400A	**ACEx 205 - WA 200 / _ - 2**	
		0-250 / 500A	**ACEx 205 - WA 250 / _ - 2**	
		0-300 / 600A	**ACEx 205 - WA 300 / _ - 2**	
		0-400 / 800A	**ACEx 205 - WA 400 / _ - 2**	
		0-500 / 1000A	**ACEx 205 - WA 500 / _ - 2**	
		0-600 / 1200A	**ACEx 205 - WA 600 / _ - 2**	
For current transformer	5	0-1 / 5A	**ACEx 205 - WA 1 / _ - 5**	
		0-2.5 / 12.5A	**ACEx 205 - WA 2.5 / _ - 5**	
		0-5 / 25A	**ACEx 205 - WA 5 / _ - 5**	
		0-15 / 75A	**ACEx 205 - WA 15 / _ - 5**	
		0-25 / 125A	**ACEx 205 - WA 25 / _ - 5**	
		0-40 / 200A	**ACEx 205 - WA 40 / _ - 5**	
		0-50 / 250A	**ACEx 205 - WA 50 / _ - 5**	
		0-60 / 300A	**ACEx 205 - WA 60 / _ - 5**	
		0-75 / 375A	**ACEx 205 - WA 75 / _ - 5**	
		0-100 / 500A	**ACEx 205 - WA 100 / _ - 5**	
		0-150 / 750A	**ACEx 205 - WA 150 / _ - 5**	
		0-200 / 1000A	**ACEx 205 - WA 200 / _ - 5**	
		0-250 / 1250A	**ACEx 205 - WA 250 / _ - 5**	
		0-300 / 1500A	**ACEx 205 - WA 300 / _ - 5**	
		0-400 / 2000A	**ACEx 205 - WA 400 / _ - 5**	
		0-500 / 2500A	**ACEx 205 - WA 500 / _ - 5**	
		0-600 / 3000A	**ACEx 205 - WA 600 / _ - 5**	

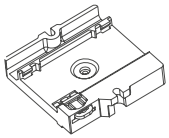
Connect to secondary 5A-5 of current transformer 1A-1

ACEx 205 - Ampmeter and voltmeter module

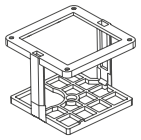
TYPE	SPECIFICATION (AC)	CODE	IMAGE
Ampmeter	0-20 / 40mA	**ACEx 250 - mA 11**	
	4-20 / 40mA	**ACEx 250 - mA12**	
Voltmeter	0-25V	**ACEx 205 - V 25**	
	0-40V	**ACEx 205 - V 40**	
	0-150V	**ACEx 205 - V 150**	
	0-250V	**ACEx 205 - V 250**	
	0-500V	**ACEx 205 - V 500**	

ACEx

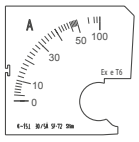
Mounting bracket for rail

SPECIFICATION	CODE	IMAGE
Used for mounting the ampmeter on rail	6WA	

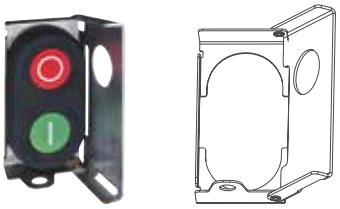
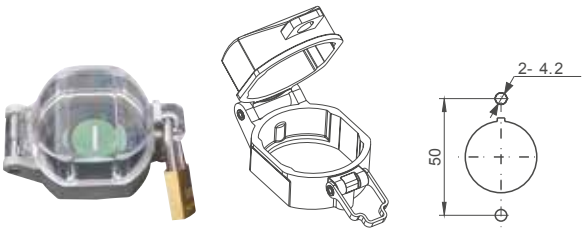
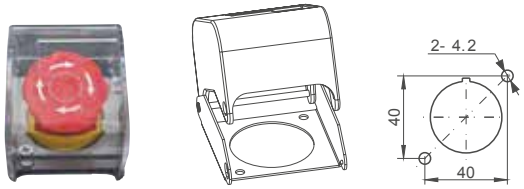
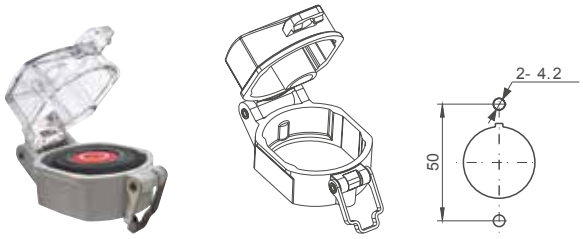
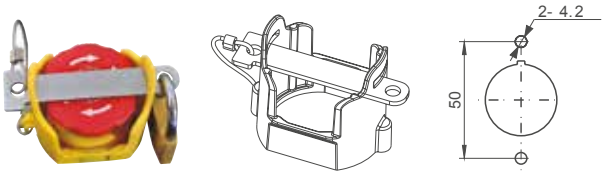
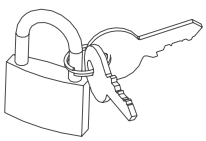
Front mounting bracket

SPECIFICATION	CODE	IMAGE
Used to mount ampmeter and voltmeter on the back of the control panel	7WA	

Ampmeter scale

FOR CURRENT TRANSFORMER (W) - SCALE	CODE	IMAGE
0...1, 2.5, 5, 15, 25 40, 50, 60, 75, 100 150, 200, 250, 300 400, 500, 600	05 - _ / _ - _ Scale Overload scale Connect to secondary 5A of current transformer 1A	

DESCRIPTION	CODE	IMAGE
Actuators nameplate (engraved according to customer specification)	ACEx 4031 / 1 _	
Actuators nameplate H, S, and large commutator (engraved according to customer specification)	ACEx 4031 / 4 _	
Rectangular signaling label for emergency activation	ACEx 4003/2	
Round signaling label for emergency activation	ACEx 4003/1	

DESCRIPTION	CODE	IMAGE
Wrench for actuators	**ACEx 4006**	
Safety Lock for ACEx 201 P2 actuators (double push button)	**ACEx 4019/5**	
Safety Lock used on ACEx 201 P1 and K actuators	**ACEx 4019/3 - 6**	
Safety Lock used on ACEx 201 P3, P4, and P6 actuators	**ACEx 4019/1 - 6**	
Permanent Safety Lock for ACEx 201 P1 actuators	**ACEx 4019/4 - 6**	
Permanent Safety Lock for ACEx 201 P3 and P6 actuators	**ACEx 4019/2- 6**	
Padlock	**ACEX BL 730**	

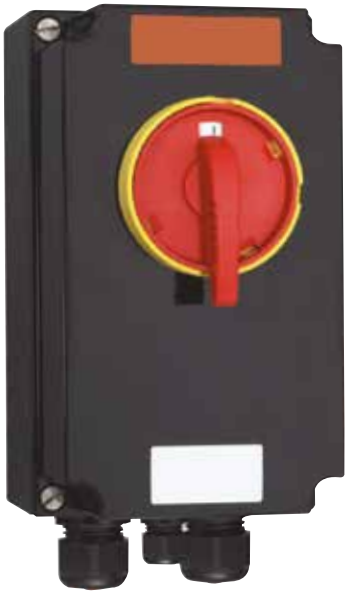
CHEx

CONTROL SWITCH AND EMERGENCY SWITCH FOR EXPLOSIVE ATMOSPHERES - 533 SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6 – T5 – T4
TEMP. CLASS COMBUSTIBLE DUSTS:
T80°C – T95°C – T130°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-1 | ABNT NBR IEC 60079-31

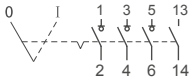
TECHNICAL SPECIFICATIONS

- Made in **polyester** reinforced with fiberglass, **in black**.
- Sealing unit.
- Internal grounding terminal.



CHEx 533 - 16/25A

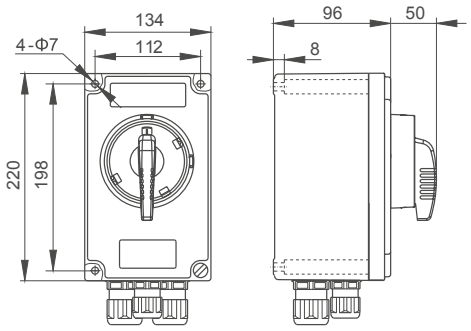
MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY	ASSISTANT CONTACT
25A	2 x 4 mm²	AC 3 230V - 25A 400V - 25A 500V - 20A 690V - 16A	(I/ON) (0/OFF) 3 poles: 1NA 6 poles 1NA + 1NF

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (KG)	CODE
 Control switch - 3 poles Emergency switch - 3 poles	2 x M25 / Φ8-17 mm 1 x M20 / Φ5.5-13 mm	1,9	**CHEx 533 0256 AD00** **CHEx 533 0256 AR00**
 Control switch - 6 poles Emergency switch - 6 poles	4 x M25 / Φ8-17 mm 1 x M20 / Φ5.5-13 mm	2,3	**CHEx 533 0256 AD00** **CHEx 533 0256 AR00**

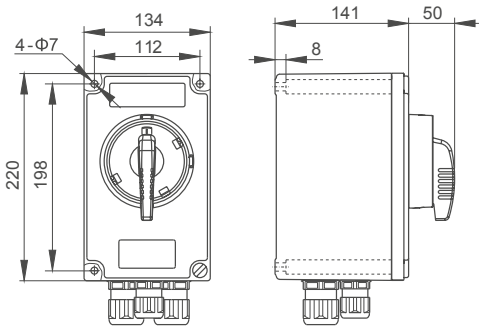

Control switch


Emergency switch

EXTERNAL DIMENSIONS



3 POLES

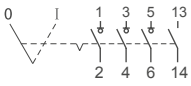


6 POLES

CHEx

CHEx 533 - 32/40A

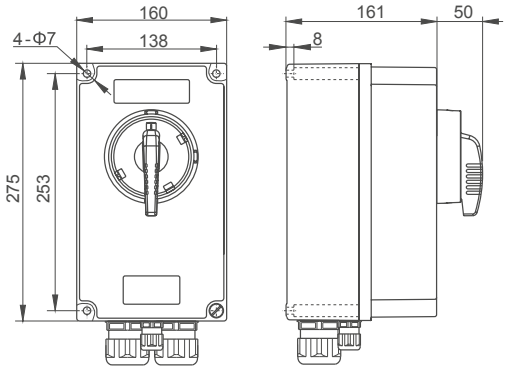
MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY	ASSISTANT CONTACT
40A	2 x 10 mm²	AC 3 230V - 40A 400V - 40A 500V - 40A 690V - 32A	(I/ON) (0/OFF) 3 poles: 1NA 6 poles 1NA + 1NF

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (kg)	CODE
 Control switch - 3 poles Emergency switch - 3 poles	2 x M40 / Φ17-28 mm 1 x M20 / Φ5.5-13 mm	3,2	**CHEx 533 0403 AD00** **CHEx 533 0403 AR00**
 Control switch - 6 poles Emergency switch - 6 poles	4 x M40 / Φ17-28 mm 1 x M20 / Φ5.5-13 mm	4,0	**CHEx 533 0406 AD00** **CHEx 533 0406 AR00**

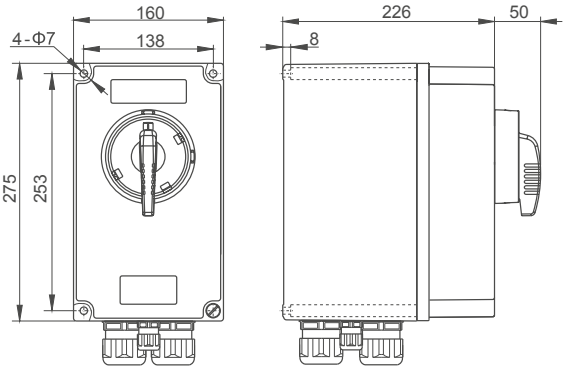

Control switch


Emergency switch

EXTERNAL DIMENSIONS



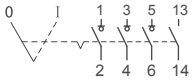
3 POLES



6 POLES

CHEx 533 - 63/80A

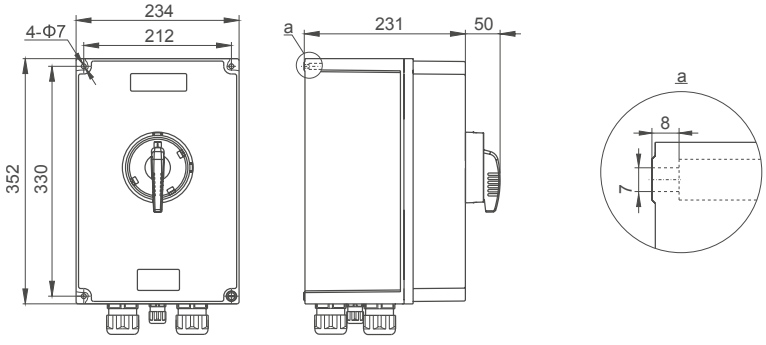
MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY	ASSISTANT CONTACT
80A	1 x 35 mm²	AC 3 230V - 80A 400V - 80A 500V - 80A 690V - 63A	(I/ON) (0/OFF) 3 poles: 1NA 6 poles 1NA + 1NF

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (kg)	CODE
 Control switch - 3 poles Emergency switch - 3 poles	2 x M50 / Φ22-35 mm 1 x M20 / Φ5.5-13 mm	7,5	**CHEx 533 0803 AD00** **CHEx 533 0803 AR00**
 Control switch - 6 poles Emergency switch - 6 poles	4 x M50 / Φ22-35 mm 1 x M20 / Φ5.5-13 mm	8,5	**CHEx 533 0806 AD00** **CHEx 533 0806 AR00**


Control switch


Emergency switch

EXTERNAL DIMENSIONS

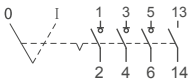


3 E 6 POLES

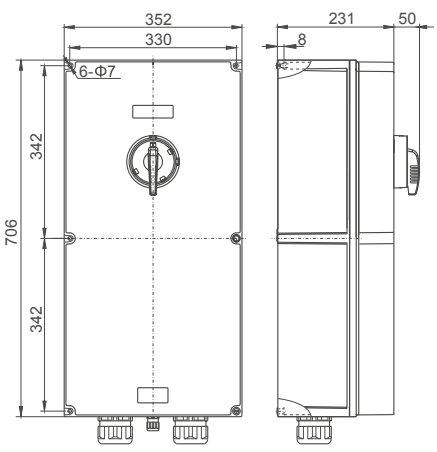
CHEx

CHEx 533 - 125/180A

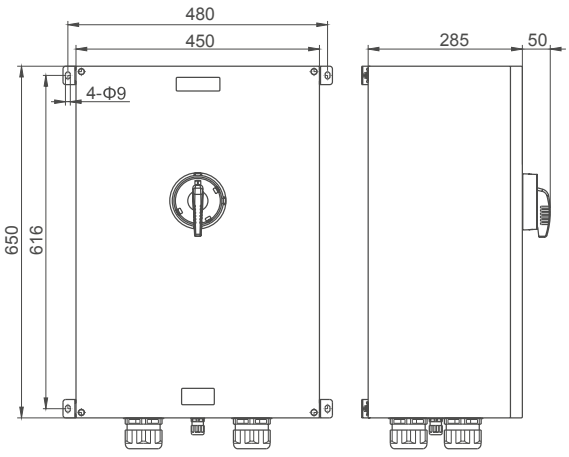
MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY	ASSISTANT CONTACT
180A	125A 1 x 50/70 mm² 180A 1 x 120 mm²	AC 3 230V - 180A 400V - 180A 500V - 180A 690V - 125A	(I/ON) (0/OFF) 3 poles: 1NA 6 poles 1NA + 1NF

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (KG)	CODE
 Control switch - 3 poles Emergency switch - 3 poles	2 x M63 / Φ27-48 mm 1 x M20 / Φ5.5-13 mm	11,4	**CHEx 533 1803 AD00** **CHEx 533 1803 AR00**
 Control switch - 6 poles Emergency switch - 6 poles	4 x M63 / Φ27-48 mm 1 x M20 / Φ5.5-13 mm	31	**CHEx 533 1806 AD00** **CHEx 533 1806 AR00**

EXTERNAL DIMENSIONS



3 POLES



6 POLES

CHEx

CONTROL SWITCH AND EMERGENCY SWITCH FOR EXPLOSIVE ATMOSPHERES - 534 SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6 – T5 – T4
TEMP. CLASS COMBUSTIBLE DUSTS:
T80 °C – T95 °C – T130°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-1 | ABNT NBR IEC 60079-31

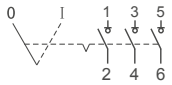
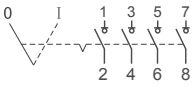
TECHNICAL SPECIFICATIONS

- Made in **polyester** reinforced with fiberglass, **in black**.
- Sealing unit.
- Internal grounding terminal.

CHEx

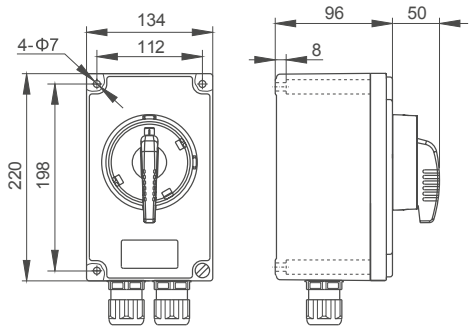
CHEx 534 - 16/25A

MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY
16A (690V AC)	2 x 6 mm²	AC 3 230V - 25A 400V - 25A 500V - 20A 690V - 16A
25A (400V AC)		

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (KG)	CODE
 3 Poles	2 x M25 / Φ8-17 mm	1,9	**CHEx 534 0253 D000**
 4 Poles	2 x M25 / Φ8-17 mm	1,9	**CHEx 534 0254 D000**

D: Control switch (black lever)
R: Emergency switch (red/yellow switch)

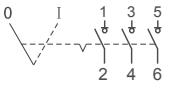
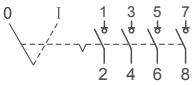
EXTERNAL DIMENSIONS



3 AND 4 POLES

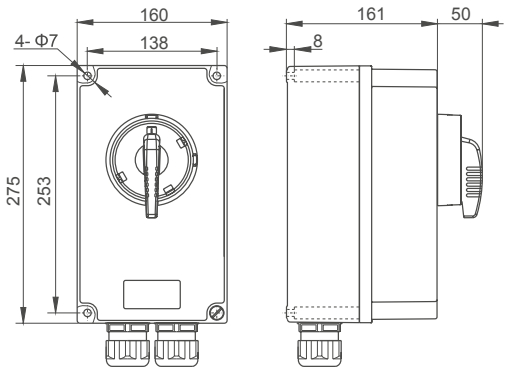
CHEx 534 - 32/40A

MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY
32A (690V AC)	2 x 16 mm²	AC 3 230V - 40A 400V - 40A 500V - 40A 690V - 32A
40A (400V AC)		

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (KG)	CODE
 3 Poles	2 x M40 / Φ17-28 mm	3,2	**CHEx 534 0403 D000**
 4 Poles	2 x M40 / Φ17-28 mm	3,2	**CHEx 534 0404 D000**

D: Control switch (black lever)
R: Emergency switch (red/yellow switch)

EXTERNAL DIMENSIONS

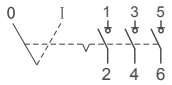
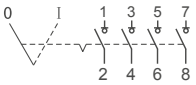


3 AND 4 POLES

CHEx

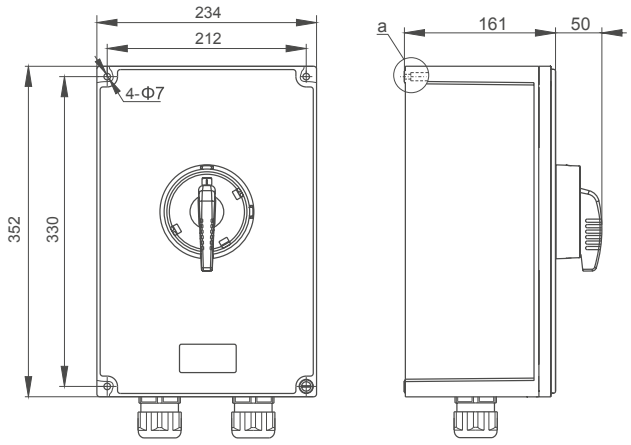
CHEx 534 - 63/80A

MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY
63A (690V AC)	1 x 35 mm²	AC 3 230V - 80A 400V - 80A 500V - 80A 690V - 63A
80A (400V AC)		

MODEL	CABLE CRIMP (CRIMPING RANGE)	WEIGHT (KG)	CODE
 3 Poles	2 x M50 / Φ22-35 mm	6,9	**CHEx 534 0803 D000**
 4 Poles	4 x M50 / Φ22-35 mm	6,9	**CHEx 534 0804 D000**

D: Control switch (black lever)
R: Emergency switch (red/yellow switch)

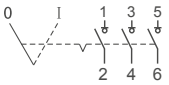
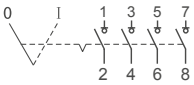
EXTERNAL DIMENSIONS



3 AND 4 POLES

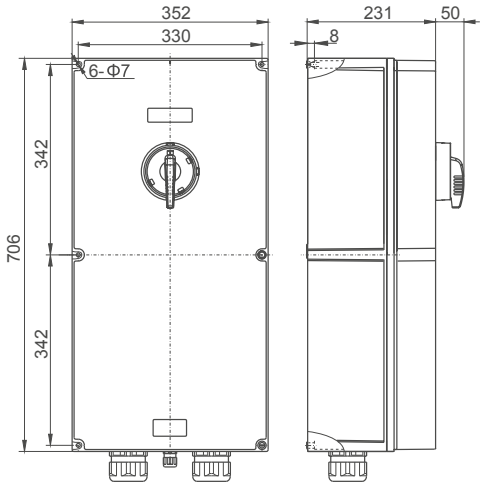
CHEx 534 - 125/180A

MAXIMUM CURRENT	TERMINALS	CONTROL CAPACITY
125A (690V AC)	125A 1 x 50/70 mm²	AC 3 230V - 180A 400V - 180A 500V - 150A 690V - 125A
180A (400V AC)	180A 1 x 120 mm²	

MODEL	CABLE CRIMP (CRIMPING RANGE)	CODE
 3 Poles	2 x M63 / Φ27-48 mm	**CHEx 534 1803 D000**
 4 Poles	4 x M63 / Φ27-48 mm	**CHEx 534 1804 D000**

D: Control switch (black lever)
R: Emergency switch (red/yellow switch)

EXTERNAL DIMENSIONS

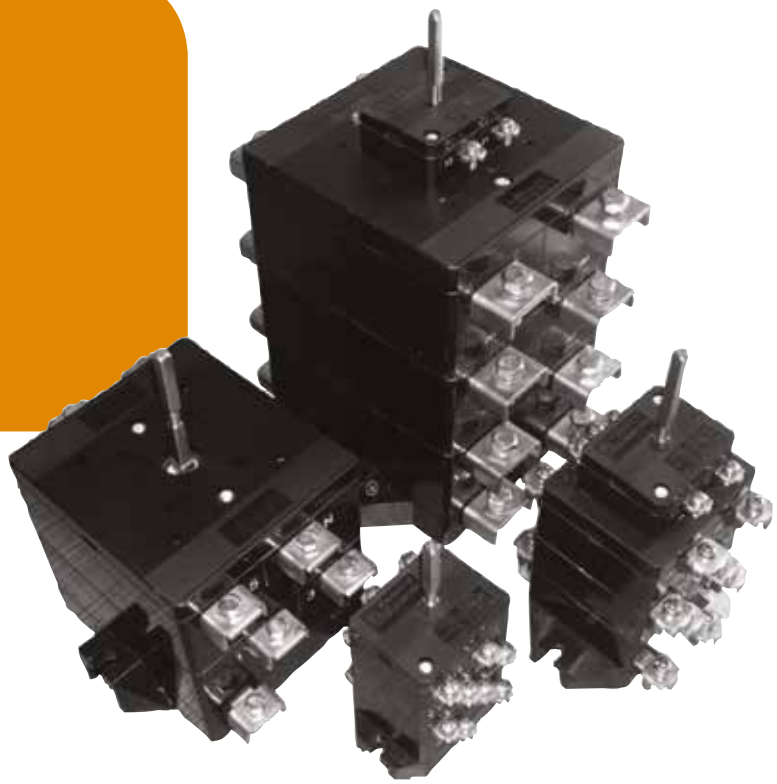


3 AND 4 POLES

CHEx

SECTIONING SWITCH
FOR EXPLOSIVE ATMOSPHERES - 513 SERIES

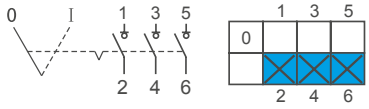
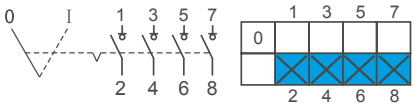
PROTECTION: Ex d e
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7



TECHNICAL SPECIFICATIONS

- Terminals section:
  25A: 2 x 1,5 to 4 mm^2
  40A: 2 x 10 mm^2
  80A: 2 x 16 to 25 mm^2
  180A: 2 x 50 to 95 mm^2
- Operating current:

AC3	230V	400V	500V	690V
	25A	25A	20A	16A
	40A	40A	40A	32A
	80A	80A	80A	63A
	180A	180A	150A	125A

MODEL AND ELECTRIC DIAGRAM	CURRENT	WEIGHT (KG)	CODE
 3 Poles	25A	0,55	_ 25 / 3 _
	40A	1,00	_ 40 / 3 _
	80A	3,30	_ 80 / 3 _
	180A	6,00	_ 180 / 3 _
 4 Poles	25A	0,58	_ 25 / 4 _
	40A	1,10	_ 40 / 4 _
	80A	3,50	_ 80 / 4 _
	180A	6,50	_ 180 / 4 _

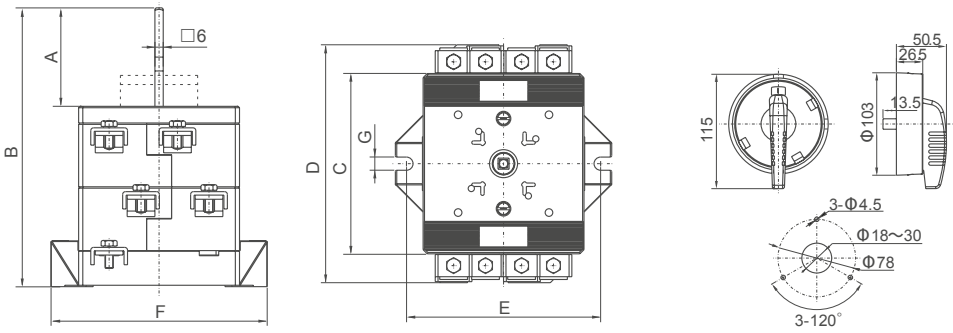
D: Control switch (black lever)
R: Emergency switch (red/yellow switch)

Poles: 3P / 4P / 3P+N / 6P

0: 1NA + 1NF
1: 2NF
2: 2NA
3: 1NF
4: 1NA

Assistant contact (blank, non-applicable)

EXTERNAL DIMENSIONS

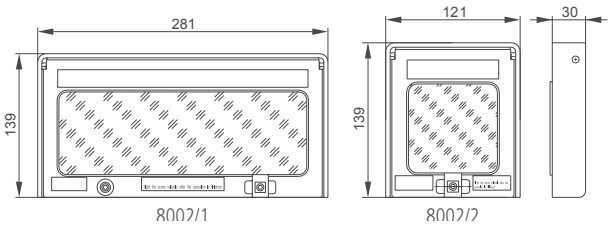


POLES	25A							40A							80A							180A						
	A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G
3P	41	105						83	171						71	201						84	241					
2P	41	105						83	171						71	201						84	241					
3P+N	41	105						83	171						71	201						84	241					
3P-4	41	105						57	171						45	201						58	241					
3P-0	23	105	50	72	74	80	5,5	57	171	73	118	115	126	6,5	45	201	130	172	142	156	9,5	58	241	145	201	172	192	9,5
4P-4	23	105						57	171						45	201						58	241					
4P-0	23	105						57	171						45	201						58	241					
6P-0	51	151						59	201						39	241						50	291					
6P-2	51	151						59	201						39	241						50	291					

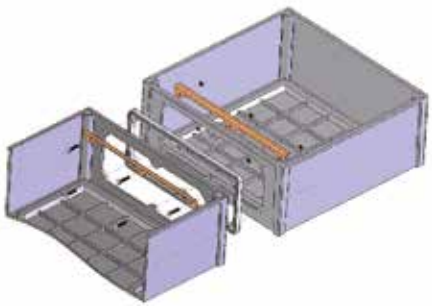
CHEx

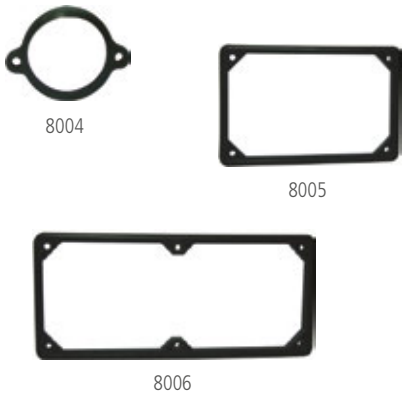
ACCESSORIES

DESCRIPTION	CODE	IMAGE
Used as operation window for internal equipment actuators.	**8002/1**	**OPERATION WINDOWS**
	8002/2	

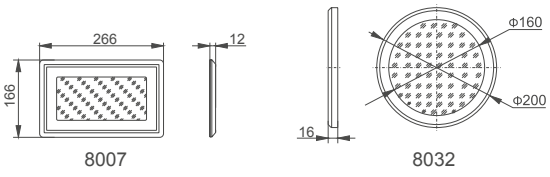


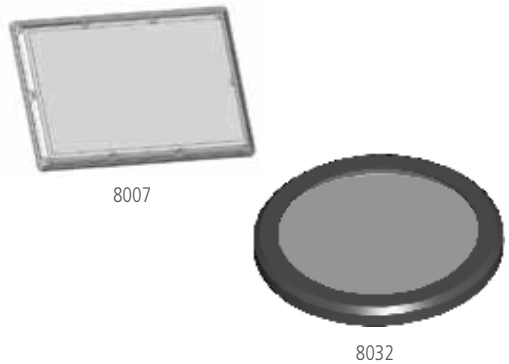
Used to connect boxes.	**8004**	**BOX CONNECTORS**
	8005	
	8006	

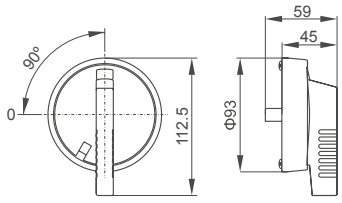
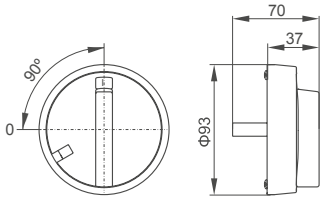
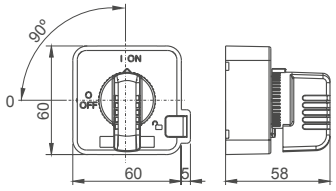
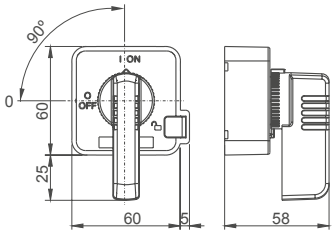
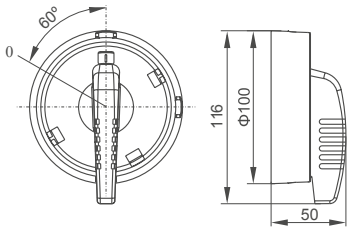




Display installed on cover.	**8007**	**DISPLAY**
	8032	





DIMENSIONS	CODE	IMAGE
	8003/1 D REGULAR (BLACK))	COMMUTATOR FRONT 
	8003/1 R EMERGENCY (RED YELLOW)	
	8003/2	COMMUTATOR FRONT 
	8029/2	COMMUTATOR FRONT 
	8029/2	
	8003/3 D REGULAR (BLACK)	COMMUTATOR FRONT 
	8003/3 R EMERGENCY (RED YELLOW)	

MDEx and MCEx

MDEX 511 - CIRCUIT BREAKER MODULE AND MCEX 512 - CONTROL MODULE FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d e
ZONES: 1 and 2
GROUPS: IIC (-20 °C < Ta < +60 °C)
IIB (-40 °C < Ta < +60 °C)
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7

MDEx 511

MCEx 512

MDEx

MDEX 511 BL - CIRCUIT BREAKER

MAXIMUM CURRENT	VOLTAGE	SHORT CIRCUIT	ASSISTANT CONTACT	CHARACTERISTIC CURVES	TERMINALS
40A	230V/400V 50/60 Hz 250V DC	6kA / 10kA	250V/400 V 50/60 Hz - 4A 110V DC - 0,5A	C and D	Main contacts at 1 to 10 mm² 2 with eye terminal) Assistant contact 1~2,5 mm²

NUMBER OF POLES	CHARACTERISTIC CURVE*	CURRENT (A)	WEIGHT (KG)
1P	C - D	0,5 - 1 - 2 - 3 - 4 - 6 - 10 - 16 - 20 - 25 - 32 - 40	0,85
2P	C - D	0,5 - 1 - 2 - 3 - 4 - 6 - 10 - 16 - 20 - 25 - 32 - 40	1,07
3P	C - D	0,5 - 1 - 2 - 3 - 4 - 6 - 10 - 16 - 20 - 25 - 32 - 40	1,43
4P	C	1 - 3 - 4 - 6 - 10 - 16 - 20 - 25 - 32 - 40	1,90
1P + N	C	6 - 10 - 16 - 20 - 25 - 32 - 40	0,85
3P + N	C - D	6 - 10 - 16 - 20 - 25 - 32 - 40	1,90

CURRENT (A)	CODE	IMAGE
0,5	BL / 0.5 / _ / _ - _	
1	BL / 1 / _ / _ - _	
2	BL / 2 / _ / _ - _	
3	BL / 3 / _ / _ - _	
4	BL / 4 / _ / _ - _	
6	BL / 6 / _ / _ - _	
10	BL / 10 / _ / _ - _	
16	BL / 16 / _ / _ - _	
20	BL / 20 / _ / _ - _	
25	BL / 25 / _ / _ - _	
32	BL / 32 / _ / _ - _	
40	BL / 40 / _ / _ - _	

MDEx 511

1 (1P) - 1N ((1P+N) - 2 (2P)
3 (3P) - 3N (3P+N) - 4 (4P)
— Number of poles

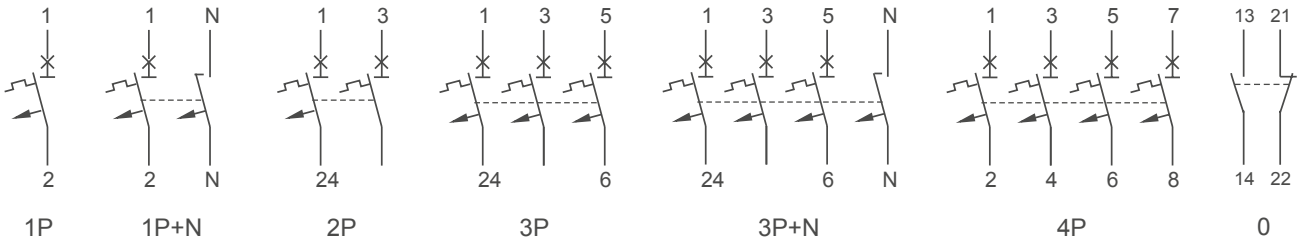
C
D
— Characteristic curve

0: Assistant contact 1NA + 1NF
D (blank, non-applicable)

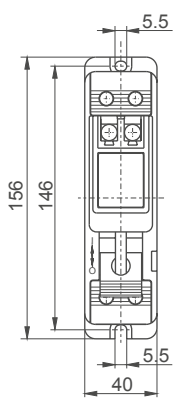
* **Characteristic curve C:** usually for lighting circuits. ***Characteristic curve D:** usually for engine start circuits.

