



Saves Your Energy

Explosion protection solutions for hazardous areas



Extreme safety for extreme conditions





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Large, globally certified product range

Our explosion protection enclosing solutions are comprehensive and widely configurable. Reliable in use and convenient to install, their overall quality provides cost efficiency, and most of all, increased safety of your employees and equipment every day.

Our explosion protection offering now comprises Ex enclosing solutions and various related industrial components. They are designed and tested to meet the requirements of industries and applications where explosive atmospheres may be present.

The enclosures are available in painted mild steel, stainless steel (AISI 304 and AISI 316L), die-cast aluminium and polyester and they

are widely certified to meet the requirements of global markets. They hold ATEX, China Ex, IECEx, Russian and UL certifications.

Our Ex enclosures are suitable for installations in:

- Zones 1 and 2 in gas areas
- Zones 21 and 22 in dust areas.



Ensto Ex

EXPLOSION PROTECTION



CNEX

Services

- Design
- Customization
- Assembly
- Certification



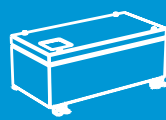
Aluminium



Polyester



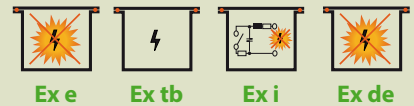
Steel



Size range

64 x 58 x 34 mm - 1000 x 2000 x 800 mm

Protection types



Empty enclosures

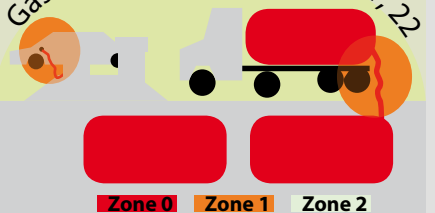
Junction boxes

Local control stations

Universal combo boxes

Zones

Gas areas: 1, 2 Dust areas: 21, 22



Widely applicable

Our explosion protection solutions are ideal for minimizing the risk related to your operations in hazardous areas. They are able to meet challenging environments, even in the most demanding industries.

Below are some examples of industries that, due to gases, fumes and combustible dust, are particularly at risk of potential explosion and in which our Ex enclosures are typically used.

Shipbuilding



Oil and gas



Food industry



Waste management



Renewable energy



Forestry



Water treatment



Pharmaceuticals



Construction



Benefits of our explosion protection solutions



Fast service

We offer you fast production times. Our enclosing solutions are ready to be delivered promptly and efficiently upon receipt of an approved purchase order and technical drawings.



Ex expertise

We are specialists in Ex enclosures. You can utilize our competence and professionalism and benefit from our know-how, allowing you to focus on what you are best at.



Wide range of certificates

Our products hold ATEX, China Ex, IECEx, Russian and UL certifications. You can trust that they fulfill the requirements of the markets globally.



Wide range of materials

We offer solutions made of a wide range of materials including steel, polyester and aluminium. You have the possibility of choosing the best material to suit the installation environment.



Design files

We also support your end-solution design process by offering different design files related to both our standard and customer-specific solutions.

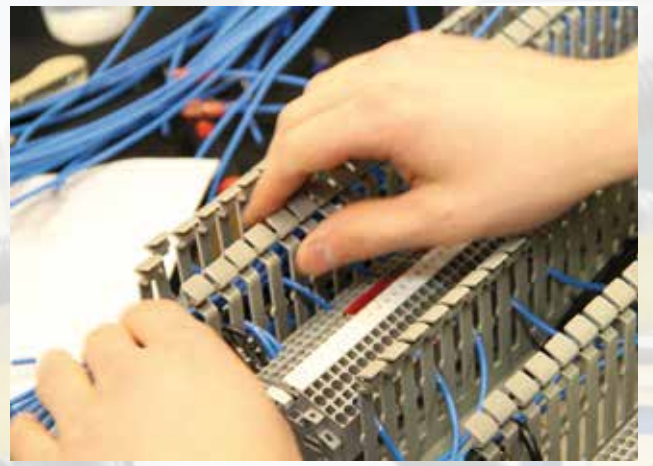


Quality assured manufacturing

Guaranteeing your smooth operations

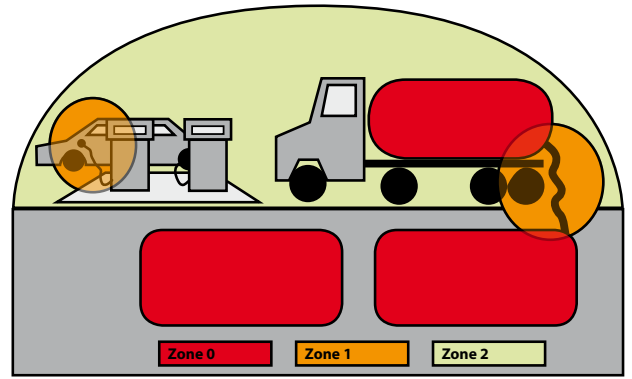
We have our own explosion protection solutions production facilities with state-of-the-art manufacturing. Our factory has received ISO certificates and it undergoes regular internal and external audits related to those.

We strive to live up to our promise of sustainability by organizing our production and logistics processes to minimize energy consumption and waste, while implementing industry best practice to assure highest quality and a healthy working environment. We are also actively involved in auditing and continuously improving our work processes, and adopting new models to make the human activities in our production chain more efficient. To our customers, this translates to shorter lead times and enhanced manufacturing flexibility.



Types of protection

Our explosion protection solutions are suitable for Zones 1 and 2 in gas areas and 21 and 22 in dust areas, and for protection types Ex e, Ex tb, Ex i, Ex p, Ex nR and Ex d.



Explosive atmospheres:

- Zone 0 (Gas), Zone 20 (Dust)
Permanent risk for explosion
- Zone 1 (Gas), Zone 21 (Dust)
Risk of explosion occasional
- Zone 2 (Gas), Zone 22 (Dust)
Risk of explosion rare and short-term.

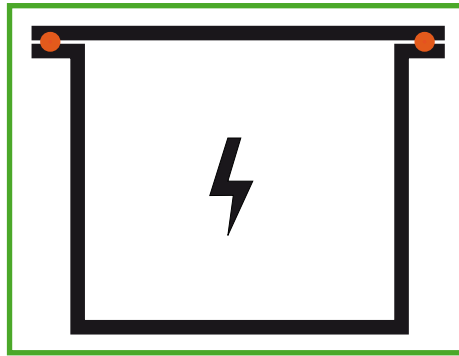
Available types of protection as pictured below:

- **In our standard offering**
- **As customer-specific projects**
- **Sourced on request**



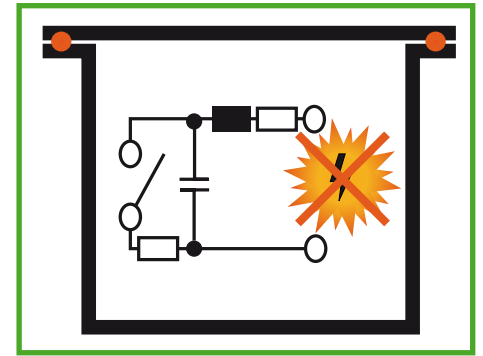
Ex e (Gas), increased safety

- Only Ex-approved components may be installed inside the enclosure.



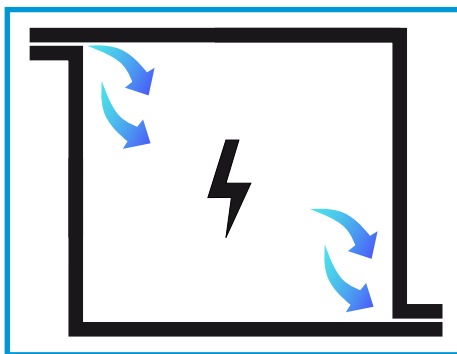
Ex tb (Dust), dust-proof enclosure

- Structure must prevent harmful amounts of dust from entering the enclosure.
- Spark-generating components can be installed inside the enclosure.
- Standard junction boxes, other equipment possible as customer-specific projects.



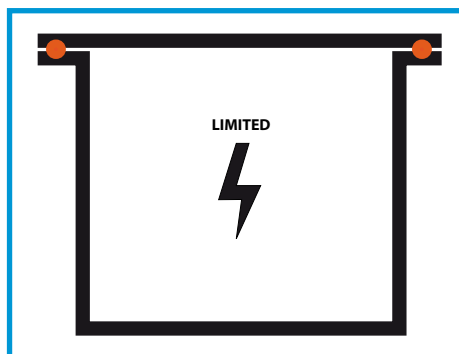
Ex i (Gas and dust), intrinsically safe

- No sparks or thermal effects are caused by the equipment due to power limitation.
- Safe-barrier system (blue color-coding for circuits is preferred)
- ISE junction boxes as standard. Other equipment possible as customer-specific projects.



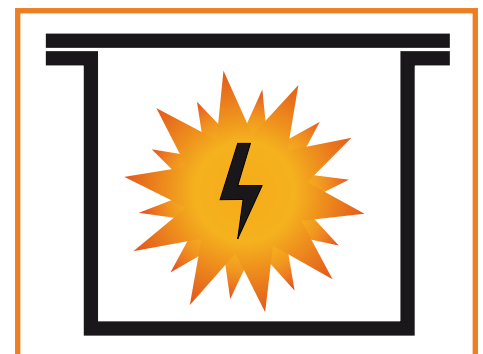
Ex p (Gas and dust), pressurization

- Protection by positive pressure inside the enclosure
- Possible as a customer-specific project.



Ex nR (Gas), restricted breathing

- The enclosures are designed in such a way that the ingress of gases is restricted.
- For Zone 2
- Possible as a customer-specific project.



Ex d (Gas), explosion-proof

- Structure of the enclosure withstands explosion pressure.
- Universal combo boxes can be mounted to Ex d.

Material comparison



Our product range comprises Ex enclosures made of steel, aluminium and polyester. Below are some advantages and disadvantages of the different materials.

Steel

Polyester painted mild steel

- + High impact resistance
- + High degree of protection
- + Easy to customize; customer-specific dimensions possible
- Corrosion risk

Stainless steel AISI 304

- + High impact resistance
- + High degree of protection
- + Excellent corrosion resistance
- + Excellent resistance to UV radiation
- + Suitable for outdoor use; a rain shelter is recommended
- + Suitable for industrial environments
- + Excellent suitability e.g. to the food industry
- + Customer-specific dimensions possible
- More expensive than painted mild steel

Stainless steel AISI 316L

- In addition to the advantages of AISI 304
- + Excellent corrosion resistance
 - + Excellent suitability e.g. to offshore industry
 - More expensive than stainless steel AISI 304



Polyester (GRP)

Carbon loaded glass-reinforced polyester (black)

- + Excellent temperature resistance
- + Good corrosion resistance
- + Good resistance against solvents
- + Excellent suitability e.g. to chemical industries
- Unrecyclable material



Die-cast aluminium

Die-cast powder-coated aluminium

- + Lighter than steel
- + High impact resistance
- + Good resistance against solvents
- + Good corrosion resistance
- + Wide temperature resistance range
- Machining may be problematic



Ensto Ex steel enclosures

The available materials include polyester painted mild steel and stainless steel AISI 304 and AISI 316L. The AISI 316L enclosures are ideally suited for chemical agents environments and other hazardous areas environments where, for instance, the resistance of sea water corrosion and extremely versatile temperatures is needed.

Benefits of using our solutions



Fast service

We offer you fast production times. Our enclosing solutions are ready to be delivered promptly and efficiently after receipt of an approved purchase order and technical drawings.



Wide range of certificates

Our products hold ATEX, China Ex, IECEx, Russian and UL certifications. You can trust that they fulfill the requirements of the markets globally.



Flexible and easily configurable concept

Our ingenious concept reduces your engineering and approval time, bringing you savings in human resource requirements.



Scalable dimensioning

Our enclosure dimensions can be scaled according to your needs. You are able to get the exact size of an enclosure you truly need. You will also be able to easily and smoothly fit the enclosure to your drawings.



Design files

We also support your end-solution design process by offering the different design files related to both our standard and customer-specific solutions.

Ensto Ex steel enclosures

In short







Our offering includes a comprehensive range of widely certified steel enclosures that are manufactured in our state-of-the-art factory in Finland. The special strength of this range is the scalable dimensioning that enables quick manufacturing.

The series includes empty enclosures, equipped junction boxes, universal combo boxes and local control stations, available in painted mild steel and stainless steel (AISI 304 and AISI 316L).

Material alternatives	Description
Painted mild steel:	For dry environments
Stainless steel AISI 304:	For demanding environments
Stainless steel AISI 316L:	For extremely demanding environments (e.g. offshore/marine)
Product alternatives	Description
Empty enclosures:	Gas and dust area components
Junction boxes:	Gas and dust area equipment, including terminals
UL recognized enclosures:	Gas and dust area components
Universal combo boxes:	Ex e enclosures certified as gas and dust area components and used together with Ex d enclosures
Customer-specific solutions:	Products designed for your specific needs
Local control station:	Gas and dust area equipment including enclosure with cutouts and specified accessories. See page 37.


Ensto Ex

EXPLOSION PROTECTION










Services


- Design
- Customization
- Assembly
- Certification



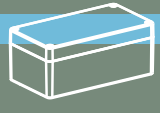
Protection types

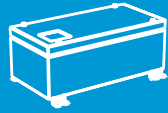
Aluminium



Polyester



Steel



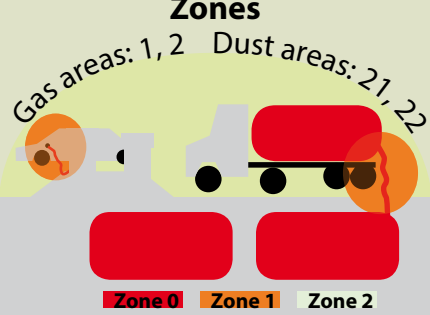
Empty enclosures

Junction boxes

Local control stations

Universal combo boxes

Zones



Zone 0 Zone 1 Zone 2

Size range

150 x 150 x 90 mm - 1000 x 2000 x 800 mm

Empty enclosures, steel

Ex e and Ex tb components



Our empty steel Ex enclosures are certified as Ex e and Ex tb components for gas and dust areas. The equipped enclosure needs to be certified as an end product.

Our empty enclosures in brief:

- Certified to meet demanding regional requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Scalable dimensioning
- Different options for:
 - Enclosure version
 - Material
 - Surface treatment.