MDEx

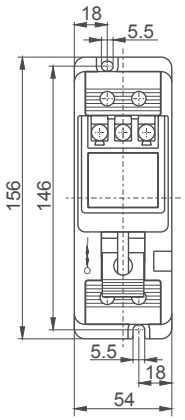
MAIN ELECTRIC DIAGRAM



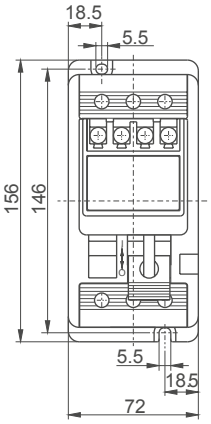
EXTERNAL DIMENSIONS



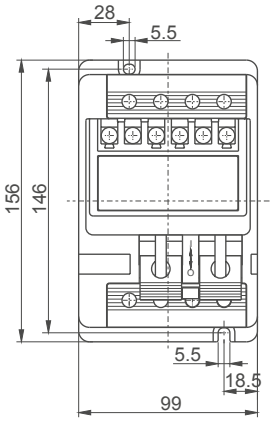
Size 1



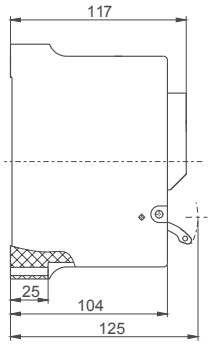
Size 2



Size 3



Size 4



	NUMBER OF POLES
SIZE 1	1P / 1P+N
SIZE 2	2P / 1P + ASSISTANT CONTACT
SIZE 3	3P / 2P + ASSISTANT CONTACT
SIZE 4	3P + N / 4P / 3P + ASSISTANT CONTACT 4P + ASSISTANT CONTACT

MDEx

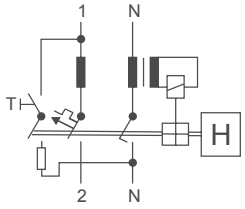
MDEX 511 BLD - DR CIRCUIT BREAKER AND MDEX 511 BFL - ELECTROMAGNETIC CIRCUIT BREAKER DR

MAXIMUM CURRENT	VOLTAGE	RESIDUAL CURRENT	SHORT CIRCUIT	WEIGHT (kg)	NUMBER OF POLES	CHARACTERISTIC CURVES	TERMINALS
40A	230V/400V 50/60 Hz	10, 30 and 300 mA	6kA / 10kA	1,1	1P+N	C and D	Main contacts at 1 to 10 mm2 (6 to 10 mm used together with eye terminal)

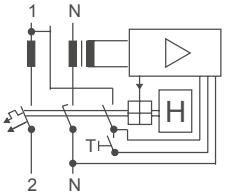
CURRENT (A)		CODE	IMAGE
6	MDEx 511 DR CIRCUIT BREAKER	BLD / 6 / 1N / 30	
10		BLD / 10 / 1N / 30	
16		BLD / 16 / 1N / 30	
20		BLD / 20 / 1N / 30	
25		BLD / 25 / 1N / 30	
32		BLD / 32 / 1N / 30	
40		BLD / 40 / 1N / 30	
6	MDEx 511 ELECTROMAGNETIC CIRCUIT BREAKER	BFL / 6 / 1N / _	
10		BFL / 10 / 1N / _	
16		BFL / 16 / 1N / _	
20		BFL / 20 / 1N / _	
25		BFL / 25 / 1N / _	
32		BFL / 32 / 1N / _	
40		BFL / 40 / 1N / _	

30
300
Residual current (mA)

MAIN ELECTRIC DIAGRAM

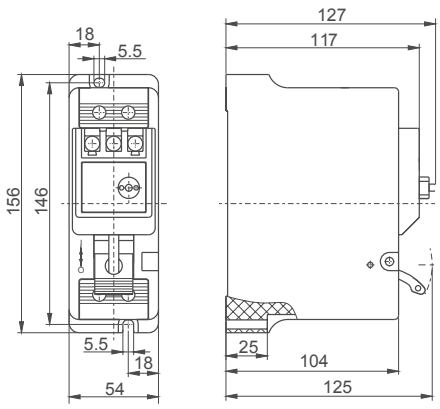


MDEx 511 BFL
Electromagnetic circuit breaker



MDEx 511 BLD
DR circuit breaker

EXTERNAL DIMENSIONS



Size2

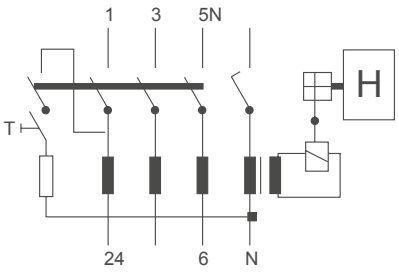
MDEx

MDEX 511 BF - DR CIRCUIT BREAKER ELECTROMAGNETIC

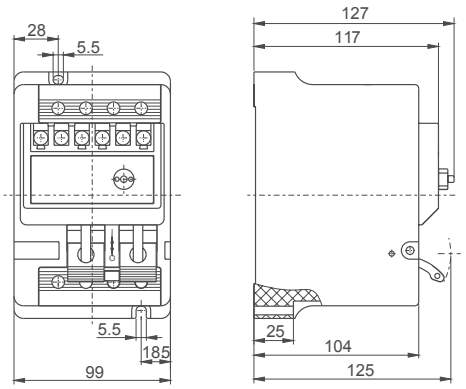
MAXIMUM CURRENT	VOLTAGE	RESIDUAL CURRENT	SHORT CIRCUIT CURRENT	WEIGHT (kg)	NUMBER OF POLES	TERMINALS
40A	230V/400V 50/60 Hz	10, 30 and 300 mA	10kA	1,9	4P	Main contacts at 1 to 10 mm2 (6 to 10 mm used together with eye terminal)

CURRENT (A))	RESIDUAL CURRENT	CODE		IMAGE
25	30	MDEx 511	BF / 25 / 4 / 30	
25	100		BF / 25 / 4 / 100	
40	30		BF / 40 / 4 / 30	
40	100		BF / 40 / 4 / 100	
40	300		BF / 40 / 4 / 300	

MAIN ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS

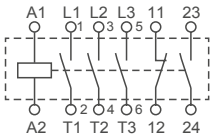


Size 4

MCEx

MCEX 512 BDI -CONTACTOR AND MCEX 512 BDIN - REVERSIBLE CONTACTOR

MAXIMUM CURRENT	VOLTAGE	INTERRUPTION CAPACITY	COIL VOLTAGE	ASSISTANT CONTACT NOMINAL	ASSISTANT CONTACT NOMINAL CURRENT	TERMINALS
38A	690V	Up to 18,5 KW	Up to 440V	690V	10A	Main contacts at 1 to 10 mm2 (6 to 10 mm used together with eye terminal) Assistant contact 1 to 2.5 mm2

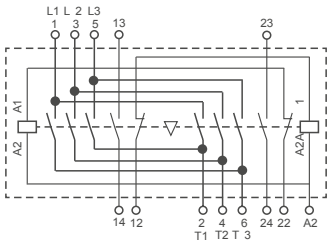
ELECTRIC DIAGRAM	WEIGHT (KG)	CODE	IMAGE
	1,75	MCEx 512 BDI / 12 _ - 0 MCEx 512 BDI / 25 _ - 0 MCEx 512 BDI / 38 _ - 0	 MCEx 512 BDI Contactor

01 - 24V
02 - 36V
03 - 48V
04 - 110V
05 - 220~230V
06 - 380~400V

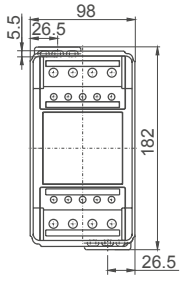
Coil voltage (AC)

Assistant contact 1NA + 1NF

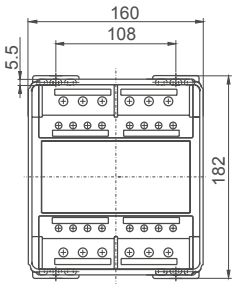
Assistant contact 2NA + 2NF

ELECTRIC DIAGRAM	WEIGHT (KG)	CODE	IMAGE
	2,8	MCEx 512 BDIN / 12 _ - 2 MCEx 512 BDIN / 25 _ - 2 MCEx 512 BDIN / 38 _ - 2	 MCEx 512 BDIN Reversible contactor

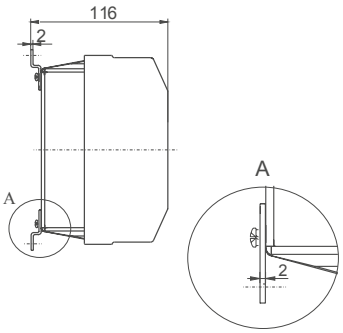
EXTERNAL DIMENSIONS



Size 5



Size 6



Other type of mount

MCEx

MCEX 512 BZCI - CONTACTOR + THERMAL RELAY

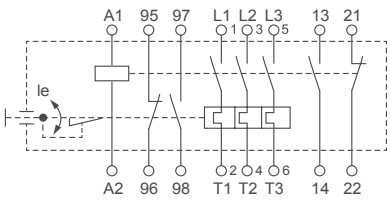
MAXIMUM CURRENT	OVERLOAD DISARM ADJUSTMENT RANGE	VOLTAGE	INTERRUPTION CAPACITY	COIL VOLTAGE	ASSISTANT CONTACT NOMINAL VOLTAGE	ASSISTANT CONTACT NOMINAL CURRENT	TERMINALS
Up to 38A	Up to 38A	690V	Up to 18,5 KW	Up to 440V	690V	95/96 NF 97/98 NA : 5A 13/14 NA 21/22 NF : 10A	Main contacts at 1 to 10 mm2 (6 to 10 mm used together with eye terminal) Assistant contact 1 to 2.5 mm2

CONTACTOR CURRENT AC (A)	THERMAL RELAY ADJUSTING RANGE	CODE	IMAGE
12	0,1 - 0,16	**MCEx 512 BZCI / 0,16 / _**	
	0,16 - 0,25	**MCEx 512 BZCI / 0,25 / _**	
	0,24 - 0,4	**MCEx 512 BZCI / 0,4 / _**	
	0,4 - 0,63	**MCEx 512 BZCI / 0,63 / _**	
	0,63 - 1	**MCEx 512 BZCI / 0,1 / _**	
	1 - 1,6	**MCEx 512 BZCI / 1,6 / _**	
	1,6 - 2,5	**MCEx 512 BZCI / 2.5 / _**	
	2,4 - 4	**MCEx 512 BZCI / 4 / _**	
	4 - 6	**MCEx 512 BZCI / 6 / _**	
	5,5 - 8	**MCEx 512 BZCI / 8 / _**	
	7 - 10	**MCEx 512 BZCI / 10 / _**	
25	9- 13	**MCEx 512 BZCI / 13 / _**	
	12 - 18	**MCEx 512 BZCI / 18 / _**	
	16 - 24	**MCEx 512 BZCI / 24 / _**	
38	23 - 32	**MCEx 512 BZCI / 32 / _**	
	30 - 38	**MCEx 512 BZCI / 38 / _**	

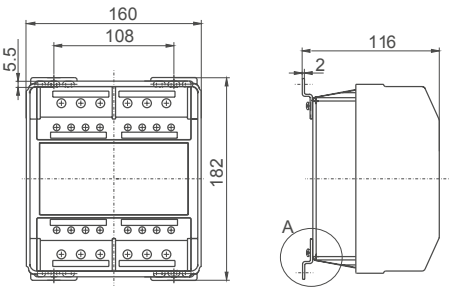
Coil voltage (AC)

- **01 - 24V**
- **02 - 36V**
- **03 - 48V**
- **04 - 110V**
- **05 - 220~230V**
- **06 - 380~400V**

ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS



Size 6

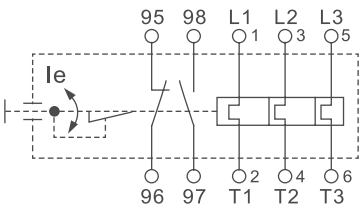
MCEx

MCEX 512 BZC - THERMAL RELAY

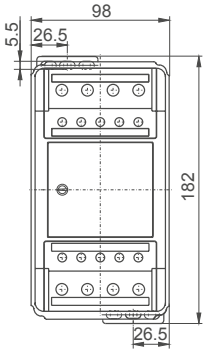
MAXIMUM CURRENT	VOLTAGE	THERM AL RELAY	WEIGHT (kg)	ASSISTANT CONTACT NOMINAL VOLTAGE	NOMINAL CURRENT	TERMINALS
Up to 38A	690V	Up to 38A	1,5	690V	5A	Main contacts at 1 to 10 mm2 (6 to 10 mm used together with eye terminal) Assistant contact 1 to 2.5 mm2

ADJUSTING RANGE	CODE	IMAGE
0,1 - 0,16	**MCEx 512 BZC / 0,16**	
0,16 - 0,25	**MCEx 512 BZC / 0,25**	
0,24 - 0,4	**MCEx 512 BZC / 0,4**	
0,4 - 0,63	**MCEx 512 BZC / 0,63**	
0,63 - 1	**MCEx 512 BZC / 1**	
1 - 1,6	**MCEx 512 BZC / 1,6**	
1,6 - 2,5	**MCEx 512 BZC / 2.5**	
2,4 - 4	**MCEx 512 BZC / 4**	
4 - 6	**MCEx 512 BZC / 6**	
5,5 - 8	**MCEx 512 BZC / 8**	
7 - 10	**MCEx 512 BZC / 10**	
9 -13	**MCEx 512 BZC / 13**	
12 - 18	**MCEx 512 BZC / 18**	
16 - 24	**MCEx 512 BZC / 24**	
23 - 32	**MCEx 512 BZC / 32**	
30 - 38	**MCEx 512 BZC / 38**	

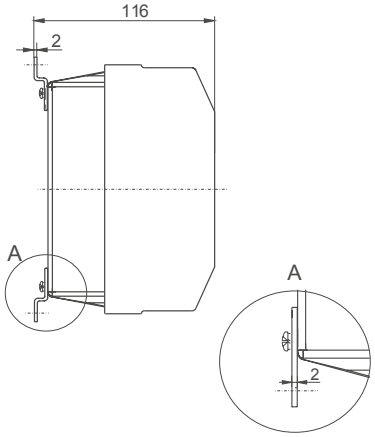
ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS



Size 5



Other type of mount

MCEx

MCEX 512 BH3 - TIMER RELAY

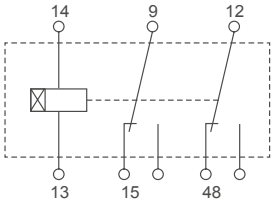
SUPPLY VOLTAGE	TIME RANGE	WEIGHT (kg)	CONTACT CAPACITY	CONNECTION
230V (may be offered with CC supply)	0,04s to 10h	0,8	220V AC 5A (resistive load)	2 x from 1 to2,5 mm^2

TIME SPECIFICATION													
MAXIMUM TIME SCALE	0,5s	1s	5s	10s	30s	60s	120s	3min	5min	10min	30min	60min	3h
TIME ADJUSTMENT RANGE	0,04 ~0,5 s	0,1 ~1s	0,2 ~5s	0,5 ~10s	1.0 ~30s	2.0 ~60s	5.0 ~120s	0,1 ~3min	0,2 ~5min	0,5 ~10min	1,0 ~30min	2,0 ~60min	0,01 ~3h

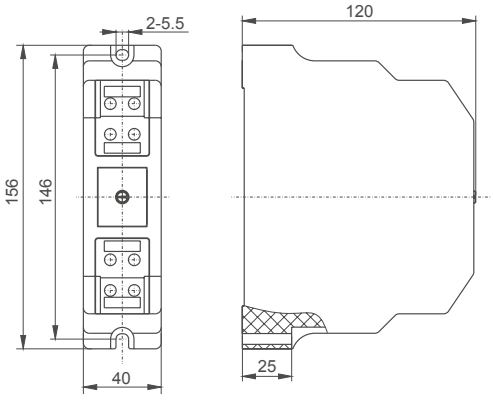
SUPPLY VOLTAGE	CODE	IMAGE
AC100 ~ 120 V	**MCEx 512 BH3 / 04 / _**	
AC200 ~ 230V	**MCEx 512 BH3 / 05 / _**	
DC 12V	**MCEx 512 BH3 / 10 / _**	
DC 24V	**MCEx 512 BH3 / 11 / _**	
DC 48V	**MCEx 512 BH3 / 13 / _**	
DC 100V / 110V	**MCEx 512 BH3 /1 4 / _**	

Timer time range: 0,04s ~ 3h

ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS



Size 1

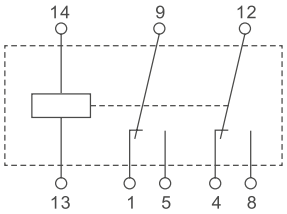
MCEx

MCEX 512 BMY - MINIATURE RELAY

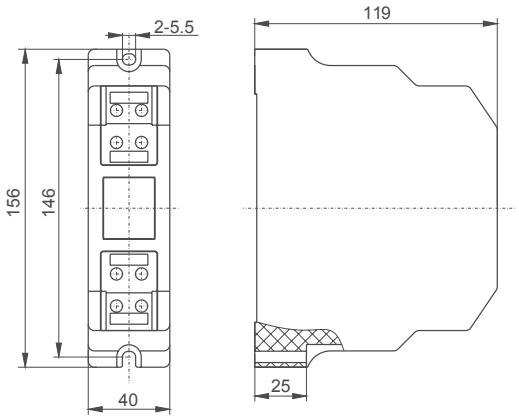
SUPPLY VOLTAGE	WEIGHT (KG)	CONTACT CAPACITY	CONNECTION
240V (may be offered with CC supply)	0,8	220V AC 5A 24V CC 5A	2 x from 1 to 2.5mm²

SUPPLY VOLTAGE	CODE	IMAGE
AC24V	**MCEx 512 BMY / 01**	
AC100 / 110V	**MCEx 512 BMY / 04**	
AC220 / 240V	**MCEx 512 BMY / 05**	
DC12V	**MCEx 512 BMY / 10**	
DC24V	**MCEx 512 BMY / 11**	
DC100V / 110V	**MCEx 512 BMY / 14**	

ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS



Size 1

MCEx

MCEX 512 BPK - ENGINE PROTECTION CIRCUIT BREAKER

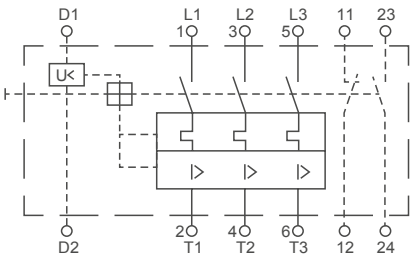
VOLTAGE	THERMAL RELAY	WEIGHT (kg)	MAXIMUM VOLTAGE	SHORT CIRCUIT CURRENT	ASSISTANT CONTACT AT AC15	DISARM VOLTAGE	TERMINALS
440V	0,1 to 25A	1,65	Up to 440V - 25A	65KA	1A - 230V	230V - 50Hz	Main contacts at 1 to 10 mm^2 (6 to 10 mm used together with eye terminal) Assistant contact 1 to 2.5 mm^2

SHORT CIRCUIT CURRENT CAPACITY (kA)	OVERLOAD DISARM ADJUSTMENT RANGE (A)	CODE	IMAGE
65	0,1 - 0,16	**MCEx 512 BPK / 0,16 / _ - _**	
65	0,16 - 0,25	**MCEx 512 BPK / 0,25 / _ - _**	
65	0,25 - 0,4	**MCEx 512 BPK / 0,4 / _ - _**	
65	0,4 - 0,63	**MCEx 512 BPK / 0,63 / _ - _**	
65	0,63 - 1	**MCEx 512 BPK / 0,1 / _ - _**	
65	1 - 1,6	**MCEx 512 BPK / 1,6 / _ - _**	
65	1,6 - 2,5	**MCEx 512 BPK / 2,5 / _ - _**	
16	2,5 - 4	**MCEx 512 BPK / 4 / _ - _**	
16	4 - 6,3	**MCEx 512 BPK / 6,3 / _ - _**	
16	6,3 - 10	**MCEx 512 BPK / 10 / _ - _**	
16	10 - 16	**MCEx 512 BPK / 16 / _ - _**	
12	16 - 20	**MCEx 512 BPK / 20 / _ - _**	
12	20 - 25	**MCEx 512 BPK / 25 / _ - _**	

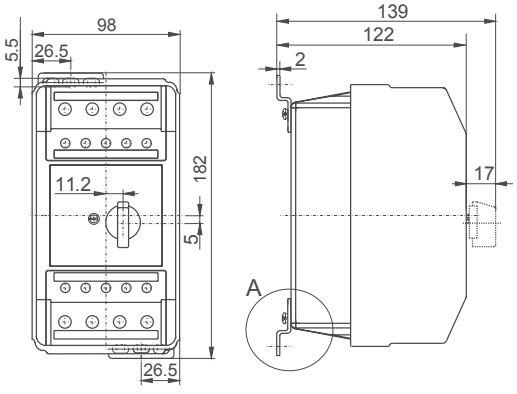
U: with AUTO-TRIP function (blank, nonapplicable)

0: assistant contact 1NA + 1NF (blank, nonapplicable)

ELECTRIC DIAGRAM



EXTERNAL DIMENSIONS



Size 5

PEEx

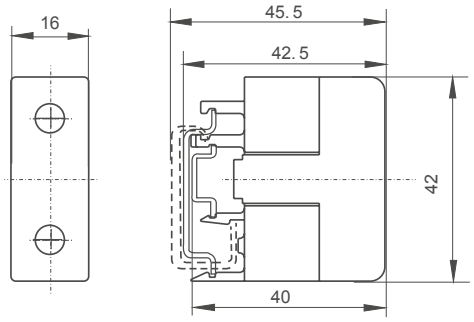
PEEX 804 - FUSE FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex e mb
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-18

TECHNICAL SPECIFICATIONS

- Voltage 250V
- Current up to 6.3 A

CURRENT	CODE
0,5	**PEEx 804 / _ 0,5A**
1	**PEEx 804 / _ 1A**
1,25	**PEEx 804 / _ 1,25A**
1,6	**PEEx 804 / _ 1,6A**
2	**PEEx 804 / _ 2A**
2,5	**PEEx 804 / _ 2,5A**
3,15	**PEEx 804 / _ 3,15A**
5	**PEEx 804 / _ 5A**
6,3	**PEEx 804 / _ 6,3A**



Type of action code
- T: Delayed action
- F: Quick action

LIGHT FITTINGS EX

LIGHT FITTINGS EX

LLEx

LED LIGHT 875 AND 876

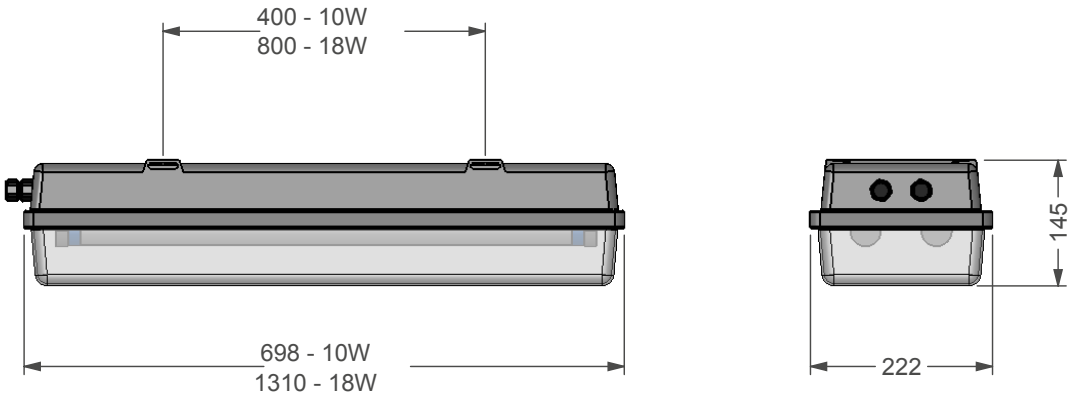
PROTECTION: Ex d nA – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
- **ABNT NBR IEC 60079-0**
- **ABNT NBR IEC 60079-1**
- **ABNT NBR IEC 60079-15**
- **ABNT NBR IEC 60079-18**
- **ABNT NBR IEC 60079-31**

TECHNICAL SPECIFICATIONS

- Philips LED light bulb double pin **G13** of **10W**, and **18W**.
- Voltage **100-240V AC, 50/60Hz**.
- Temperature **color 4000K** or **6500K**.
- Body made in **polyester reinforced with fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Standard terminal block with 3 buses for conduits between 1.5 and 10mm2.
- Diffuser closing system using the bank vault principle.
- The diffuser can be opened with a nut driver.
- Disconnect the power supply circuit via switch when the diffuser is open.

LLEx

EXTERNAL DIMENSIONS

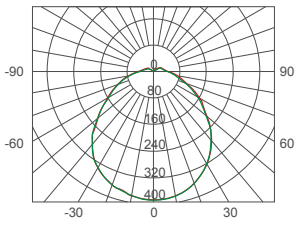


HOW TO REQUEST

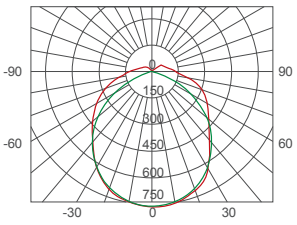
LLEX LED - *-*-*

- **Inlets**
  - **B**: 1 M25 cable crimp (crimping range ø8- 17mm) + 2 M25 plugs
  - **D**: 2 M25 cable crimps (crimping range ø8-17mm) + 1 M25 plug
- **Temperature color**
  - **1**: 4000K
  - **2**: 6500K
- **Power**
  - **10W**
  - **18W**

PHOTOMETRIC CURVES (cd/1000lm)



LLEx 875 (10W)



LLEx 876 (18W)

C0/180

C90/270

LFEx

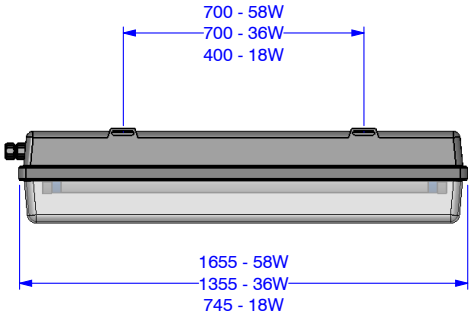
FLUORESCENT LIGHT E840 SERIES

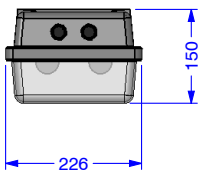
PROTECTION: Ex d e q – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Gb–Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Twist-to-lock double-pin light bulbs **G13** of **18, 36** or **58 watts**.
- Electronic reactor **220-240V AC/DC** with end-of-life protection, **50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Diffuser can be opened using a number 13 nut driver.
- Diffuser closing system using the bank vault principle.
- **3 M25 entries**
  (supplied with 2 cable crimps and one plug).
- Standard terminal block for conduits of up to 6 mm2.
- Disconnect the power supply circuit via switch when the diffuser is open.

EXTERNAL DIMENSIONS





REF.	MODEL	POWER
56650/011	Fluorescent Light LFEx e840	1 x 18W
56650/021		2 x 18W
56650/012		1 x 36W
56650/022		2 x 36W
56650/013		1 x 58W
56650/023		2 x 5 8W

LFEx

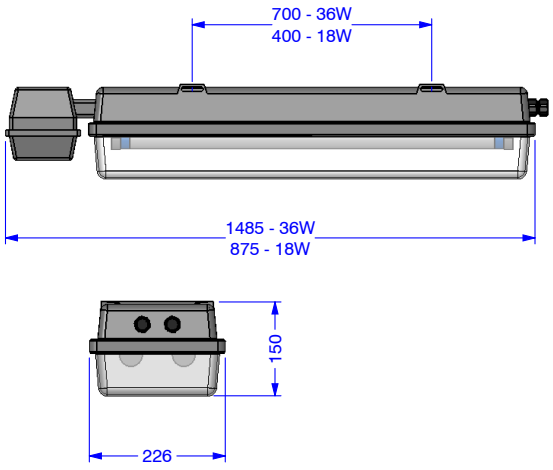
EMERGENCY FLUORESCENT LIGHT E841 SERIES

PROTECTION: Ex d e q – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
- **ABNT NBR IEC 60079-0**
- **ABNT NBR IEC 60079-1**
- **ABNT NBR IEC 60079-7**
- **ABNT NBR IEC 60079-31**

TECHNICAL SPECIFICATIONS

- Twist-to-lock double-pin light bulbs **G13 of 18 or 36 watts**.
- Electronic reactor **220-240V AC** with end-of-life protection, **50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Diffuser can be opened using a number 13 nut driver.
- Diffuser closing system using the bank vault principle.
- **2 M25 entries** (supplied with 2 cable crimps).
- Standard terminal block for conduits of up to 6 mm2.
- Disconnect the power supply circuit via switch when the diffuser is open.
- In-built battery: 1 to 3 hours autonomous operation. Weekly 5-min function test. Quarterly service test. Periodical charge and discharge system.

EXTERNAL DIMENSIONS



REF.	MODEL	POWER	AUTONOMY
56650/111	Emergency Fluorescent Light LFEx e841	1 x 18W	1h
56650/121		2 x 18W	
56650/112		1 x 36W	
56650/122		2 x 36W	
56650/311	Emergency Fluorescent Light LFEx e841	1 x 18W	3h
56650/0321		2 x 18W	
56650/312		1 x 36W	
56650/322		2 x 36W	

LFEx

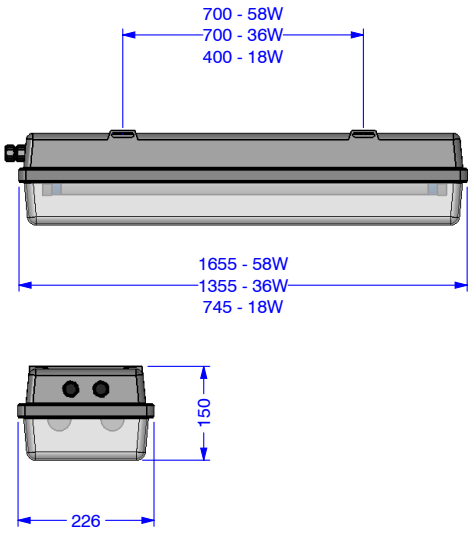
FLUORESCENTE LIGHT TD842 SERIES

PROTECTION: Ex tb
ZONAS: 21 and 22
GROUPS: IIIC
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Twist-to-lock double-pin light bulbs **G13** of **18, 36,** or **58 watts**.
- Electronic reactor **220-240V AC/DC** with end-of-life protection, **50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in transparent polycarbonate.
- Reflector in **white polymer**.
- Diffuser can be opened using a number 13 nut driver.
- Diffuser closing system using the bank vault principle.
- **3 M25 entries** (supplied with 2 cable crimps and a plug).
- Standard terminal block for conduits of up to 2.5 mm2.
- Disconnect the power supply circuit via switch when the diffuser is open.