Contents of the product package:

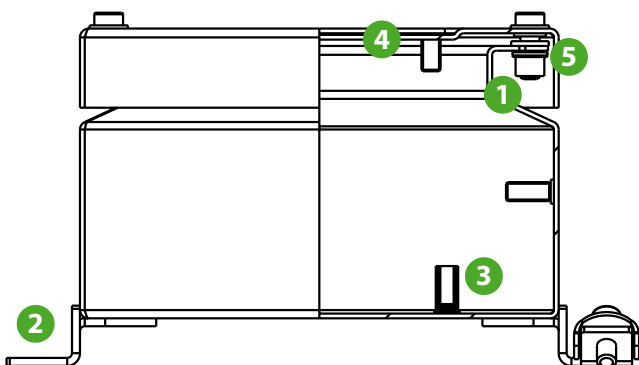
- Enclosure base
- Cover
- Captive cover screws with washers or a quick lock
- An M6 nut and a washer for earthing
- Models with flange openings include cover plates, bolts and washers.

Further information:

- Standard sizes, page 19
- Accessories, page 23 and 42–44
- Services, page 18.

Special features guaranteeing the maximum strength and durability of our solutions:

1. Extremely rugged collar structure
2. All hinges and lugs welded for maximum strength
3. Inserts for DIN rail/mounting plate
4. Special closed-cell gasket
5. High-quality screw inserts mounted in hexagonal holes.



Variations

Version:	Cover screws Tight hinges and cover screws on the opposite side Tight hinges and quick locks Cover screws and hinges enabling free movement of the cover
Material:	Stainless steel, AISI 316L (1.5 mm) Stainless steel, AISI 304 (1.5 mm) Polyester painted mild steel (1.5 mm)
Surface treatment:	Natural Brushed Painted, RAL7035 (custom colors available)
Dimensions:	Width: 150–1,500 mm Height: 150–1,000 mm Depth: 90–400 mm
Earthing:	Internal earthing bolt External earthing bolt (M6)
Mounting:	Welded fastening lugs, horizontal/vertical

Technical information

Degree of protection:	IP66/IP67 (IP66 with flanges installed)
Service temperature:	-55 °C to +160 °C / +100 °C / +85 °C

Conformity

Approvals/certificates:	Presafe 14 ATEX 5378U IECEX PRE 14.0042U ROSTECHNADZOR (RTN) PERMIT CNEx12. 1219U
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	II 2 G Ex e IIC Gb
Marking, dust:	II 2 D Ex tb IIIC Db IP66/67 or IP66



Fastening lugs can be attached in a horizontal or vertical position. Standard grounding is placed onto one lug.



Standard grounding can be replaced with an M10 brass internal/outer insert.

A code key for choosing the optimal solutions

Our flexible and easily configurable Ex steel concept helps you to define the optimal and most cost-efficient enclosure. You can be certain that an optimized size and shape can be found for every purpose and situation. A code key has been created to help customers define and make the optimal choice for their specific needs and situations.

Based on your individual enclosure needs, you can first choose a platform from four alternatives. This is followed by a choice of materials and surface treatments. You can also select either plain sides or sides with flange openings. Size alternatives are flexible.



Version 1

The cover is fastened with screws and connected with a ground strap.



Version 2

The cover is fastened with tight hinges and cover screws on the opposite side.



Version 3

The cover is fastened with tight hinges and one or several locks.



Version 4

The cover is fastened with screws as in Version 1. The cover is secured with hinges enabling free movement of the cover.

Code:	X / 1, 2, 3, 4 / S, A, F / N, B, E / P, F, FC / W / H / D / D / S / C
Model:	X
Version 1:	1
Version 2:	2
Version 3 ⁶ :	3
Version 4:	4
Material AISI 304:	S
Material AISI 316L:	A
Material FEDC01:	F
Surface treatment, Natural ¹ :	N
Surface treatment, Brushed ² :	B
Surface treatment, Painted ³ :	E
With plain sides:	P
With 155x75 mm flange opening/flange (IP66):	F
With custom flanges (IP66):	FC
Width (from 150 to 1,000 mm):	W
Height (from 150 to 2,000 mm) ⁴ :	H
Depth (from 90 to 400 mm) ⁵ :	D
Two door version:	D
Quick locks, AISI 316 ⁶ :	S
Universal combo box	C

¹ Natural: no brushing, rough looking, more economical

² Brushed: brushed finish, grinded seams, welded corners on the cover, attractive appearance

³ Painted: FEDC01 with a polyester painted surface (max +85 °C)

⁴ If size is more than 1200 mm, an enclosure with two doors is highly recommended.

⁵ Depth is not limited by certificate. Enclosure door can be opened in any direction, based on customer request.

⁶ We deliver nickel coated zinc locks as standard; quick lock AISI 316 requires S in the coding (max +85 °C).



Enclosures can be ordered with plain sides or with flange openings and flanges.



Nickel coated zinc locks as standard and AISI 316 as an option.

Junction boxes, steel

Ex e, Ex tb and Ex i equipment



We also provide complete junction boxes certified as Ex e, Ex tb and Ex i equipment to our customers. These junction boxes are designed to enclose Ex e and Ex i terminals. The maximum number of terminals used in each solution is determined by the conductor cross-section, enclosure operating temperature and required temperature class. Our boxes are suitable for temperature classes T6 up to T4.

Our junction boxes in brief:

- Certified to meet demanding regional requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Scalable dimensioning
- Different enclosure version for:
 - Material
 - Surface treatment.

Contents of the product package:

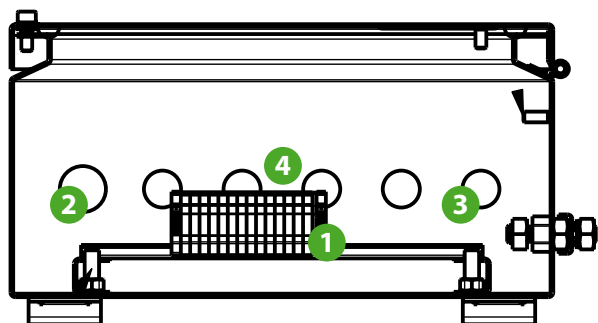
- Empty enclosure
- DIN rail or mounting plate
- Terminals
- Optional:
 - Cable glands
 - Breather.

Further information:

- Standard sizes, page 21
- Accessories, page 23 and 42–44
- Services, page 18.

Special features guaranteeing the maximum strength and durability of our solutions:

1. DIN rail installed terminals
2. Customized openings
3. Cable glands chosen to meet equipment specifications
4. Clearance and creepage distances taken into account in design.



Variations

Material:	Stainless steel, AISI 316L (1.5 mm) Stainless steel, AISI 304 (1.5 mm) Polyester painted mild steel (1.5 mm)
Surface treatment:	Natural Brushed Painted, RAL7035 (custom colors available)
Dimensions:	Width: 150–1,500 mm Height: 150–1,000 mm Depth: 90–400 mm
Earthing:	Internal earthing bolt as standard External earthing bolt (M5 or M6)
Mounting:	Welded fastening lugs, horizontal/vertical
Optional:	Earthing M10 internal/external Window(s) (5 standard sizes) Gland plate(s) Drain plug/cable glands/blinds Solution for two pad lock(s) Busbar system Mounting plate(s) or DIN rail(s) (with profiles) Ex certified terminals

Technical information

Degree of protection:	IP66/IP67 (IP66 with flanges installed)
Temperature class:	T6 (80 °C) / T5 (95 °C) / T4 (130 °C)
Ambient temperature:	-55 °C to +40 °C / +50 °C / +65 °C
Terminal quantity:	Specified in table on page 22
Surface temperature (dust areas):	T65 °C to T139 °C

Conformity

Approvals/certificates:	Presafe 14 ATEX 5379X IECEx PRE 14.0043X ROSTECHNADZOR (RTN) PERMIT CNEx12. 1220X
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	II 2 G Ex e IIC T ₁ Gb
Marking, dust:	II 2 D Ex tb IIIC T ₁ °C Db



UL recognized enclosures, steel

AEx e and AEx tb components (NEC 500/505)



We offer world-class stainless steel increased safety and dust proof solutions designed especially for the oil and gas offshore market needs in the USA and Canada. This exclusive enclosure range makes it multi-usable for global and local OEMs for installation in both Division and Zone classified hazardous locations. The range includes cabinets certified as AEx e, AEx tb (USA) and Ex e (Canada) components.

Our UL recognized enclosures in brief:

- Certified to meet the demanding North American requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Designed for the harsh environment of the Arctic Ocean
- Tested also for extremely high temperatures
- Scalable dimensioning
- Different options for:
 - Material
 - Cover fastening
 - Surface treatment.

Contents of the product package:

- Enclosure base
- Cover
- Captive cover screws with washers or a quick lock
- An M6 nut and a washer for earthing
- Models with flange openings include cover plates, bolts and washers.

Hazardous area classifications

	EN	IEC	NEC 505	NEC 500
Gas	Ex e Zone 0	Ex e Ga	AEx e Class I, Zone 0	Class I, Div. 1
	Ex e Zone 1	Ex e Gb	AEx e Class I, Zone 1	
	Ex e Zone 2	Ex e Gc	AEx e Class I, Zone 2	Class I, Div. 2

Variations

Version:	Cover screws Tight hinges and cover screws on the opposite side Tight hinges and locks Cover screws and hinges enabling free movement of the cover
Material:	Stainless steel, AISI 304 (1.5 mm, 0.05 inch) Stainless steel, AISI 316L (1.5 mm, 0.05 inch) Painted mild steel (1.5 mm, 0.05 inch)
Surface treatment:	Natural Brushed Polyester painted (custom colors available)
Dimensions:	Width: 150 – 1,000 mm (5.9 – 59.1 inch) Height: 150 – 1,500 mm (5.9 – 39.4 inch) Depth: 90 – 600 mm (3.5 – 23.6 inch)
Grounding:	Internal grounding bolt as standard External grounding bolts (M6)
Mounting:	Welded fastening lugs, horizontal/vertical

Technical information

Degree of protection:	IP66/67 or IP66
Service temperature:	- 50 to +160 °C / +100 °C / +85 °C (- 58 to +320 °F / +212 °F / +185 °F)

Conformity

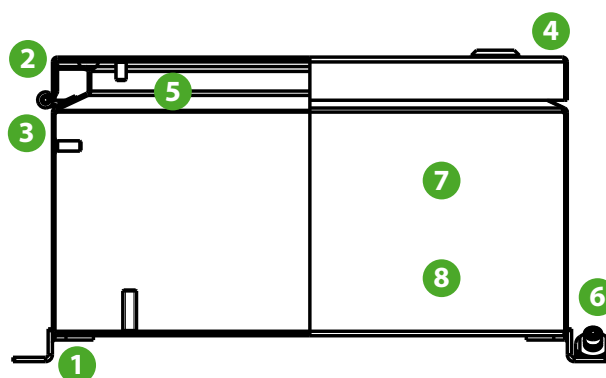
File No.:	E365430
USR approvals:	Class I, Zone 1, AEx e IIC Gb Class II, Zone 21 AEx tb IIIC Db Class II, Div. 2, Groups F, G Class III, Div. 2
CNR approvals:	Class I, Zone 1, Ex e IIC Gb Class II, Div. 2, Groups F, G Class III, Div. 2
Equivalency markings:	Class I, Div. 2, Groups A, B, C, D

Main features:

1. Welded mounting brackets
2. Left-side hinges
3. Removable hinge pin
4. Bolted doors or quarter turn latch locking
5. Special closed-cell gasket
6. Internal/External grounding connection and mounting system for back plate or rail system.

Optional features:

7. Up to 4 flanges
 - Optional flanges can be made with 1/10 inch plates or 6/10 inch plates with bended sides
8. Customized size.



Universal combo boxes, steel

Ex e and Ex tb components



We also provide universal combo boxes certified as Ex e and Ex tb components to our customers. Our universal combo box is an Ex e and Ex tb enclosure designed to fit perfectly next to an Ex d enclosure. Instead of having one Ex d enclosure with terminals and an interface component, you can have a lightweight, easier to maintain and more cost efficient universal combo box solution with indirect connection.

Our universal combo boxes in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Scalable dimensioning.

Contents of the product package:

- Enclosure base
- Door
- DIN 3 lock and key
- Mounting set for connecting to an Ex d enclosure
- Gasket for connecting to an Ex d enclosure
- Drilling instructions
- Mounting plate
- DIN rail, 1 x 200 - 400 mm.

Further information:

- Standard sizes, page 20
- Accessories, page 23 and 42–44
- Services, page 18.

Variations

Material:	Stainless steel AISI 316L Painted mild steel, coated RAL7035 (1.5 mm)
Surface treatment:	Brushed
Dimensions:	Width: 300 – 500 mm Height: 200+25 – 400+25 mm Depth: 160 – 250 mm
Earthing:	Internal earthing: Ensto Clampo Ground (optional) External earthing: rivet for M6x12mm
Mounting:	Connection to an Ex d enclosure by bolts

Technical information

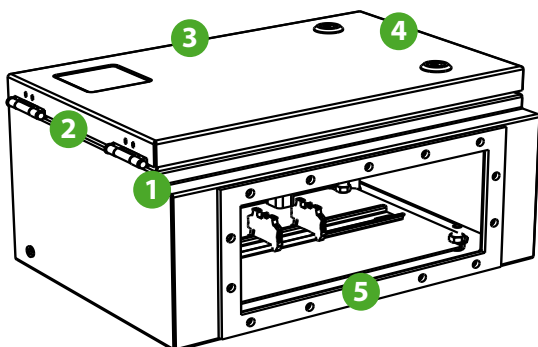
Degree of protection:	IP66
Service temperature:	-55 °C to +40 °C
Maximum power:	9.6 W up to 36 W
Temperature class:	T6
Optional:	T6 (+40 °C / +55 °C / +65 °C)
Surface temperature (dust areas):	T85 °C

Conformity

Approvals/certificates:	Presafe 14 ATEX 5378U IECEx PRE 14.0042U
Standards:	EN/IEC 60079-0, -7 -31
Marking, gas:	II 2 G Ex e IIC Gb
Marking, dust:	II 2 D Ex tb IIIC T_°C Db

Special features guaranteeing the maximum strength and durability of our solutions:

1. High-tension base collar structure
2. All hinges and lugs welded for maximum strength
3. Special closed-cell gasket
4. Quick lock version offers an easy but reliable key access to the enclosure
5. EPDM rubber gasket.



Watch video: Kurt Rönberg presents Ensto's innovative universal combo box.

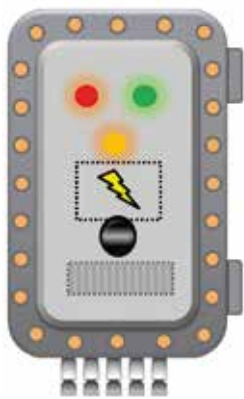
Universal combo boxes, steel

Ex e and Ex tb components



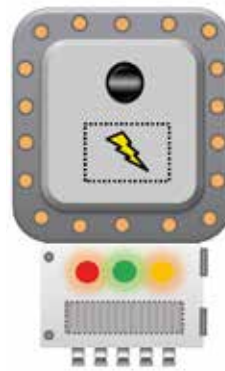
Operation example

Traditional solution Large Ex d with terminals



- ← All components integrated into one Ex d enclosure
- ← Extra air space needed (EN 60079-1)
- ← Ex d glands integrated at factory, no flexibility to add spare connections

Universal combo box solution Small Ex d with our Ex e enclosure



- ← Non-Ex components in Ex d enclosures
- ← IP-rated flange opening facing an Ex d enclosure
- ← Ex e d components in Ex e enclosure can be used
- ← Ex e glands can be used, extra connections can be added on-site

Benefits of our universal combo boxes



Safe solution

- Minimize the risk of damaging the protection type of the Ex d enclosure
- No Ex d knowledge needed for installation on-site



Cost-efficient solution

- Smaller Ex d enclosure needed
- Maintenance costs lower



Smaller size

- Size smaller than in traditional Ex d solution as no extra air space needed in Ex e part
- Lighter weight compared to traditional ex d solutions



Easy machining

- Possibility for different variations (e.g. window)
- Possibility to add for extra connections on-site
- Reduced machining needs of Ex d enclosure bring cost savings



Easy and quick connection and maintenance

- No need to open Ex d enclosure for connections
- Connection space in Ex e universal combo box is easy to open and close reliably



Customer-specific solutions, steel



We offer both ready-certified and specially-designed solutions for your specific needs.

We are experts in providing customer-specific Ex enclosing solutions for hazardous areas. Our standard enclosures can be delivered with a multitude of optional solutions and features such as any dimension, material, surface treatment, RAL color, flanges and windows. In addition, we provide special design enclosures developed together with our customers according to their needs.

Size range

Maximum possible solution size (W x H x D) 1,000 x 2,000 x 800 mm.



Customized enclosures can be fitted with a polycarbonate window (max. 100 °C).



A padlock can be mounted to an enclosure for extra safety.

Our service offering



Machining



Printing



Assembly



Customer-specific sizes



Feasibility studies



Design



Certification



Testing

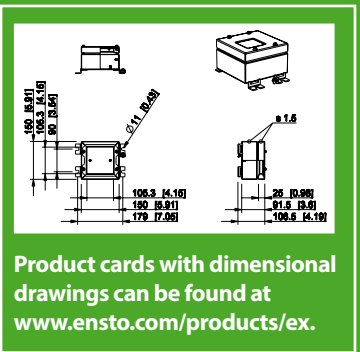


A customer-specific solution made in size 850 x 2,000 x 650 mm.

Technical tables, steel

Standard sizes

We have created some standard sizes that are readily available for fast and efficient delivery. The materials used in these standard sizes are stainless steel AISI 316L and polyester painted mild steel, in line with the norm for this market.



Empty enclosures, steel

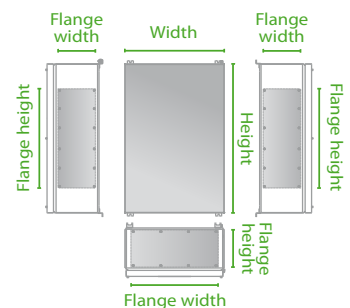
Ensto Ex enclosures with plain sides, CNEX

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
Plain sides, AISI 316L						
X1ABP151509	Brushed	-55 °C to +160 °C	150	150	90	6438100132101
X1ABP152010	Brushed	-55 °C to +160 °C	150	200	100	6438100132118
X1ABP202010	Brushed	-55 °C to +160 °C	200	200	100	6438100132125
X1ABP203012	Brushed	-55 °C to +160 °C	200	300	120	6438100132132
X1ABP204015	Brushed	-55 °C to +160 °C	200	400	150	6438100132149
X1ABP303015	Brushed	-55 °C to +160 °C	300	300	150	6438100132156
X1ABP403015	Brushed	-55 °C to +160 °C	400	300	150	6438100132163
X1ABP404020	Brushed	-55 °C to +160 °C	400	400	200	6438100132170
X1ABP406020	Brushed	-55 °C to +160 °C	400	600	200	6438100132187
X1ABP508020	Brushed	-55 °C to +160 °C	500	800	200	6438100132194
Plain sides, polyester painted mild steel						
X1FEP151509	Painted	-55 °C to +85 °C	150	150	90	6438100132200
X1FEP152010	Painted	-55 °C to +85 °C	150	200	100	6438100132217
X1FEP202010	Painted	-55 °C to +85 °C	200	200	100	6438100132224
X1FEP203012	Painted	-55 °C to +85 °C	200	300	120	6438100132231
X1FEP204015	Painted	-55 °C to +85 °C	200	400	150	6438100132248
X1FEP303015	Painted	-55 °C to +85 °C	300	300	150	6438100132255
X1FEP403015	Painted	-55 °C to +85 °C	400	300	150	6438100132262
X1FEP404020	Painted	-55 °C to +85 °C	400	400	200	6438100132279
X1FEP406020	Painted	-55 °C to +85 °C	400	600	200	6438100132286
X1FEP508020	Painted	-55 °C to +85 °C	500	800	200	6438100132293



Ensto Ex enclosures with flange openings, CNEX

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
Flange openings on the bottom, AISI 316L						
X2ANP403015G1	Flange opening size 260 x 70 mm	-55 °C to +160 °C	400	300	150	6438100132309
X2ANP404020G1	Flange opening size 260 x 120 mm	-55 °C to +160 °C	400	400	200	6438100132316
X2ANP406020G1	Flange opening size 260 x 120 mm	-55 °C to +160 °C	400	600	200	6438100132323
X2ANP508020G1	Flange opening size 360 x 120 mm	-55 °C to +160 °C	500	800	200	6438100132330
Flange openings on the bottom, polyester painted mild steel						
X2FEP403015G1	Flange opening size 260 x 70 mm	-55 °C to +85 °C	400	300	150	6438100132347
X2FEP404020G1	Flange opening size 260 x 120 mm	-55 °C to +85 °C	400	400	200	6438100132354
X2FEP406020G1	Flange opening size 260 x 120 mm	-55 °C to +85 °C	400	600	200	6438100132361
X2FEP508020G1	Flange opening size 360 x 120 mm	-55 °C to +85 °C	500	800	200	6438100132378
Flange openings on the bottom and both sides, AISI 316L						
X2ANP403015G2	Flange openings: bottom 260 x 70 mm, sides 160 x 70 mm	-55 °C to +160 °C	400	300	150	6438100132385
X2ANP404020G2	Flange openings: bottom 260 x 120 mm, sides 260 x 120 mm	-55 °C to +160 °C	400	400	200	6438100132392
X2ANP406020G2	Flange openings: bottom 260 x 120 mm, sides 460 x 120 mm	-55 °C to +160 °C	400	600	200	6438100132408
X2ANP508020G2	Flange openings: bottom 360 x 120 mm, sides 660 x 120 mm	-55 °C to +160 °C	500	800	200	6438100132415
Flange openings on the bottom and both sides, polyester painted mild steel						
X2FEP403015G2	Flange openings: bottom 260 x 70 mm, sides 160 x 70 mm	-55 °C to +85 °C	400	300	150	6438100132422
X2FEP404020G2	Flange openings: bottom 260 x 120 mm, sides 260 x 120 mm	-55 °C to +85 °C	400	400	200	6438100132439
X2FEP406020G2	Flange openings: bottom 260 x 120 mm, sides 460 x 120 mm	-55 °C to +85 °C	400	600	200	6438100132446
X2FEP508020G2	Flange openings: bottom 360 x 120 mm, sides 660 x 120 mm	-55 °C to +85 °C	500	800	200	6438100132453



The flange openings are either only on the bottom of the enclosure, or on both sides and the bottom.

Ensto Ex cabinets with quick locks,

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
Brushed AISI 316L cabinets, IP66						
X3ABP203016	Zinc DIN-3 lock	-55 °C to +85 °C	200	300	160	6438100156350
X3ABP303016	Zinc DIN-3 lock	-55 °C to +85 °C	300	300	160	6438100156367
X3ABP304016	Zinc DIN-3 lock	-55 °C to +85 °C	300	400	160	6438100156374
X3ABP304020	Zinc DIN-3 lock	-55 °C to +85 °C	300	400	200	6438100156381
X3ABP404016	Zinc DIN-3 lock	-55 °C to +85 °C	400	400	160	6438100156398
X3ABP404020	Zinc DIN-3 lock	-55 °C to +85 °C	400	400	200	6438100156404
X3ABP406020	Zinc DIN-3 lock	-55 °C to +85 °C	400	600	200	6438100156411
X3ABP506030	Zinc DIN-3 lock	-55 °C to +85 °C	500	600	300	6438100156428
X3ABP608030	Zinc DIN-3 lock	-55 °C to +85 °C	600	800	300	6438100156435
X3ABP8010030	Zinc DIN-3 lock	-55 °C to +85 °C	800	1000	300	6438100156442
Brushed AISI 316L cabinets, IP66/67						
X3ABP203016S	AISI 316 DIN-3 lock	-55 °C to +85 °C	200	300	160	6438100156459
X3ABP303016S	AISI 316 DIN-3 lock	-55 °C to +85 °C	300	300	160	6438100156466
X3ABP304016S	AISI 316 DIN-3 lock	-55 °C to +85 °C	300	400	160	6438100156473
X3ABP304020S	AISI 316 DIN-3 lock	-55 °C to +85 °C	300	400	200	6438100156480
X3ABP404016S	AISI 316 DIN-3 lock	-55 °C to +85 °C	400	400	160	6438100156497
X3ABP404020S	AISI 316 DIN-3 lock	-55 °C to +85 °C	400	400	200	6438100156503
X3ABP406020S	AISI 316 DIN-3 lock	-55 °C to +85 °C	400	600	200	6438100156510
X3ABP506030S	AISI 316 DIN-3 lock	-55 °C to +85 °C	500	600	300	6438100156527
X3ABP608030S	AISI 316 DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	600	800	300	6438100156534
X3ABP8010030S	AISI 316 DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	800	1000	300	6438100156541
Brushed AISI 316L cabinets with two doors, IP66						
X3ABP10010030D	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	1000	1000	300	6438100156558
X3ABP12010030D	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	1200	1000	300	6438100156565
X3ABP15010030D	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	1500	1000	300	6438100156572



Universal combo boxes,

Order code	Product code	Service temperature	Drilling area (mm)	Minimum installation space (mm)	Dimensions (mm)			GTIN-13
					Width	Height	Depth	
UCB2010	X3ABP302316C	-55 °C to +85 °C	170 x 65	200 x 95	300	200+25*	160	6438100156213
UCB2015	X3ABP302320C	-55 °C to +85 °C	170 x 110	200 x 140	300	200+25*	200	6438100156220
UCB2510	X3ABP352816C	-55 °C to +85 °C	210 x 65	240 x 95	350	250+25*	160	6438100156237
UCB2515	X3ABP352820C	-55 °C to +85 °C	210 x 110	240 x 140	350	250+25*	200	6438100156244
UCB3010	X3ABP402816C	-55 °C to +85 °C	270 x 65	300 x 95	400	250+25*	160	6438100156251
UCB3015	X3ABP402820C	-55 °C to +85 °C	270 x 110	300 x 140	400	250+25*	200	6438100156268
UCB3313	X3ABP434318C	-55 °C to +85 °C	300 x 95	330 x 130	430	400+25*	180	6438100156275
UCB3319	X3ABP434325C	-55 °C to +85 °C	300 x 160	330 x 190	430	400+25*	250	6438100156282
UCB4013	X3ABP504318C	-55 °C to +85 °C	370 x 95	400 x 130	500	400+25*	180	6438100156299
UCB4019	X3ABP504325C	-55 °C to +85 °C	370 x 160	400 x 190	500	400+25*	250	6438100156305



* Note: The height of an enclosure door is 25 mm lower than the height of the base due to the collar structure of an Ex d enclosure.

UL recognized enclosures with plain sides,

Product code	Description	Service temperature (°C)	Service temperature (°F)	Dimensions (mm)			Dimensions (inch)			GTIN-13
				Width	Height	Depth	Width	Height	Depth	
X1ABP151509.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	150	150	90	5.9	5.9	3.5	6438100166656
X1ABP152010.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	150	200	100	5.9	7.9	3.9	6438100166663
X1ABP202010.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	200	200	100	7.9	7.9	3.9	6438100166670
X1ABP203012.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	200	300	120	7.9	11.8	4.7	6438100166687
X1ABP204015.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	200	400	150	7.9	15.7	5.9	6438100166694
X1ABP303015.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	300	300	150	11.8	11.8	5.9	6438100166700
X1ABP403015.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	400	300	150	15.7	11.8	5.9	6438100166717
X1ABP404020.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	400	400	200	15.7	15.7	7.9	6438100166724
X1ABP406020.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	400	600	200	15.7	23.6	7.9	6438100166731
X1ABP508020.U	Brushed	-55 °C to +160 °C	-67 °F to +320 °F	500	800	200	19.7	31.5	7.9	6438100166748



Product code	Description	Service temperature (°C)	Service temperature (°F)	Dimensions (mm)			Dimensions (inch)			GTIN-13
				Width	Height	Depth	Width	Height	Depth	
Brushed AISI 316L cabinets, IP66										
X3ABP203016S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	200	300	160	7.9	11.8	6.3	6438100166755
X3ABP303016S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	300	300	160	11.8	11.8	6.3	6438100166762
X3ABP304016S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	300	400	160	11.8	15.7	6.3	6438100166779
X3ABP304020S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	300	400	200	11.8	15.7	7.9	6438100166786
X3ABP404016S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	400	400	160	15.7	15.7	6.3	6438100166793
X3ABP404020S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	400	400	200	15.7	15.7	7.9	6438100166809
X3ABP406020S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	400	600	200	15.7	23.6	7.9	6438100166816
X3ABP556030S.U	Zinc DIN-3 lock	-55 °C to +85 °C	-67 °F to +185 °F	550	600	300	19.7	23.6	11.8	6438100166823
X3ABP608030S.U	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	-67 °F to +185 °F	600	800	300	23.6	31.5	11.8	6438100166830
X3ABP8010030S.U	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	-67 °F to +185 °F	800	1000	300	31.5	39.4	11.8	6438100166847
Brushed AISI 316L cabinets with two doors, IP66										
X3ABP10010030D.U	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	-67 °F to +185 °F	1000	1000	300	39.4	39.4	11.8	6438100166854
X3ABP12010030D.U	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	-67 °F to +185 °F	1200	1000	300	47.2	39.4	11.8	6438100166861
X3ABP15510030D.U	Zinc DIN-3 lock, hi-strength mounting lugs	-55 °C to +85 °C	-67 °F to +185 °F	1550	1000	300	59.1	39.4	11.8	6438100166878

Junction boxes, steel

Standard sizes

We have created some standard sizes that are readily available for fast and efficient delivery. Customer-specific sizes also available.