EXTERNAL DIMENSIONS



REF.	MODEL	POWER
56652/011	Fluorescent Light LFEx tD842	1 x 18W
56652/021		2 x 18W
56652/012		1 x 36W
56652/022		2 x 36W
56652/013		1 x 58W
56652/023		2 x 58W

LFEx

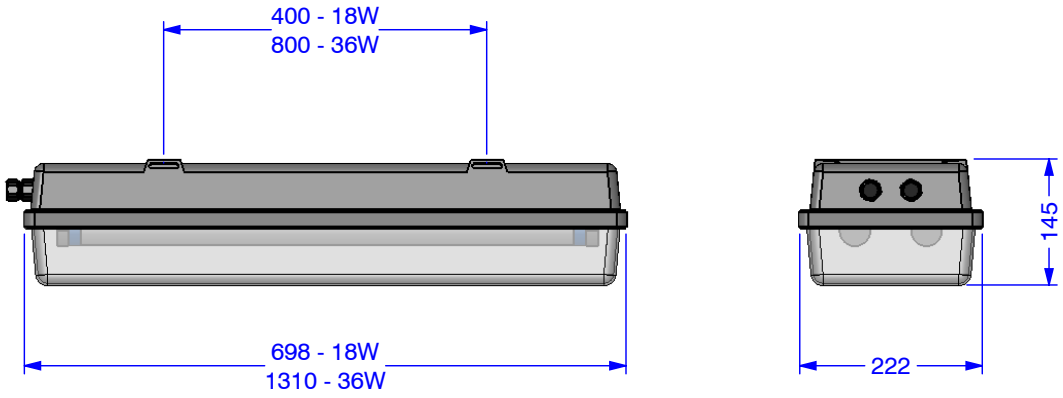
FLUORESCENT LIGHT 865 AND 866 SERIES

PROTECTION: Ex d e q - Ex tb
ZONES: 1 and 2 - 21 and 22
GROUPS: IIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS COMBUSTIBLE DUSTS T83ºC - T98ºC
EPL: Gb - Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
- **ABNT NBR IEC 60079-0**
- **ABNT NBR IEC 60079-1**
- **ABNT NBR IEC 60079-7**
- **ABNT NBR IEC 60079-18**

TECHNICAL SPECIFICATIONS

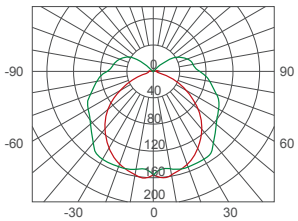
- Twist-to-lock double-pin light bulbs **G13** of **18** and **36 watts.**
- Electronic reactor **110-240V AC, 50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Standard terminal block for conduits between 1.5 and 10 mm2.
- Diffuser closing system using the bank vault principle.
- The diffuser can be opened with a nut driver.
- Disconnect the power supply circuit via switch when the diffuser is open.

EXTERNAL DIMENSIONS

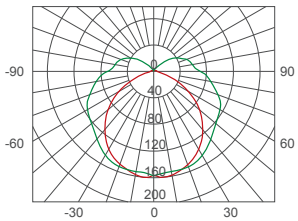


REF.	MODEL	POWER	M25 CABLE CRIMP (CRIMPING RANGE Ø8-17MM)	PLASTIC M25 PLUG
56653/011	Fluorescent Light LFEx 0865B	2 x 18W	1 piece	2 pieces
56653/021	Fluorescent Light LFEx 0865D		2 pieces	1 piece
56653/012	Fluorescent Light LFEx 0866B	2 x 36W	1 piece	2 pieces
56653/022	Fluorescent Light LFEx 0866D		2 pieces	1 piece

PHOTOMETRIC CURVES (cd/1000lm)



LFEx 865 (18W)



LFEx 866 (36W)

CO/180

C90/270

LFEx

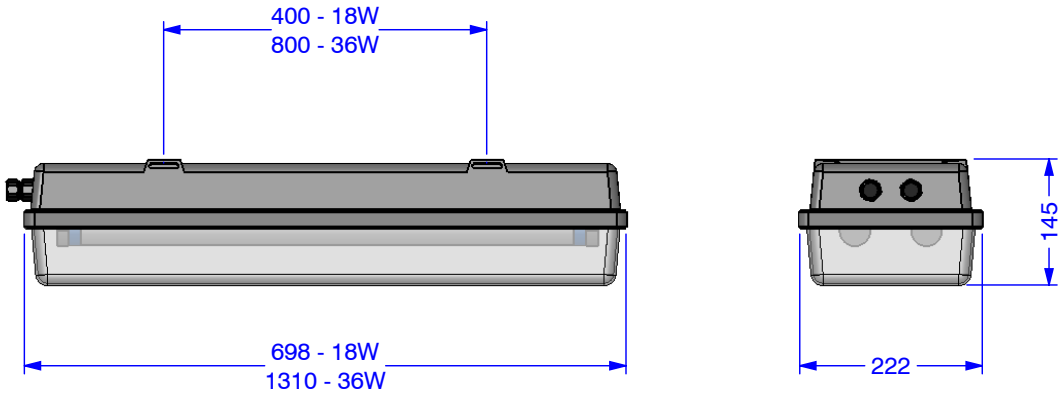
EMERGENCY FLUORESCENT LIGHT 865 AND 866 SERIES

PROTECTION: Ex d e mb q - Ex tb
ZONES: 1 and 2 - 21 and 22
GROUPS: IIC - IIIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS COMBUSTIBLE DUSTS: 183ºC - 198ºC
EPL: Gb - Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
- **ABNT NBR IEC 60079-0**
- **ABNT NBR IEC 60079-1**
- **ABNT NBR IEC 60079-7**
- **ABNT NBR IEC 60079-18**

TECHNICAL SPECIFICATIONS

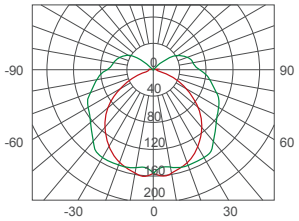
- Twist-to-lock double-pin light bulbs **G13** of **18** and **36 watts**.
- Electronic reactor **110-240V AC, 50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Standard terminal block for conduits between 1.5 and 10 mm2.
- Diffuser closing system using the bank vault principle.
- The diffuser can be opened with a nut driver.
- Disconnect the power supply circuit via switch when the diffuser is open.

EXTERNAL DIMENSIONS

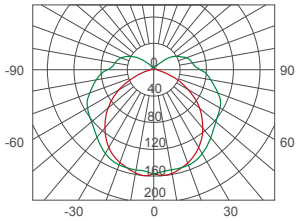


REF.	MODEL	POWER	AUTONOMY	M25 CABLE CRIMP (CRIMPING RANGE Ø8-17mm)	PLASTIC M25 PLUG
56653/211	Fluorescent Light LFEx 0865B	2 x 18W	2h	1 piece	2 pieces
56653/221	Fluorescent Light LFEx 0865D			2 pieces	1 piece
56653/212	Fluorescent Light LFEx 0866B	2 x 36W		1 piece	2 pieces
56653/222	Fluorescent Light LFEx 0866D			2 pieces	1 piece

PHOTOMETRIC CURVES (cd/1000lm)



LFEx 865 (18W)



LFEx 866 (36W)

C0/180

C90/270

LFEx

FLUORESCENT LIGHT 875 AND 876 SERIES

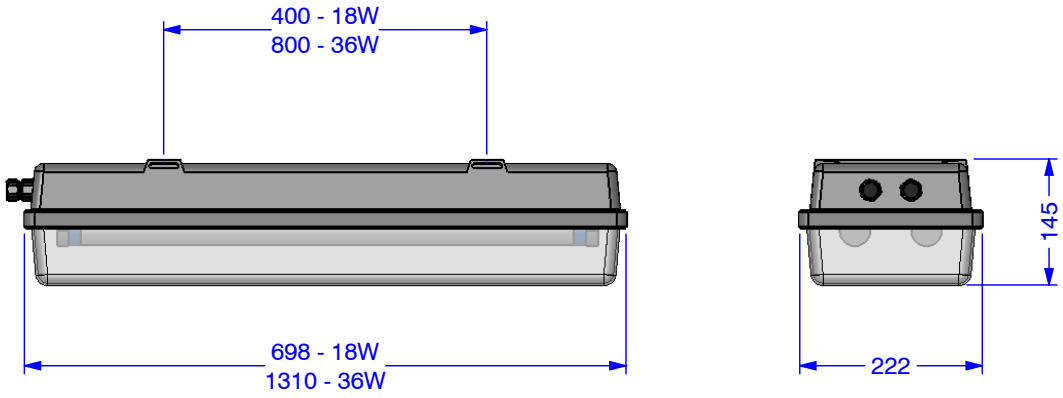
PROTECTION: Ex nA – Ex mb nA – Ex d nA – Ex d mb nA – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T4
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:

- **ABNT NBR IEC 60079-0**
- **ABNT NBR IEC 60079-1**
- **ABNT NBR IEC 60079-15**
- **ABNT NBR IEC 60079-18**
- **ABNT NBR IEC 60079-31**

TECHNICAL SPECIFICATIONS

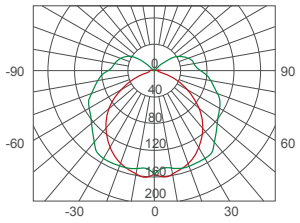
- Twist-to-lock double-pin light bulbs **G13** of **18** and **36 watts**.
- Electronic reactor **220-240V AC, 50/60Hz**.
- Body made in **polyester reinforced** with **fiberglass**.
- Single-mold diffuser in **transparent polycarbonate**.
- Reflector in **white polymer**.
- Standard terminal block for conduits between 1.5 and 10 mm2.
- Diffuser closing system using the bank vault principle.
- The diffuser can be opened with a nut driver.
- Disconnect the power supply circuit via switch when the diffuser is open.

EXTERNAL DIMENSIONS

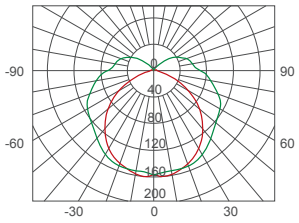


REF.	MODEL	POWER	M25 CABLE CRIMP (CRIMPING RANGE Ø8-17mm)	PLASTIC M25 PLUG
56654/011	Fluorescent Light LFEx 0875B	2 x 18W	1 piece	2 pieces
56654/021	Fluorescent Light LFEx 0875D		2 pieces	1 piece
56654/012	Fluorescent Light LFEx 0876B	2 x 36W	1 piece	2 pieces
56654/022	Fluorescent Light LFEx 0876D		2 pieces	1 piece

PHOTOMETRIC CURVES (cd/1000lm)



LFEx 875 (18W)



LFEx 876 (36W)

C0/180

C90/270

LLEx

FLUORESCENT LED LIGHT 873/1 AND 874/1 SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6
TEMP. CLASS COMBUSTIBLE
DUSTS: T80 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy**.
- **Tempered glass** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Voltage: **110-240V**.
- Frequency: **50/60Hz**
- Temperature color: **5500-6000K**
- Power factor: **> 0.98**
- Standard terminal block for conduits between 2.5 and 10 mm2.

HOW TO REQUEST

* - * * * * * *

Accessory
(see code table)

Inlets
Ceiling light
B: 1 M25 cable crimp (crimping range ø8-17mm) + 1 M25 plastic plug
D: 2 M25 plastic cable crimps (crimping range ø8-17mm)
90° wall lights
13: 1 M25 plastic cable crimp (crimping range ø8-17mm) + 3 plastic M25 plugs
22: 2 M25 plastic cable crimps (crimping range ø8-17mm) + 2 M25 plugs

Room temperature
2: -20°C to +55°C
4: -40°C to +55°C

Bulb power
(see code table)

Bulb model
(see code table)

Light
B: Ceiling light
C: Pole 90°
D: Pole 25°
E: 90° wall lights

Fixture model
(see code table)

MODEL	BULB MODEL	BULB POWER	TEMPERATURE CLASS	WEIGHT (kg)
LLEx 873/1	**LED**	30W	T6 | T80°C	5,42
LLEx 874/1	**LED**	45W	T6 | T80°C	5,50
		60W		5,55

TYPES OF FIXTURE

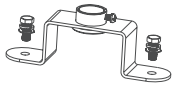
B

C

D

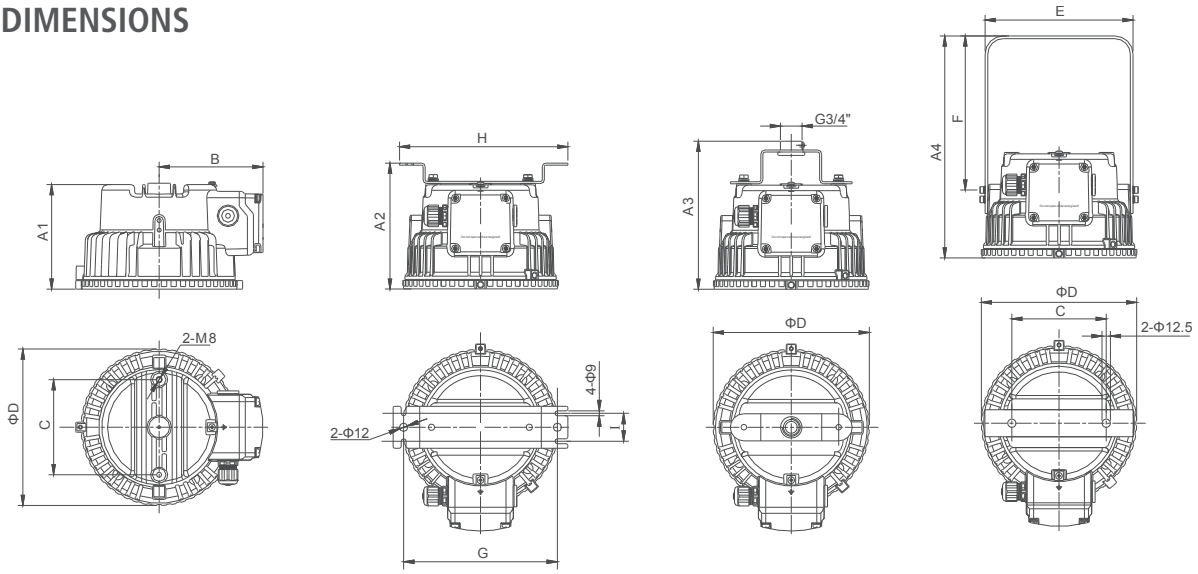
E

ACCESSORIES

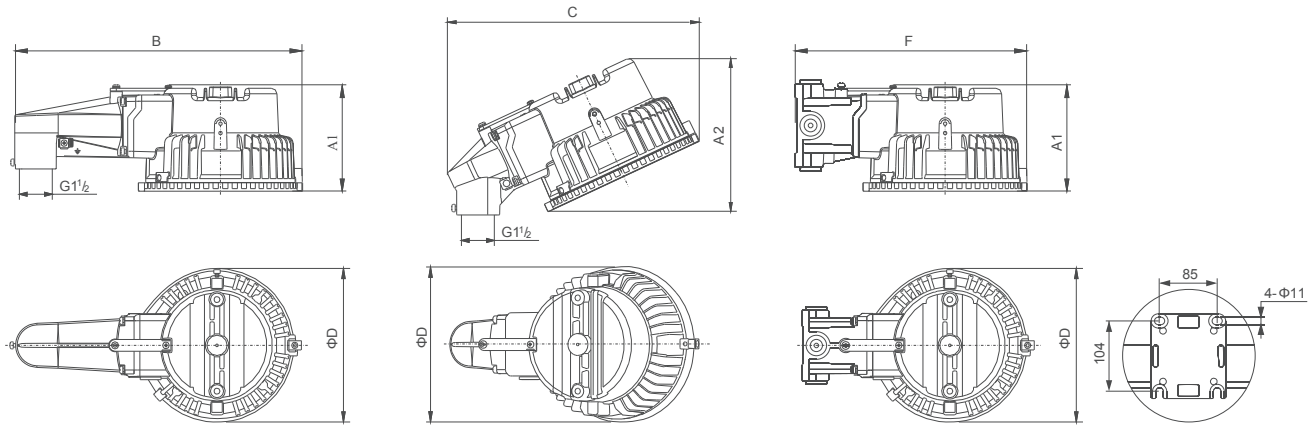
DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Mount ceiling light	Carbon steel	Light fitting Model 873/2	8722/1	
		Light fitting Model 874/2	8722/2	
"U" shaped mount	Carbon steel	Light fitting Model 873/2	8701/1	
		Light fitting Model 874/2	8701/2	
Mount hanging	Carbon steel	Light fitting Model 873/2	8702/1	
		Light fitting Model 874/2	8702/2	

LLEx

DIMENSIONS

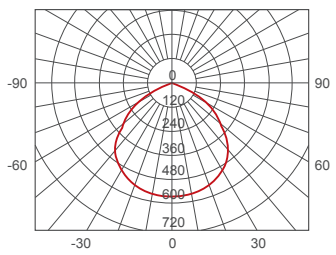


MODEL	A1	A2	A3	A4	B	C	ΦD	E	F	G	H	I
LLEx 873/1	156	186	220	330	153	140	230	220	229	220	250	40
LLEx 874/1	160	190	223	368	180	160	280	268	265	240	270	40

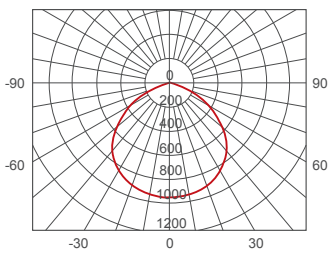


MODEL	A1	A2	B	C	ΦD	F
LLEx 873/1	156	225	435	370	230	272
LLEx 874/1	160	253	485	415	280	377

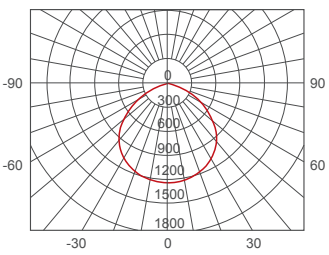
PHOTOMETRIC CURVES (cd/1000lm)



LLEx 873/1 (30W)



LLEx 874/1 (45W)



LLEx 874/1 (60W)

LLEx

LED LIGHT 874/2 AND 870 SERIES

PROTECTION: Ex nR – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T5 - T4
TEMP. CLASS: COMBUSTIBLE DUSTS: T100ºC - T135ºC
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-15

T* - please consult Tramontina

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy.**
- **Tempered glass**.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Voltage: **100-240V**.
- Frequency: **50/60Hz**
- Temperature color: **5500K**
- Power factor: **> 0.98**
- Standard terminal block for conduits between 2.5mm2.
- **Electrostatic powder coating** finish in **gray**.

HOW TO REQUEST

* - * * * * *

Accessory
(see code table)

Inlets
Ceiling light
B: 1 M25 cable crimp (crimping range ø8-17mm) + 1 M25 plastic plug
D: 2 M25 plastic cable crimps (crimping range ø8-17mm)

90° wall lights
13: 1 M25 plastic cable crimp (crimping range ø8-17mm) + 3 plastic M25 plugs
22: 2 M25 plastic cable crimps (crimping range ø8-17mm) + 2 M25 plugs

Bulb power
(see code table)

Bulb model
(see code table)

Light
B: Ceiling light
C: Pole 90°
D: Pole 25°
E: 90° wall lights

Fixture model
(see code table)

LLEx

MODEL	BULB MODEL	BULB POWER
LLEx 874/2 N	LED	43W 53W 69W
LLEx 870 N	LED	104W 155W 230W

TYPES OF FIXTURE

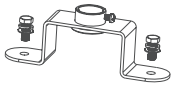
B

C

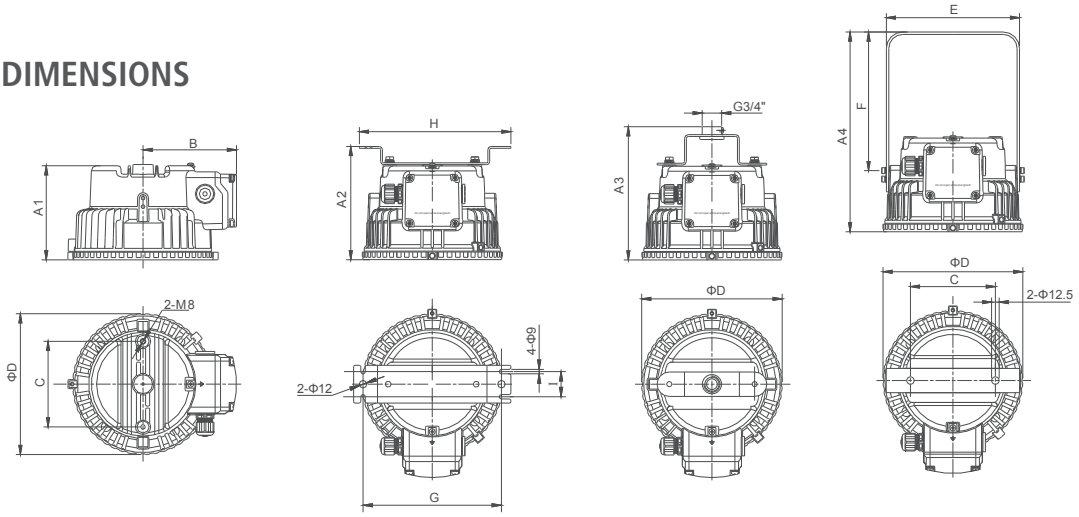
D

E

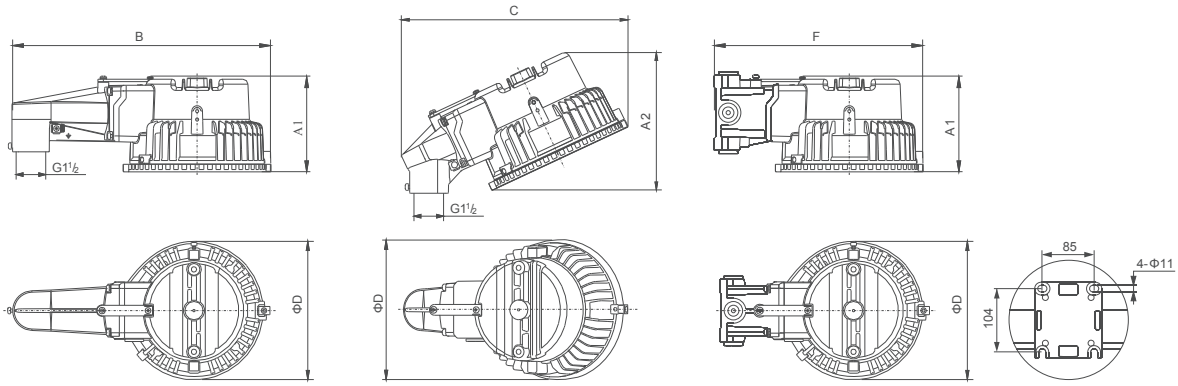
ACCESSORIES

DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Mount ceiling light	Carbon steel	Light fitting Model 870	8722/3	
		Light fitting Model 874/2	8722/2	
"U" shaped mount	Carbon steel	Light fitting Model 870	8719/2	
		Light fitting Model 874/2	8701/2	
Mount hanging	Carbon steel	Light fitting Model 874/2	8702/2	

DIMENSIONS

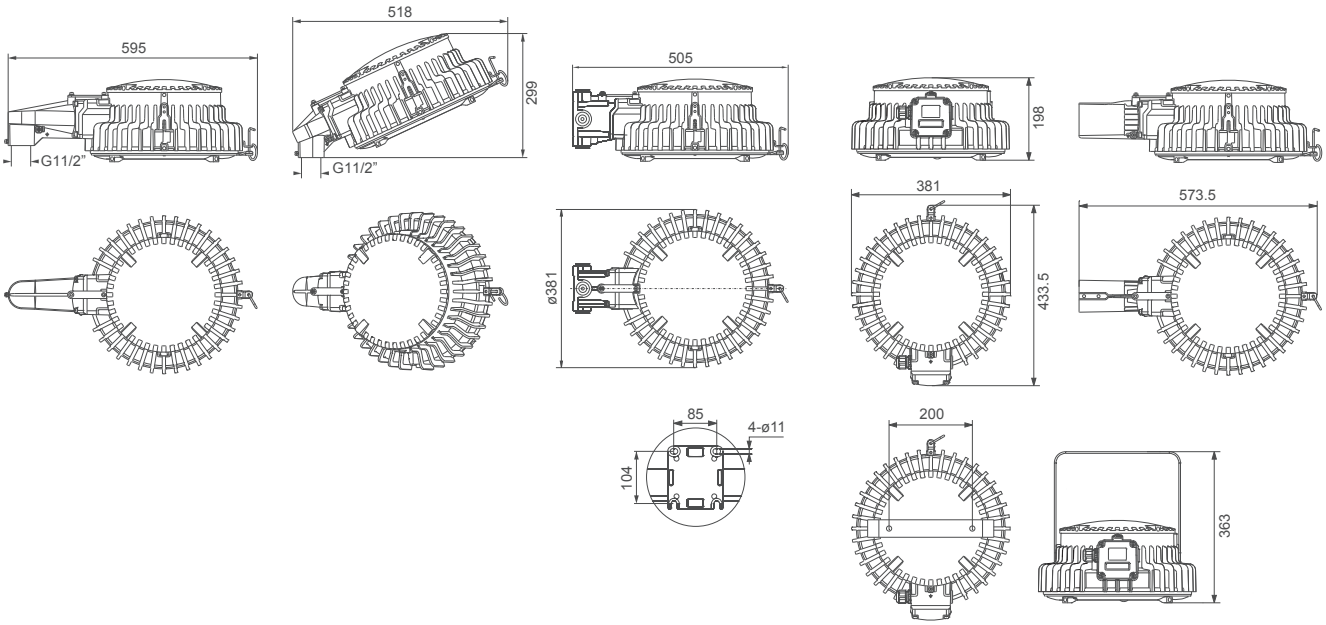


MODEL	A1	A2	A3	A4	B	C	ΦD	E	F	G	H	I
LLEx 874/2	160	190	223	368	180	160	280	268	265	240	270	40



MODEL	A1	A2	B	C	ΦD	E1	E2	F
LLEx 874/2	160	253	485	415	280	2470	2620	377

LLEx 870



LUEx

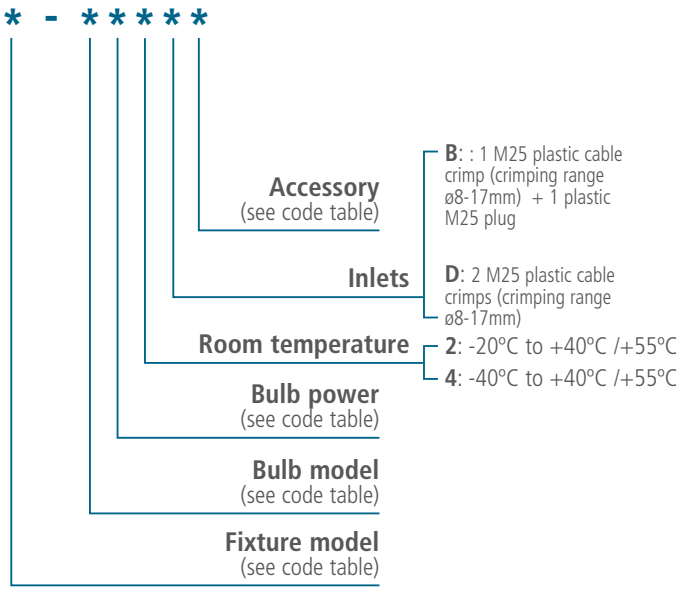
LIGHT FITTING 871/2B AND 872/2B SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS:
T6, T5, T4 ou T3
TEMP. CLASS: COMBUSTIBLE DUSTS:
T80°C, T95°C, T130°C ou T195°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7 | ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy**.
- **Borosilicate** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Supplied with reactor.
- Frequency: **60Hz**.
- **Electrostatic powder coating** finish **gray**.

HOW TO REQUEST



Example: Fixture for metallic vapor 100W bulb with 1 cable crimp and 1 plug for room temperature -20°C to +40°C + mount

Code: **LUEx 871/2B-M100W2B+8701/1**

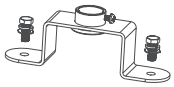
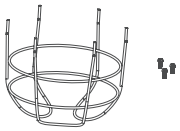
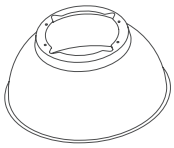
MODELO	SOCKET	POWER	VOLTAGE RATING	TEMPERATURE CLASS	
				RT ≤ 40°C	RT ≤ 55°C
LUEx 871/2B-F45W	E27	45W	220 ~ 240 V 50 / 60 HZ	T6/T80°C	-
LUEx 871/2B-F65W				T6/T80°C	-
LUEx 871/2B-I50W	-	50 W	220 ~ 240 V 50 / 60 Hz	T6/T80°C	T5/T95°C
LUEx 871/2B-I85W		85 W		T6/T80°C	T5/T95°C
LUEx 871/2B-X125W	E27	125 W	220 V - 50 Hz	T4/T130°C	-
LUEx 871/2B-X160W		160 W		T4/T130°C	-
LUEx 871/2B-H50W	E27	50 W	220 V, 230 V, 240 V 230 / 240V , 220 / 230 / 240 V 50 Hz	T4/T130°C	T4/T130°C
LUEx 871/2B-H80W		80 W		T4/T130°C	T4/T130°C
LUEx 871/2B-H125W		125 W		T4/T130°C	T4/T130°C
LUEx 871/2B-M70W		70 W		T6/T80°C	T5/T95°C
LUEx 871/2B-M100W		100 W		T5/T95°C	T4/T130°C
LUEx 871/2B-M150W		150 W		T5/T95°C	T4/T130°C
LUEx 871/2B-S70W		70 W		T6/T80°C	T5/T95°C
LUEx 871/2B-S100W		100 W		T6/T80°C	T5/T95°C
LUEx 872/2B-I135W	-	135 W	220 ~ 240 VC 50 / 60HZ	T5/T95°C	T4/T130°C
LUEx 872/2B-I165W		165 W		T5/T95°C	T4/T130°C
LUEx 872/2B-X500W	E40	500 W	220 V - 50 Hz	T4/T130°C	-
LUEx 872/2B-H400W	E40	400 W	220 V, 230 V, 240 V 230 / 240 V, 220 / 230 / 240 V 50 Hz	T3/T195°C	-
LUEx 872/2B-M250W		250 W		T5/T95°C	T4/T130°C
LUEx 872/2B-M400W		400 W		T4/T130°C	-
LUEx 872/2B-S150W		150 W		T4/T130°C	T4/T130°C
LUEx 872/2B-S250W		250 W		T5/T95°C	T4/T130°C
LUEx 872/2B-S400W		400 W		T4/T130°C	-
LUEx 871/2B-X125W	E27	125 W	220 V - 60 Hz	T4/T130°C	-
LUEx 871/2B-X160W		160 W		T4/T130°C	-
LUEx 872/2B-X500W	E40	500 W	220 V - 60 Hz	T4/T130°C	-
LUEx 871/2B-H50W	E27	50 W	220 V, 230 V, 240 V 230 / 240 V, 220 / 230 / 240 V 60 Hz	T4/T130°C	T4/T130°C
LUEx 871/2B-H80W		80 W		T4/T130°C	T4/T130°C
LUEx 871/2B-H125W		125 W		T4/T130°C	T4/T130°C
LUEx 871/2B-M70W		70 W		T6/T80°C	T5/T95°C
LUEx 871/2B-M100W		100 W		T4/T130°C	T4/T130°C
LUEx 871/2B-M150W		150 W		T4/T130°C	T4/T130°C
LUEx 871/2B-S70W		70 W		T5/T95°C	T4/T130°C
LUEx 871/2B-S100W		100 W		T5/T95°C	T4/T130°C
LUEx 872/2B-H400W	E40	400 W		T3/T195°C	-
LUEx 872/2B-H250W		250 W		T3/T195°C	-
LUEx 872/2B-M250W		250 W		T4/T130°C	T4/T130°C
LUEx 872/2B-M400W		400 W		T4/T130°C	-
LUEx 872/2B-S150W		150 W		T4/T130°C	T4/T130°C
LUEx 872/2B-S250W		250 W		T5/T95°C	T4/T130°C
LUEx 872/2B-S400W		400 W		T4/T130°C	-

F - compact fluorescent light
I - induction bulb
H - mercury vapor bulb
M - metallic vapor bulb
S - sodium vapor bulb
X - mixed bulb

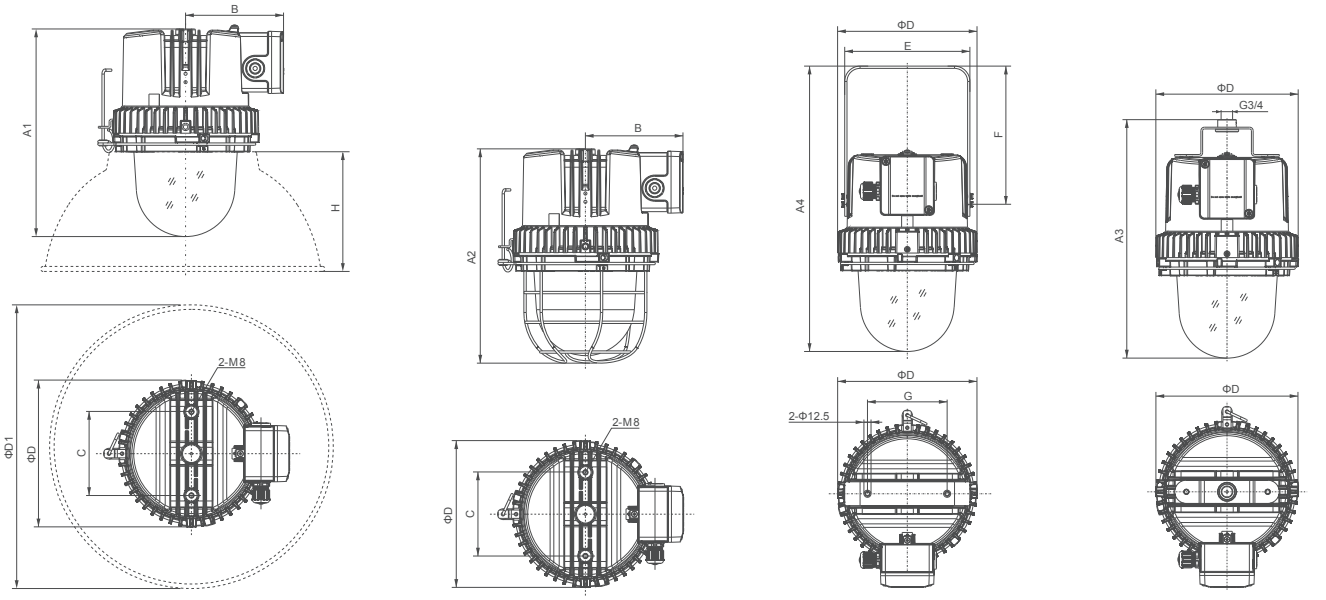
ACCESSORIES

DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Optical assembly	Borosilicato	Light fitting Model 871	8703/1	
		Light fitting Model 872	8703/2	
"U" shaped mount	Carbon steel	Light fitting Model 871	8701/1	
		Light fitting Model 872	8701/2	