Instructions for ordering junction boxes

1.

Select the suitable empty enclosure (custom sizes also available)

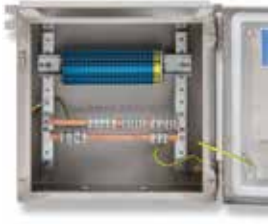


Empty enclosures

Enclosure type	Description	Dimensions (mm)			GTIN-13
		Width	Height	Depth	
II 2 GD Ex e, Ex tb, Ex i junction box					
X1ABP01JB	Empty X1ABP151509 enclosure	150	150	90	-
X1ABP02JB	Empty X1ABP152010 enclosure	150	200	100	-
X1ABP03JB	Empty X1ABP202010 enclosure	200	200	100	-
X1ABP04JB	Empty X1ABP203012 enclosure	200	300	120	-
X1ABP05JB	Empty X1ABP204015 enclosure	200	400	150	-
X1ABP06JB	Empty X1ABP303015 enclosure	300	300	150	-
X1ABP07JB	Empty X1ABP403015 enclosure	400	300	150	-
X1ABP08JB	Empty X1ABP404020 enclosure	400	400	200	-
X1ABP09JB	Empty X1ABP406020 enclosure	400	600	200	-
X1ABP10JB	Empty X1ABP508020 enclosure	500	800	200	-

2.

Define the required terminals



Maximum amount of terminals allowed

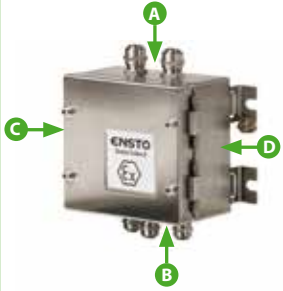
The table is calculated by using the codes of Phoenix Contact ST and UKH terminals. Other brands and terminal types are also available on request.

Enclosure type	Maximum quantity terminal blocks (system current)								
	Conductor cross-section (mm ²) Nominal current max. per terminal block (A) Nominal voltage (V)								
	ST2.5	ST4	ST6	ST10	ST16	ST35	UKH50	UKH95	UKH240
X1ABP01JB	20 pcs (16A) 2.5 mm ² 21 A 550 V	17 pcs (16A) 4 mm ² 30 A 550 V	13 pcs (16A) 6 mm ² 36.5 A 550 V	10 pcs (30A) 10 mm ² 50 A 550 V	8 pcs (30A) 16 mm ² 65 A 550 V	6 pcs (30A) 35 mm ² 108 A 690 V	N/A	N/A	N/A
X1ABP02JB	30 pcs (16A) 2.5 mm ² 21 A 550 V	25 pcs (16A) 4 mm ² 30 A 550 V	19 pcs (16A) 6 mm ² 36.5 A 550 V	15 pcs (30A) 10 mm ² 50 A 550 V	13 pcs (30A) 16 mm ² 65 A 550 V	9 pcs (30A) 35 mm ² 108 A 690 V	N/A	N/A	N/A
X1ABP03JB	30 pcs (16A) 2.5 mm ² 21 A 550 V	25 pcs (16A) 4 mm ² 30 A 550 V	19 pcs (16A) 6 mm ² 36.5 A 550 V	15 pcs (30A) 10 mm ² 50 A 550 V	13 pcs (30A) 16 mm ² 65 A 550 V	9 pcs (30A) 35 mm ² 108 A 690 V	N/A	N/A	N/A
X1ABP04JB	30 pcs (16A) 2.5 mm ² 21 A 550 V	42 pcs (16A) 4 mm ² 30 A 550 V	31 pcs (16A) 6 mm ² 36.5 A 550 V	25 pcs (30A) 10 mm ² 50 A 550 V	21 pcs (30A) 16 mm ² 65 A 550 V	16 pcs (30A) 35 mm ² 108 A 690 V	N/A	N/A	N/A
X1ABP05JB	90 pcs (10A) 2.5 mm ² 21 A 550 V	75 pcs (10A) 4 mm ² 30 A 550 V	56 pcs (10A) 6 mm ² 36.5 A 550 V	45 pcs (20A) 10 mm ² 50 A 550 V	38 pcs (20A) 16 mm ² 65 A 550 V	28 pcs (20A) 35 mm ² 108 A 690 V	3 pcs (60A) 50 mm ² 133 A 690 V	3 pcs (60A) 95 mm ² 216 A 880 V	3 pcs (60A) 240 mm ² 350 A 1100 V
X1ABP06JB	90 pcs (10A) 2.5 mm ² 21 A 550 V	80 pcs (10A) 4 mm ² 30 A 550 V	63 pcs (10A) 6 mm ² 36.5 A 550 V	50 pcs (20A) 10 mm ² 50 A 550 V	42 pcs (20A) 16 mm ² 65 A 550 V	30 pcs (20A) 35 mm ² 108 A 690 V	6 pcs (60A) 50 mm ² 133 A 690 V	6 pcs (60A) 95 mm ² 216 A 880 V	3 pcs (60A) 240 mm ² 350 A 1100 V
X1ABP07JB	80 pcs (10A) 2.5 mm ² 21 A 550 V	120 pcs (10A) 4 mm ² 30 A 550 V	90 (10A) 6 mm ² 36.5 A 550 V	75 pcs (20A) 10 mm ² 50 A 550 V	63 pcs (20A) 16 mm ² 65 A 550 V	47 pcs (20A) 35 mm ² 108 A 690 V	6 pcs (60A) 50 mm ² 133 A 690 V	6 pcs (60A) 95 mm ² 216 A 880 V	3 pcs (60A) 240 mm ² 350 A 1100 V
X1ABP08JB	95 pcs (10A) 2.5 mm ² 21 A 550 V	140 pcs (10A) 4 mm ² 30 A 550 V	90 pcs (10A) 6 mm ² 36.5 A 550 V	75 pcs (20A) 10 mm ² 50 A 550 V	63 pcs (20A) 16 mm ² 65 A 550 V	47 pcs (20A) 35 mm ² 108 A 690 V	9 pcs (60A) 50 mm ² 133 A 690 V	9 pcs (60A) 95 mm ² 216 A 880 V	6 pcs (60A) 240 mm ² 350 A 1100 V
X1ABP09JB	120 pcs (10A) 2.5 mm ² 21 A 550 V	140 pcs (10A) 4 mm ² 30 A 550 V	200 pcs (10A) 6 mm ² 36.5 A 550 V	115 pcs (20A) 10 mm ² 50 A 550 V	140 pcs (20A) 16 mm ² 65 A 550 V	100 pcs (20A) 35 mm ² 108 A 690 V	12 pcs (60A) 50 mm ² 133 A 690 V	12 pcs (60A) 95 mm ² 216 A 880 V	6 pcs (60A) 240 mm ² 350 A 1100 V
X1ABP10JB	250 pcs (6A) 2.5 mm ² 21 A 550 V	350 pcs (6A) 4 mm ² 30 A 550 V	280 pcs (6A) 6 mm ² 36.5 A 550 V	200 pcs (10A) 10 mm ² 50 A 550 V	180 pcs (16A) 16 mm ² 65 A 550 V	140 pcs (20A) 35 mm ² 108 A 690 V	15 pcs (60A) 50 mm ² 133 A 690 V	15 pcs (60A) 95 mm ² 216 A 880 V	9 pcs (60A) 240 mm ² 350 A 1100 V

N/A Not available

3.

Define number/type of required cable glands per side



Maximum number of cable glands allowed

Enclosure type	Cable glands per side (A and B, C and D), see picture on the left							
	Size: M20		Size: M25		Size: M32		Size: M40	
	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D
X1ANP01JB	8	8	3	3	2	2	N/A	N/A
X1ANP02JB	8	10	3	4	2	3	2	2
X1ANP03JB	10	10	4	4	3	3	2	2
X1ANP04JB	11	18	7	11	3	5	2	4
X1ANP05JB	18	36	8	16	6	12	2	6
X1ANP06JB	27	27	12	12	10	10	4	4
X1ANP07JB	36	27	16	12	12	10	6	4
X1ANP08JB	60	60	24	24	18	18	12	12
X1ANP09JB	60	90	24	72	18	27	12	18
X1ANP10JB	75	120	30	51	20	39	14	24

N/A Not available

4.

Inform our sales personnel of your needs



Contact information

Local contact information can be found on our web pages (www.ensto.com/contacts).



Accessories

Mounting plates

Product code	Description	Dimensions (mm)	Dimensions (inch)	Package size (pcs)	GTIN-13
Mounting plates, galvanized steel					
XMP12	For 150 x 150 mm enclosures	100 x 100 x 1.5	3.94 x 3.94 x 0.06	1	6438100134037
XMP12	For 150 x 200 mm enclosures	100 x 100 x 1.5	3.94 x 3.94 x 0.06	1	6438100134037
XMP22	For 200 x 200 mm enclosures	150 x 170 x 2	5.91 x 6.69 x 0.08	1	6438100132552
XMP23	For 200 x 300 mm enclosures	260 x 140 x 2	10.24 x 5.51 x 0.08	1	6438100158811
XMP24	For 200 x 400 mm enclosures	140 x 360 x 2	5.51 x 14.17 x 0.08	1	6438100132569
XMP33	For 300 x 300 mm enclosures	260 x 240 x 2	10.24 x 9.45 x 0.08	1	6438100158828
XMP43	For 400 x 300 mm enclosures	260 x 340 x 2	10.24 x 13.39 x 0.08	1	6438100158842
XMP44	For 400 x 400 mm enclosures	360 x 340 x 2	14.17 x 13.39 x 0.08	1	6438100158859
XMP46	For 400 x 600 mm enclosures	560 x 340 x 2.5	22.05 x 13.39 x 0.10	1	6438100158866
XMP58	For 500 x 800 mm enclosures	760 x 440 x 2.5	29.92 x 17.32 x 0.10	1	6438100132576
XMP68	For 600 x 800 mm enclosures	760 x 540 x 3	29.92 x 21.26 x 0.12	1	6438100157425
XMP810	For 800 x 1000 mm enclosures	960 x 740 x 3	37.80 x 29.13 x 0.12	1	6438100157432



XMP23

DIN rails and DIN rail profiles

Product code	Description	Dimensions (mm)	Dimensions (inch)	Package size (pcs)	GTIN-13
DIN rails for base, DIN 35, galvanized steel					
DR3520B	For base, 150 mm side without profiles	35 x 122	1.38 x 4.80	10	6418677176371
DR3520B	For base, 200 mm side	35 x 122	1.38 x 4.80	10	6418677176371
DR3530B	For base, 300 mm side	35 x 222	1.38 x 8.74	10	6418677176388
DR3540B	For base, 400 mm side	35 x 322	1.38 x 12.68	10	6418677176395
DR3550B	For base, 500 mm side	35 x 422	1.38 x 16.61	5	6418677176401
DR3560B	For base, 600 mm side	35 x 522	1.38 x 20.55	5	6418677176418
DR3580B	For base, 800 mm side	35 x 722	1.38 x 28.43	5	6418677176425
DIN rail profiles for base, galvanized steel					
EBP20	For base, 200 mm side, pair	20 x 143	0.79 x 5.63	1	6418677176289
EBP30	For base, 300 mm side, pair	20 x 243	0.79 x 9.57	1	6418677176296
EBP40	For base, 400 mm side, pair	20 x 343	0.79 x 13.50	1	6418677176302
EBP50	For base, 500 mm side, pair	20 x 443	0.79 x 17.44	1	6418677176319
EBP60	For base, 600 mm side, pair	20 x 543	0.79 x 21.38	1	6418677176326
EBP80	For base, 800 mm side, pair	20 x 743	0.79 x 29.25	1	6418677176333



DR3530B

More accessories on pages 42–44



KTA4.20



KTA2.25



KTA24.20



KTA25.25



PTKA4.32



BSSA20B



KTAS1.25



KTAE1.20

Ensto Ex polyester enclosures

The temperature resistance of glass reinforced polyester is superb. It has a high corrosion resistance and is resistant to solvents. It is therefore suitable for highly demanding industrial environments such as oil refineries and the petrochemical and chemical industries.

Benefits of using our solutions



Quick deliveries

Our leadtime is one of the most efficient in the market. Enclosing solutions are ready to be delivered promptly after the receipt of an approved purchase order and technical drawing.



Wide size range

We offer a particularly wide range of standard enclosure sizes.



Design files

We also support your end-solution design process by offering different design files related to both our standard and customer-specific solutions.

Ensto Ex polyester enclosures

In short



Our polyester explosion protection enclosures offering includes a particularly wide range of standard enclosure sizes. This enables quick deliveries and enhanced cost-efficiency. Our solutions are built for the toughest environments and versatile applications and they are widely certified.

The series includes empty enclosures, equipped junction boxes and local control stations. All the solutions are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

The enclosures are made of black carbon-loaded glass reinforced polyester containing a graphite additive that prevents static discharge of the housing surface, thanks to its low surface resistance.

Material	Description
Polyester:	Carbon-loaded glass reinforced polyester (black)
Product alternatives	Description
Empty enclosures:	Gas and dust area components
Junction boxes:	Gas and dust area equipment
Local control stations:	Gas and dust area equipment including enclosure with cutouts and specified accessories. See page 37.

Ensto Ex

EXPLOSION PROTECTION

Aluminium

Polyester

Steel

Services

- Customization
- Assembly

Protection types

Ex e

Ex tb

Ex i

		Empty enclosures
		Junction boxes
		Local control stations
		Universal combo boxes

Zones

Gas areas: 1, 2 Dust areas: 21, 22

Zone 0**Zone 1****Zone 2**

Size range

75 x 80 x 55 mm - 600 x 250 x 160 mm

Empty enclosures, polyester

Ex e and Ex tb components



We have an exceptionally large size range of Ex polyester enclosures in our offering. The enclosures are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

Our empty Ex e and Ex tb enclosures are component certified. This simplifies your approval process as the enclosure does not have to be retested and reapproved when registering a new Ex end product.

Our empty enclosures in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Material includes graphite that prevents static discharge of the housing surface.

Content of an enclosure package:

- Enclosure base
- Cover
- Captive stainless steel AISI 316 cover screws
- Special gasket.

Available services:

- Printing
- Threading of holes
- Drilling.