LUEx

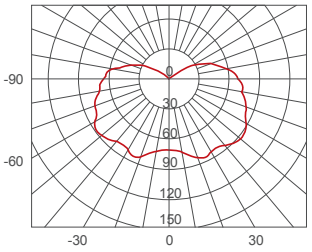
DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Mount hanging	Carbon steel	Light fitting Model 871	8702/1	
		Light fitting Model 872	8702/2	
Protection grate	Stainless steel	Light fitting Model 871	8704/1	
		Light fitting Model 872	8704/2	
Reflector	Aluminum	Light fitting Model 871	8724/1	
		Light fitting Model 872	8724/2	

DIMENSIONS

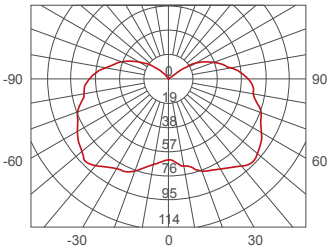


MODEL	A1	A2	A3	A4	B	C	ΦD	ΦD1	E	F	G	H
LUEx 871/2B	350	360	410	500	165	140	245	475	220	245	140	200
LUEx 872/2B	500	510	560	660	190	160	300	685	268	280	160	260

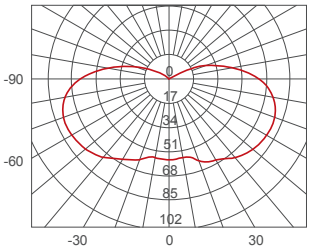
PHOTOMETRIC CURVES (cd/1000lm)



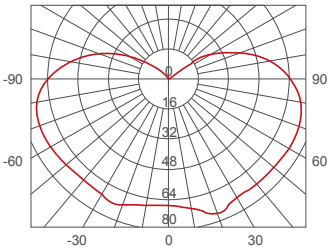
LUEx 871/2B-F (45W)



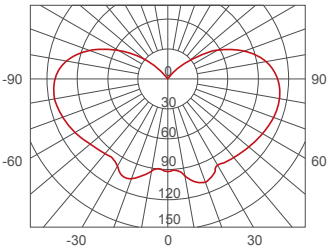
LUEx 871/2B-F (65W)



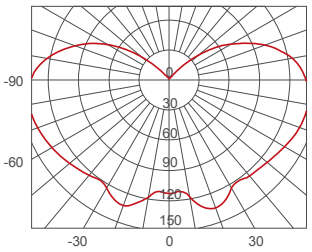
LUEx 871/2B-I (50W)



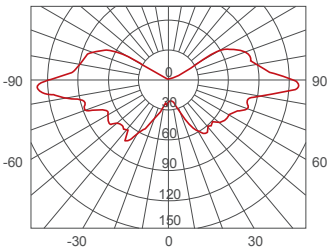
LUEx 871/2B-I (85W)



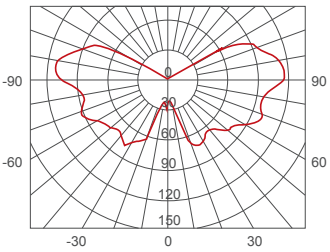
LUEx 872/2B-I (135W)



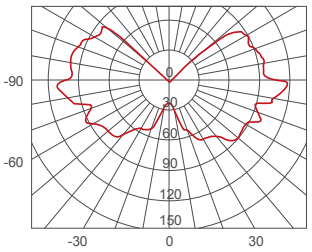
LUEx 872/2B-I (165W)



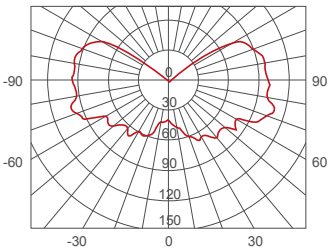
LUEx 871/2B-M (70W)



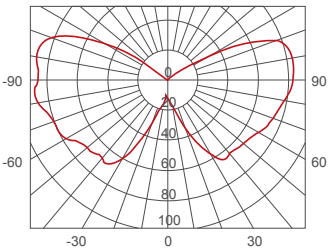
LUEx 871/2B-M (150W)



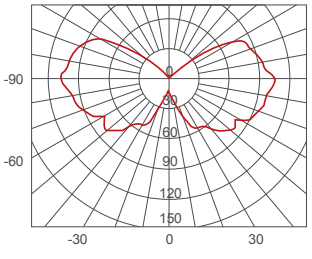
LUEx 871/2B-M (250W)



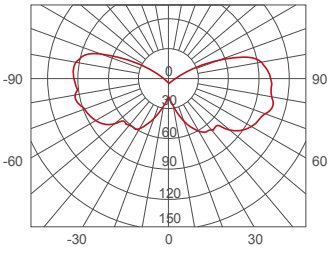
LUEx 872/2B-M (400W)



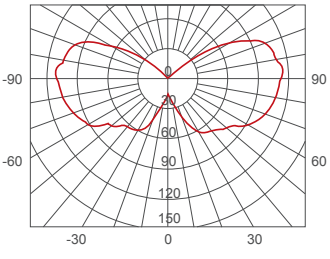
LUEx 871/2B-S (100W)



LUEx 872/2B-S (150W)



LUEx 872/2B-S (250W)



LUEx 872/2B-S (400W)

LUEx

LIGHT FITTING 873/2 AND 874/2 SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS:
T6, T5 ou T4
TEMP. CLASS: COMBUSTIBLE DUSTS:
T80°C, T95°C ou T130°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7 | ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy**.
- **Borosilicate** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Supplied with reactor.
- **Electrostatic powder coating** finish **gray**.

Example: 90° wall light for 250W sodium vapor bulb with one cable crimp and 3 plugs for room temperature -20°C to +40°C.

Code: **LUEx 874/2E-S250W2213**

HOW TO REQUEST

**** - *******

- **Accessory** (see code table)
- **Inlets**
  - **Ceiling light**
    B: 1 M25 cable crimp (crimping range ø8-17mm) + 1 M25 plastic plug
    D: 2 M25 plastic cable crimps (crimping range ø8-17mm)
  - **90° wall lights**
    13: 1 M25 plastic cable crimp (crimping range ø8-17mm) + 3 plastic M25 plugs
    22: 2 M25 plastic cable crimps (crimping range ø8-17mm) + 2 M25 plugs
- **Room temperature**
  - **2**: -20°C a +40°C /+55°C
  - **4**: -40°C a +40°C /+55°C
- **Bulb power** (see code table)
- **Bulb model** (see code table)
- **Light**
  - **B**: Ceiling light
  - **C**: Pole 90°
  - **D**: Pole 25°
  - **E**: 90° wall lights
- **Fixture model** (see code table)

MODEL	SOCKET	POWER	VOLTAGE RATING	TEMPERATURE CLASS	
				Rt ≤ 40°C	Rt ≤ 55°C
LUEx 873/2 _ -LED25W	-	-	220 ~ 240 V 50 / 60 Hz	T6/T80°C	T6/T80°C
LUEx 873/2 _ -I50W				T6/T80°C	T6/T80°C
LUEx 873/2 _ -F45W	E27	45W	220 ~ 240 V 50 / 60 Hz	T6/T80°C	-
LUEx 873/2 _ -F65W		65W		T6/T80°C	-
LUEx 873/2 _ -M70W	E27	70 W	220 V, 230 V, 240 V 230 / 240 V 220 / 230 / 240 V 50 Hz	T6/T80°C	T5/T95°C
LUEx 873/2 _ -M100W		100 W		T4/T130°C	T4/T130°C
LUEx 873/2 _ -M150W		150 W		T4/T130°C	T4/T130°C
LUEx 873/2 _ -S70W		70 W		T5/T95°C	T4/T130°C
LUEx 873/2 _ -S100W		100 W		T5/T95°C	T4/T130°C
LUEx 874/2 _ -M250W	E40	250 W	220 V, 230 V, 240 V 230 / 240 V 220 / 230 / 240 V 50 Hz	T4/T130°C	T4/T130°C
LUEx 874/2 _ -S150W		150 W		T4/T130°C	T4/T130°C
LUEx 874/2 _ -S250W		250 W		T4/T130°C	T4/T130°C
LUEx 873/2 _ -M70W	E27	70 W	220 V, 230 V, 240 V 230 / 240 V 220 / 230 / 240 V 60 Hz	T6/T80°C	T5/T95°C
LUEx 873/2 _ -M100W		100 W		T4/T130°C	T4/T130°C
LUEx 873/2 _ -M150W		150 W		T4/T130°C	T4/T130°C
LUEx 873/2 _ -S70W		70 W		T5/T95°C	T4/T130°C
LUEx 873/2 _ -S100W		100 W		T5/T95°C	T4/T130°C
LUEx 874/2 _ -M250W	E40	250 W		T4/T130°C	T4/T130°C
LUEx 874/2 _ -S150W	E40	150 W		T4/T130°C	T4/T130°C
LUEx 874/2 _ -S250W		250 W		T4/T130°C	T4/T130°C

F - compact fluorescent light
I -induction bulb
M - metallic vapor bulb
S - sodium vapor bulb

TYPES OF FIXTURE

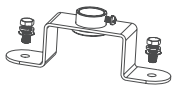
B

C

D

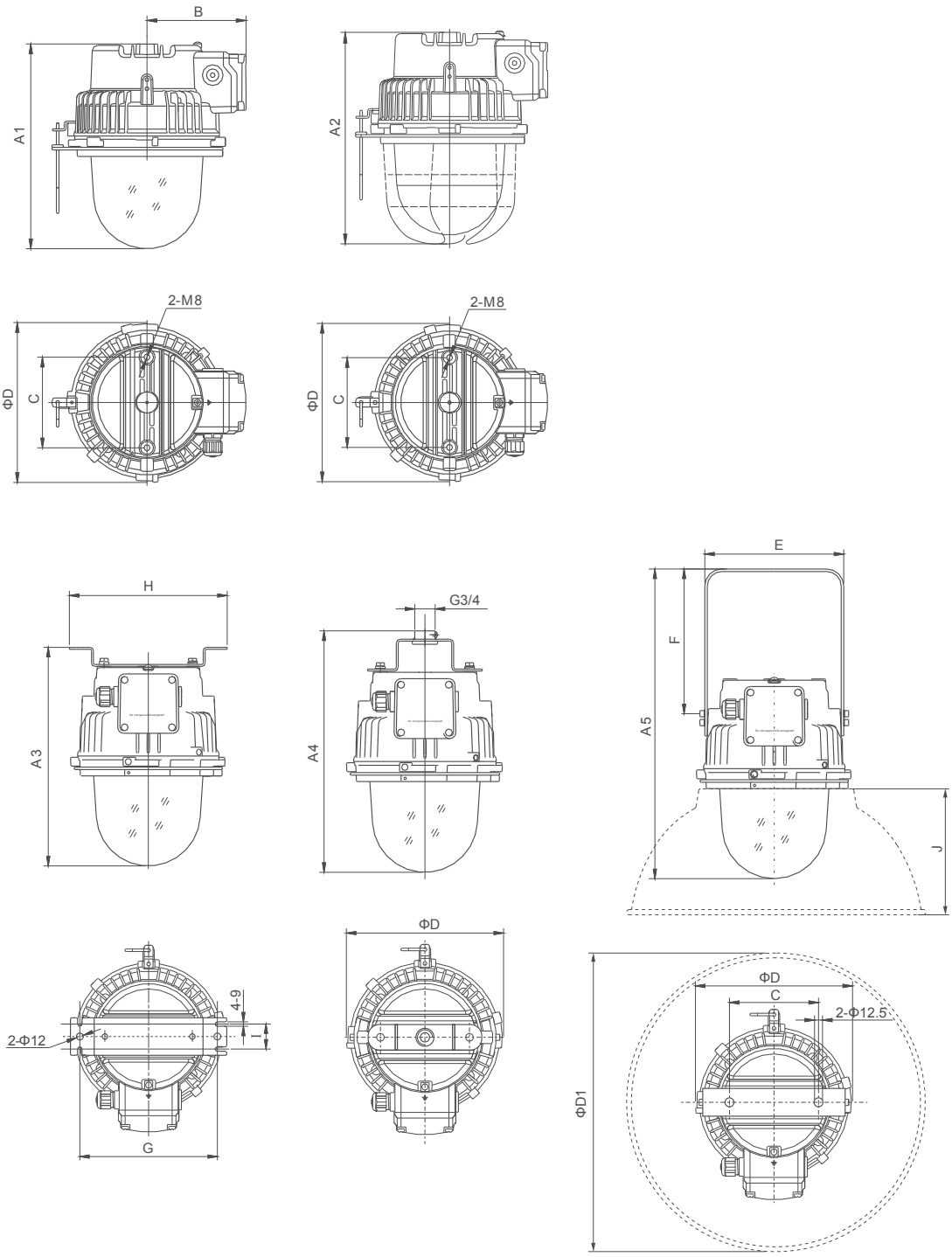
E

ACCESSORIES

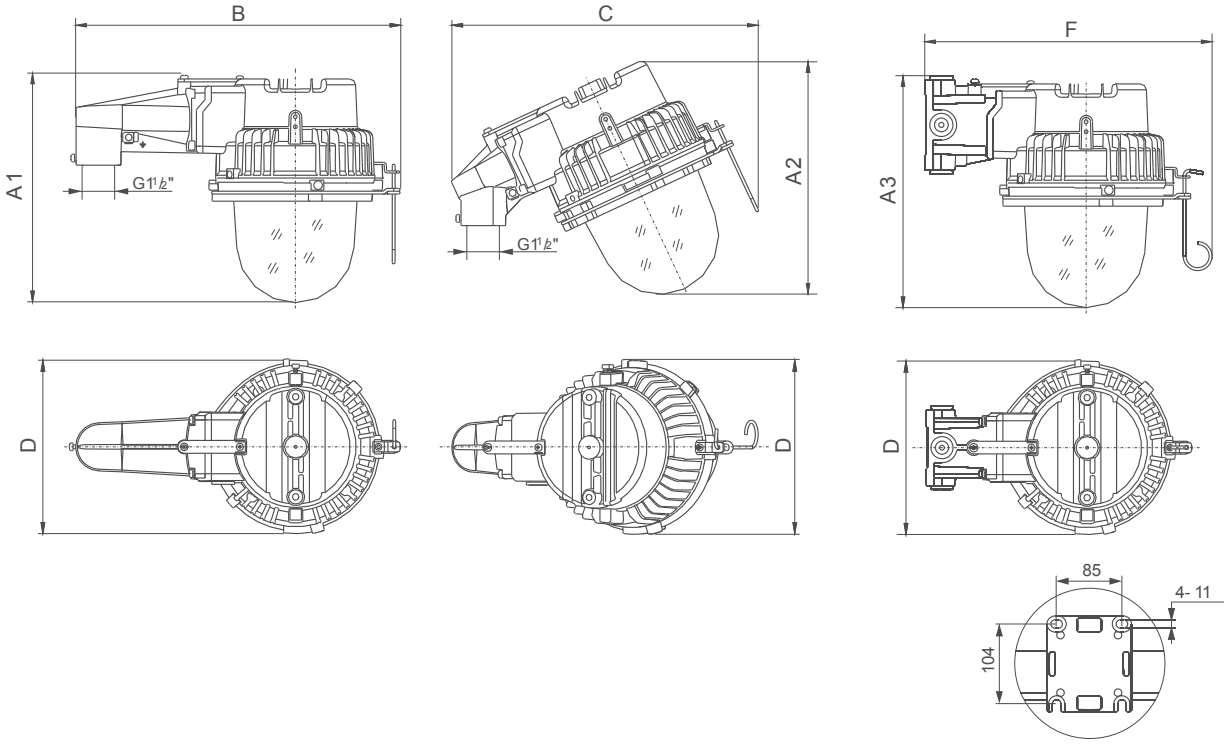
DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Mount ceiling light	Carbon steel	Light fitting Model 873/2	8722/1	
		Light fitting Model 874/2	8722/2	
"U" shaped mount	Carbon steel	Light fitting Model 873/2	8701/1	
		Light fitting Model 874/2	8701/2	
Mount hanging	Carbon steel	Light fitting Model 873/2	8702/1	
		Light fitting Model 874/2	8702/2	

LUEx

DIMENSIONS

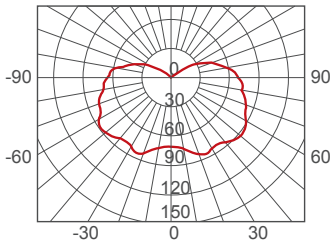


MODEL	A1	A2	A3	A4	A5	B	C	ΦD	ΦD1	E	F	G	H	I	J
LUEx 873/2	317	330	346	379	490	153	140	245	475	220	229	220	250	40	200
LUEx 874/2	422	432	450	485	630	180	160	300	685	268	265	240	270	40	260

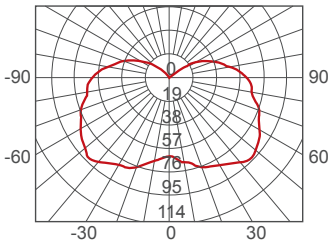


MODEL	A1	A2	A3	B	C	ΦD	F
LUEx 873/2	320	326	325	455	430	254	390
LUEx 874/2	423	433	430	507	475	300	441

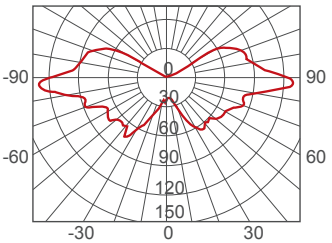
PHOTOMETRIC CURVES (cd/1000lm)



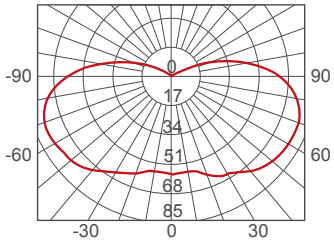
LUEx 873/2-F (45W)



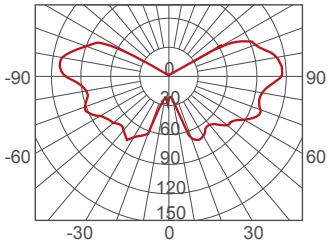
LUEx 873/2-F (65W)



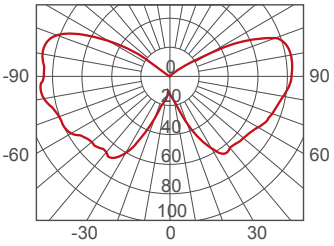
LUEx 873/2-M (70W)



LUEx 873/2-I (50W)



LUEx 874/2-M (150W)



LUEx 874/2-S (100W)

LUEx

LIGHT FITTING 879 SERIES

PROTECTION: Ex nR – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS:
T6, T5, T4 ou T3
TEMP. CLASS: COMBUSTIBLE DUSTS:
T80°C, T95°C, T130°C ou T195°C
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0 | ABNT NBR IEC 60079-15
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy**.
- **Borosilicate** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Supplied with reactor.
- **Electrostatic powder coating** finish **gray**.
- Room temperature -40°C to +40°C/+55°C.

HOW TO REQUEST

** - ****

Accessory
(see code table)

Light fitting inlets 90° ceiling light and wall light
13: 1 plastic M25 cable crimp (crimping range ø8-17mm) + 3 plastic M25 plugs
22: 2 M25 plastic cable crimps (crimping range ø8-17mm) + 2 M25 plugs+ 2 bujões M25

Bulb power
(see code table)

Bulb model
(see code table)

Light
A: Hanging
B: Ceiling light
C: Pole 90°
D: Pole 25°
E: 90° wall lights

Fixture model
(see code table)

Example: 25° lamp post for 85W induction bulb + grate + reflector.

Code: **LUEx 879/1D-I85W+8718/1+8724/1**

MODEL	SOCKET	POWER	VOLTAGE RATING	TEMPERATURE CLASS	
				Rt ≤ 40°C	Rt ≤ 55°C
LUEx 879/1 _ -F45W	E27	45W	220 ~ 240 V 50 / 60 HZ	T6/T80°C	-
LUEx 879/1 _ -F65W		65W		T6/T80°C	-
LUEx 879/1 _ -I50W	/	50W		T6/T80°C	T5/T95°C
LUEx 879/1 _ -I85W		85W		T6/T80°C	T5/T95°C
LUEx 879/1 _ -M50W	E27	50W	220 V, 230 V, 240 V 230 / 240 V 220 / 230 / 240 V 50 / 60 Hz	T5/T95°C	T4/T130°C
LUEx 879/1 _ -M70W		70W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -M100W		100W		T4/T130°C	T4/T130°C
LUEx 879/1 _ -M150W		150W		T4/T130°C	T4/T130°C
LUEx 879/1 _ -S50W		50W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -S70W		70W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -S100W		100W		T5/T95°C	T4/T130°C
LUEx 879/2 _ -S150W	E40	150W		T4/T130°C	T4/T130°C
LUEx 879/2 _ -M250W		250W		T4/T130°C	T3/T195°C
LUEx 879/2 _ -S250W		250W		T4/T130°C	T3/T195°C
LUEx 879/3 _ -M250W		250W		T4/T130°C	T4/T130°C
LUEx 879/3 _ -S250W		250W		T4/T130°C	T4/T130°C
LUEx 879/3 _ -M400W		400W		T4/T130°C	T3/T195°C
LUEx 879/3 _ -S400W		400W		T3/T195°C	T3/T195°C
LUEx 879/3 _ -I135W	/	135W	220 ~ 240Vac 50 / 60 Hz	T6/T80°C	T5/T95°C
LUEx 879/3 _ -I165W		165W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -M50W	E27	50W	120 / 208 / 240 / 277 / 480 V 60 Hz	T6/T80°C	T6/T80°C
LUEx 879/1 _ -M70W		70W		T6/T80°C	T5/T95°C
LUEx 879/1 _ -M100W		100W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -M150W		150W		T4/T130°C	T4/T130°C
LUEx 879/2 _ -M175W	E40	175W		T4/T130°C	T4/T130°C
LUEx 879/1 _ -S50W	E27	50W		T6/T80°C	T6/T80°C
LUEx 879/1 _ -S70W		70W		T5/T95°C	T4/T130°C
LUEx 879/1 _ -S100W		100W		T5/T95°C	T4/T130°C
LUEx 879/2 _ -S150W		150W		T4/T130°C	T4/T130°C
LUEx 879/3 _ -M250W	E40	250W		T4/T130°C	T4/T130°C
LUEx 879/3 _ -S250W		250W		T4/T130°C	T4/T130°C
LUEx 879/3 _ -S400W		400W		T3/T195°C	T4/T130°C
LUEx 879/3 _ -M400W		400W		T4/T130°C	T4/T130°C

F - compact fluorescent light
I - induction bulb
M - metallic vapor bulb
S - sodium vapor bulb

TYPES OF FIXTURE

A

B

C

D

E

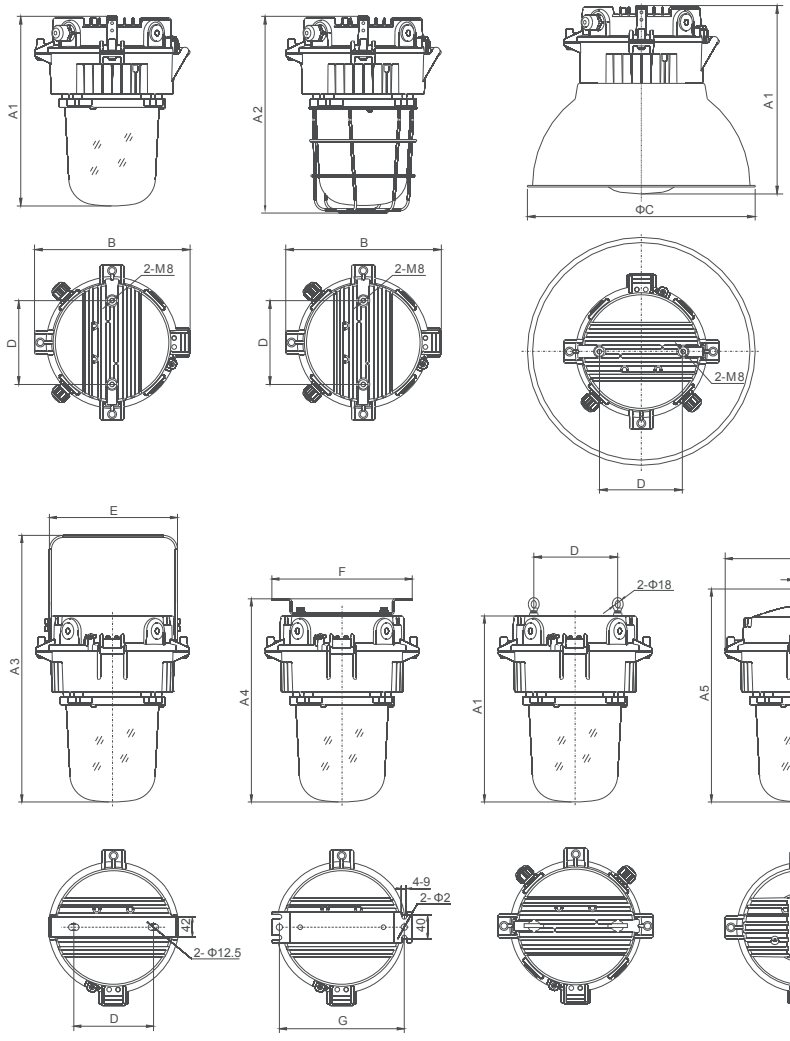
ACCESSORIES

DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Mount ceiling light	Carbon steel	Light fitting Model 879/1 e 879/2	8722/2	
		Light fitting Model 879/3	8722/3	
"U" shaped mount	Carbon steel	Light fitting Model 879/1 e 879/2	8719/1	
		Light fitting Model 879/3	8719/2	

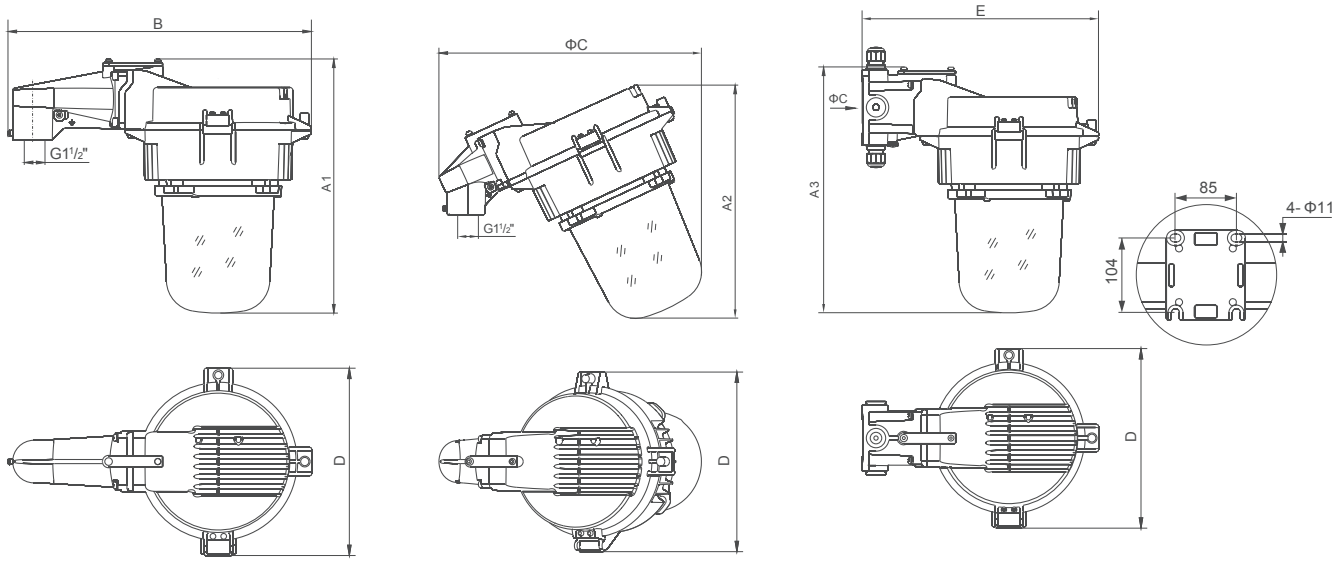
LUEx

DESCRIPTION	MATERIAL SOURCE	APPLICATION	CODE	IMAGE
Globe	Borosilicate	Light fitting Model 879/1	192/210	
		Light fitting Model 879/2	192/290	
		Light fitting Model 879/3	240/290	
Protection grate	Stainless steel	Light fitting Model 879/1	8718/1	
		Light fitting Model 879/2	8718/2	
		Light fitting Model 879/3	8718/3	
Reflector	Aluminum	Light fitting Model 879/1 e 879/2	8724/1	
		Light fitting Model 879/3	8724/2	

DIMENSIONS

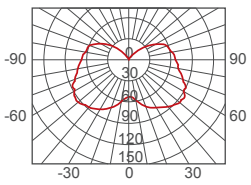


MODEL	A1	A2	B	ΦC	D	A3	A4	A5	E	F	G
LUEx 879/1	362	380	297	475	160	578	392	412	258	270	240
LUEx 879/2	442	460	297	475	160	658	472	492	258	270	240
LUEx 879/3	510	535	350	685	200	750	540	560	303	370	340

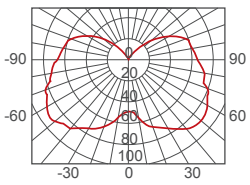


MODEL	A1	A2	A3	B	C	D	E
LUEx 879/1	405	386	406	480	435	297	391
LUEx 879/2	485	460	486	480	465	297	391
LUEx 879/3	555	530	553	535	530	350	443

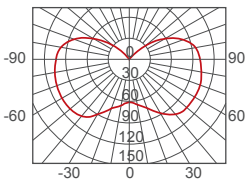
PHOTOMETRIC CURVES (cd/1000lm)



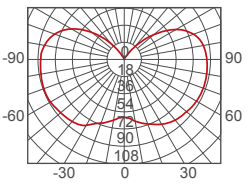
LUEx 879-F (45W)



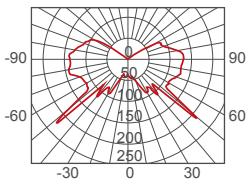
LUEx 879-F (65W)



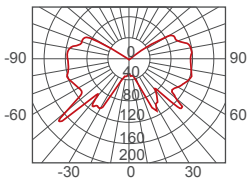
LUEx 879-I (50W)



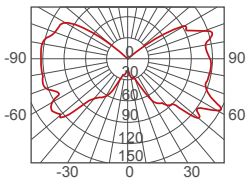
LUEx 879-I (85W)



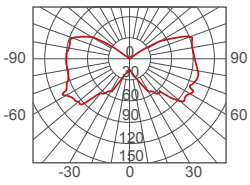
LUEx 879-M (70W)



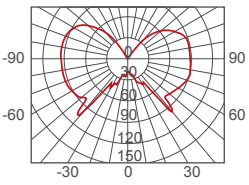
LUEx 879-M (150W)



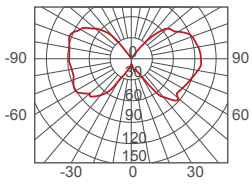
LUEx 879-S (70W)



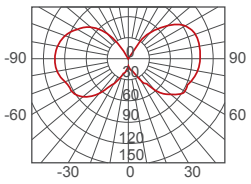
LUEx 879-S (100W)



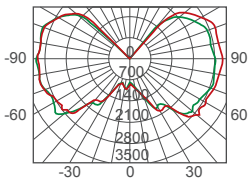
LUEx 879-M (250W)



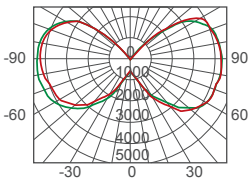
LUEx 879-S (150W)



LUEx 879-S (250W)



LUEx 879-M (400W)



LUEx 879-S (400W)

PLEx

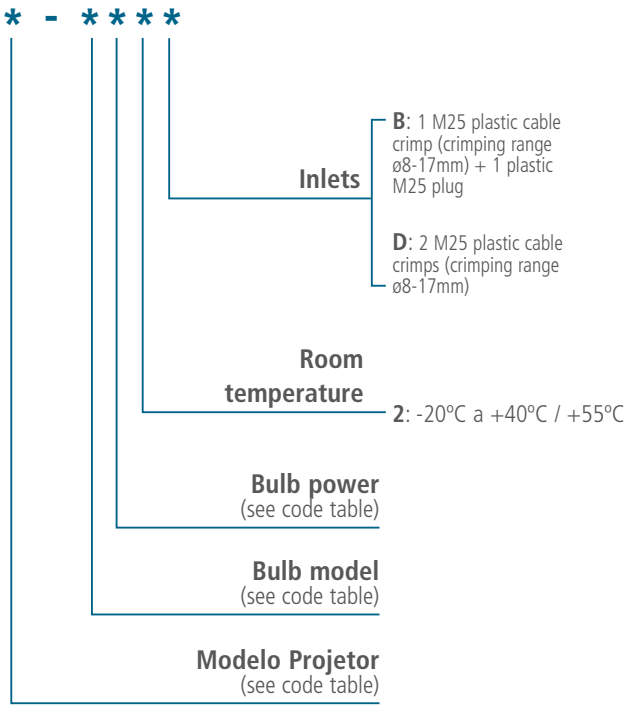
LED PROJECTOR 878D SERIES

PROTECTION: Ex db eb op is - Ex tb op is
ZONES: 1 and 2 - 21 and 22
GROUPS: IIB - IIIC
TEMP. CLASS GASES AND VAPORS: T5 ou T4
TEMP. CLASS COMBUSTIBLES DUSTS. 190°C - T 205°C
EPL: Gb - Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7

TECHNICAL SPECIFICATIONS

- Projectors made in copper-free **aluminum alloy**.
- **Tempered glass** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Voltage: **100~277V.**
- **Electrostatic powder coating** finish in **gray.**

HOW TO REQUEST



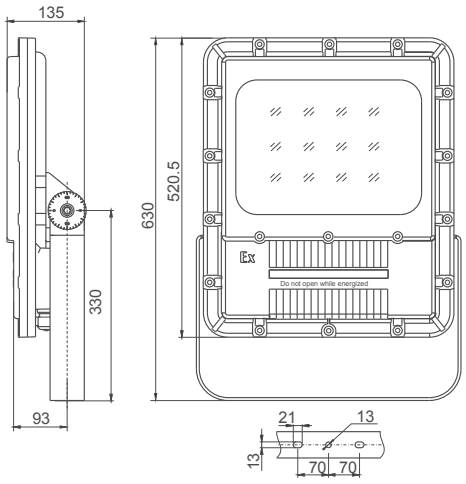
Example: LED projector for 160W bulb with 2 cable crimps for room temperature -20°C to +40°C.