Further information:

- Standard sizes, page 28
- Accessories, page 28 and 42–44.

Examples of available accessories:



Variations

Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Carbon loaded glass-reinforced polyester (black)
Dimensions:	Width: 75–600 mm Height: 80–250 mm Depth: 55–160 mm

Technical information

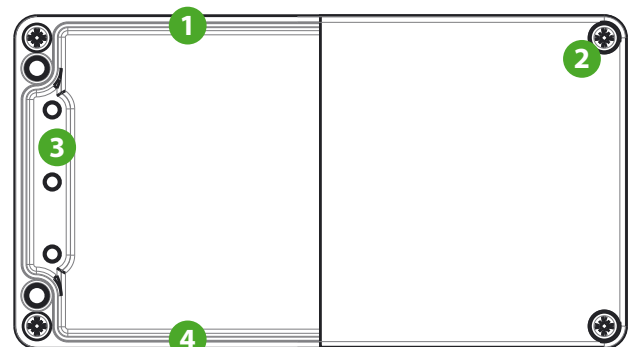
Degree of protection:	IP66
Service temperature:	-55 °C to +100 °C

Conformity

Approvals/certificates:	 IBExU 14 ATEX 1126U IECEx IBE14.0042U
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	II 2G Ex e IIC Gb
Marking, dust:	II 2D Ex tb IIIC Db

Special features guaranteeing the maximum strength and durability of our solutions:

1. Thick wall structure
2. Captive stainless steel AISI 316 cover screws
3. Stainless steel inserts for DIN rails
4. Special gasket.



Junction boxes, polyester

Ex e, Ex tb and Ex i equipment



We provide complete junction boxes certified as Ex e, Ex tb and Ex i equipment to our customers. These junction boxes are designed to enclose Ex e and Ex i terminals. The maximum number of terminals used in each solution is determined by the conductor cross-section, enclosure operating temperature and required temperature class. Our boxes are suitable for temperature classes T6 up to T5.

Our junction boxes in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Material included graphite that prevents static discharge of the housing surface.

Content of an enclosure package:

- Empty enclosure
- DIN rail or mounting plate
- Terminals
- Optional:
 - Cable glands
 - Breather.

Available services:

- Printing
- Threading of holes
- Drilling
- Description plates made of plastic or stainless steel.

Further information:

- Standard sizes, page 28
- Accessories, page 28 and 42–44.



Variations

Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Carbon loaded glass-reinforced polyester (black)
Dimensions:	Width: 75–600 mm Height: 80–250 mm Depth: 55–160 mm

Technical information

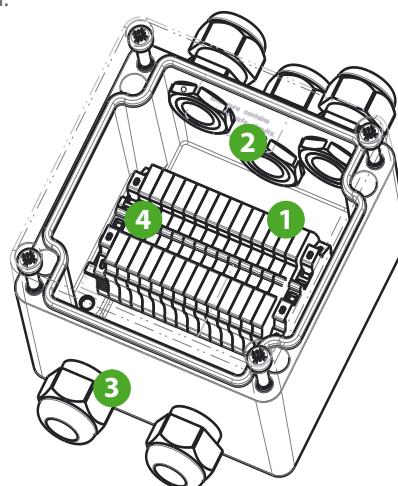
Degree of protection:	IP66
Temperature class:	T6 / T5
Ambient temperature:	-55 °C / -20 °C to +40 °C / +55 °C
Surface temperature (dust areas):	T85 °C / T100 °C

Conformity

Approvals/certificates:	 IBExU 14 ATEX 1128X IECEx IBE14.0043X
Standards:	EN/IEC 60079-0, -7, -31, - 11
Marking, gas:	II 2 G Ex e IIC T_ Gb II 2G Ex ia IIC T6/T5 Gb
Marking, dust:	II 2D Ex tb IIIC T85°C/T100°C Db

Special features guaranteeing the maximum strength and durability of our solutions:

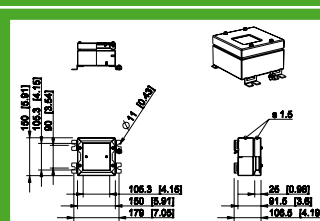
1. DIN rail installed terminals
2. Customized openings
3. Cable glands chosen to meet equipment specifications
4. Clearance and creepage distances taken into account in design.



Empty enclosures, polyester

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.



Product cards with dimensional drawings can be found at www.ensto.com/products/ex.

Ensto Ex enclosures, stocked items

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
MGRPEX080808	Plain sides	-55 °C to +100 °C	75	80	75	6438100170875
MGRPEX081108	Plain sides	-55 °C to +100 °C	75	110	75	6438100170899
MGRPEX121209	Plain sides	-55 °C to +100 °C	120	122	90	6438100170967
MGRPEX122209	Plain sides	-55 °C to +100 °C	120	220	90	6438100170974
MGRPEX161609	Plain sides	-55 °C to +100 °C	160	160	90	6438100170981
MGRPEX162609	Plain sides	-55 °C to +100 °C	160	260	90	6438100170998
MGRPEX252512	Plain sides	-55 °C to +100 °C	250	255	120	6438100171025
MGRPEX254012	Plain sides	-55 °C to +100 °C	250	400	120	6438100171049
MGRPEX256012	Plain sides	-55 °C to +100 °C	250	600	120	6438100171063
MGRPEX404012	Plain sides	-55 °C to +100 °C	400	400	120	6438100171070

Stocked items available with shorter delivery times!

Ensto Ex enclosures, non-stockable items

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
MGRPEX080806	Plain sides	-55 °C to +100 °C	75	80	55	6438100170141
MGRPEX081106	Plain sides	-55 °C to +100 °C	75	110	55	6438100170882
MGRPEX081606	Plain sides	-55 °C to +100 °C	75	160	55	6438100170905
MGRPEX081608	Plain sides	-55 °C to +100 °C	75	160	75	6438100170912
MGRPEX081906	Plain sides	-55 °C to +100 °C	75	190	55	6438100170929
MGRPEX081908	Plain sides	-55 °C to +100 °C	75	190	75	6438100170936
MGRPEX082305	Plain sides	-55 °C to +100 °C	75	230	50	6438100170943
MGRPEX082308	Plain sides	-55 °C to +100 °C	75	230	75	6438100170950
MGRPEX163609	Plain sides	-55 °C to +100 °C	160	360	90	6438100171001
MGRPEX165609	Plain sides	-55 °C to +100 °C	160	560	90	6438100171018
MGRPEX252516	Plain sides	-55 °C to +100 °C	250	255	160	6438100171032
MGRPEX254016	Plain sides	-55 °C to +100 °C	250	400	160	6438100171056
MGRPEX256012	Plain sides	-55 °C to +100 °C	600	250	120	6438100171063



Accessories

Enclosure	Mounting plate	DIN rails for base, DIN 15	DIN rails for base, DIN 35	Hinge pair	PE busbar	Fastening lug set	Continuity plate set
MGRPEX080806	MMP0808B	DR15.0808M	N/A	N/A	*	HMFL4	N/A
MGRPEX080808	MMP0808B	DR15.0808M	N/A	N/A	*	HMFL4	N/A
MGRPEX081106	MMP0811B	DR15.0811	N/A	N/A	*	HMFL4	N/A
MGRPEX081108	MMP0811B	DR15.0811	N/A	N/A	*	HMFL4	N/A
MGRPEX081606	MMP0816B	DR15.0816	N/A	N/A	*	HMFL4	N/A
MGRPEX081608	MMP0816B	DR15.0816	N/A	N/A	*	HMFL4	N/A
MGRPEX081906	MMP0819B	DR15.0819	N/A	N/A	*	HMFL4	N/A
MGRPEX081908	MMP0819B	DR15.0819	N/A	N/A	*	HMFL4	N/A
MGRPEX082305	MMP0823B	DR15.0823	N/A	N/A	*	HMFL4	N/A
MGRPEX082308	MMP0823B	DR15.0823	N/A	N/A	*	HMFL4	N/A
MGRPEX121209	MMP1212B	N/A	DR35.1212	HMH12	EGX02	HMFL4	*
MGRPEX122209	MMP1222B	N/A	DR35.1220	HMH12	EGX02	HMFL4	*
MGRPEX161609	MMP1616B	N/A	DR35.1616	HMH12	EGX03	HMFL4	*
MGRPEX162609	MMP1626B	N/A	DR35.1626	HMH12	*	HMFL4	*
MGRPEX163609	MMP1636B	N/A	DR35.12/1636	HMH12	*	HMFL4	*
MGRPEX165609	MMP1656B	N/A	DR35.1656	HMH12	*	HMFL4	*
MGRPEX252512	MMP2526B	N/A	DR35.2526	HMH12	*	HMFL4	*
MGRPEX254012	MMP2540B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*
MGRPEX256012	MMP2560B	N/A	DR35.23/3160	HMH12	*	HMFL4	*
MGRPEX404012	MMP4041B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*
MGRPEX252516	MMP2526B	N/A	DR35.2526	HMH12	EGX04	HMFL4	*
MGRPEX254016	MMP2540B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*

N/A Not available

* Available on request

More accessories on page 42-44.

Junction boxes, polyester

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.

Instructions for ordering junction boxes

1.

Select the suitable empty enclosure

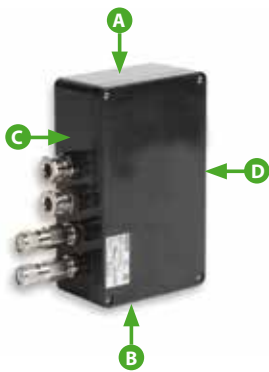


Empty enclosures

Enclosure type	Description	Dimensions (mm)			GTIN-13
		Width	Height	Depth	
MGRPEX080808JB	Empty MGRPEX080808 enclosure	75	80	75	-
MGRPEX081108JB	Empty MGRPEX081108 enclosure	75	110	75	-
MGRPEX121209JB	Empty MGRPEX121209 enclosure	120	122	90	-
MGRPEX122209JB	Empty MGRPEX122209 enclosure	120	220	90	-
MGRPEX161609JB	Empty MGRPEX161609 enclosure	160	160	90	-
MGRPEX162609JB	Empty MGRPEX162609 enclosure	160	260	90	-
MGRPEX252512JB	Empty MGRPEX252512 enclosure	250	255	120	-
MGRPEX254012JB	Empty MGRPEX254012 enclosure	250	400	120	-
MGRPEX256012JB	Empty MGRPEX256012 enclosure	250	600	120	-
MGRPEX404012JB	Empty MGRPEX404012 enclosure	400	400	120	-

2.

Define number/type of required cable glands per side



Maximum number of cable glands allowed

Enclosure type	Cable glands per side (A and B, C and D), see picture on the left									
	Size: M16		Size: M20		Size: M25		Size: M32		Size: M40	
	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D
MGRPEX080808	1	2	1	2	N/A	1	N/A	N/A	N/A	N/A
MGRPEX081108	1	4	1	3	N/A	2	N/A	N/A	N/A	N/A
MGRPEX121209	4	9	2	5	1	3	1	2	1	1
MGRPEX122209	4	18	2	11	1	5	1	3	1	3
MGRPEX161609	8	14	4	8	2	4	2	2	1	2
MGRPEX162609	8	26	4	14	2	7	2	4	1	3
MGRPEX252512	10	34	8	20	4	9	3	7	2	4
MGRPEX254012	12	58	8	35	4	17	3	13	2	6
MGRPEX256012	12	84	8	52	4	24	3	18	2	10
MGRPEX404012	20	58	14	35	6	17	4	13	2	6

3.

Define the required terminals



Maximum amount of terminals allowed

Define the required terminals by using the tables related to the relevant product card located on our web pages. To find the information do as follows:

1. Go to our website and select Products and Explosion protection (website: www.ensto.com/products/ex)
2. Select the relevant enclosure material
3. Select *Junction boxes*
4. Select relevant enclosure type
5. On the product card open the product data sheet document.

4.

Inform our sales personnel of your needs



Contact information

Local contact information can be found on our web pages (www.ensto.com/contacts).



Ensto Ex aluminium enclosures

The relative weight of aluminium is only about a quarter of that of steel. It has high impact resistance, a wide temperature range and excellent corrosion resistance.

Benefits of using our solutions



Quick deliveries

Our leadtime is one of the most efficient in the market. Enclosing solutions are ready to be delivered promptly after receipt of an approved purchase order and technical drawing.



Wide size range

We offer a particularly wide range of standard enclosure sizes.



Lightweight

Due to the properties of aluminium, the enclosures are low in weight but have high impact resistance.

Ensto Ex aluminium enclosures

In short



Our aluminium explosion protection enclosures offering includes a particularly wide range of standard enclosure sizes. This enables quick deliveries and enhanced cost-efficiency. Our solutions are built for the toughest environments and versatile applications and they are widely certified for use in hazardous environments.

The series includes empty enclosures and equipped junction boxes. All the solutions are suitable for installations in fields where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

The enclosures are made of die-cast aluminium with a powder-coating similar to RAL 7001.

Material	Description
Aluminium:	Die-cast powder-coated aluminium, similar to RAL 7001
Product alternatives	Description
Empty enclosures:	Gas and dust area components
Junction boxes:	Gas and dust area equipment

Ensto Ex

EXPLOSION PROTECTION

Services

- Painting
- Customization
- Assembly

Aluminium	Polyester	Steel	Empty enclosures
			Junction boxes
			Local control stations
			Universal combo boxes

Size range

64 x 58 x 34 mm - 310 x 600 x 180 mm

Protection types

Ex e

Ex tb

Ex i

Zones

Gas areas: 1, 2 Dust areas: 21, 22

Zone 0 **Zone 1** **Zone 2**

Empty enclosures, aluminium

Ex e and Ex tb components



We have an exceptionally large size range of Ex aluminium enclosures in our offering. The enclosures are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

Our empty Ex enclosures are component certified. This simplifies your approval process as the enclosure does not have to be retested and reaproved when registering a new Ex end product.

Our empty enclosures in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Lightweight.

Content of a standard enclosure package:

- Enclosure base
- Cover
- Captive stainless steel AISI 316 captive cover screws
- Special gasket
- Exterior earthing connection from 2.5 mm² up to 120 mm²
- Earthing connection points in the interior.

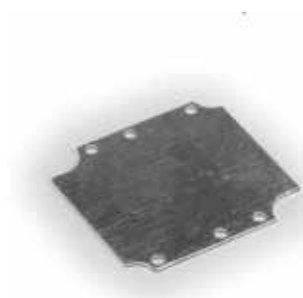
Available services:

- Painting
- Drilling
- Printing.

Further information:

- Standard sizes, page 34
- Accessories, page 34 and 42–44.