Code: **PLEx 878d/B-LED160W2D**

MODEL	MODEL POWER	BULB POWER	TEMPERATURE CLASS		WEIGHT (kg)	IMAGE
			Rt ≤ 40ºC	Rt ≤ 55ºC		
PLEx 878d/B	LED	120W 160W 200W	T5/T90ºC	T4/T105ºC	18,00	
PLEx 878d/F	LED	120W 160W 200W	T5/T90ºC	T4/ T105ºC	18,00	

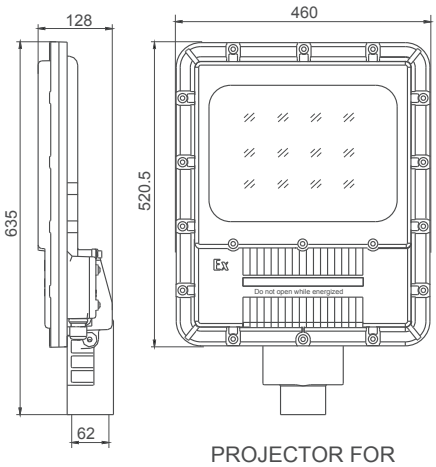
DIMENSIONS

PLEx 878d/B



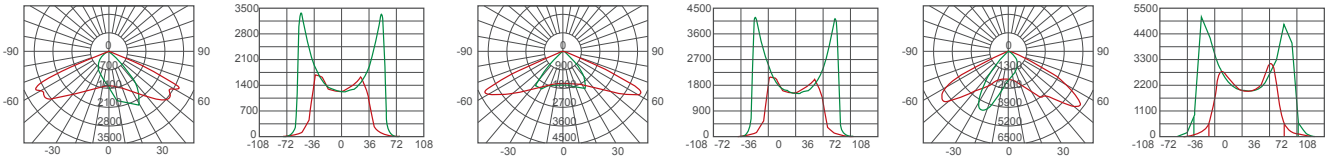
PROJECTOR

PLEx 878d/F



PROJECTOR FOR
PUBLIC LIGHTING

PHOTOMETRIC CURVES (cd)



PLEx 878d
F-LED (120W)

PLEx 878d
B-LED (120W)

PLEx 878d
F-LED (160W)

PLEx 878d
B-LED (160W)

PLEx 878d
F-LED (200W)

PLEx 878d
B-LED (200W)

PLEx

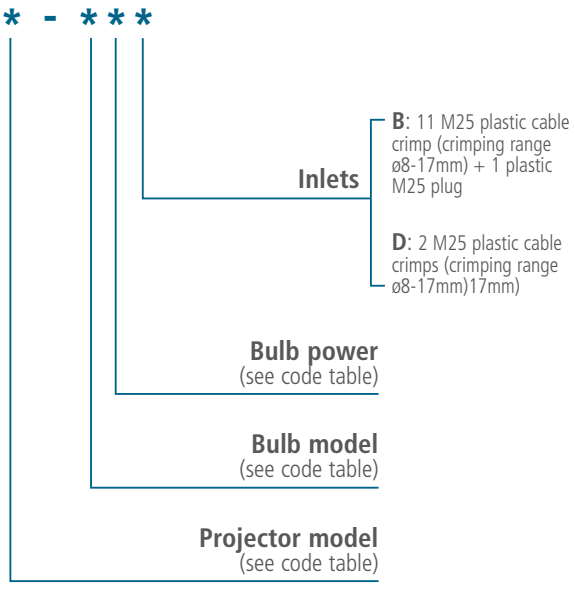
LED PROJECTOR 878N SERIES

PROTECTION: Ex nR – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T5 ou T4
TEMP. CLASS: COMBUSTIBLE DUSTS:
T90ºC ou T105º
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-15
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Projectors made in copper-free **aluminum alloy**.
- **Tempered glass** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Voltage: **100-277V**
- Power factor: **> 0.95**
- **Electrostatic powder coating** finish **gray**.
- Room temperature -40°C to +40°C/+55°C.

HOW TO REQUEST



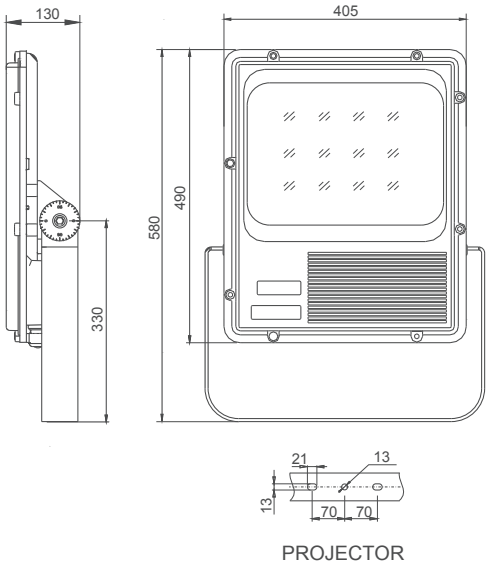
Example: LED public lighting projector for 120W bulb with 1 cable crimp and 1 plug.

Code: **PLEx 878n/F-LED120WB**

MODEL	MODEL POWER	BULB POWER	TEMPERATURE CLASS		WEIGHT (KG)	IMAGE
			Rt ≤ 40ºC	Rt ≤ 55ºC		
PLEx 878n/B	LED	120W	T5/T90ºC	T4/T105ºC	18,00	
		160W				
		200W				
PLEx 878n/F	LED	120W	T5/T90ºC	T4/T105ºC	18,00	
		160W				
		200W				

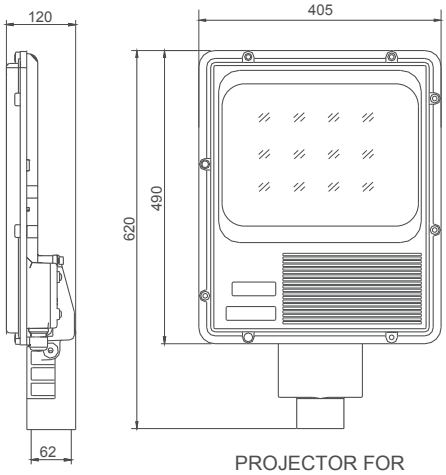
DIMENSIONS

PLEx 878n/B



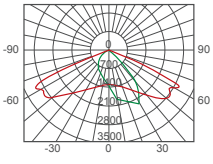
PROJECTOR

PLEx 878n/F

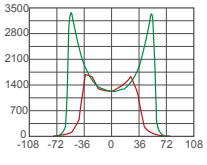


PROJECTOR FOR PUBLIC LIGHTING

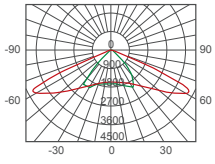
PHOTOMETRIC CURVES (cd)



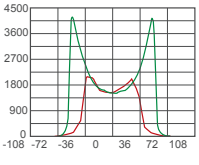
PLEx 878n F-LED (120W)



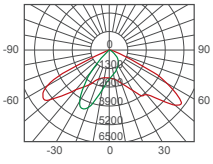
PLEx 878n B-LED (120W)



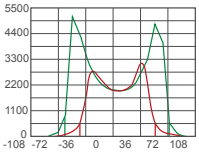
PLEx 878n F-LED (160W)



PLEx 878n B-LED (160W)



PLEx 878n F-LED (200W)



PLEx 878n B-LED (200W)

PREx

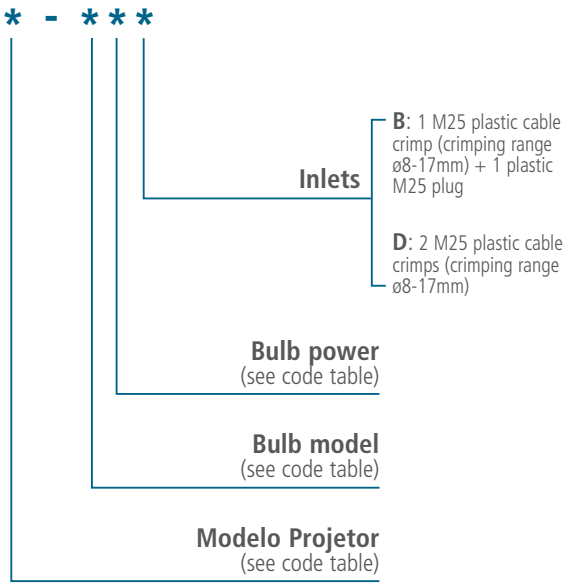
PROJECTOR 878D SERIES

PROTECTION: Ex d e
ZONES: 1 and 2
GROUPS: IIB
TEMP. CLASS GASES AND VAPORS:
T5, T4 ou T3
EPL: Gb
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7

TECHNICAL SPECIFICATIONS

- Projectors made in copper-free **aluminum alloy**.
- **Tempered glass** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- Supplied with reactor.
- Voltage: **220V**
- Frequency: **50/60Hz**
- **Electrostatic powder coating** finish in Munsell **gray** N 6.5 polyester.
- Room temperature -20°C to +40°C/+55°C.

HOW TO REQUEST

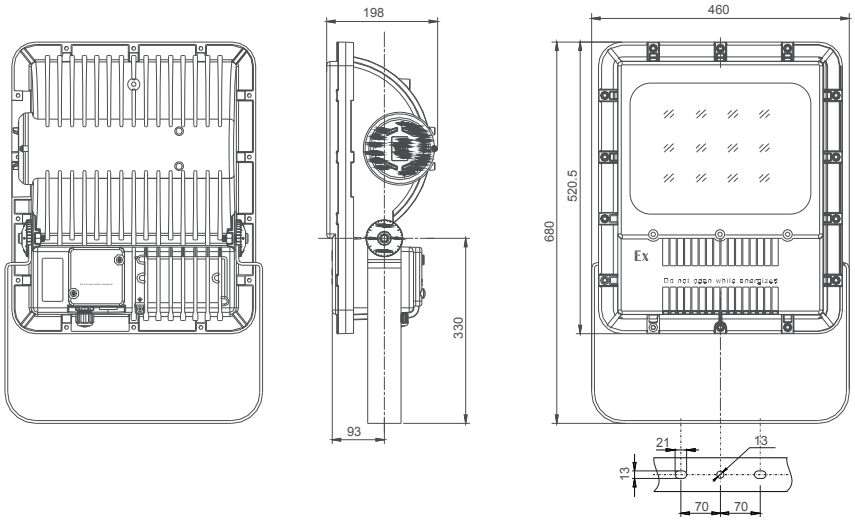


Example: Projector for 400W metallic vapor bulb with 2 cable crimps.

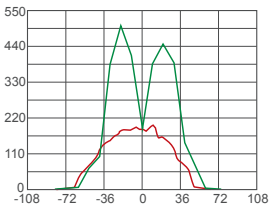
Code: **PREx 878d-M400WD**

MODEL	BULB MODEL		BULB POWER	SOCKET	TEMPERATURE CLASS		WEIGHT (kg)	IMAGE
	CODE	DESCRIPTION			Rt ≤ 40°C	Rt ≤ 55°C		
PREx 878d	I	Induction	85W	-	T5	T4	19,00	
	M	Metallic vapor	250W	E40	T3	T3	20,50	
			400W	E40	T3	-	21,00	
	S	Sodium vapor	250W	E40	T3	T3	22,00	
			400W	E40	T3	-	22,50	

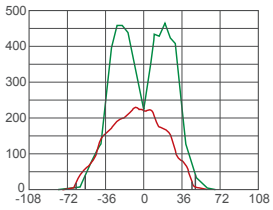
DIMENSIONS



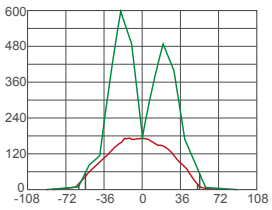
PHOTOMETRIC CURVES (cd/1000lm)



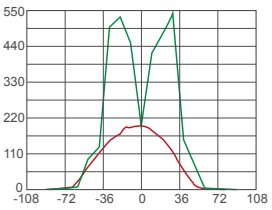
PREx 878d-M (250W)



PREx 878d-M (400W)



PREx 878d-S (250W)



PREx 878d-S (400W)

PREx

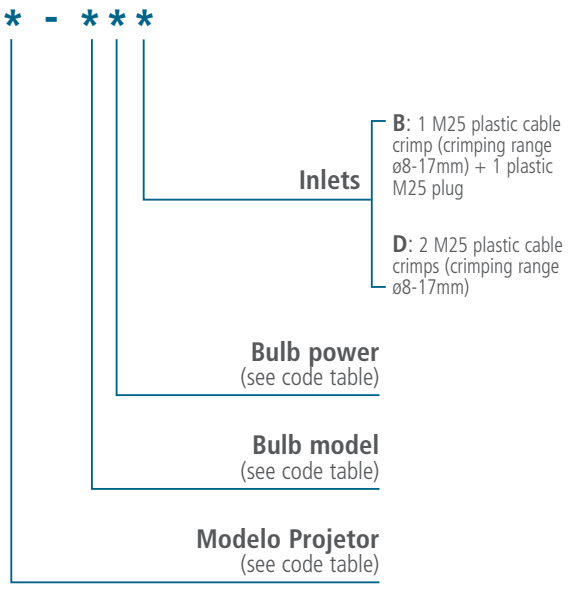
PROJECTOR 878N SERIES

PROTECTION: Ex nR – Ex tb
ZONES: 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS:
T5, T4, T3 ou T2
TEMP. CLASS: COMBUSTIBLE DUSTS:
T85°C ... T215°C
EPL: Gc – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-15
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Projectors made in copper-free aluminum alloy.
- Tempered glass globe.
- Sealing unit.
- Stainless steel screws and connectors.
- Supplied with reactor.
- Voltage: 220V
- Frequency: 50/60Hz
- Electrostatic powder coating finish in Munsell gray N 6.5 polyester.
- Room temperature -40°C to +40°C/+55°C.

HOW TO REQUEST

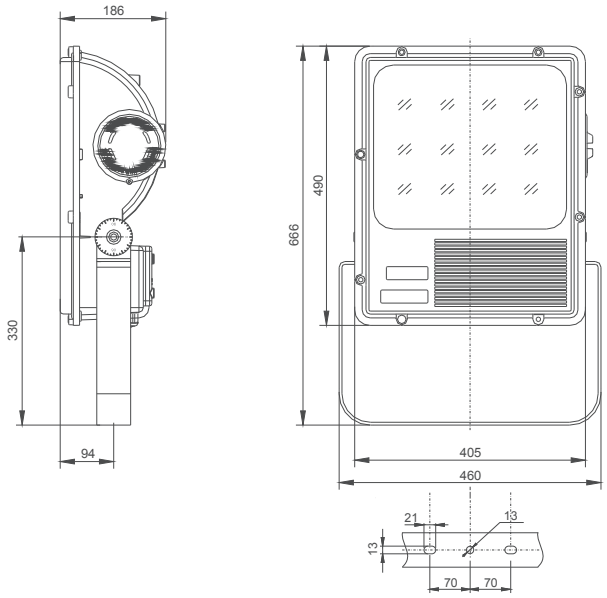


Example: Projector for 250W sound vapor bulb with 1 cable crimp and 1 plug.

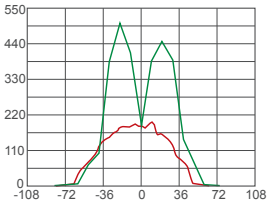
Code: **PREx 878n-S250WB**

MODEL	BULB MODEL		BULB POWER	SOCKET	TEMPERATURE CLASS		WEIGHT (kg)	IMAGE
	CODE	DESCRIPTION			Rt ≤ 40ºC	Rt ≤ 55ºC		
PREx 878n	I	Induction	85W	-	T5/T85ºC	T4/T100ºC	19,00	
	M	Metallic vapor	250W	E40	T3/T150ºC	T3/T165ºC	20,50	
			400W	E40	T3 ou T2/ T200ºC ou T195ºC	T2/T215ºC	21,00	
	S	Sodium vapor	70W	E40	T3/T150ºC	T3/T165ºC	22,00	
			100W	E40	T3/T180ºC	T3/T195ºC	22,50	

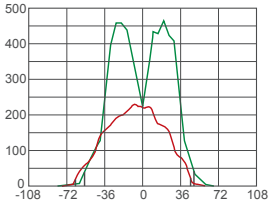
DIMENSIONS



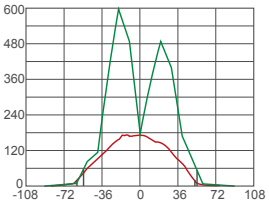
PHOTOMETRIC CURVES (cd/1000lm)



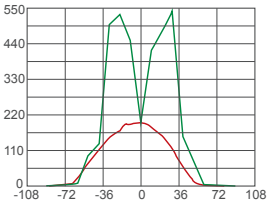
PREx 878n-M (250W)



PREx 878n-M (400W)



PREx 878n-S (250W)



PREx 878n-S (400W)

LSEx

SIGNALING LIGHTS 873 SERIES

PROTECTION: Ex d e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
TEMP. CLASS GASES AND VAPORS: T6
TEMP. CLASS: COMBUSTIBLE DUSTS: T80 °C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

LSEx 873/2BJD LED

TECHNICAL SPECIFICATIONS

- Light fittings made in copper-free **aluminum alloy**.
- **Borosilicate** globe.
- Sealing unit.
- **Stainless steel** screws and connectors.
- **Electrostatic powder coating** finish in Munsell **gray** N 6.5 polyester.

LSEx 873/2BTD-3 LED

LSEx 873/2BZD

LSEX 873/2BJD LED

HOW TO REQUEST

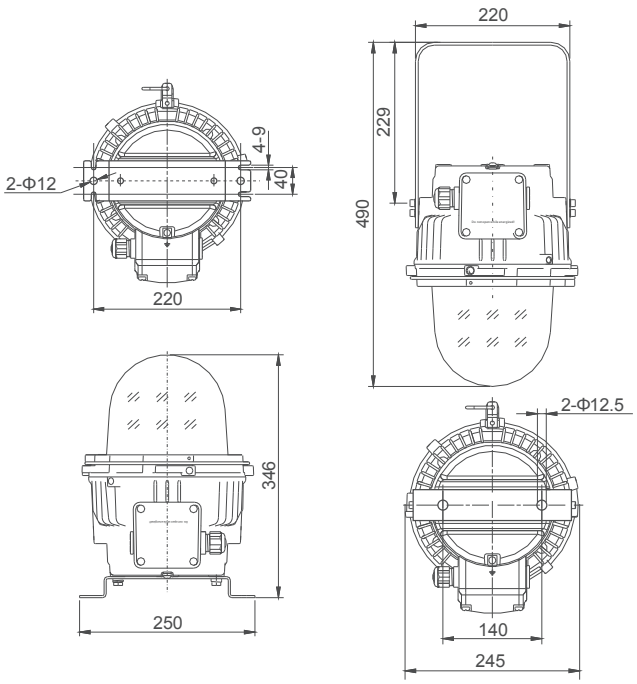
LSEx 873/2BJD * * * * * *

- **Accessories for mounting**
  - **D8722**: base mount
  - **D8701**: hanging mount
- **Inlets**
  - **B**: 1 M25 plastic cable crimp (crimping range ø8-17mm) + 1 plastic M25 plug
  - **D**: 2 M25 plastic cable crimps (crimping range ø8-17mm)
- **Room temperature**
  - **2**: -20°C a +55°C
  - **4**: -40°C a +55°C
- **Voltage**
  - **23**: 24V AC/DC
  - **30**: 110 AC
  - **31**: 220 AC
  - **57**: 220-240V AC
- **Type of light**
  - **L**: On
  - **F**: Flashing
  - **Z**: Rotating light
- **Colors**
  - **VD**: Green
  - **VM**: Red
  - **AM**: Yellow
  - **AZ**: Blue
  - **BR:** White

Base

Hanging

DIMENSIONS



Example: 220V signaling light with mounted rotating red light with 2 cable crimps for room temperature -20°C to +40°C + support for hanging mount.

Code: **LSEx 873/2BJD - VMZ312D+D8701**

LSEx

LSEX 873/2BTD-3 LED

HOW TO REQUEST

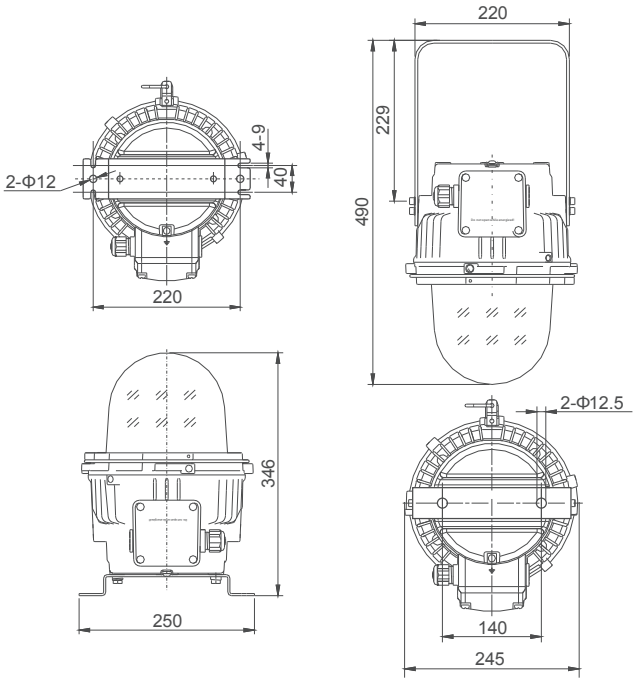
LSEx 873/2BTD-3 * * * * * * * * * ***

- **Accessories for mounting**
  - **D8722**: base mount
  - **D8701**: hanging mount
- **Inlets**
  - **B**: 1 M25 plastic cable crimp (crimping range ø8-17mm) + 1 plastic M25 plug
  - **D**: 2 M25 plastic cable crimps (crimping range ø8-17mm))
- **Room temperature**
  - **2**: -20°C a +55°C
  - **4**: -40°C a +55°C
- **Voltage**
  - **23**: 24V AC/DC
  - **30**: 110 AC
  - **31**: 220 AC
  - **57**: 220-240V AC
- **Type of light**
  - **L**: On
  - **F**: Flashing
- **Colors**
  - **VD**: Green
  - **VM**: Red
  - **AM**: Yellow
  - **AZ**: Blue
  - **BR:** White
- **3 batteries**

Base

Hanging

DIMENSIONS

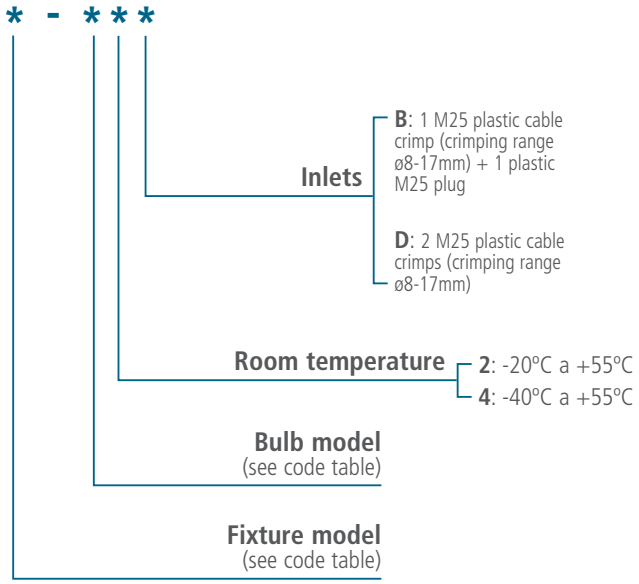


Example: 24V signaling light with mounted flashing green, yellow, and red light with 2 cable crimps for room temperature -20°C to +40°C + support for hanging mount.

Code: **LSEx 873/2BTD-3 - VDAMVMF232D+D8701**

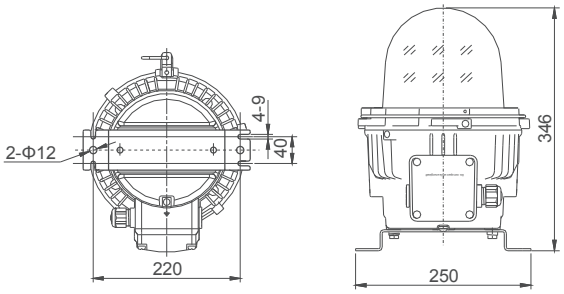
LSEX 873/2BZD

HOW TO REQUEST



MODEL	BULB MODEL		BULB POWER	TEMPERATURE CLASS		WEIGHT (kg)	IMAGE
	CODE	DESCRIPTION		Rt < 40°C	Rt < 55°C		
LSEX 873/2BZD	LED	LED red	10W	T6/T80°C	T6/T80°C	8,3	
	XBR	Xenon strobe white	<10W	T6/T80°C	T6/T80°C	8,3	
	XVM	Xenon strobe red	<10W	T6/T80°C	T6/T80°C	8,3	

DIMENSIONS



EX OUTLETS AND PLUGS

EX OUTLETS AND PLUGS

TPEx

OUTLETS AND PLUGS
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d e – Ex tb
ZONES: 1, 2 – 21 and 22
GROUPS: IIC – IIIC
TEMPERATURE CLASS:
- **TPEx 251-16A**

T6 / T85°C [-40°C ≤ ROOMT ≤ +45°C]
T5 / T100°C [-40°C ≤ ROOMT ≤ +55°C]
- **TPEx 252-32A**

T6 / T85°C [-40°C ≤ ROOMT ≤ +40°C]
T5 / T100°C [-40°C ≤ ROOMT ≤ +55°C]
- **TPEx 253-63A***

T6 [-40°C ≤ ROOMT ≤ +40°C]
T85°C
T5 [-40°C ≤ ROOMT ≤ +55°C]
- **TPEx 254-125A***

T5 [-40°C ≤ ROOMT ≤ +45°C]
T100°C
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:

TECHNICAL SPECIFICATIONS

- Outlet made in **polyester** reinforced with **fiberglass**.
- Plug made in **polyamides.**
- Turn the plug to activate.
- Frequency: **50/60 Hz**

TPEx

TPEX 251 OUTLETS AND PLUGS
16A - 3 POLES

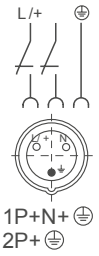
Wall-mounted outlet

Flush outlet

Mobile outlet

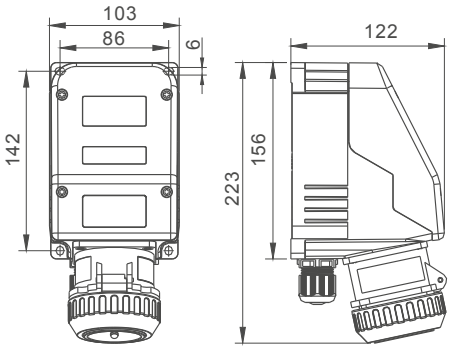
Plug

Plug with guard

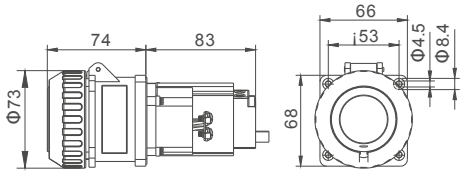
REFERENCE	MODEL	POLARITY	TENSION	CURRENT	WEIGHT (KG)	ELECTRICAL DIAGRAM
57651/434	Wall-mounted outlet	1P+N+T 2P+T  4	110-130V	16A	1,20Kg	
57651/834	Flush outlet				0,40Kg	
57651/334	Mobile outlet				070Kg	
57651/734	Plug				0,35Kg	
57651/034	Plug with guard				0,37Kg	
57651/436	Wall-mounted outlet	1P+N+T 2P+T  6	200-250V	16A	1,20Kg	
57651/836	Flush outlet				0,40Kg	
57651/336	Mobile outlet				0,70Kg	
57651/736	Plug				0,35Kg	
57651/036	Plug with guard				0,37Kg	

Wall-mounted outlet: supplied with an M25 cable crimper (Ø8-17 mm).
Mobile outlet: crimping range for cables Ø6.5-18.5mm.
Plugs: crimping range for cables Ø6.5-18.5mm.

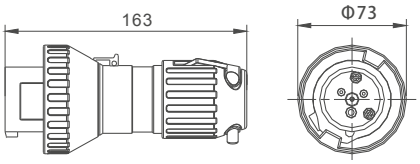
EXTERNAL DIMENSIONS



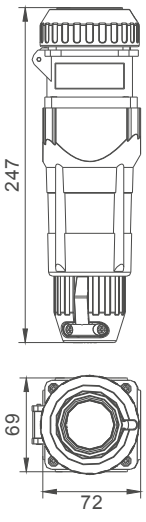
Wall-mounted outlet



Flush outlet



Plug



Mobile outlet

TPEX 251 OUTLETS AND PLUGS 16A - 4 AND 5 POLES

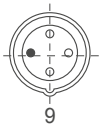
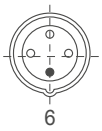
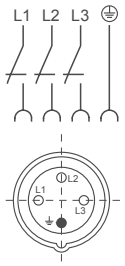
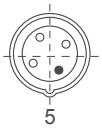
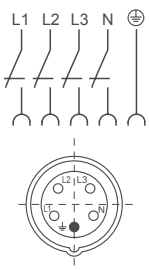
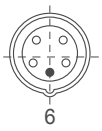
Wall-mounted outlet

Tomada embutir

Tomada móvel

Plug

Plug with guard

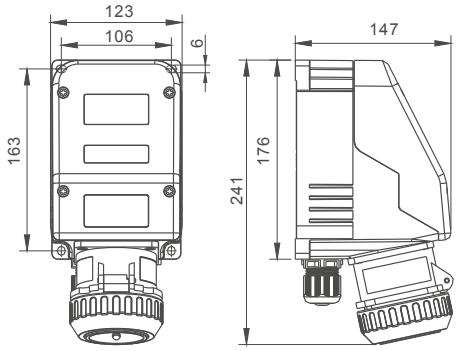
REFERENCE	MODEL	POLARITY	TENSION	CURRENT	WEIGHT (KG)	ELECTRICAL DIAGRAM
57651/449	Wall-mounted outlet	3P+T  9	200-250V	16A	1,20Kg	
57651/849	Flush outlet				0,40Kg	
57651/349	Mobile outlet				0,70Kg	
57651/749	Plug				0,35Kg	
57651/049	Plug with guard				0,37Kg	
57651/446	Wall-mounted outlet	3P+T  6	380-415V	16A	1,20Kg	3P + ⏚ 
57651/846	Flush outlet				0,40Kg	
57651/346	Mobile outlet				0,70Kg	
57651/746	Plugue				0,35Kg	
57651/046	Plug with guard				0,37Kg	
57651/447	Wall-mounted outlet	3P+T  7	480-500V	16A	1,20Kg	
57651/847	Flush outlet				0,40Kg	
57651/347	Mobile outlet				0,70Kg	
57651/747	Plug				0,35Kg	
57651/047	Plug with guard				0,37Kg	
57651/445	Wall-mounted outlet	3P+T  5	600-690V	16A	1,20Kg	3P+ N + ⏚ 
57651/845	Flush outlet				0,40Kg	
57651/345	Mobile outlet				0,70Kg	
57651/745	Plug				0,35Kg	
57651/045	Plug with guard				0,37Kg	
57651/456	Wall-mounted outlet	3P+N+T  6	200-250V 380-415V	16A	1,20Kg	
57651/856	Flush outlet				0,40Kg	
57651/356	Mobile outlet				0,70Kg	
57651/756	Plug				0,35Kg	
57651/056	Plug with guard				0,37Kg	

Wall-mounted outlet: supplied with an M25 cable crimper (Ø8-17 mm) and M25 stopper.
Mobile outlet: crimping range for cables Ø6.5-20 mm.
Plugs: crimping range for cables Ø6.5-20 mm.