Examples of available accessories:



Mounting plates



Fastening lug sets

Variations

Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Die-cast powder-coated aluminium, similar to RAL 7001
Dimensions:	Width: 64–310 mm Height: 58–600 mm Depth: 34–180 mm
Earthing:	Internal connection points External earthing connection

Technical information

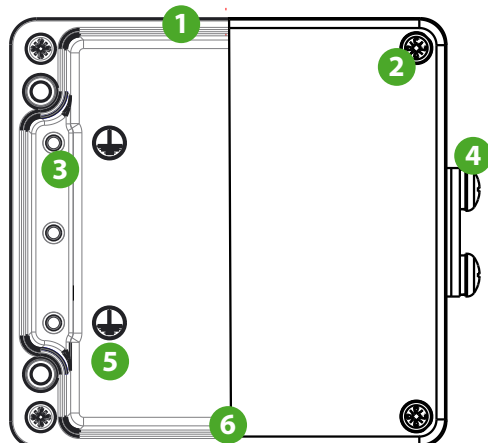
Degree of protection:	IP66
Service temperature:	-55 °C to +100 °C

Conformity

Approvals/certificates:	IECEx IBExU 14 ATEX 1127U IECEx IBE14.0040U
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	II 2G Ex e IIC Gb
Marking, dust:	II 2D Ex tb IIIC Db

Special features guaranteeing the maximum strength and durability of our solutions:

1. Thick wall structure
2. Cover screws in stainless steel
3. Stainless steel inserts for DIN rails
4. Exterior earthing connection from 2.5 mm² up to 120 mm²
5. Earthing connection points in the interior
6. Special gasket.



Junction boxes, aluminium

Ex e, Ex tb and Ex i equipment



Our aluminium Ex junction boxes are ideally suited for chemical agents environments and other hazardous areas environments where for instance resistance to seawater corrosion and extremely versatile temperatures is needed. Our junction boxes are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

These junction boxes are designed to enclose Ex e, Ex tb and Ex i terminals. The maximum number of terminals used in each solution is determined by the terminals section, enclosure operating temperature and required temperature class. Our boxes are suitable for temperature classes T6 up to T3.

Our junction boxes in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Lightweight.

Content of a junction box package:

- Empty enclosure
- DIN rail or mounting plate
- Terminals
- Optional:
 - Cable glands
 - Breather.

Available services:

- Description plates made of plastic or stainless steel
- Painting
- Drilling
- Printing.

Further information:

- Standard sizes, page 35
- Accessories, page 34 and 42–44.



Variations

Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Die-cast powder-coated aluminium, similar to RAL 7001
Dimensions:	Width: 64–310 mm Height: 58–600 mm Depth: 34–180 mm
Earthing:	Internal connection points External earthing connection

Technical information

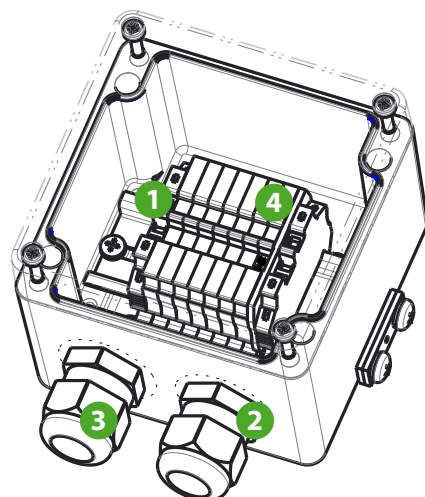
Degree of protection:	IP66
Temperature class:	T6 / T5
Ambient temperature:	-55 °C/-20 °C to +40 °C / +85 °C
Surface temperature (dust areas):	T85 °C / T100 °C

Conformity

Approvals/certificates:	IBE14 IBExU 14 ATEX 1129 IECEx IBE14.0041
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	II 2G Ex e IIC T6/T5 Gb II 2G Ex ia IIC T6/T5 Gb
Marking, dust:	II 2D Ex tb IIIC T85°C/T100°C Db

Special features guaranteeing the maximum strength and durability of our solutions:

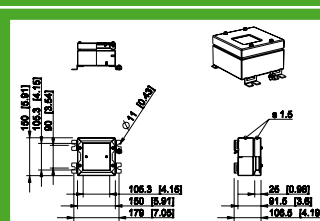
1. DIN rail installed terminals
2. Customized openings
3. Cable glands chosen to meet equipment specifications
4. Clearance and creepage distances taken into account in design.



Empty enclosures, aluminium

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.



Product cards with dimensional drawings can be found at www.ensto.com/products/ex.

Ensto Ex enclosures, stock products

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
HALPEX080806	Plain sides	-55 °C to +100 °C	80	75	57	6438100171117
HALPEX081306	Plain sides	-55 °C to +100 °C	80	125	57	6438100171124
HALPEX081806	Plain sides	-55 °C to +100 °C	80	175	57	6438100171131
HALPEX101008	Plain sides	-55 °C to +100 °C	100	100	80	6438100171155
HALPEX121209	Plain sides	-55 °C to +100 °C	120	122	90	6438100171209
HALPEX122209	Plain sides	-55 °C to +100 °C	120	220	90	6438100171230
HALPEX161609	Plain sides	-55 °C to +100 °C	160	160	90	6438100171285
HALPEX163609	Plain sides	-55 °C to +100 °C	160	360	90	6438100171315
HALPEX162609	Plain sides	-55 °C to +100 °C	160	260	90	6438100171308
HALPEX234011	Plain sides	-55 °C to +100 °C	230	400	110	6438100171377

Stocked items available with shorter delivery times!

Ensto Ex enclosures, non-stockable products

Product code	Dimensions (mm)			Service temperature	GTIN-13
	Width	Height	Depth		
HALPEX060603	64	58	34	-55 °C to +100 °C	6438100171087
HALPEX060903	64	98	35	-55 °C to +100 °C	6438100171094
HALPEX061503	64	150	34	-55 °C to +100 °C	6438100171100
HALPEX082505	80	250	54	-55 °C to +100 °C	6438100171148
HALPEX101608	100	160	80	-55 °C to +100 °C	6438100171162
HALPEX102008	100	200	80	-55 °C to +100 °C	6438100171179
HALPEX121207	120	122	65	-55 °C to +100 °C	6438100171186
HALPEX121208	120	122	80	-55 °C to +100 °C	6438100171193
HALPEX122207	120	220	65	-55 °C to +100 °C	6438100171216
HALPEX122208	120	220	80	-55 °C to +100 °C	6438100171223
HALPEX123608	122	360	80	-55 °C to +100 °C	6438100171247
HALPEX141409	140	140	90	-55 °C to +100 °C	6438100171254
HALPEX141809	140	180	90	-55 °C to +100 °C	6438100171261

Product code	Dimensions (mm)			Service temperature	GTIN-13
	Width	Height	Depth		
HALPEX142090	140	200	90	-55 °C to +100 °C	6438100171278
HALPEX165609	160	560	90	-55 °C to +100 °C	6438100171322
HALPEX162607	160	260	65	-55 °C to +100 °C	6438100171292
HALPEX232811	230	280	110	-55 °C to +100 °C	6438100171346
HALPEX232011	230	200	110	-55 °C to +100 °C	6438100171339
HALPEX233311	230	330	110	-55 °C to +100 °C	6438100171353
HALPEX233318	230	330	180	-55 °C to +100 °C	6438100171360
HALPEX236011	230	600	110	-55 °C to +100 °C	6438100171384
HALPEX314011	310	400	110	-55 °C to +100 °C	6438100171391
HALPEX314018	310	400	180	-55 °C to +100 °C	6438100171407
HALPEX316011	310	600	110	-55 °C to +100 °C	6438100171414
HALPEX316018	310	600	180	-55 °C to +100 °C	6438100171421

Accessories

Enclosure	Mounting plate	DIN rails for base, DIN 15	DIN rails for base, DIN 35	PE connection on DIN rail	PE busbar	Fastening lug set
HALPEX060603	N/A	DR15.0606	N/A	*	*	HMFL4
HALPEX060903	N/A	DR15.0609	N/A	*	*	HMFL4
HALPEX061503	N/A	DR15.0615	N/A	*	*	HMFL4
HALPEX080806	HMP0808B	DR15.0808H	N/A	*	*	HMFL4
HALPEX081306	HMP0813B	DR15.0813	N/A	*	*	HMFL4
HALPEX081806	HMP0818B	DR15.0818	N/A	*	*	HMFL4
HALPEX082505	N/A	DR15.0825	N/A	*	*	HMFL4
HALPEX101008	N/A	DR15.0610	N/A	*	*	HMFL4
HALPEX101608	N/A	N/A	DR35.1616	*	*	HMFL4
HALPEX102008	N/A	N/A	DR35.2023	*	*	HMFL4
HALPEX121207	HMP1212B	N/A	DR35.1212	*	EGX02	HMFL4
HALPEX121208	HMP1212B	N/A	DR35.1212	*	EGX02	HMFL4
HALPEX121209	HMP1212B	N/A	DR35.1212	*	EGX02	HMFL4
HALPEX122207	HMP1222B	N/A	DR35.1220	*	*	HMFL4
HALPEX122208	HMP1222B	N/A	DR35.1220	*	*	HMFL4
HALPEX122209	HMP1222B	N/A	DR35.1220	*	*	HMFL4
HALPEX123608	HMP1236B	N/A	DR35.12/1636	*	*	HMFL4
HALPEX141409	HMP1414B	N/A	DR35.1414	*	*	HMFL4
HALPEX141809	HMP1814B	N/A	DR35.1814	*	*	HMFL4
HALPEX142090	HMP2014B	N/A	DR35.2014	*	*	HMFL4
HALPEX165609	HMP1656B	N/A	DR35.1656	*	*	HMFL4
HALPEX161609	HMP1616B	N/A	DR35.1616	*	*	HMFL4
HALPEX162607	HMP1626B	N/A	DR35.1656	*	*	HMFL4
HALPEX232811	HMP2328B	N/A	DR35.2328	*	*	HMFL4
HALPEX163609	HMP1636B	N/A	DR35.12/1636	*	*	HMFL4
HALPEX162609	HMP1626B	N/A	DR35.1626	*	*	HMFL4
HALPEX232011	HMP2023B	N/A	DR35.2023	*	*	HMFL4
HALPEX233311	HMP2333B	N/A	DR35.2333	*	*	HMFL4
HALPEX233318	HMP2333B	N/A	DR35.2333	*	*	HMFL4
HALPEX234011	HMP2340B	N/A	DR35.23/3140	*	*	HMFL4
HALPEX236011	HMP2360B	N/A	DR35.23/3160	*	*	HMFL4
HALPEX314011	HMP3140B	N/A	DR35.23/3140	*	*	HMFL4
HALPEX314018	HMP3140B	N/A	DR35.23/3140	*	*	HMFL4
HALPEX316011	HMP3160B	N/A	DR35.23/3160	*	*	HMFL4
HALPEX316018	HMP3160B	N/A	DR35.23/3160	*	*	HMFL4

N/A Not available

* Available on request

More accessories on page 42-44.

Junction boxes, aluminium

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.

Instructions for ordering junction boxes

1.

Select the suitable empty enclosure

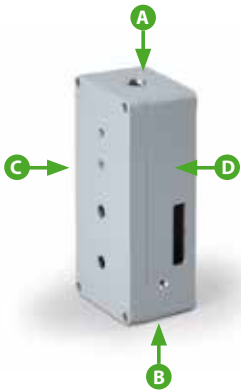


Empty enclosures

Enclosure type	Description	Dimensions (mm)			GTIN-13
		Width	Height	Depth	
HALPEX080806JB	Empty HALPEX080806JB enclosure	75	80	75	-
HALPEX081306JB	Empty HALPEX081306JB enclosure	75	110	75	-
HALPEX081806JB	Empty HALPEX081806JB enclosure	120	122	90	-
HALPEX101008JB	Empty HALPEX101008JB enclosure	120	220	90	-
HALPEX121209JB	Empty HALPEX121209JB enclosure	160	160	90	-
HALPEX122209JB	Empty HALPEX122209JB enclosure	160	260	90	-
HALPEX161609JB	Empty HALPEX161609JB enclosure	250	255	120	-
HALPEX163609JB	Empty HALPEX163609JB enclosure	250	400	120	-
HALPEX162609JB	Empty HALPEX162609JB enclosure	250	600	120	-
HALPEX234011JB	Empty HALPEX234011JB enclosure	400	400	120	-

2.

Define number/type of required cable glands per side



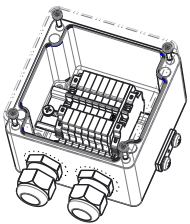
Maximum number of cable glands allowed

Product code	Cable glands per side (A and B, C and D), see picture on the right									
	Size: M16		Size: M20		Size: M25		Size: M32		Size: M40	
	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D
HALPEX080806JB	2	1	2	1	1	1	N/A	N/A	N/A	N/A
HALPEX081306JB	2	4	2	3	1	2	N/A	N/A	N/A	N/A
HALPEX081806JB	2	6	2	5	1	3	N/A	N/A	N/A	N/A
HALPEX101008JB	4	6	3	5	1	2	1	1	N/A	N/A
HALPEX121209JB	5	5	4	4	2	2	1	1	N/A	N/A
HALPEX122209JB	6	15	4	14	2	6	1	4	N/A	N/A
HALPEX161609JB	8	12	6	9	3	5	2	3	2	1
HALPEX163609JB	8	36	6	24	3	15	2	7	5	1
HALPEX162609JB	8	24	6	17	3	10	2	5	3	1
HALPEX234011JB	18	50	17	39	8	20	5	14	6	3

N/A Not available

3.

Define the required terminals



Maximum amount of terminals allowed

Define the required terminals by using the tables related to the relevant product card located on our web pages. To find the information do as follows:

1. Go to our website and select Products and Explosion protection (website: ensto.com/products/ex)
2. Select the relevant enclosure material
3. Select *Junction boxes*
4. Select relevant product type
5. On the product card open the product data sheet document.

4.

Inform our sales personnel of your needs



Contact information

Local contact information can be found on our web pages (www.ensto.com/contacts)



Ensto Ex local control stations

Local control stations are enclosures including ready-made cut-outs and equipped with specified operators, such as pushbuttons, signal lamps, and switch modules. We offer these solutions in stainless steel, painted mild steel, and polyester.

Benefits of using our solutions



Large size range

In addition to polyester models, our offering includes an especially large range of standard enclosure sizes in stainless steel and painted mild steel.



Readily certified custom solutions

In case you cannot find a suitable solution from our standard product range, we also offer the possibility of ordering readily certified customer-specific solutions.



Wide range of control components

Our offering comprises a wide range of control components, among them pushbuttons, signal lamps, and switches, to meet your varied needs.