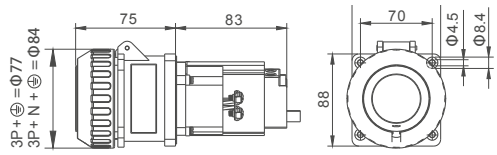
TPEx

TPEX 251 OUTLETS AND PLUGS
16A - 4 AND 5 POLES

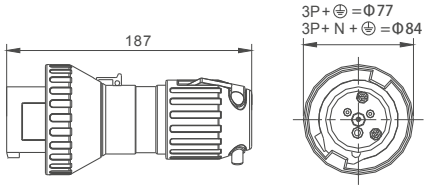
EXTERNAL



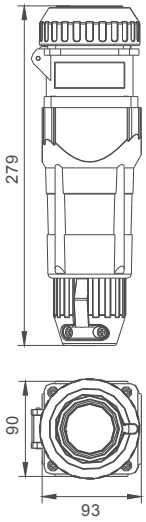
Wall-mounted outlet



Flush outlet



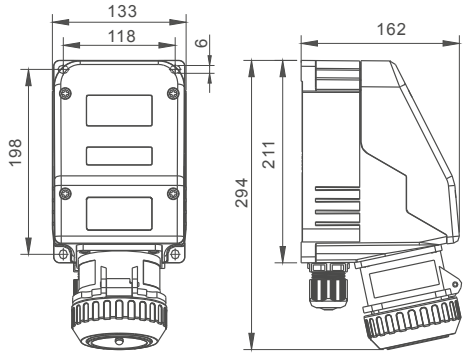
Plug



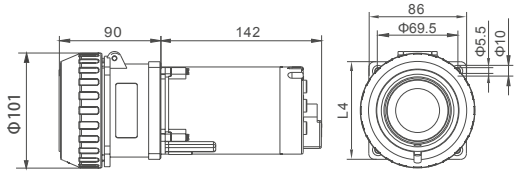
Mobile outlet

TPEX 252 OUTLETS AND PLUGS
32A - 4 AND 5 POLES

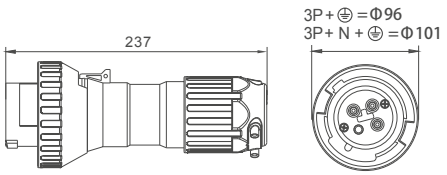
EXTERNAL DIMENSIONS



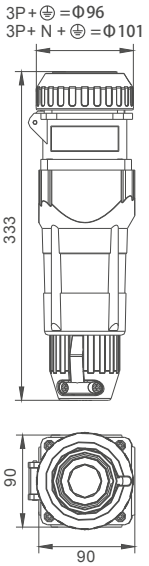
Wall-mounted outlet



Flush outlet



Plug



Mobile outlet

TPEX 155 OUTLETS AND PLUGS 32A - 4 AND 5 POLES

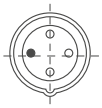
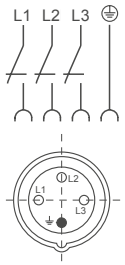
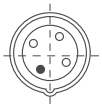
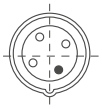
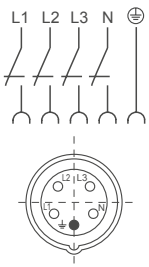
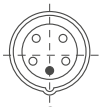
Wall-mounted outlet

Flush outlet

Mobile outlet

Plug

Plug with guard

REFERENCE	MODEL	POLARITY	TENSION	CURRENT	WEIGHT (KG)	ELECTRICAL DIAGRAM
57652/449	Wall-mounted outlet	3P+T  9	200-250V	32A	1,80Kg	3P + ⏚ 
57652/849	Flush outlet				1,00Kg	
57652/349	Mobile outlet				1,70Kg	
57652/749	Plug				0,70Kg	
57652/049	Plug with guard				0,74Kg	
57652/446	Wall-mounted outlet	3P+T  6	380-415V	32A	1,80Kg	
57652/846	Flush outlet				1,00Kg	
57652/346	Mobile outlet				1,70Kg	
57652/746	Plug				0,70Kg	
57652/046	Plug with guard				0,74Kg	
57652/447	Wall-mounted outlet	3P+T  7	480-500V	32A	1,80Kg	
57652/847	Flush outlet				1,00Kg	
57652/347	Mobile outlet				1,70Kg	
57652/747	Plug				0,70Kg	
57652/047	Plug with guard				0,74Kg	
57652/445	Wall-mounted outlet	3P+T  5	600-690V	32A	1,80Kg	3P+ N + ⏚ 
57652/845	Flush outlet				1,00Kg	
57652/345	Mobile outlet				1,70Kg	
57652/745	Plug				0,70Kg	
57652/045	Plug with guard				0,74Kg	
57652/456	Wall-mounted outlet	3P+N+T  6	200-250V 380-415V	32A	1,80Kg	
57652/856	Flush outlet				1,00Kg	
57652/356	Mobile outlet				1,70Kg	
57652/756	Plug				0,70Kg	
57652/056	Plug with guard				0,74Kg	

Wall-mounted outlet: supplied with an M32 cable crimper (Ø12-21 mm) and M32 stopper.
Mobile outlet: crimping range for cables Ø10-28mm.
Plugs: crimping range for cables Ø10-28mm.

TPEx

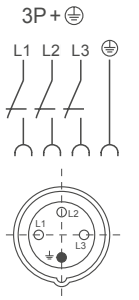
TPEX 253 OUTLETS AND PLUGS
63A - 4 AND 5 POLES

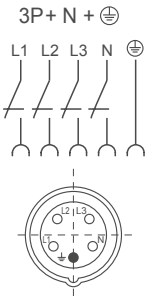
Wall-mounted outlet

Plug

Plug with guard

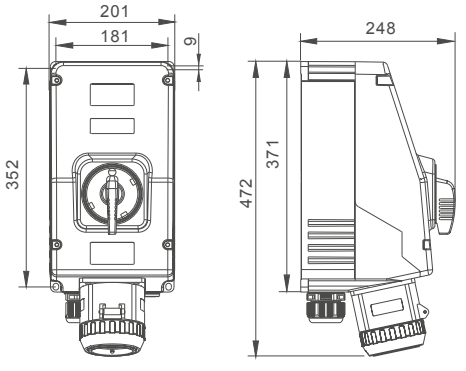
REFERENCE	MODEL	POLARITY	TENSION	CURRENT	WEIGHT (KG)
57653/449	Wall-mounted outlet	3P+T	200-250V	63A	8,1Kg
57653/749	Plug				0,85Kg
57653/049	Plug with guard	9			0,85Kg
57653/446	Wall-mounted outlet	3P+T	380-415V	63A	8,1Kg
57653/746	Plug				0,85Kg
57653/046	Plug with guard	6			0,85Kg
57653/447	Wall-mounted outlet	3P+T	480-500V	63A	8,1Kg
57653/747	Plug				0,85Kg
57653/047	Plug with guard	7			0,85Kg
57653/445	Wall-mounted outlet	3P+T	600-690V	63A	8,1Kg
57653/745	Plug				0,85Kg
57653/045	Plug with guard	5			0,85Kg
57653/456	Wall-mounted outlet	3P+N+T	200-250V 380-415V	63A	8,1Kg
57653/756	Plug				0,85Kg
57653/056	Plug with guard	6			0,85Kg



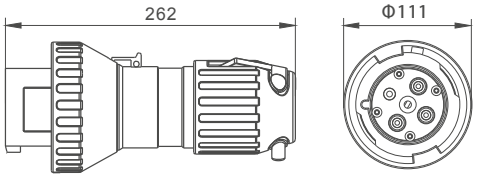


Wall-mounted outlet: supplied with an M50 cable crimper (Ø22-35mm) and M50 stopper.
Plugs: crimping range for cables Ø15-35mm.

EXTERNAL DIMENSIONS



Wall-mounted outlet



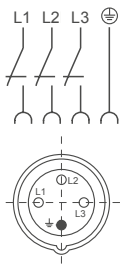
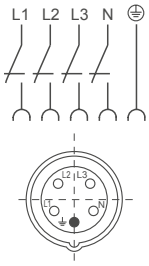
Plug

TOMADAS E PLUGUES TPEX 254
125A - 4 E 5 PÓLOS

Wall-mounted outlet

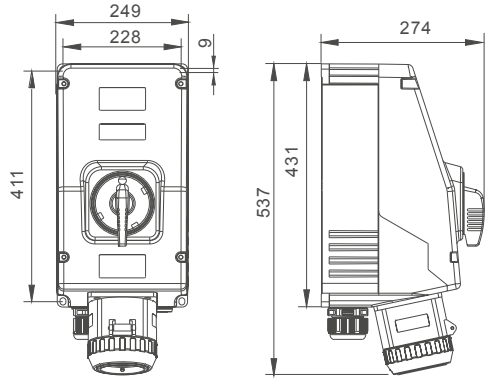
Plug

Plug with guard

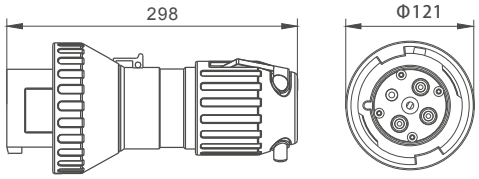
REFERENCE	MODEL	POLARITY	TENSION	CURRENT	WEIGHT (KG)	ELECTRICAL DIAGRAM
57654/449	Wall-mounted outlet	3P+T  9	200-250V	125A	13,5Kg	3P + ⏚ 
57654/749	Plug				1,3Kg	
57654/049	Plug with guard				1,3Kg	
57654/446	Wall-mounted outlet	3P+T  6	380-415V	125A	13,5Kg	
57654/746	Plug				1,3Kg	
57654/046	Plug with guard				1,3Kg	
57654/447	Wall-mounted outlet	3P+T  7	480-500V	125A	13,5Kg	
57654/747	Plug				1,3Kg	
57654/047	Plug with guard				1,3Kg	3P+ N + ⏚ 
57654/445	Wall-mounted outlet	3P+T  5	600-690V	125A	13,5Kg	
57654/745	Plug				1,3Kg	
57654/045	Plug with guard				1,3Kg	
57654/456	Wall-mounted outlet	3P+N+T  6	200-250V 380-415V	125A	13,5Kg	
57654/756	Plug				1,3Kg	
57654/056	Plug with guard				1,3Kg	

Wall-mounted outlet: supplied with an M63 cable crimper (Ø27-48mm) and M63 stopper.
Plugs: crimping range for cables Ø20-57mm.

EXTERNAL DIMENSIONS

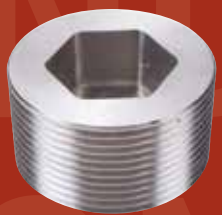


Wall-mounted outlet



Plug

EX ACCESSORIES AND CONNECTORS



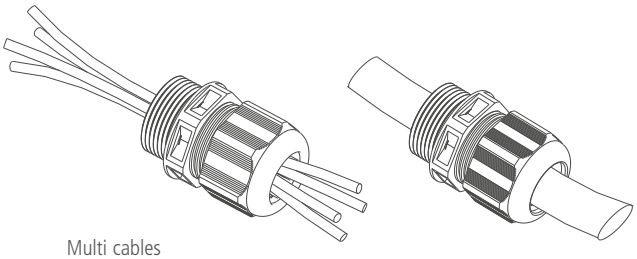
PCEx

CABLE CRIMP
FOR EXPLOSIVE ATMOSPHERES - 220 SERIES

PROTECTION: Ex e
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
DEGREE OF PROTECTION:: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7

TECHNICAL SPECIFICATIONS

- Cable crimps made in **polyamide**.
- Used to connect cables to electrical equipment contained by enclosure.
- Color **black**.

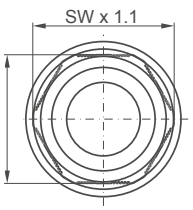


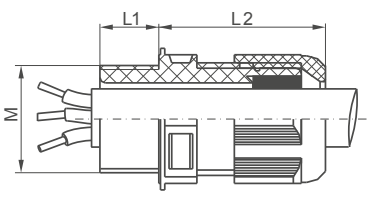
Multi cables

EXTERNAL DIMENSIONS

MODEL	THREAD	Ø CABLE		DIMENSIONS (mm)		
		MINIMUM	MAXIMUM	SW	L1	L2
PCEX 0220 1610 E101	M16	4	9	20	10	27
PCEX 0220 2011 E102	M20	5.5	13	24	11	31
PCEX 0220 2511 E103	M25	8	17	29	11	36
PCEX 0220 3212 E 104	M32	12	21	36	12	43
PCEX 0220 4014 E105	M40	17	28	46	14	47
PCEX 0220 5016 E106	M50	22	35	55	16	54
PCEX 0220 6316 E107	M63	27	48	68	16	57
PCEX 0220 2511 E108	M25	4 x 3 – 6 *		29	11	36
PCEX 0220 3212 E109	M32	4 x 5 – 7 *		36	12	43
PCEX 0220 2016 E110	M20	5.5	13	24	16	31
PCEX 0220 2516 E111	M25	8	17	29	16	36
PCEX 0220 3216 E112	M32	12	21	36	16	43
PCEX 0220 2516 E113	M25	4 x 3 – 6 *		29	16	36
PCEX 0220 326 E114	M32	4 x 5 – 7 *		36	16	43

* Multi cables





PCEx

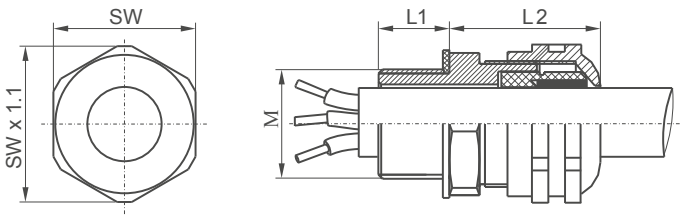
CABLE CRIMP
FOR EXPLOSIVE ATMOSPHERES - 220 SERIES

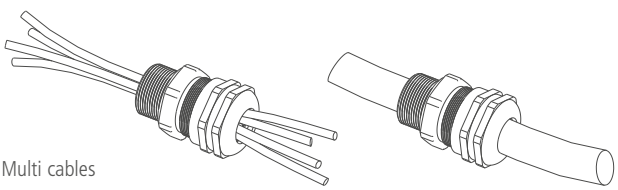
PROTECTION: Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Cable crimp for **unarmored cables** made in **nickel-plated** tin and **304 stainless steel**.
- Used to connect cables to electrical equipment contained by enclosure.

EXTERNAL DIMENSIONS





Multi cables

NICKEL-PLATED TIN

MODEL	THREAD	Ø CABLE		DIMENSIONS (mm)			IMAGE
		MINIMUM	MAXIMUM	SW	L1	L2	
PCEX 0221 1614 E401	M16	4	9	22	14	24.5	
PCEX 0221 2015 E402	M20	5.5	13	26	15	28	
PCEX 0221 2515 E403	M25	8	17	32	15	35	
PCEX 0221 3216 E404	M32	12	21	36	16	40	
PCEX 0221 4016 E405	M40	17	28	46	16	46	
PCEX 0221 5016 E406	M50	22	35	56	16	50	
PCEX 0221 6319 E407	M63	27	48	70	19	54.5	
PCEX 0221 2515 E408	M25	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E409	M32	4 X 5 – 7*		37	16	40	
PCEX 0221 2015 E441	1/2" BSP	5.5	13	26	15	28	
PCEX 0221 2515 E442	3/4" BSP	8	17	32	15	35	
PCEX 0221 3216 E443	1" BSP	12	21	40	16	40	
PCEX 0221 4016 E444	1.1/4" BSP	17	28	50	16	46	
PCEX 0221 5016 E445	1.1/2" BSP	22	35	56	16	50	
PCEX 0221 6319 E446	2" BSP	27	48	70	19	54.5	
PCEX 0221 2515 E447	3/4" BSP	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E448	1" BSP	4 X 5 – 7*		37	16	40	
PCEX 0221 2015 E471	1/2" NPT	5.5	13	26	15	28	
PCEX 0221 2515 E472	3/4" NPT	8	17	32	15	35	
PCEX 0221 3216 E473	1" NPT	12	21	40	16	40	
PCEX 0221 4016 E474	1.1/4" NPT	17	28	50	16	46	
PCEX 0221 5016 E475	1.1/2" NPT	22	35	56	16	50	
PCEX 0221 6319 E476	2"	27	48	70	19	54.5	
PCEX 0221 2515 E477	3/4" NPT	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E478	1" NPT	4 X 5 – 7*		37	16	40	

304 STAINLESS STEEL

MODEL	THREAD	Ø CABLE		DIMENSIONS (mm)			IMAGE
		MINIMUM	MAXIMUM	SW	L1	L2	
PCEX 0221 1614 E401G	M16	4	9	22	14	24.5	
PCEX 0221 2015 E402G	M20	5.5	13	26	15	28	
PCEX 0221 2515 E403G	M25	8	17	32	15	35	
PCEX 0221 3216 E404G	M32	12	21	36	16	40	
PCEX 0221 4016 E405G	M40	17	28	46	16	46	
PCEX 0221 5016 E406G	M50	22	35	56	16	50	
PCEX 0221 6319 E407G	M63	27	48	70	19	54.5	
PCEX 0221 2515 E408G	M25	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E409G	M32	4 X 5 – 7*		37	16	40	
PCEX 0221 2015 E441G	1/2" BSP	5.5	13	26	15	28	
PCEX 0221 2515 E442G	3/4" BSP	8	17	32	15	35	
PCEX 0221 3216 E443G	1" BSP	12	21	40	16	40	
PCEX 0221 4016 E444G	1.1/4" BSP	17	28	50	16	46	
PCEX 0221 5016 E445G	1.1/2" BSP	22	35	56	16	50	
PCEX 0221 6319 E446G	2" BSP	27	48	70	19	54.5	
PCEX 0221 2515 E447G	3/4" BSP	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E448G	1" BSP	4 X 5 – 7*		37	16	40	
PCEX 0221 2015 E471G	1/2" NPT	5.5	13	26	15	28	
PCEX 0221 2515 E472G	3/4" NPT	8	17	32	15	35	
PCEX 0221 3216 E473G	1" NPT	12	21	40	16	40	
PCEX 0221 4016 E474G	1.1/4" NPT	17	28	50	16	46	
PCEX 0221 5016 E475G	1.1/2" NPT	22	35	56	16	50	
PCEX 0221 6319 E476G	2"	27	48	70	19	54.5	
PCEX 0221 2515 E477G	3/4" NPT	4 X 3 – 6*		32	15	35	
PCEX 0221 3216 E478G	1" NPT	4 X 5 – 7*		37	16	40	

* Multi cables.

PCEx

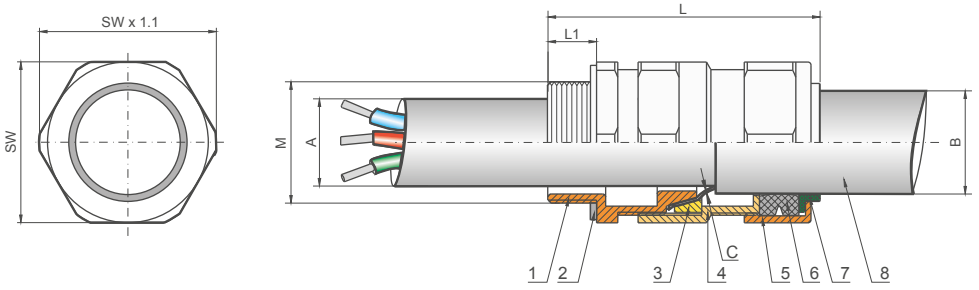
CABLE CRIMP
FOR EXPLOSIVE ATMOSPHERES - 226 SERIES

PROTECTION: Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Cable crimp for **armored cables** made in **nickel-plated tin** and **304 stainless steel**.
- Used to connect cables to electrical equipment contained by enclosure.

EXTERNAL DIMENSIONS



1 - Body
2 - Gasket
3 - Ring
4 - Sleeve
5 - Compression nut
6 - O-ring
7 - Cable protection ring
8 - Armored cable

NICKEL-PLATED TIN

MODEL	THREAD	Ø CABLE A		Ø CABLE B		DIMENSIONS (mm)			Ø (C) WIRE (mm)	IMAGE
		MIN.	MAX.	MIN.	MAX.	SW	L1	L		
PCEX 0226 2015 E001	M20	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E002	M25	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E003	M25	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E004	M32	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E005	M40	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E006	M50	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E007	M50	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E008	M63	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E009	M63	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E010	M75	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E011	M75	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E012	M80	59	68	65	78.5	106	20	117	1.50	
PCEX 0226 2015 E041	1/2" BSP	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E042	3/4" BSP	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E043	3/4" BSP	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E044	1" BSP	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E045	1.1/4" BSP	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E046	1.1/2" BSP	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E047	1.1/2" BSP	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E048	2" BSP	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E049	2.1/2" BSP	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E050	2.1/2" BSP	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E051	3" BSP	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E052	3" BSP	59	68	65	78.5	106	20	117	1.50	
PCEX 0226 2015 E071	1/2" NPT	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E072	3/4" NPT	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E073	3/4" NPT	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E074	1" NPT	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E075	1.1/4" NPT	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E076	1.1/2" NPT	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E077	1.1/2" NPT	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E078	2" NPT	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E079	2.1/2" NPT	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E080	2.1/2" NPT	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E081	3" NPT	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E082	3" NPT	59	68	65	78.5	106	20	117	1.50	

304 STAINLESS STEEL

MODEL	THREAD	Ø CABLE A		Ø CABLE B		DIMENSIONS (mm)			Ø (C) WIRE (mm)	IMAGEM
		MIN.	MAX.	MIN.	MAX.	SW	L1	L		
PCEX 0226 2015 E001G	M20	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E002G	M25	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E003G	M25	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E004G	M32	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E005G	M40	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E006G	M50	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E007G	M50	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E008G	M63	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E009G	M63	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E010G	M75	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E011G	M75	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E012G	M80	59	68	65	78.5	106	20	117	1.50	
PCEX 0226 2015 E041G	1/2" BSP	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E042G	3/4" BSP	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E043G	3/4" BSP	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E044G	1" BSP	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E045G	1.1/4" BSP	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E046G	1.1/2" BSP	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E047G	1.1/2" BSP	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E048G	2" BSP	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E049G	2.1/2" BSP	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E050G	2.1/2" BSP	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E051G	3" BSP	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E052G	3" BSP	59	68	65	78.5	106	20	117	1.50	
PCEX 0226 2015 E071G	1/2" NPT	3	8.5	8	13.5	32	15	76	0.85	
PCEX 0226 2515 E072G	3/4" NPT	6	12.5	11.5	16	32	15	76	0.85	
PCEX 0226 2515 E073G	3/4" NPT	6.5	12.5	15	21	37	15	76	0.90	
PCEX 0226 3215 E074G	1" NPT	11	18.5	20.5	27.5	44	15	85	1.25	
PCEX 0226 4016 E075G	1.1/4" NPT	17	25	26	34	53	16	91	1.40	
PCEX 0226 5016 E076G	1.1/2" NPT	22	31.5	31	40.5	62	16	91	1.40	
PCEX 0226 5016 E077G	1.1/2" NPT	29.5	36.5	36.5	46.5	67	16	95	1.40	
PCEX 0226 6319 E078G	2" NPT	35.5	42.5	43	53	81	19	108	1.40	
PCEX 0226 6319 E079G	2.1/2" NPT	40	50	49	59.5	86	20	108	1.50	
PCEX 0226 7520 E080G	2.1/2" NPT	47	56	58	66	92	20	115	1.50	
PCEX 0226 7520 E081G	3" NPT	53	62	60.5	72	99	20	114	1.50	
PCEX 0226 8020 E082G	3" NPT	59	68	65	78.5	106	20	117	1.50	

PCEx

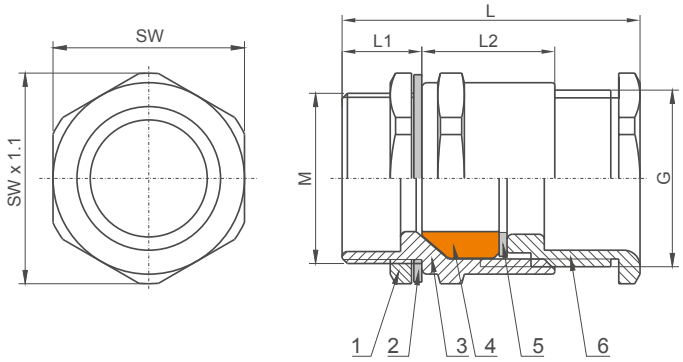
CABLE CRIMP
FOR EXPLOSIVE ATMOSPHERES - 227 SERIES

PROTECTION: Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Cable crimp for unarmored cables made in nickel-plated tin and 304 stainless steel.
- Used to connect cables to electrical equipment contained by enclosure.

EXTERNAL DIMENSIONS



1 - Hex jam
2 - Gasket
3 - Body
4 - O-ring
5 - Washer
6 - Compression nut

LATÃO NIQUELADO

MODEL	THREAD	Ø CRIMPING RANGE		G	L MAX.	DIMENSIONS (mm)			IMAGE
		MIN.	MAX.			SW	L1	L2	
PCEX 0227 2015 E201	M20	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E202	M25	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E203	M32	11	19	G 1	60	36	15	30	
PCEX 0227 4016 E204	M40	18	27	G 1.1/4	55	46	16	32	
PCEX 0227 5016 E205	M50	26	34	G 1.1/2	66	56	16	32	
PCEX 0227 6319 E206	M63	40	46	G 2	75	70	19	36	
PCEX 0227 7520 E207	M75	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E208	M80	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E209	M63	35	42	G 2	75	70	19	36	
PCEX 0227 7520 E210	M75	46	54	G 2.1/2	80	85	20	36	
PCEX 0227 2015 E241	1/2" BSP	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E242	3/4" BSP	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E243	1" BSP	11	19	G 1	60	38	15	30	
PCEX 0227 4016 E244	1.1/4" BSP	18	27	G 1.1/4	66	48	16	32	
PCEX 0227 5016 E245	1.1/2" BSP	26	34	G 1.1/2	66	58	16	32	
PCEX 0227 6319 E246	2" BSP	40	46	G 2	75	75	19	36	
PCEX 0227 7520 E247	2.1/2' BSP	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E248	3" BSP	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E249	2" BSP	35	42	G 2	75	75	19	36	
PCEX 0227 7520 E250	2.1/2" BSP	46	54	G 2.1/2	80	85	20	36	
PCEX 0227 2015 E271	1/2" NPT	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E272	3/4" NPT	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E273	1" NPT	11	19	G 1	60	38	15	30	
PCEX 0227 4016 E274	1.1/4" NPT	18	27	G 1.1/4	66	48	16	32	
PCEX 0227 5016 E275	1.1/2" NPT	26	34	G 1.1/2	66	58	16	32	
PCEX 0227 6319 E276	2" NPT	40	46	G 2	75	75	19	36	
PCEX 0227 7520 E277	2.1/2' NPT	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E278	3" NPT	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E279	2" NPT	35	42	G 2	75	75	19	36	
PCEX 0227 7520 E280	2.1/2" NPT	46	54	G 2.1/2	80	85	20	36	

304 STAINLESS STEEL

MODEL	THREAD	Ø CRIMPING RANGE		G	L MAX.	DIMENSIONS (mm)			IMAGE
		MIN.	MAX.			SW	L1	L2	
PCEX 0227 2015 E201G	M20	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E202G	M25	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E203G	M32	11	19	G 1	60	36	15	30	
PCEX 0227 4016 E204G	M40	18	27	G 1.1/4	55	46	16	32	
PCEX 0227 5016 E205G	M50	26	34	G 1.1/2	66	56	16	32	
PCEX 0227 6319 E206G	M63	40	46	G 2	75	70	19	36	
PCEX 0227 7520 E207G	M75	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E208G	M80	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E209G	M63	35	42	G 2	75	70	19	36	
PCEX 0227 7520 E210G	M75	46	54	G 2.1/2	80	85	20	36	
PCEX 0227 2015 E241G	1/2" BSP	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E242G	3/4" BSP	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E243G	1" BSP	11	19	G 1	60	38	15	30	
PCEX 0227 4016 E244G	1.1/4" BSP	18	27	G 1.1/4	66	48	16	32	
PCEX 0227 5016 E245G	1.1/2" BSP	26	34	G 1.1/2	66	58	16	32	
PCEX 0227 6319 E246G	2" BSP	40	46	G 2	75	75	19	36	
PCEX 0227 7520 E247G	2.1/2' BSP	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E248G	3" BSP	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E249G	2" BSP	35	42	G 2	75	75	19	36	
PCEX 0227 7520 E250G	2.1/2" BSP	46	54	G 2.1/2	80	85	20	36	
PCEX 0227 2015 E271G	1/2" NPT	8	11	G 1/2	50	26	15	23	
PCEX 0227 2515 E272G	3/4" NPT	11	15	G 3/4	54	32	15	26	
PCEX 0227 3215 E273G	1" NPT	11	19	G 1	60	38	15	30	
PCEX 0227 4016 E274G	1.1/4" NPT	18	27	G 1.1/4	66	48	16	32	
PCEX 0227 5016 E275G	1.1/2" NPT	26	34	G 1.1/2	66	58	16	32	
PCEX 0227 6319 E276G	2" NPT	40	46	G 2	75	75	19	36	
PCEX 0227 7520 E277G	2.1/2' NPT	53	61	G 2.1/2	80	85	20	36	
PCEX 0227 8020 E278G	3" NPT	57	68	G 3	84	95	20	39	
PCEX 0227 6319 E279G	2" NPT	35	42	G 2	75	75	19	36	
PCEX 0227 7520 E280G	2.1/2" NPT	46	54	G 2.1/2	80	85	20	36	

ACEx

CONTROL STATIONS AND SIGNALING DEVICES FOR EXPLOSIVE ATMOSPHERES

PROTECTION: Ex db – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

Single push button

Pilot light

Emergency push button

TECHNICAL SPECIFICATIONS

- Control stations and signaling devices with **Ex db** protection (explosion-proof) and **Ex tb** (combustible dust) for installation in potentially explosive atmospheres.
- Body and axis made in **304** or **316L stainless steel**.
- Lever made in **aluminum alloy**.
- Control stations with **M2 X 1.5** thread.
  * Thread **M30 x 1.5** made-to-order.

SINGLE PUSH BUTTON - PS

TECHNICAL SPECIFICATIONS

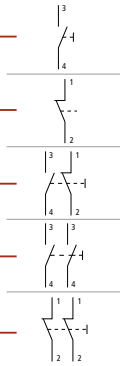
- Body and axis made in **304 stainless steel**. *316L stainless steel can be made-to-order.
- **O-ring** and bellows in **silicone**.
- Voltage rating: **24V** to **600V**.
- Nominal current up to **10A**.
- Buses: 0.5 to 2.5 mm2.
- Weight: 0.25g

HOW TO REQUEST

PS * *

Contact block

- **10**: 1NA
- **01**: 1NF
- **11**: 1NA+1NF
- **20**: 2NA
- **02:** 2NF



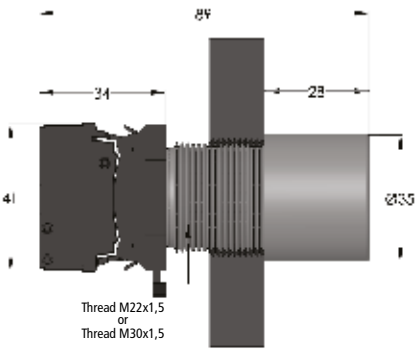
Cover color

- **AM**: Yellow
- **AZ**: Blue
- **BR**: White
- **PR**: Black
- **VD:** Green
- **VM:** Red

Example: Single push button with red cover and 1NF contact block.

CODE: **PSVM01**

EXTERNAL DIMENSIONS



ACEx

EMERGENCY PUSH BUTTON - PE

TECHNICAL SPECIFICATIONS

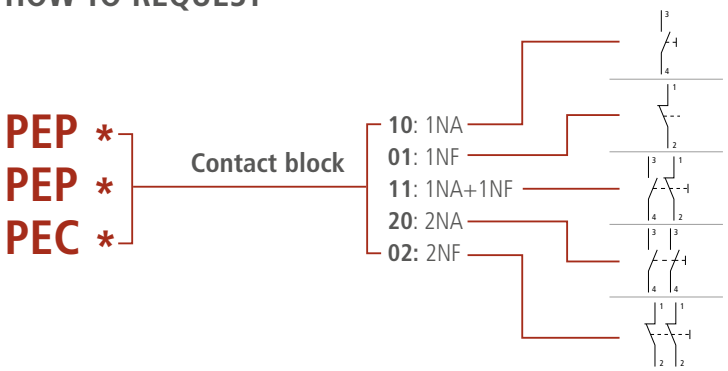
- Body and axis made in **304 stainless steel**. *316L stainless steel can be made-to-order.
- **O-ring** seal.
- Voltage rating: **24V** to **600V**.
- Nominal current up to **10A**.
- Buses: 0.5 to 2.5 mm2.
- Weight PEP: 0.25g | Weight PEC: 0.25g | Weight PEG: 0.27g

PEP
Emergency push button Pull to Release

PEC
Emergency push button with key

PEG
Rotating emergency push button

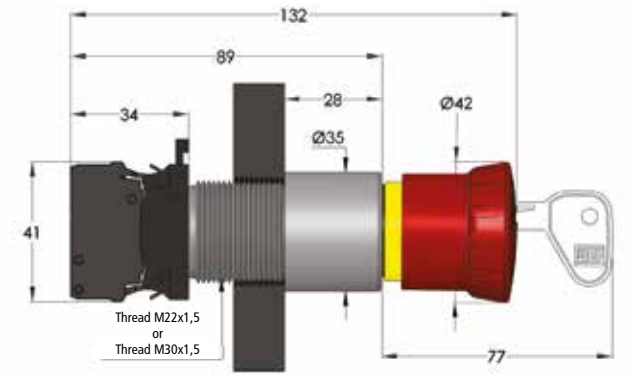
HOW TO REQUEST



Example: Rotating emergency push button with control block 1NA+1NF.

CODE: **PEG11**

EXTERNAL DIMENSIONS



PILOT LIGHT - IL

TECHNICAL SPECIFICATIONS

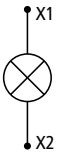
- Body and axis made in **304 stainless steel**. *316L stainless steel can be made-to-order.
- **LED light block**.
- **O-ring** seal.
- **Polycarbonate** lens.
- Buses: minimum 0.5 to 2.5 mm2.
- Weight: 0.23g

HOW TO REQUEST

IL * *

Voltage
- **12**: 12 Vca/cc
- **24**: 24 Vca/cc
- **48**: 48 Vca/cc
- **11**: 110-113 Vca/cc
- **22:** 220-240 Vca/cc

Lens color:
- **AM**: Yellow
- **AZ**: Blue
- **BR**: White
- **VD:** Green
- **VM:** Red

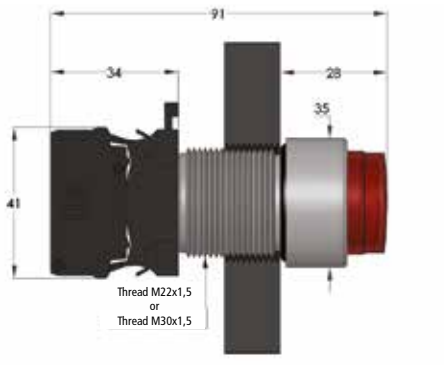


Diagram

Example: Pilot light with green lens and 220/240 Vca voltage.

CODE: **ILVD22**

EXTERNAL DIMENSIONS



ACEx

ROTATING ACTUATORS - AG

TECHNICAL SPECIFICATIONS

- To activate circuit breakers and switches.
- Body and axis made in **304 stainless steel**. *316L stainless steel can be made-to-order.
- Lever made in **aluminum alloy**.
- **O-ring** seal.

AGG

HOW TO REQUEST

AGG *
AGM *
AGP *

Length 'L'
3 digits
(minimum 30 mm)

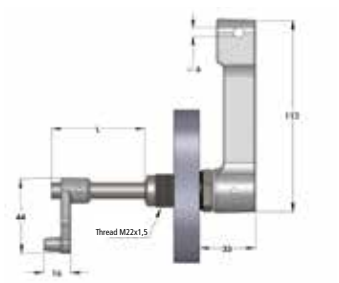
Example 1: Rotating actuator M with length L of 50 mm.
CODE: **IL050**

Example 2: Rotating actuator P with length L of 220 mm.
CODE: **IL220**

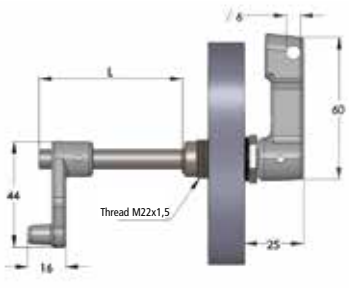
AGM

AGP

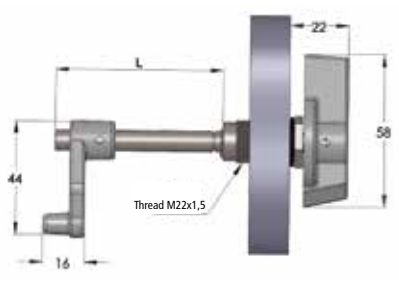
EXTERNAL DIMENSIONS



AGG



AGM



AGP

USEx

EXPLOSION-PROOF SEALING UNIT

PROTECTION: Ex d
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1

TECHNICAL SPECIFICATIONS

- Sealing unit with **Ex d** protection (explosion-proof) for installation in potentially explosive atmospheres.
- Made in **copper-free aluminum alloy** resistant to corrosion.
- **1/2"** to **4" NPT** or **BSP** threaded inlets.
- **Electrostatic powder coating** finish. Munsell gray N6.5 polyester.
- Used to contain the flame, preventing its spread to the tubes in the event of an explosion.

HOW TO REQUEST

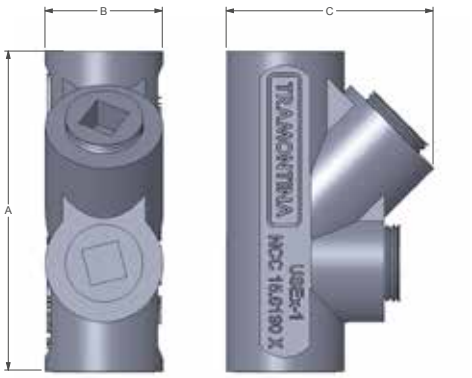
USEx **

Gauge
1: 1/2"
2: 3/4"
3: 1"
4: 1 1/4"
5: 1 1/2"
6: 2"
7: 2 1/2"
8: 3"
10: 4"

Type of thread
N: NPT
B: BSP

EXTERNAL DIMENSIONS

GAUGES	A	B	C
1/2"	91	32	55
3/4"	101	38	65
1"	119	44	72
1.1/4"	131	56	82
1.1/2"	137	60	86
2"	156	75	98
2.1/2"	177	88.5	109
3"	207	103.5	123
4"	231	133	153



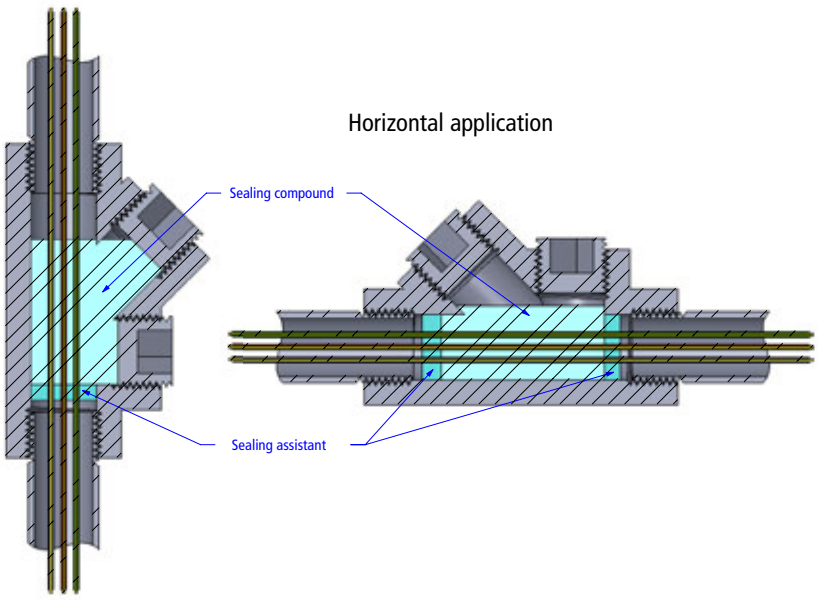
USEx

REF.	DESCRIPTION
56734/001	Sealing Unit USEx-1 1/2" NPT
56734/002	Sealing Unit USEx-2 3/4" NPT
56734/003	Sealing Unit USEx-3 1" NPT
56734/004	Sealing Unit USEx-4 1.1/4" NPT
56734/005	Sealing Unit USEx-5 1.1/2" NPT
56734/006	Sealing Unit USEx-6 2" NPT
56734/007	Sealing Unit USEx-7 2.1/2" NPT
56734/008	Sealing Unit USEx-8 3" NPT
56734/009	Sealing Unit USEx-10 4" NPT

REF.	DESCRIPTION
56734/021	Sealing Unit USEx-1 1/2" BSP
56734/022	Sealing Unit USEx-2 3/4" BSP
56734/023	Sealing Unit USEx-3 1" BSP
56734/024	Sealing Unit USEx-4 1.1/4" BSP
56734/025	Sealing Unit USEx-5 1.1/2" BSP
56734/026	Sealing Unit USEx-6 2" BSP
56734/027	Sealing Unit USEx-7 2.1/2" BSP
56734/028	Sealing Unit USEx-8 3" BSP
56734/029	Sealing Unit USEx-10 4" BSP

SEALING COMPOUND AND SEALING ASSISTANT FOR SEALING UNITS

Vertical application



TECHNICAL SPECIFICATIONS

- Sealing compound used to seal sealing units.
- Sealing assistant: retention fiber applied with the sealing compound.

REF.	DESCRIÇÃO
56734/501	Sealing assistant - 100 g
56734/502	Sealing assistant - 200 g
56734/511	Sealing compound - 500 g
56734/512	Sealing compound - 1.000 g

BUEx

PLUG WITH INCREASED SAFETY - 223 SERIES

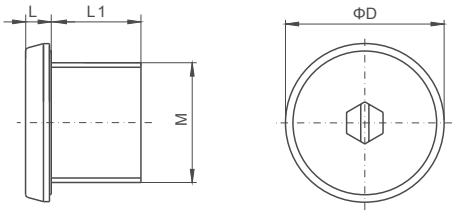
PROTECTION: Ex e
ZONES: 1 and 2
GROUPS: IIC
EPL: Gb
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-7

TECHNICAL SPECIFICATIONS

- Made in **polyamide**.
- Used to close enclosure entries.
- Color **black**.

EXTERNAL DIMENSIONS

MODEL	THREAD	DIMENSIONS (mm)		
		L1	L	Ø D
BUEX 0223 1614 E101	M16	14	4	22
BUEX 0223 2015 E102	M20	15	4	26.4
BUEX 0223 2515 E103	M25	15	4	31.9
BUEX 0223 3216 E104	M32	16	5.5	39.6
BUEX 0223 4016 E105	M40	16	5.5	50.6
BUEX 0223 5016 E106	M50	16	5.5	60.5
BUEX 0223 6319 E107	M63	19	7.5	74.8



BUEx

PLUGS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

Plug with NPT thread

Plug with BSP and metric thread

TECHNICAL SPECIFICATIONS

- Safety plug with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum alloy, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** and **M16** to **M100** threads.
- Used to close unused threaded entries of enclosures and boxes.

HOW TO REQUEST

BUEx ***

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

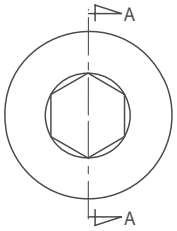
Type of thread
- **N:** NPT
- **B:** BSP
- **M:** Metric

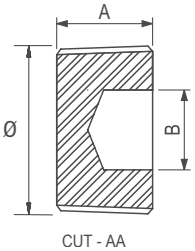
Ø Thread

NPT ou BSP	Metric
1: 1/2"	**1:** M16
2: 3/4"	**2:** M20
3: 1"	**3:** M25
4: 1 1/4"	**4:** M32
5: 1 1/2"	**5:** M40
6: 2"	**6:** M50
7: 2 1/2"	**7:** M63
8: 3"	**8:** M75
10: 4"	**9:** M90
	10: M100

EXTERNAL DIMENSIONS

Ø THREAD NPT/BSP	Ø THREAD MÉTRICA	DIMENSIONS	
		A	B
	M16	17	10
1/2"	M20	17	10
3/4"	M25	17	10
1"	M32	22	10
1.1/4"	M40	23	10
1.1/2"	M50	23	10
2"	M63	33	14
2.1/2"	M75	33	14
3"	M90	33	14
4"	M100	33	19





CUT - AA

TRAMONTINA EX ATMOSFERAS EXPLOSIVAS

BREx

REDUCING BUSHING FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Bushing with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum alloy, stainless steel, tin,** and **nickel-plated tin**.
- **1/2"** to **4" NPT** or **BSP** threads.

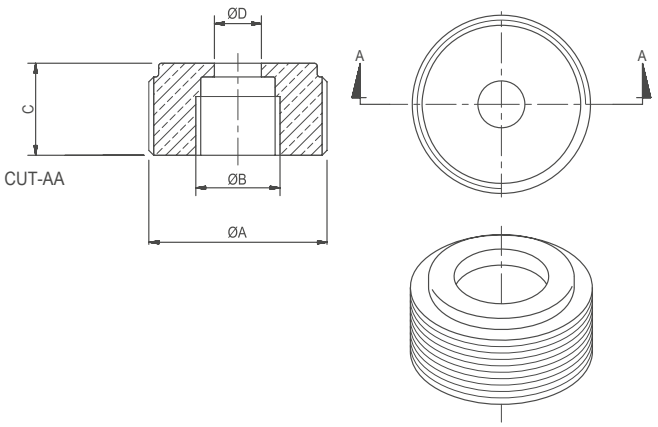
HOW TO REQUEST

BREx * * * *

- **Material source**
  - **A:** Aluminum
  - **I4:** 304 stainless steel
  - **I6:** 316 stainless steel
  - **I6L:** 316L stainless steel
  - **L:** Tin
  - **N:** Nickel-plated tin
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **Female**
    - **1:** 1/2"
    - **2:** 3/4"
    - **3:** 1"
    - **4:** 1 1/4"
    - **5:** 1 1/2"
    - **6:** 2"
    - **7:** 2 1/2"
    - **8:** 3"
- **Ø Thread**
  - **Male**
    - **1:** 1/2"
    - **2:** 3/4"
    - **3:** 1"
    - **4:** 1 1/4"
    - **5:** 1 1/2"
    - **6:** 2"
    - **7:** 2 1/2"
    - **8:** 3"
    - **10:** 4"

EXTERNAL DIMENSIONS

Ø A	Ø B	DIMENSIONS	
		C	D
3/4"	1/2"	22	14
1"	1/2"	22	14
1"	3/4"	22	20
1.1/4"	1/2"	25	14
1.1/4"	3/4"	25	20
1.1/4"	1"	25	26
1.1/2"	1/2"	25	14
1.1/2"	3/4"	25	20
1.1/2"	1"	25	26
1.1/2"	1.1/4"	25	32
2"	1/2"	30	14
2"	3/4"	30	20
2"	1"	30	26
2"	1.1/4"	30	32
2"	1.1/2"	30	38
2.1/2"	1/2"	35	14
2.1/2"	3/4"	35	20
2.1/2"	1"	35	26
2.1/2"	1/4"	35	32
2.1/2"	1/2"	35	38
2.1/2"	2"	35	51
3"	2"	35	14
3"	3/4"	35	20
3"	1"	35	26
3"	1.1/4"	35	32
3"	1.1/2"	35	38
3"	2"	35	51
3"	2.1/2"	35	64
4"	1/2"	35	14
4"	3/4"	35	20
4"	1"	35	26
4"	1.1/4"	35	32
4"	1.1/2"	35	38
4"	2"	35	51
4"	2.1/2"	35	64
4"	3"	35	76



LREx

REDUCING SLEEVE
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Reducing sleeve with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum alloy, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2** threads: to **4" NPT** or **BSP**.

HOW TO REQUEST

LREx * * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread

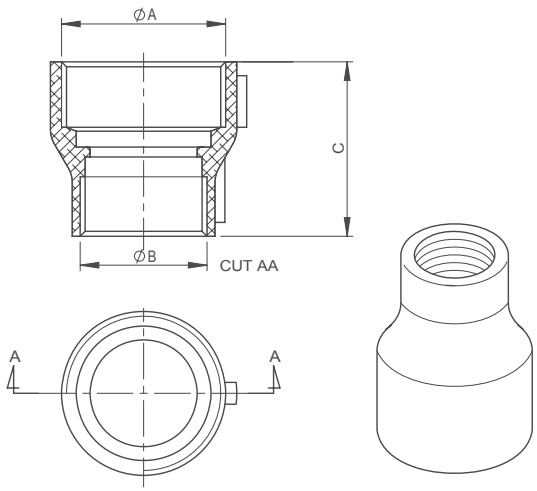
Smaller
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"

Ø Thread

Larger
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

EXTERNAL DIMENSIONS

Ø A	Ø B	C
3/4"	1/2"	38
1"	1/2"	40
1"	3/4"	40
1.1/4"	1/2"	51
1.1/4"	3/4"	51
1.1/4"	1"	51
1.1/2"	1/2"	60
1.1/2"	3/4"	60
1.1/2"	1"	60
1.1/2"	1.1/4"	60
2"	1/2"	66
2"	3/4"	66
2"	1"	66
2"	1.1/4"	66
2"	1.1/2"	66
2.1/2"	1"	76
2.1/2"	1.1/4"	76
2.1/2"	1.1/2"	76
2.1/2"	2"	76
3"	1.1/4"	80
3"	1.1/2"	80
3"	2"	80
3"	2.1/2"	80
4"	2"	84
4"	2.1/2"	84
4"	3"	84



UNEx

JUNCTION FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

Junction female-female

Junction male-female

TECHNICAL SPECIFICATIONS

- Junctions with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum, stainless steel, electrolytic galvanized iron,** or **fire galvanized iron**.
- **1/2"** to **4" NPT** or **BSP** threads.

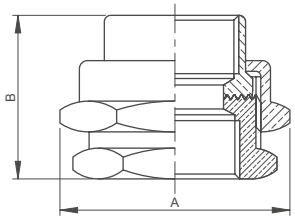
HOW TO REQUEST

UNEx * * * * *

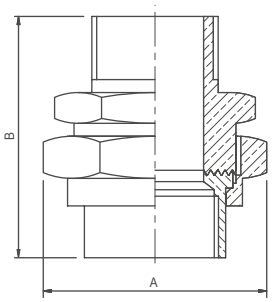
- **Material source**
  - **A:** Aluminum
  - **I4:** 304 stainless steel
  - **I6:** 316 stainless steel
  - **I6L:** 316L stainless steel
  - **F:** Fire galvanized iron
  - **E:** Electrolytic galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"
- **Type of junction**
  - **FF:** female-female
  - **MF:** male-female

EXTERNAL DIMENSIONS

FEMALE - FEMALE			MALE - FEMALE		
Ø THREAD	A	B	Ø THREAD	A	B
1/2"	39,5	41	1/2"	40	58,5
3/4"	47	46	3/4"	47	63
1"	54	49	1"	50	71
1.1/4"	72	49	1.1/4"	64,2	72,2
1.1/2"	80,5	54	1.1/2"	80	76,5
2"	100	64	2"	88,5	86,5
2.1/2"	112	67	2.1/2"	111,5	98
3"	131,5	68,5	3"	132	100
4"	157	81	4"	157	121



União fêmea-fêmea



União macho-fêmea

LVEx

SLEEVE FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Sleeve with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum, stainless steel, electrolytic galvanized iron,** or **fire galvanized iron**.
- **1/2"** to **4" NPT** or **BSP threads**.

HOW TO REQUEST

LVEx ***

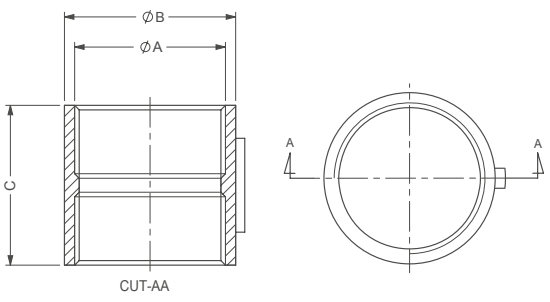
Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

EXTERNAL DIMENSIONS

ØA	ØB	C
1/2"	27,5	33
3/4"	33.5	38
1"	40	44
1.1/4"	51	53
1.1/2"	57	58
2"	70	62
2.1/2"	87	73
3"	101	77,5
4"	125,5	88



NCEx | NLEx

SHORT AND LONG NIPPLES FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

Short nipple

Long nipple

TECHNICAL SPECIFICATIONS

- Nipples with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum, stainless steel, electrolytic galvanized iron, fire galvanized iron, tin,** or **nickel-plated tin.**
- **1/2"** to **4" NPT** or **BSP** threads.

HOW TO REQUEST

N*Ex ***

Material source
- **A:** Alumínio
- **I4:** Aço inox 304
- **I6:** Aço inox 316
- **I6L:** Aço inox 316L
- **L:** Latão
- **N:** Latão niquelado
- **F:** Ferro galvanizado à fogo
- **E:** Ferro galvanizado eletrolítico

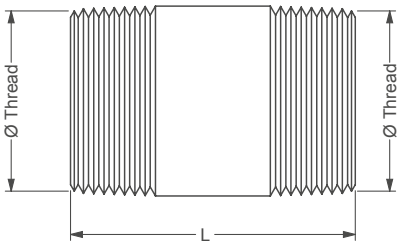
Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

Type of nipple
- **C:** short nipple
- **L:** long nipple

EXTERNAL DIMENSIONS

SHORT NIPPLE		LONG NIPPLE	
Ø THREAD	L	Ø THREAD	L
1/2"	28	1/2"	38
3/4"	34	3/4"	50
1"	38	1"	50
1.1/4"	41	1.1/4"	63
1.1/2"	44	1.1/2"	63
2"	50	2"	63
2.1/2"	63	2.1/2"	76
3"	66	3"	76
4"	76	4"	76



ADEx

THREAD ADAPTER
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Thread adapter with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum, stainless steel, tin,** or **nickel-plated tin.**
- **1/2"** to **4" NPT** or **BSP** and **M16** to **M75** threads.

HOW TO REQUEST

ADEx * * * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickelplated tin

Type of thread (female)
- **N:** NPT
- **B:** BSP
- **M:** Metric

Ø Thread (female)

NPT/BSP	Metric
1: 1/2"	**1:** M16
2: 3/4"	**2:** M20
3: 1"	**3:** M25
4: 1 1/4"	**4:** M32
5: 1 1/2"	**5:** M40
6: 2"	**6:** M50
7: 2 1/2"	**7:** M63

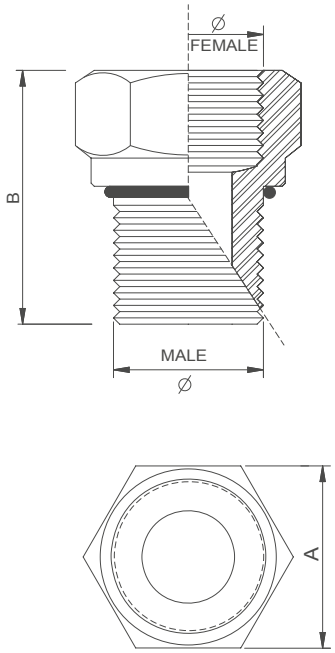
Type of thread (male)
- **N:** NPT
- **B:** BSP
- **M:** Metric

Ø Thread (male)

NPT/BSP	Metric
1: 1/2"	**1:** M16
2: 3/4"	**2:** M20
3: 1"	**3:** M25
4: 1 1/4"	**4:** M32
5: 1 1/2"	**5:** M40
6: 2"	**6:** M50
7: 2 1/2"	**7:** M63
8: 3"	**8:** M75

EXTERNAL DIMENSIONS

Ø THREAD		DIMENSIONS (mm)	
MALE	FEMALE	A	B
M16x1,5	1/2"	25.4	37
M20x1,5	1/2"	25.4	37
M20x1,5	3/4"	31.8	40
M25x1,5	1/2"	31.8	38
M25x1,5	3/4"	31.8	40
M25x1,5	1"	38.1	40
M32x1,5	1"	38.1	40
M32x1,5	1.1/4"	50.8	44
M32x1,5	1.1/2"	60.32	44
M40x1,5	1.1/4"	50.8	44
M40x1,5	1.1/2"	60.32	44
M50x1,5	1.1/2"	60.32	44
M50x1,5	2"	76.2	46
M63x1,5	2"	76.2	46
M63x1,5	2.1/2"	76.2	46
M75x1,5	2.1/2"	92	46
M75x1,5	3"	92	48



Ø THREAD		DIMENSIONS (mm)	
MALE	FEMALE	A	B
1/2"	M16x1,5	28.57	37
1/2"	M20x1,5	28.57	37
3/4"	M20x1,5	31.8	40
1/2"	M25x1,5	31.8	38
3/4"	M25x1,5	31.8	40
1"	M25x1,5	38.1	40
1"	M32x1,5	38.1	40
1.1/4"	M32x1,5	50.8	44
1.1/2"	M32x1,5	60.32	44
1.1/4"	M40x1,5	50.8	44
1.1/2"	M40x1,5	50.8	44
1.1/2"	M50x1,5	63.5	44
2"	M50x1,5	73.02	46
2"	M63x1,5	73.02	46
2.1/2"	M63x1,5	88.9	46
2.1/2"	M75x1,5	88.9	46
3"	M75x1,5	101.6	48

RDEx

THREAD REDUCER
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex d – Ex e – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
EPL: Gb – Db
DEGREE OF PROTECTION: IP66
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-7
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Thread reducer with **Ex d** (explosion-proof), **Ex e** (increased safety), and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum, stainless steel, tin,** or **nickel-plated tin.**
- **1/2"** to **4" NPT** or **BSP** and **M16** to **M100** threads.

HOW TO REQUEST

RDEx * * * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickelplated tin

Type of thread (female)
- **N:** NPT
- **B:** BSP
- **M:** Metric

Ø Thread (female)

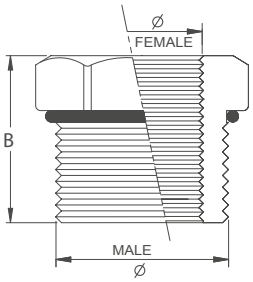
NPT/BSP	Metric
1: 1/2"	**3:** M25
2: 3/4"	**4:** M32
3: 1"	**5:** M40
4: 1 1/4"	**6:** M50
5: 1 1/2"	**7:** M63
6: 2"	**8:** M75
7: 2 1/2"	**9:** M90
8: 3"	

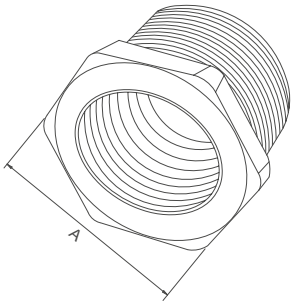
Type of thread (male)
- **N:** NPT
- **B:** BSP
- **M:** Metric

Ø Thread (male)

NPT/BSP	Metric
1: 1/2"	**3:** M25
2: 3/4"	**4:** M32
3: 1"	**5:** M40
4: 1 1/4"	**6:** M50
5: 1 1/2"	**7:** M63
6: 2"	**8:** M75
7: 2 1/2"	**9:** M90
8: 3"	**10:** M100
10: 4"	

EXTERNAL DIMENSIONS





Ø THREAD		DIMENSIONS (mm)	
MALE	FEMALE	A	B
M25x1,5	1/2"	28.57	24
M32x1,5	1/2"	34.92	24
M32x1,5	3/4"	34.92	24
M40x1,5	1/2"	44.45	26.4
M40x1,5	3/4"	44.45	26.4
M40x1,5	1"	44.45	26.4
M50x1,5	1/2"	53.97	26.4
M50x1,5	3/4"	53.97	26.4
M50x1,5	1"	53.97	26.4
M50x1,5	1.1/4"	53.97	26.4
M63x1,5	1/2"	66.67	26.4
M63x1,5	3/4"	66.67	26.4
M63x1,5	1"	66.67	26.4
M63x1,5	1.1/4"	66.67	26.4
M63x1,5	1.1/2"	66.67	26.4
M75x1,5	1/2"	78	34.8
M75x1,5	3/4"	78	34.8
M75x1,5	1"	78	34.8
M75x1,5	1.1/4"	78	34.8
M75x1,5	1.1/2"	78	34.8
M75x1,5	2"	78	34.8
M90x2	1/2"	95.25	42
M90x2	3/4"	95.25	42
M90x2	1"	95.25	42
M90x2	1.1/4"	95.25	42
M90x2	1.1/2"	95.25	42
M90x2	2"	95.25	42
M90x2	2.1/2"	95.25	42
M100x2	1/2"	106	42
M100x2	3/4"	106	42
M100x2	1"	106	42
M100x2	1.1/4"	106	42
M100x2	1.1/2"	106	42
M100x2	2"	106	42
M100x2	2.1/2"	106	42
M100x2	3"	106	42

Ø ROSCA		DIMENSIONS (mm)	
MALE	FEMALE	A	B
3/4"	1/2"	28.57	24
1"	1/2"	38.1	24
1"	3/4"	38.1	24
1.1/4"	1/2"	44.45	26.4
1.1/4"	3/4"	44.45	26.4
1.1/4"	1"	44.45	26.4
1.1/2"	1/2"	50.8	26.4
1.1/2"	3/4"	50.8	26.4
1.1/2"	1"	50.8	26.4
1.1/2"	1.1/4"	50.8	26.4
2"	1/2"	63.5	26.4
2"	3/4"	63.5	26.4
2"	1"	63.5	26.4
2"	1.1/4"	63.5	26.4
2"	1.1/2"	63.5	26.4
3"	1/2"	95.25	34.8
3"	3/4"	95.25	34.8
3"	1"	95.25	34.8
3"	1.1/4"	95.25	34.8
3"	1.1/2"	95.25	34.8
3"	2"	95.25	34.8
3"	2.1/2"	95.25	42
4"	1/2"	120	42
4"	3/4"	120	42
4"	1"	120	42
4"	1.1/4"	120	42
4"	1.1/2"	120	42
4"	2"	120	42
4"	2.1/2"	120	42
4"	3"	120	42
4"	3.1/2"	120	42

DREx

BREATHER DRAIN
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex db – Ex tb
ZONES: 1 and 2 – 21 and 22
GROUPS: IIC – IIIC
DEGREE OF PROTECTION: IP66 (dreno) / IP65 (respiro)
APPLICABLE STANDARDIZING:
ABNT NBR IEC 60079-0
ABNT NBR IEC 60079-1
ABNT NBR IEC 60079-31

TECHNICAL SPECIFICATIONS

- Breather drain with **Ex db** (explosion-proof) and **Ex tb** (combustible dust) protection for installation in potentially explosive atmospheres.
- Made in **aluminum**.
- **1/2" NPT** threads.
- Used in enclosures installed in environments with a high degree of humidity or great variations in temperature and condensation problems.

TFEx

FLEXIBLE TUBE
FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

PROTECTION: Ex
ZONES: 1 and 2
GROUPS: IIB + H2 (latão) / IIC (aço inox)
EPL: Gb

TECHNICAL SPECIFICATIONS

- Made in **stainless steel** and **tin**.
- **1/2"** to **4" NPT** or **BSP** threads.

HOW TO REQUEST

To order **stainless steel flexible tubes**, change the seventh digit to **2**.

Example: 56748/021 - flexible tube 1/2"x 500 mm made in stainless steel (with NPT thread).

To order **BSP threaded flexible tubes**, change the sixth digit to **1**.

Example: 56748/101 - flexible tube 1/2"x 500 mm made in tin (with BSP thread).

Male flexible tube
Male junction

Male flexible tube
Female junction

TFEx

MALE FLEXIBLE TUBE AND MALE JUNCTION - TIN (NPT THREAD)

REF.	GAUGE	LENGTH	Ø INTERNAL (MIN.)	RADIUS CURVATURE (MIN.)
56748/001	1/2″	500 mm	15 mm	270 mm
56748/002		600 mm		
56748/003		800 mm		
56748/004		1000 mm		
56748/009	3/4″	500 mm	21 mm	280 mm
56748/010		600 mm		
56748/011		800 mm		
56748/012		1000 mm		
56748/017	1″	500 mm	26 mm	310 mm
56748/018		600 mm		
56748/019		800 mm		
56748/020		1000 mm		
56748/025	1.1/4″	500 mm	34 mm	320 mm
56748/026		600 mm		
56748/027		800 mm		
56748/028		1000 mm		
56748/033	1.1/2″	500 mm	41 mm	400 mm
56748/034		600 mm		
56748/035		800 mm		
56748/036		1000 mm		
56748/041	2″	500 mm	52 mm	500 mm
56748/042		600 mm		
56748/043		800 mm		
56748/044		1000 mm		

MALE FLEXIBLE TUBE AND FEMALE JUNCTION - TIN (NPT THREAD)

REF.	GAUGE	LENGTH	Ø INTERNAL (MIN.)	RADIUS CURVATURE (MIN.)
56748/005	1/2″	500 mm	15 mm	270 mm
56748/006		600 mm		
56748/007		800 mm		
56748/008		1000 mm		
56748/013	3/4″	500 mm	21 mm	280 mm
56748/014		600 mm		
56748/015		800 mm		
56748/016		1000 mm		
56748/021	1″	500 mm	26 mm	310 mm
56748/022		600 mm		
56748/023		800 mm		
56748/024		1000 mm		
56748/029	1.1/4″	500 mm	34 mm	320 mm
56748/030		600 mm		
56748/031		800 mm		
56748/032		1000 mm		
56748/037	1.1/2″	500 mm	41 mm	400 mm
56748/038		600 mm		
56748/039		800 mm		
56748/040		1000 mm		
56748/045	2″	500 mm	52 mm	500 mm
56748/046		600 mm		
56748/047		800 mm		
56748/048		1000 mm		

To order 2 1/2″ to 4″ gauges, please contact Tramontina.

BOXES ACCESSORIES AND INDUSTRIAL CONNECTORS

*PRODUCTS IN THIS SECTION ARE NOT CERTIFIED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES.