Ensto Ex local control stations

In short



Our offering includes a wide range of local control stations available in steel (painted mild steel, stainless steel AISI 304 and AISI 316L), and polyester.

These solutions are designed and tested to meet the requirements of all industries and applications in which explosive atmospheres may be present, such as the onshore and offshore industries and petrochemical and marine applications.

Our certificate provides the opportunity to equip our local control stations with diverse Ex-certified components, such as:

- Standard and emergency pushbuttons
- Rotating switches
- Signaling lamps
- Measurement instruments
- Anti-condensation heaters.

Material alternatives	Description
Painted mild steel:	For non-corrosive environments
Stainless steel AISI 304:	For demanding environments
Stainless steel AISI 316L:	For extremely demanding environments (e.g., offshore/marine)
Carbon-loaded glass reinforced polyester (black):	For demanding environments (e.g. petrochemical industries)
Product alternatives	Description
Standard products:	Gas and dust area equipment
Customer-specific solutions:	Products designed for your specific needs

Ensto Ex

EXPLOSION PROTECTION

Aluminium

Polyester

Steel

Services

- Design
- Customization
- Assembly
- Testing

Size range
120 x 120 x 90 mm - 1000 x 2000 x 800 mm

Protection types

Ex e

Ex tb

Empty enclosures

Junction boxes

Local control stations

Universal combo boxes

Zones

Gas areas: 1, 2 Dust areas: 21, 22

Zone 0**Zone 1****Zone 2**

Local control stations, standard sizes

Ex e and Ex tb equipment



Our offering also comprises local control stations certified as Ex e and Ex tb equipment. The solutions are suitable for installations in fields where explosive concentrations of gases, steams, and dusts can appear (i.e., in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

Our local control stations are available in stainless steel, painted mild steel, and polyester. The ready-made solutions are furnished with cable glands and a DIN rail and equipped with suitable control components, such as pushbuttons, signal lamps, and switch modules, as selected by the customer.

Our local control stations in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Available in stainless steel AISI 316L and polyester
- Offered with an especially wide range of optional control components for selection by the customer.

Content of a standard enclosure package:

- Empty enclosure
- DIN rail
- Cable gland, size: M20
- Blind, size: M25
- Selected control components
- Selected terminal blocks.

Variations

Material:	Stainless steel AISI 316L Polyester (carbon loaded glass-reinforced polyester, black)
Dimensions:	Width: 120–200 mm Height: 120–200 mm Depth: 90 mm

Technical information

Degree of protection:	IP65
Ambient temperature:	-20 °C to +40 °C

Conformity

Approvals/certificates:	Presafe 14 ATEX 5288X IECEx PRE 14.0035X
Standards:	EN/IEC 60079-0, -1, -7, -31
Marking, gas:	II 2 G Ex d e IIC T6 Gb
Marking, dust:	II 2 D Ex tb IIIC T85°C Db

Note: Maximum temperature for components +75 °C



Our local control stations made of stainless steel are available with 1-4 control components selected by the customer.

Our local control stations made of polyester are available with 1-3 control components selected by the customer.

How to build your order code

Standard sizes

We manufacture a selection of standard enclosures with ready-made cut-outs, for which you may choose your preferred control components. The ready-made cut-outs have a fixed area and are not interchangeable. Customer-specific solutions are also available.

Instructions for creating your order code:

1. Select the enclosure type

- Choose the material and application (stainless steel or polyester)
- Select the quantity of control components (1-4 options for stainless steel, 1-3 options for polyester).

2. Select the suitable components by mounting area (see page 40)

- Choose control component codes by mounting area (A, B, C, or D).

3. Inform our sales personnel of your needs

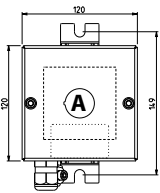
- Local contact information can be found on our web pages (www.ensto.com/contacts).
- Alternatively, scan the QR code to the right.



1. Step 1: Select the enclosure type

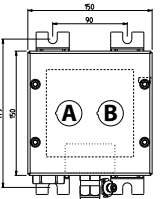
Stainless steel enclosures

SFEX -models



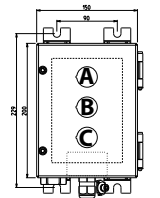
SFEX1AB1C **A**

- Size: 120x120x90 mm
 - One optional control component
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on door.



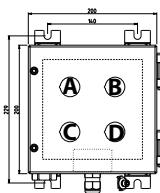
SFEX1AB2C **A B**

- Size: 150x150x90 mm
 - Two optional control components
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on door.



SFEX2AB3C **A B C**

- Size: 150x200x90 mm
 - Three optional control components
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on door.

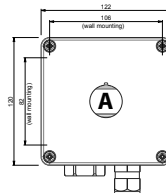


SFEX2AB4C **A B C D**

- Size: 200x200x90 mm
 - Four optional control components
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on door.

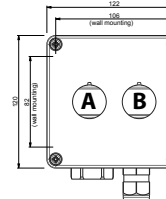
Polyester enclosures

MFEX -models



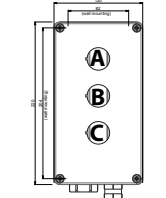
MFEX1C **A**

- Size: 122x120x90 mm
 - One optional control component
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on DIN rail.



MFEX2C **A B**

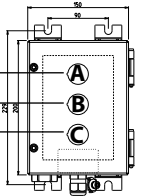
- Size: 122x120x90 mm
 - Two optional control components
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on DIN rail.



MFEX3C **A B C**

- Size: 120x220x90 mm
 - Three optional control components
 - M20 cable gland, KTA25.20
 - M25 blind, PTKA2.25
- Enclosure control component installed directly on DIN rail.

2. Step 2: Select the suitable components by mounting area



Control component code list for standard type code

Actuator type	Control mounting areas (See the pictures on page 39)				Switch type	Rated voltage U _n	Rated current I _n
	A	B	C	D			
Pushbuttons							
Locking mushroom Pushbutton, red (AC-15)	A2	B2	C2	D2	1xNC+1xNO	400 V	10 A
Pushbutton, green (AC-15)	A4	B4	C4	D4	1xNC+1xNO	400 V	10 A
Pushbutton, green (text: "START") (AC-15)	A5	B5	C5	D5	1xNC+1xNO	400 V	10 A
Pushbutton, red (AC-15)	A6	B6	C6	D6	1xNC+1xNO	400 V	10 A
Pushbutton, red (text: "STOP") (AC-15)	A7	B7	C7	D7	1xNC+1xNO	400 V	10 A
Pushbutton, yellow (AC-15)	A8	B8	C8	D8	1xNC+1xNO	400 V	10 A
Mushroom pushbutton, black (AC-15)	A9	B9	C9	D9	1xNC+1xNO	400 V	10 A
Locking mushroom pushbutton, red (DC-13)	A13	B13	C13	D13	1xNC+1xNO	24 V	1 A
Pushbutton, green (DC-13)	A15	B15	C15	D15	1xNC+1xNO	24 V	1 A
Pushbutton, green (text: "START") (DC-13)	A16	B16	C16	D16	1xNC+1xNO	24 V	1 A
Pushbutton, red (DC-13)	A17	B17	C17	D17	1xNC+1xNO	24 V	1 A
Pushbutton, red (text: "STOP") (DC-13)	A18	B18	C18	D18	1xNC+1xNO	24 V	1 A
Pushbutton, yellow (DC-13)	A19	B19	C19	D19	1xNC+1xNO	24 V	1 A
Mushroom pushbutton, black (DC-13)	A20	B20	C20	D20	1xNC+1xNO	24 V	1 A
Lockable button, 2 x positions actuator (AC-15)	A32	B32	C32	D32	1xNC+1xNO	400 V	10 A
Lockable button, 2 x positions actuator (DC-13)	A33	B33	C33	D33	1xNC+1xNO	24 V	1 A
Pushbutton, white (AC-15)	A34	B34	C34	D34	1xNC+1xNO	400 V	10 A
Pushbutton, white (DC-13)	A35	B35	C35	D35	1xNC+1xNO	24 V	1 A
Double red/green pushbutton actuator (AC-15)	A36	B36	C36	D36	1xNC+1xNO	400 V	10 A
Double red/green pushbutton actuator (DC-13)	A37	B37	C37	D37	1xNC+1xNO	24 V	1 A
Emergency-stop buttons							
Emergency stop (1NC+1NO) (AC-15)	A10	B10	C10	D10	1xNC+1xNO	400 V	10 A
Emergency stop (2NC) (AC-15)	A11	B11	C11	D11	2NC	400 V	10 A
Emergency stop (1NC+1NO) (DC-13)	A21	B21	C21	D21	1xNC+1xNO	24 V	1 A
Emergency stop (2NC) (DC-13)	A22	B22	C22	D22	2NC	24 V	1 A
Selector switches							
Position selector switch, 0 - I (AC-15)	A1	B1	C1	D1	1xNC+1xNO	400 V	10 A
Position selector switch, I - 0 - II (AC-15)	A3	B3	C3	D3	1xNC+1xNO	400 V	10 A
Position selector switch, 0 - I (DC-13)	A12	B12	C12	D12	1xNC+1xNO	24 V	1 A
Position selector switch, I - 0 - II (DC-13)	A14	B14	C14	D14	1xNC+1xNO	24 V	1 A
Pilot lights							
Lamp-module actuator, green	A23	B23	C23	D23	-	24 V AC/DC	0.05 A
Lamp-module actuator, red	A24	B24	C24	D24	-	24 V AC/DC	0.05 A
Lamp-module actuator, yellow	A25	B25	C25	D25	-	24 V AC/DC	0.05 A
Illuminated buttons							
Illuminated button actuator, green 1NC	A26	B26	C26	D26	1xNC	24 V AC/DC	0.05 A
Illuminated button actuator, red 1NC	A27	B27	C27	D27	1xNC	24 V AC/DC	0.05 A
Illuminated button actuator, yellow 1NC	A28	B28	C28	D28	1xNC	24 V AC/DC	0.05 A
Illuminated button actuator, green 1NO	A38	B38	C38	D38	1xNO	24 V AC/DC	0.05 A
Illuminated button actuator, red 1NO	A39	B39	C39	D39	1xNO	24 V AC/DC	0.05 A
Illuminated button actuator, yellow 1NO	A40	B40	C40	D40	1xNO	24 V AC/DC	0.05 A
Other accessories							
Potentiometer, 1kΩ	A29	B29	C29	D29	-	320 V AC/DC	0.003 A
Potentiometer, 10 kΩ	A30	B30	C30	D30	-	320 V AC/DC	0.003 A
Blanking plug	A31	B31	C31	D31	-	N/A	N/A

N/A Not available

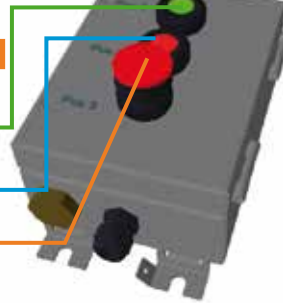
3. Step 3: Build your own order code and inform our sales personnel of your needs

Example

Enclosure type chosen (step 1)

S F E X 2 A B 3 C **A 5 B 7 C 1 1**

- A5 = Pushbutton, green (text: "start") (AC-15)/1NC + 1NO/400 V/10 A
- B7 = Pushbutton, red (text: "stop") (AC-15)/1NC + 1NO/400 V/10 A
- C11 -> Emergency stop (2NC) (AC-15)/2NC/400 V/10 A



- Local contact information can be found on our web pages (www.ensto.com/contacts).
- Alternatively, scan the QR code below.



Local control stations, customer-specific solutions

Ex e, Ex tb and Ex i equipment



In case you cannot find a suitable solution from our standard product range, we provide the opportunity to order readily certified customer-specific solutions.

Our offering also includes local control stations certified as Ex e, Ex tb, and Ex i equipment. The solutions are suitable for installations in fields where explosive concentrations of gases, steams, and dusts can appear (i.e., in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

Our local control stations are available in stainless steel, painted mild steel, and polyester. The ready-made solutions are furnished with cable glands and a DIN rail and are equipped with suitable control components, such as pushbuttons, signal lamps, and switch modules, selected by the customer.

Our customer-specific local control stations in brief:

- Certified to meet demanding regional requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Available in painted mild steel, stainless steel (AISI 3014 and AISI 316L) and polyester.

Information requested for complete customer-specific local control station solutions:

- Select the suitable enclosure material and size (custom sizes also available)
- Specify the required accessories:
 - Components and their positions
 - Terminals and their types
 - Cable glands and their locations
 - Wiring, optional (note: circuit testing required; additional charges may apply)
- Inform our sales personnel of your needs.