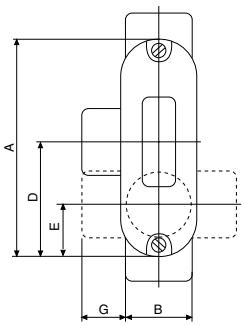
BOXES ACCESSORIES AND INDUSTRIAL CONNECTORS

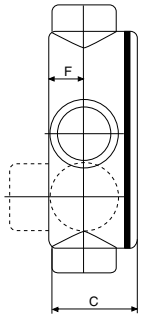
CDA

CONDULETES AMERICANO

TECHNICAL SPECIFICATIONS

- Supplied with lid and **NPT thread**.*
  *BSP thread can be made-to-order.
- **IP65** degree of protection





REF.	GAUGE	DIMENSIONS (mm)							IMAGE
		A	B	C	D	E	F	G	
56101/071	1/2"	97,5	34	40	48,75	22	16	18	 **model C**
56101/072	3/4"	118	38,5	46,5	59	26	18	19	
56101/073	1"	136,5	44	53,5	68,25	27,5	22,5	19	
56101/074	1.1/4"	166	53	71	83	42,5	27,5	24,5	
56101/075	1.1/2"	184	61	78	92	44,5	31	27	
56101/076	2"	244	73	94	122	56	37,5	28,5	
56103/071	1/2"	97,5	34	40	48,75	22	16	18	 **model LB**
56103/072	3/4"	118	38,5	46,5	59	26	18	19	
56103/073	1"	136,5	44	53,5	68,25	27,5	22,5	19	
56103/074	1.1/4"	166	53	71	83	42,5	27,5	24,5	
56103/075	1.1/2"	184	61	78	92	44,5	31	27	
56103/076	2"	244	73	94	122	56	37,5	28,5	
56104/071	1/2"	97,5	34	40	48,75	22	16	18	 **model LL**
56104/072	3/4"	118	38,5	46,5	59	26	18	19	
56104/073	1"	136,5	44	53,5	68,25	27,5	22,5	19	
56104/074	1.1/4"	166	53	71	83	42,5	27,5	24,5	
56104/075	1.1/2"	184	61	78	92	44,5	31	27	
56104/076	2"	244	73	94	122	56	37,5	28,5	
56105/071	1/2"	97,5	34	40	48,75	22	16	18	 **model LR**
56105/072	3/4"	118	38,5	46,5	59	26	18	19	
56105/073	1"	136,5	44	53,5	68,25	27,5	22,5	19	
56105/074	1.1/4"	166	53	71	83	42,5	27,5	24,5	
56105/075	1.1/2"	184	61	78	92	44,5	31	27	
56105/076	2"	244	73	94	122	56	37,5	28,5	
56106/071	1/2"	97,5	34	40	48,75	22	16	18	 **model T**
56106/072	3/4"	118	38,5	46,5	59	26	18	19	
56106/073	1"	136,5	44	53,5	68,25	27,5	22,5	19	
56106/074	1.1/4"	166	53	71	83	42,5	27,5	24,5	
56106/075	1.1/2"	184	61	78	92	44,5	31	27	
56106/076	2"	244	73	94	122	56	37,5	28,5	

To request a **BSP thread**, change the seventh digit to "5".
Example: 56101/051 - American conduit outlet model C 1/2– BSP.

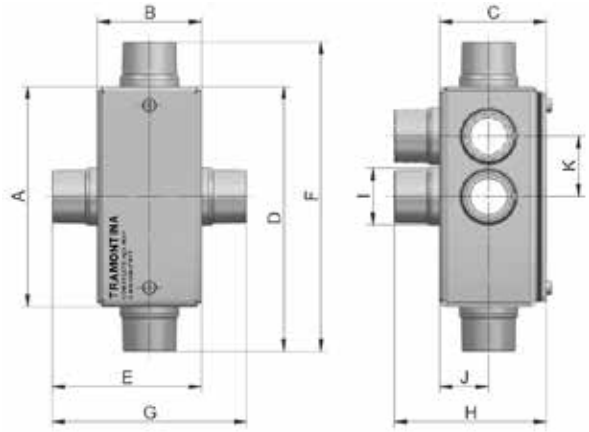
CDAi

STAINLESS STEEL CONDUIT OUTLET

TECHNICAL SPECIFICATIONS

- Made in **304 stainless steel**.
  316 or 316L stainless steel can be made-to-order.
- Lid attached to body with stainless steel bolts.
- **Neoprene** seal.
- Electro-polished finish.
- **1/2"** to **4" NPT** or **BSP** threaded inlets.
- **IP66** degree of protection

REF.	MODEL	Ø THREAD	DIMENSIONS (mm)											QUANTITY OF BOLTS ON LID
			A	B	C	D	E	F	G	H	I	J	K	
56500/401	CDAi-1 E 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56500/402	CDAi-2 E 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56500/403	CDAi-3 E 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56500/404	CDAi-4 E 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56500/405	CDAi-5 E 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56500/406	CDAi-6 E 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56500/407	CDAi-7 E 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56500/408	CDAi-8 E 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56500/409	CDAi-10 E 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4
56501/401	CDAi-1 C 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56501/402	CDAi-2 C 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56501/403	CDAi-3 C 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56501/404	CDAi-4 C 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56501/405	CDAi-5 C 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56501/406	CDAi-6 C 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56501/407	CDAi-7 C 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56501/408	CDAi-8 C 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56501/409	CDAi-10 C 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4



CDAi

REF.	MODEL	Ø THREAD	DIMENSIONS (mm)											QUANTITY OF BOLTS ON LID
			A	B	C	D	E	F	G	H	I	J	K	
56502/401	CDAi-1 LL 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56502/402	CDAi-2 LL 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56502/403	CDAi-3 LL 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56502/404	CDAi-4 LL 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56502/405	CDAi-5 LL 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56502/406	CDAi-6 LL 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56502/407	CDAi-7 LL 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56502/408	CDAi-8 LL 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56502/409	CDAi-10 LL 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4
56503/401	CDAi-1 LR 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56503/402	CDAi-2 LR 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56503/403	CDAi-3 LR 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56503/404	CDAi-4 LR 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56503/405	CDAi-5 LR 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56503/406	CDAi-6 LR 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56503/407	CDAi-7 LR 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56503/408	CDAi-8 LR 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56503/409	CDAi-10 LR 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4
56504/401	CDAi-1 LB 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56504/402	CDAi-2 LB 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56504/403	CDAi-3 LB 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56504/404	CDAi-4 LB 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56504/405	CDAi-5 LB 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56504/406	CDAi-6 LB 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56504/407	CDAi-7 LB 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56504/408	CDAi-8 LB 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56504/409	CDAi-10 LB 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4
56505/401	CDAi-1 T 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56505/402	CDAi-2 T 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56505/403	CDAi-3 T 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56505/404	CDAi-4 T 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56505/405	CDAi-5 T 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56505/406	CDAi-6 T 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56505/407	CDAi-7 T 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56505/408	CDAi-8 T 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56505/409	CDAi-10 T 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4

REF.	MODEL	Ø THREAD	DIMENSIONS (mm)											QUANTITY OF BOLTS ON LID
			A	B	C	D	E	F	G	H	I	J	K	
56506/401	CDAi-1 TB 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56506/402	CDAi-2 TB 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56506/403	CDAi-3 TB 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56506/404	CDAi-4 TB 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56506/405	CDAi-5 TB 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56506/406	CDAi-6 TB 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56506/407	CDAi-7 TB 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56506/408	CDAi-8 TB 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56506/409	CDAi-10 TB 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4
56507/401	CDAi-1 X 1/2 NPT	1/2"	116	54	55,5	137	75	158	96	76,5	28	25,5	29	2
56507/402	CDAi-2 X 3/4 NPT	3/4"	116	54	55,5	139,5	77,5	163	101	79	32,7	25,5	29	2
56507/403	CDAi-3 X 1 NPT	1"	130	56	60,5	154	80	178	104	84,5	40	28	32,5	2
56507/404	CDAi-4 X 1.1/4 NPT	1.1/4"	155	76	80,5	179	100	203	124	104,5	50	38	39	2
56507/405	CDAi-5 X 1.1/2 NPT	1.1/2"	155	76	80,5	180	101	205	126	105,5	57	38	39	2
56507/406	CDAi-6 X 2 NPT	2"	180	84	89,5	210,5	114,5	241	145	120	72,4	42,5	45	2
56507/407	CDAi-7 X 2.1/2 NPT	2.1/2"	225	120	126,5	261	156	297	192	162,5	87,5	61	56	4
56507/408	CDAi-8 X 3 NPT	3"	225	120	126,5	261	156	297	192	162,5	104	61	56	4
56507/409	CDAi-10 X 4 NPT	4"	285	140	147,5	324	179	263	218	186,5	129	71,5	71	4

To request **conduit outlets with a BSP thread**, change the seventh digit from "0" to "2".
Example: 56500/421 - condulete aço inox CDAi-1 E 1/2" BSP.

AR

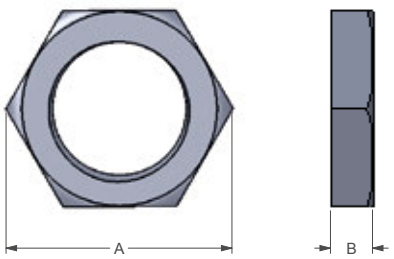
WASHER

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** and **M16** to **M75** threads.

EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)	
	A	B
1/2"	27	6
3/4"	36	7
1"	43	8
1.1/4"	55	9
1.1/2"	65	10
2"	75	13
2.1/2"	90	13
3"	107	15
4"	137	17



HOW TO REQUEST

AR * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP
- **M:** Metric

Ø Thread

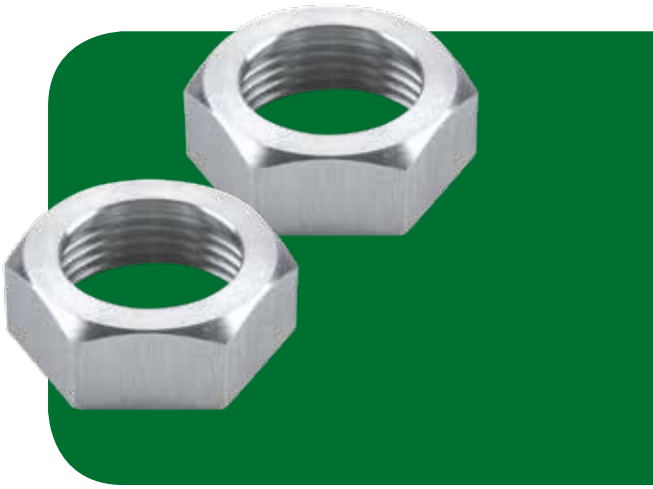
	Metric
1: 1/2"	**1:** M16
2: 3/4"	**2:** M20
3: 1"	**3:** M25
4: 1 1/4"	**4:** M32
5: 1 1/2"	**5:** M40
6: 2"	**6:** M50
7: 2 1/2"	**7:** M63
8: 3"	**8:** M75
10: 4"	

BU

BUSHING

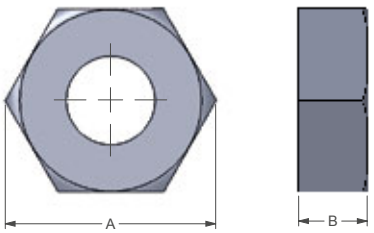
TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** threads.



EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)		HANDLE SECTION
	A	B	C
1/2"	27	11	6 - 16
3/4"	36	12	6 - 16
1"	43	14	6 - 16
1.1/4"	55	15	6 - 16
1.1/2"	65	17	6 - 16
2"	75	17	25 - 35
2.1/2"	88	18	25 - 35
3"	108	20	25 - 35
4"	135	22	25 - 35



HOW TO REQUEST

BU * * *

- **Material source**
  - **A:** Aluminum
  - **I4:** 304 stainless steel
  - **I6:** 316 stainless steel
  - **I6L:** 316L stainless steel
  - **L:** Tin
  - **N:** Nickel-plated tin
  - **F:** Ferro galvanizado à fogo
  - **E:** Electrolytic galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"

BUI

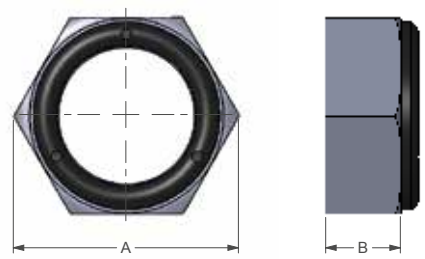
INSULATED BUSHING

TECHNICAL SPECIFICATIONS

- Made in a**luminum, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** threads.

EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)		HANDLE SECTION
	A	B	C
1/2"	27	14	6 - 16
3/4"	36	16	6 - 16
1"	43	18	6 - 16
1.1/4"	55	20	6 - 16
1.1/2"	65	22	6 - 16
2"	75	23	25 - 35
2.1/2"	88	24	25 - 35
3"	108	31	25 - 35
4"	135	31	25 - 35



HOW TO REQUEST

BUI * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Ferro galvanizado à fogo
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

BUT

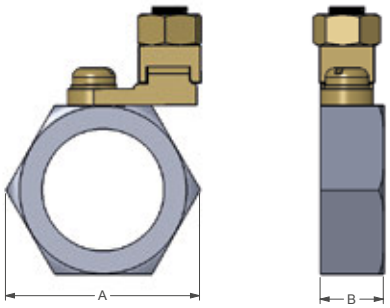
TERMINAL BUSHING

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** threads.
- Grounding terminal made of **tin**.

EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)		HANDLE SECTION
	A	B	C
1/2"	27	11	6 - 16
3/4"	36	12	6 - 16
1"	43	14	6 - 16
1.1/4"	55	15	6 - 16
1.1/2"	65	17	6 - 16
2"	75	17	25 - 35
2.1/2"	88	18	25 - 35
3"	108	20	25 - 35
4"	135	22	25 - 35



HOW TO REQUEST

BUT * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

BUTI

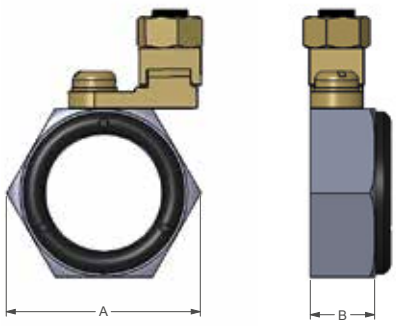
INSULATED TERMINAL BUSHING

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron, tin, nickel-plated tin,** and **stainless steel.**
- **1/2"** to **4" NPT** or **BSP** threads.
- Grounding terminal made of tin.

EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)		HANDLE SECTION
	A	B	C
1/2"	27	14	6 - 16
3/4"	36	16	6 - 16
1"	43	18	6 - 16
1.1/4"	55	20	6 - 16
1.1/2"	65	22	6 - 16
2"	75	23	25 - 35
2.1/2"	88	24	25 - 35
3"	108	31	25 - 35
4"	135	31	25 - 35



HOW TO REQUEST

BUTI * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **L:** Tin
- **N:** Nickel-plated tin
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

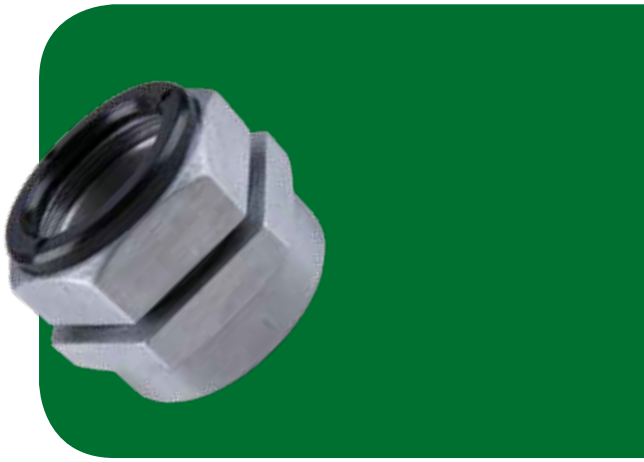
Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

CH

CONNECTOR

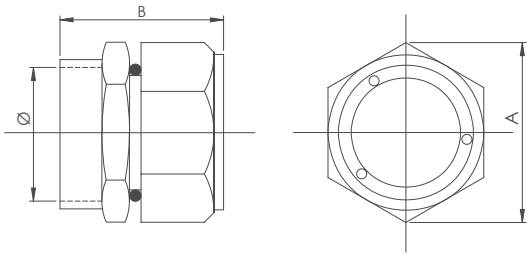
TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron,** or **fire galvanized iron**.
- **1/2”** to **4” NPT** or **BSP** threads.



EXTERNAL DIMENSIONS

Ø	A	B	Ø HOLE ON PLATE
1/2"	40	44	21
3/4"	43	47	27
1"	55	52	33
1.1/4"	61	55	42
1.1/2"	61	55	48
2"	66	61	60
2.1/2"	72	66	75
3"	77	70	88
4"	81	94	113



HOW TO REQUEST

CH * * *

Material source
- **A:** Aluminum
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

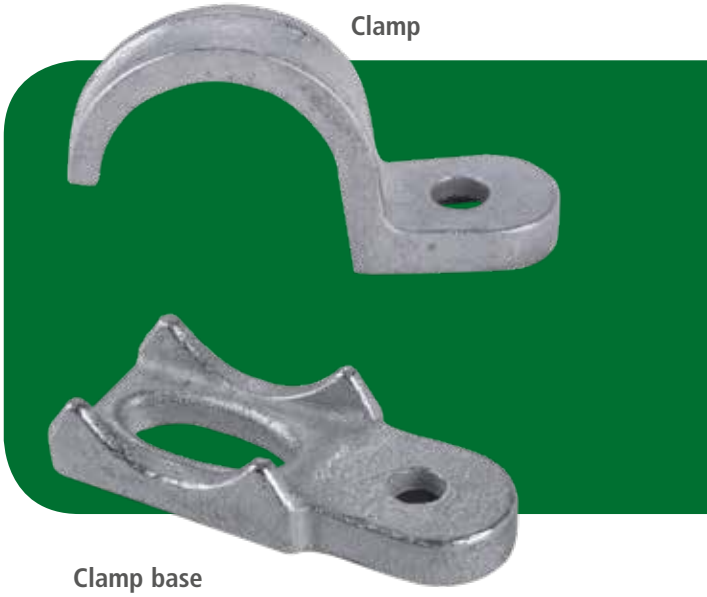
Ø Thread
- **1:** 1/2”
- **2:** 3/4”
- **3:** 1”
- **4:** 1 1/4”
- **5:** 1 1/2”
- **6:** 2”
- **7:** 2 1/2”
- **8:** 3”
- **10:** 4”

ABU | ABB

CLAMP AND CLAMP BASE

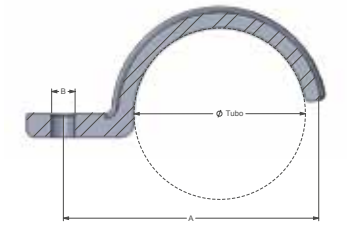
TECHNICAL SPECIFICATIONS

- Made in **aluminum** or **fire galvanized iron**.
- **1/2"** to **4" NPT** or **BSP** threads.

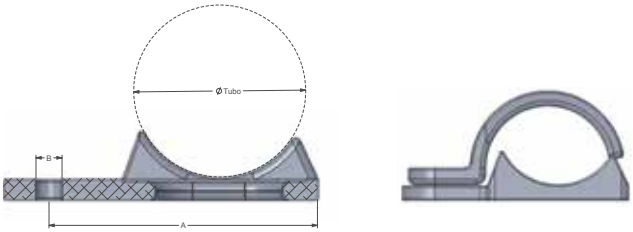


EXTERNAL DIMENSIONS

PIPE	DIMENSIONS (mm)		HANDLE SECTION
	A	B	C
1/2"	24	7	22
3/4"	29	7	27
1"	36	8,5	33
1.1/4"	42	8,5	42
1.1/2"	47	10,5	49
2"	55	10,5	61
2.1/2"	67	13,5	73
3"	75	13,5	89
4"	100	13,5	115



Clamp



Clamp base

HOW TO REQUEST

AB* * *

Material source
- **A:** Aluminum
- **F:** Fire galvanized iron

Pipe
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

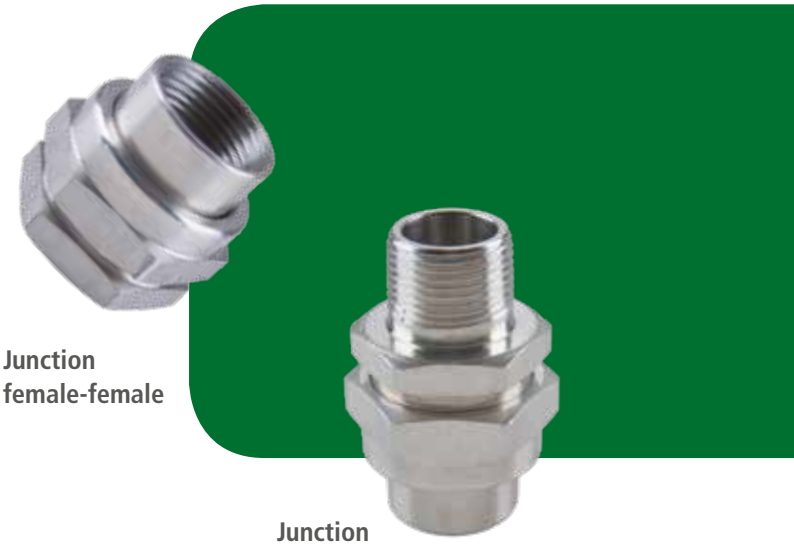
Type
- **U:** Clamp
- **B:** Clamp base

UN

JUNCTION

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron,** and **stainless steel.**
- **1/2"** to **4" NPT** or **BSP** threads.

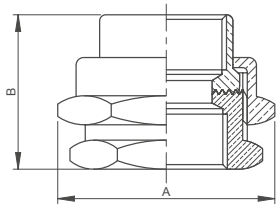


Junction female-female

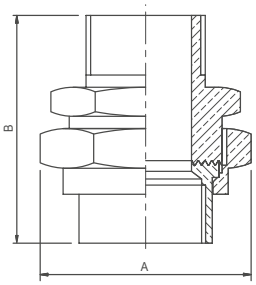
Junction male-female

EXTERNAL DIMENSIONS

FEMALE-FEMALE			MALE-FEMALE		
Ø THREAD	A	B	Ø THREAD	A	B
1/2"	39,5	41	1/2"	40	58,5
3/4"	47	46	3/4"	47	63
1"	54	49	1"	50	71
1.1/4"	72	49	1.1/4"	64,2	72,2
1.1/2"	80,5	54	1.1/2"	80	76,5
2"	100	64	2"	88,5	86,5
2.1/2"	112	67	2.1/2"	111,5	98
3"	131,5	68,5	3"	132	100
4"	157	81	4"	157	121



Female-female junction



Male-female junction

HOW TO REQUEST

UN ** *** ***

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

Type of junction
- **FF:** female-female
- **MF:** male-female

LV

GLOVE

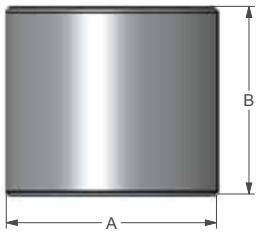
TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron,** and **stainless steel.**
- **1/2"** to **4" NPT** or **BSP** threads.

HOW TO REQUEST

LV * * *

- **Material source**
  - **A:** Aluminum
  - **I4:** 304 stainless steel
  - **I6:** 316 stainless steel
  - **I6L:** 316L stainless steel
  - **F:** Fire galvanized iron
  - **E:** Electrolytic galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"



EXTERNAL DIMENSIONS

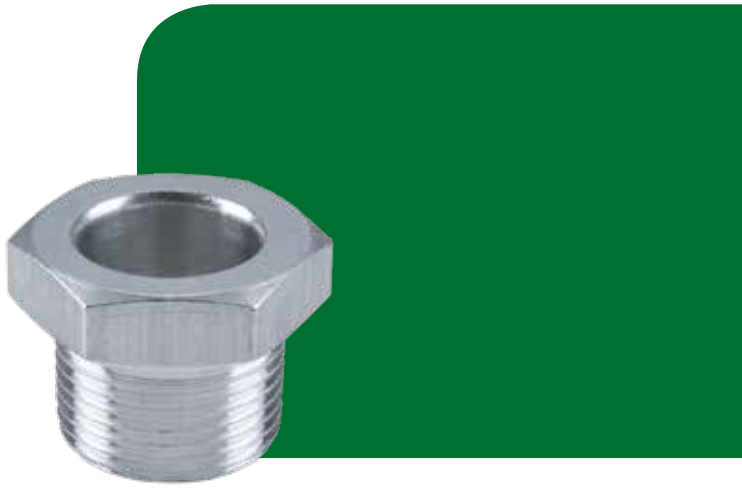
Ø THREAD	FIRE GALVANIZED GLOVE			ALUMINUM GLOVE		
	EXTERNAL Ø A (mm)	MINIMUM LENGTH B (mm)		EXTERNAL Ø A (mm)	MINIMUM LENGTH B (mm)	
	BSP/NPT	BSP	NPT	BSP/NPT	BSP	NPT
1/2"	26,7	25	40	20,4	35	35
3/4"	33,4	28	41	31,7	36,1	36,1
1"	38,1	34	51	38,1	41,4	41,4
1.1/4"	48,1	38	52	50	53	53
1.1/2"	54	38	52	54,5	48,2	48,2
2"	70	44	54	69	56,3	56,3
2.1/2"	82,55	48	79	80,2	65	82,2
3"	95,55	53	83	97,7	85,4	85,4
4"	120	72	89	119,6	92,5	92,5

NP

NIPPLE

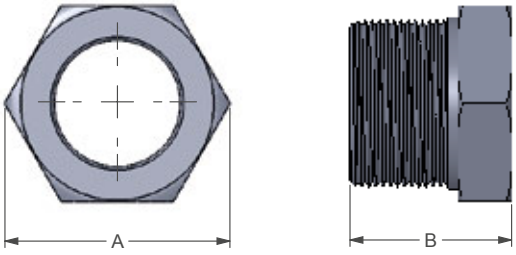
TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** threads.



EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)	
	A	B
1/2"	30	12
3/4"	35	22
1"	40	24
1.1/4"	50	26
1.1/2"	60	27
2"	70	35
2.1/2"	90	38
3"	105	40
4"	145	48



HOW TO REQUEST

NP * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

TP

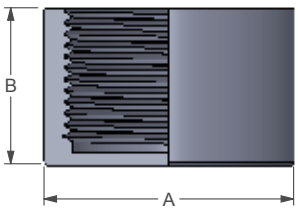
CAP

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron,** and **stainless steel.**
- **1/2"** to **4" NPT** or **BSP** threads.

EXTERNAL DIMENSIONS

Ø THREAD	DIMENSIONS (mm)	
	A	B
1/2"	27	22
3/4"	32	25
1"	40	25
1.1/4"	51	29
1.1/2"	60	31
2"	72	31
2.1/2"	84	40
3"	101	45
4"	125	50



HOW TO REQUEST

TP * * *

Material source
- **A:** Aluminum
- **I4:** 304 stainless steel
- **I6:** 316 stainless steel
- **I6L:** 316L stainless steel
- **F:** Fire galvanized iron
- **E:** Electrolytic galvanized iron

Type of thread
- **N:** NPT
- **B:** BSP

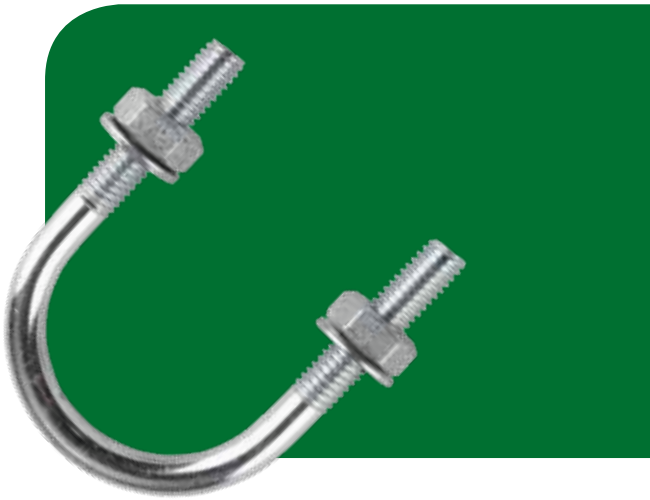
Ø Thread
- **1:** 1/2"
- **2:** 3/4"
- **3:** 1"
- **4:** 1 1/4"
- **5:** 1 1/2"
- **6:** 2"
- **7:** 2 1/2"
- **8:** 3"
- **10:** 4"

GU

CLIP

TECHNICAL SPECIFICATIONS

- Made in **aluminum, electrolytic galvanized iron, fire galvanized iron,** and **stainless steel**.
- **1/2"** to **4" NPT** or **BSP** threads.



EXTERNAL DIMENSIONS

TUBE GAUGE	ØA	B	C	D
1/2"	1/4"	23	25	52,85
3/4"	1/4"	28	30	60,35
1"	1/4"	34	30	68,35
1.1/4"	1/4"	44	30	76,35
1.1/2"	1/4"	50	40	81,35
2"	5/16"	61	40	97,94
2.1/2"	5/16"	77	50	120,94
3"	5/16"	90	50	137,94
4"	3/8"	116	60	167,53

HOW TO REQUEST

GU * * *

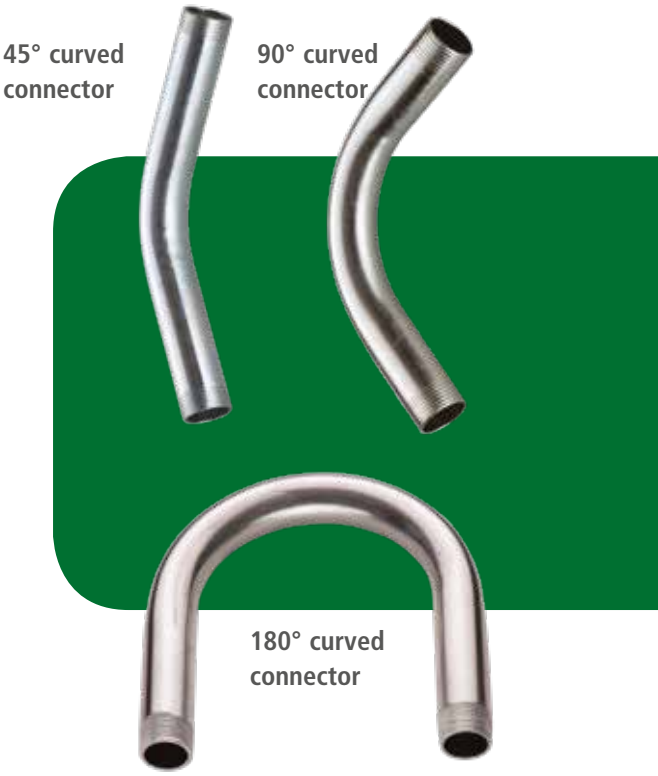
- **Material source**
  - **A:** Aluminum
  - **I4:** 304 stainless steel
  - **I6:** 316 stainless steel
  - **I6L:** 316L stainless steel
  - **F:** Fire galvanized iron
  - **E:** Electrolytic galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"

CR

CURVED CONNECTOR

TECHNICAL SPECIFICATIONS

- Made in **aluminum** and **fire galvanized iron**.
- **1/2"** to **4" NPT** or **BSP** threads.
- 45°, 90°, and 180° options available.



EXTERNAL DIMENSIONS

45° curved connector

90° curved connector

180° curved connector

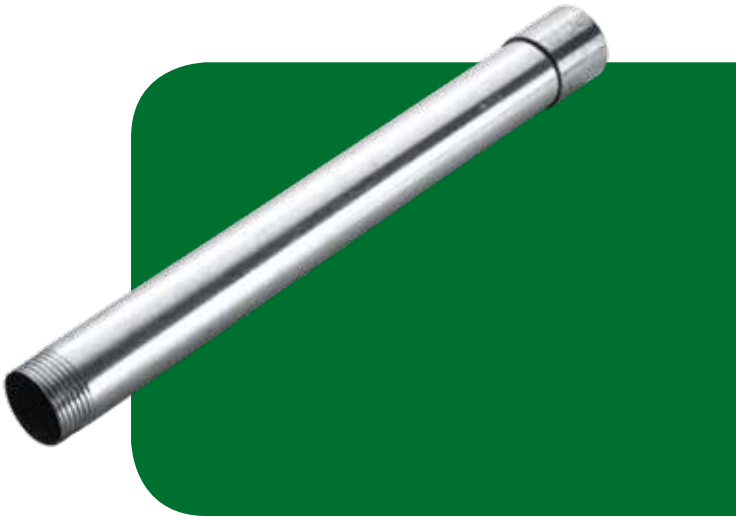
HOW TO REQUEST

CR ** ***

- **Material source**
  - **A:** Aluminum
  - **F:** Fire galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP
- **Ø Thread**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"
- **Model**
  - **45:** 45°
  - **90:** 90°
  - **180:** 180°

ELECTRICAL DUCTS

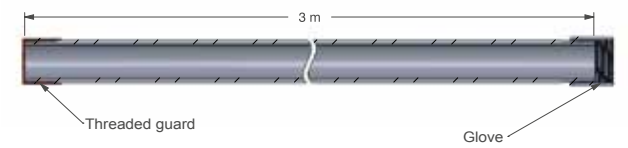
ELECTRICAL DUCTS



TECHNICAL SPECIFICATIONS

- Made in **aluminum** and fire galvanized **carbon steel** with stitching (internal burr removed).
- **1/2"** to **4" NPT** or **BSP** threads.
- Supplied in **3-meter bars** with glove on one end and threaded guard on the other.

EXTERNAL DIMENSIONS



HOW TO REQUEST

ELECTRICAL DUCTS * * *

- **Ø Thread**
  - **NPT ou BSP**
  - **1:** 1/2"
  - **2:** 3/4"
  - **3:** 1"
  - **4:** 1 1/4"
  - **5:** 1 1/2"
  - **6:** 2"
  - **7:** 2 1/2"
  - **8:** 3"
  - **10:** 4"
- **Material source**
  - **A:** Aluminum
  - **F:** Fire galvanized iron
- **Type of thread**
  - **N:** NPT
  - **B:** BSP

TRAMONTINA

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