Ready-certified enclosure sizes for your specific solutions

Stainless steel AISI316L	Maximum number of components		Maximum number of terminals		Ambient temperature
	T6	T5	T6	T5	
120 x 120 x 100	1	-	2	-	-20/-40 °C to +40 °C
150 x 150 x 100	2	-	4	-	-20/-40 °C to +40 °C
150 x 200 x 100	3	-	6	-	-20/-40 °C to +40 °C
200 x 200 x 100	4	-	16	-	-20/-40 °C to +40 °C
200 x 300 x 100	6	-	24	-	-20/-40 °C to +40 °C
200 x 400 x 100	8	-	32	-	-20/-40 °C to +40 °C
300 x 300 x 160	9	-	36	-	-20/-40 °C to +40 °C
300 x 400 x 160	9	-	36	-	-20/-40 °C to +40 °C
400 x 400 x 200	11	16	44	64	-20/-40 °C to +40 °C
400 x 600 x 200	11	24	44	96	-20/-40 °C to +40 °C
600 x 800 x 200	-	24	-	96	-20/-40 °C to +40 °C
1000 x 2000 x 800	-	24	-	96	-20/-40 °C to +40 °C

Polyester	Maximum number of components		Maximum number of terminals		Ambient temperature
	T6	T6	T6	T6	
120 x 120 x 90	2	-	-	-	-20/-40 °C to +40 °C
220 x 120 x 90	3	-	-	-	-20/-40 °C to +40 °C
160 x 160 x 90	2	-	-	-	-20/-40 °C to +40 °C
260 x 160 x 90	4	16	-	-	-20/-40 °C to +40 °C
250 x 250 x 120	5	20	-	-	-20/-40 °C to +40 °C
400 x 250 x 160	10	16	-	-	-20/-40 °C to +40 °C
400 x 405 x 120	10	40	-	-	-20/-40 °C to +40 °C
600 x 250 x 120	10	40	-	-	-20/-40 °C to +40 °C

Variations	
Material:	Stainless steel, AISI 316L Stainless steel, AISI 304 Painted mild steel, coated RAL7035 Carbon-loaded glass reinforced polyester
Dimensions:	Width: 120–800 mm Height: 120–2,000 mm Depth: 90 - 800 mm
Technical information	
Degree of protection:	IP65 or IP66
Ambient temperature:	-20 °C / -40 °C to +40 °C / +55 °C
Conformity	
Approvals/certificates:	Presafe 14 ATEX 5288X IECEx PRE 14.0035X
Standards:	EN/IEC 60079-0, -1, -7, -11, -31
Marking, gas:	II 2 G Ex d e IIC T6/T5 Gb II 2 G Ex d e ia IIC T6/T5 Gb
Marking, dust:	II 2 D Ex tb IIIC T85°C Db

Note: Maximum temperature for components +75 °C

Components

	Pushbuttons <ul style="list-style-type: none"> • Flush button, green, red, yellow, white • Double flush button, green/red, yellow/white • Mushroom button, black • Locking mushroom flush button • Button lockable in both positions • Contact, 1NC/1NO, 2NC, 2NO
	Emergency-stop buttons <ul style="list-style-type: none"> • Emergency-stop button, red/yellow • Contact, 1NC/1NO, 2NC, 2NO
	Selector switches <ul style="list-style-type: none"> • Selector switch with two or three positions • Lockable selector switch with two or three positions • Contact, 1NC/1NO, 2NC, 2NO
	Pilot lights <ul style="list-style-type: none"> • Illuminated indicator module, red • Illuminated indicator module, green • Illuminated indicator module, yellow • Illuminated indicator module, white • Lamp module
	Illuminated buttons <ul style="list-style-type: none"> • Illuminated flush button, red • Illuminated flush button, green • Illuminated flush button, yellow • Illuminated flush button, white • Lamp module, contact, 1NO • Lamp module, contact, 1NC
	Other accessories <ul style="list-style-type: none"> • Enclosure heaters • Air-sensing thermostat, ON/OFF • Explosion-proof voltmeter and ammeter • Explosion-proof potentiometer • Busbars for grounding of cable screens/armor • Terminal blocks • Blanking plug

Other accessories

We offer a wide range of accessories, including mounting plates, DIN rails, cable glands, shrouds for cable glands, counter/lock nuts, blinds, breathers, and earthing tags.

Benefits of using our accessories



High-quality accessories

All of our accessories are certified to meet demanding regional requirements.



Sourcing of third-party accessories

You can utilize our sourcing services in the event that our range does not cover all accessories suitable for your needs.



Assembly services

We also offer assembly services, saving you time and other resources and guaranteeing safe and reliable assemblies.

Cable glands

Accessories

Ex e/tb cable glands, AISI 316

Ensto order code	Size	Cable size (mm)	Service temperature	Manufacturer's product number	ATEX- certificate	IECEX- certificate	Weight (kg)	Package size (pcs)	GTIN-13
AISI 316 Ex e/t glands, non-armored									
KTA4.16	M20	4-8.4	-60 °C to +180 °C	A3LSF16M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.078	5	6438100134235
KTA4.20	M20	9.4-14	-60 °C to +180 °C	A3LSF20M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.127	5	6438100134242
KTA4.25	M25	13.5-20	-60 °C to +180 °C	A3LSF25M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.166	5	6438100134259
KTA4.32	M32	19.5-26.3	-60 °C to +180 °C	A3LSF32M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.244	5	6438100134266
AISI 316 Ex e/t glands, armored									
KTA3.16	M20	3.4-8.4/9-13.5	-60 °C to +180 °C	CR3S16M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.396	5	6438100134280
KTA3.20	M20	9.4-14/15.5-21.1	-60 °C to +180 °C	CR3S20M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.178	5	6438100134297
KTA3.25	M25	13.5-20/20.3-27.4	-60 °C to +180 °C	CR3S25M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.233	5	6438100134303
KTA3.32	M32	19.5-26.3/26.7-34	-60 °C to +180 °C	CR3S32M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.416	5	6438100134310

CSA certificate: CSA 1356011.

Ex e/tb cable glands, nickel-plated brass

Ensto order code	Size	Cable size (mm)	Service temperature	Manufacturer's product number	ATEX- certificate	IECEX- certificate	Weight (kg)	Package size (pcs)	GTIN-13
Nickel-plated brass Ex e/t glands, non-armored, one-seal gland									
KTA1.16	M20	4-8.4	-60 °C to +180 °C	A3LBF16M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.078	5	6438100134334
KTA1.20	M20	9.4-14	-60 °C to +180 °C	A3LBF20M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.127	5	6438100134341
KTA1.25	M25	13.5-20	-60 °C to +180 °C	A3LBF25M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.166	5	6438100134358
KTA1.32	M32	19.5-26.3	-60 °C to +180 °C	A3LBF32M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.244	5	6438100134365
KTA1.40	M40	23-32.2	-60 °C to +180 °C	A3LBF40M	SIRA 01ATEX1272X	IECEX SIR 07.0096X	0.396	5	6438100134372
Nickel-plated brass Ex e/t glands, armored, two-seal gland									
KTA2.16	M20	3.4-8.4/9-13.5	-60 °C to +180 °C	CR3B16M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.178	5	6438100134396
KTA2.20	M20	9.4-14/15.5-21.1	-60 °C to +180 °C	CR3B20M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.233	5	6438100134402
KTA2.25	M25	13.5-20/20.3-27.4	-60 °C to +180 °C	CR3B25M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.416	5	6438100134419
KTA2.32	M32	19.5-26.3/26.7-34	-60 °C to +180 °C	CR3B32M	BAS 01ATEX2271X	IECEX SIR 07.0099X	0.772	5	6438100134426
KTA2.40	M40	23-32.2/33-40.6	-60 °C to +180 °C	CR3B40M	BAS 01ATEX2271X	IECEX SIR 07.0099X	1.093	5	6438100134433

CSA 1356011 for brass Ex d/e glands.

Other sizes available on request.

Ex e/Ex tb/Ex i cable glands, polyamide

Ensto order code	Size	Cable size (mm)	Service temperature	Manufacturer's product number	ATEX- certificate	IECEX- certificate	Weight (kg)	Package size (pcs)	GTIN-13
Polyamide (blue) Ex e/t glands, non-armored, one-seal gland									
KTA24.20S	M20	5.0-10	-40 °C to +80 °C	BM-SX2 BLUE	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.012	25	6438100163327
KTA24.20	M20	6.0-12	-40 °C to +80 °C	BM-X3 BLUE	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.012	25	6438100134464
KTA24.25	M25	13.0-18.0	-40 °C to +80 °C	BM-X5 BLUE	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.016	25	6438100134471
KTA24.32	M32	18.0-25.0	-40 °C to +80 °C	BM-X7 BLUE	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.041	25	6438100134488
KTA24.40	M40	22.0-32.0	-40 °C to +80 °C	BM-X8 BLUE	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.090	25	6438100163341
Polyamide (black) Ex e/t glands, non-armored, one-seal gland									
KTA25.20S	M20	5.0-10	-40 °C to +80 °C	BM-SX2	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.012	25	6438100163334
KTA25.20	M20	6.0-12	-40 °C to +80 °C	BM-X3	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.012	25	6438100134518
KTA25.25	M25	13.0-18.0	-40 °C to +80 °C	BM-X5	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.016	25	6438100134525
KTA25.32	M32	18.0-25.0	-40 °C to +80 °C	BM-X7	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.041	25	6438100134532
KTA25.40	M40	22.0-32.0	-40 °C to +80 °C	BM-X8	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	0.090	25	6438100158934

Suitable for use in Zones 1, 2, 21 and 22.

Ingress protection: IP66/IP68



KTA4.20



KTA2.25



KTA24.20



KTA25.25

Other accessories

Counter/lock nuts

Ensto order code	Size	Package size (pcs)	GTIN-13
Counter/lock nut, stainless steel			
KTM26.16	M16	10	6438100136437
KTM26.20	M20	15	6438100136444
KTM26.25	M25	10	6438100136451
KTM26.32	M32	10	6438100136468
Counter/lock nut, nickel-plated brass			
PTK16.16	M16	10	6416031813160
PTK16.20	M20	15	6416031813207
PTK16.25	M25	10	6416031813252
PTK16.32	M32	10	6416031813320
PTK16.40	M40	5	6416031813405
PTK16.50	M50	3	6416031813504
PTK16.63	M63	2	6416031813634
PTK16.75	M75	2	6438100136475



PTKA4.32

Ex e/tb blinds

Ensto order code	Size	Overall height (mm)	Service temperature	Manufacturer's product number	ATEX- certificate	IECEX- certificate	Package size (pcs)	GTIN-13
Polyamide (black) Ex e/tb blinds, one-seal blind								
PTKA4.20	M20	10	-40 °C to +80 °C	TP-X1	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	20	6438100134563
PTKA4.25	M25	10	-40 °C to +80 °C	TP-X2	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	20	6438100134570
PTKA4.32	M32	15	-40 °C to +80 °C	TP-X3	IMQ 13 ATEX 010X	IECEX IMQ 13.0003X	20	6438100134587
AlSi 316L Ex e/t blinds, one-seal blind								
PTKA17.16	M16	20.5	-60 °C to +200 °C	SPHH3SFM16	SIRA 09ATEX1320X	IECEX SIR 09.0131X	20	6438100134600
PTKA17.20	M20	21.0	-60 °C to +200 °C	SPHH3SFM20	SIRA 09ATEX1320X	IECEX SIR 09.0131X	20	6438100134617
PTKA17.25	M25	21.0	-60 °C to +200 °C	SPHH3SFM25	SIRA 09ATEX1320X	IECEX SIR 09.0131X	20	6438100134624
PTKA17.32	M32	21.0	-60 °C to +200 °C	SPHH3SFM32	SIRA 09ATEX1320X	IECEX SIR 09.0131X	20	6438100134631
Nickel-plated brass Ex e/t blind, one-seal								
PTKA2.16	M16	20.5	-60 °C to +200 °C	SPHH3BFNPM16	SIRA 09ATEX1320X	IECEX SIR 09.0131X	10	6438100163259
PTKA2.20	M20	21.0	-60 °C to +200 °C	SPHH3BFNPM20	SIRA 09ATEX1320X	IECEX SIR 09.0131X	10	6438100163266
PTKA2.25	M25	21.0	-60 °C to +200 °C	SPHH3BFNPM25	SIRA 09ATEX1320X	IECEX SIR 09.0131X	10	6438100163273
PTKA2.32	M32	21.0	-60 °C to +200 °C	SPHH3BFNPM32	SIRA 09ATEX1320X	IECEX SIR 09.0131X	10	6438100163280
PTKA2.40	M40	21.5	-60 °C to +200 °C	SPHH3BFNPM40	SIRA 09ATEX1320X	IECEX SIR 09.0131X	10	6438100163297

CSA 2310046 for AlSi 316 and Nickel-plated brass Ex e/t blinds

Suitable for use in Zones 1, 2, 21 and 22

Other sizes available on request.

Ingress protection: IP66/IP68

Ex e/tb breather drain valve, nickel-plated brass

Ensto order code	Size	Overall height (mm)	Service temperature	Manufacturer's product number	ATEX- certificate	IECEX certificate	Package size (pcs)	GTIN-13
BSSA20B	M20	22	-60 °C to +200 °C	ACDP3BE/NP/M20/10	SIRA 09ATEX3321U	IECEX SIR 09.0132U	1	6438100163303

CSA certificate: CSA 2310046

Suitable for use in Zones 1, 2, 21 and 22.

Ingress protection: IP66



BSSA20B

PVC shrouds for cable glands (armored)

Ensto order code	Description	Service temperature	Package size (pcs)	GTIN-13
KTAS1.20	PVC shroud for KTA2.20	-25 °C to +70 °C	50	6438100141547
KTAS1.25	PVC shroud for KTA2.25	-25 °C to +70 °C	50	6438100141554
KTAS1.32	PVC shroud for KTA2.32	-25 °C to +70 °C	50	6438100141561
KTAS1.40	PVC shroud for KTA2.40	-25 °C to +70 °C	50	6438100141578



KTAS1.25

Earthing tags, nickel-plated brass

Ensto product code	Size	Package size (pcs)	GTIN-13
KTAE1.16	M16	50	6438100141585
KTAE1.20	M20	50	6438100141592
KTAE1.25	M25	50	6438100141608
KTAE1.32	M32	50	6438100141615



KTAE1.20

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More information available on our website

More information available on www.ensto.com

On this website you will find, for instance:

- Latest product news
- Product cards relevant product information
- Customer references
- Catalogues and leaflets
- Distributor information
- Contact information for our sales personnel.



Product cards available on www.ensto.com/products/ex

We support your end-solution design process by offering design files related to both our standard and customer-specific enclosing solutions, terminals and load break switches. The files are then easy to use in your own design tools for further integration to the end applications.

Design files for our standard products are available via our web pages. If you need a larger number of different documents, we are happy to deliver those on request.

Available design file formats:

PDF, DWG, DXF, STEP and separately zipped STEP-files, for example, for use in E3 software.



Our other brochures

Get also familiar with our other solutions targeted for industrial customers.

Ensto Industrial solutions



Enclosing solutions



Industrial components



Order materials via email industrial.solutions@ensto.com



LEGAL NOTICE

The information in this brochure is to the best of Ensto's knowledge and belief correct and reliable. We reserve the right to make changes in the specifications, materials and production methods without further notice. Be aware that you should evaluate independently the suitability of each product for the intended application. Ensto does not give any assurance of any particular quality or performance. Our responsibilities for the products are set forth in the "Orgalime S 2000 General Conditions for the Supply of Mechanical, Electrical and Electronic Products". The products shall be installed only by a competent person with the required knowledge for the country in question. Ensto is not responsible for its distributors or for any misuse, incorrect installation or ignored national safety or other national provisions.

Ensto

Ensto is a family business and an international cleantech company specializing in the development, manufacture and marketing of electrical systems and supplies for the distribution of electrical power as well as various electrical applications. We are committed to lasting sustainable development and our goal is to be a leading company in green energy efficiency and distribution. Our products, manufactured in seven countries, are environmentally friendly, energy efficient and leave a minimum carbon footprint.

Facts

- Established in 1958
- 1670 people in Europe and Asia
- Local presence in 20 countries
- Turnover EUR 280 million
- Headquarters located in Finland.

Cleantech

Cleantech refers to all those products, services, processes, and technologies which prevent or reduce the impact of harmful actions on the environment. Cleantech stands for higher quality, efficiency, and profitability. Ensto and other Finnish companies are already world leaders in several key cleantech sectors.

- SALES
- SALES AND PRODUCTION
R&D in Finland, Poland, France, Italy and India



Saves Your Energy

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