



**B&R Enclosures**

# **Hazardous Areas**

*Enclosures & Accessories*

[brenclosures.com.au](http://brenclosures.com.au)



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# About B&R Enclosures

Since 1955, B&R Enclosures has built a reputation for excellence in design and production, culminating in our position as Australia's largest enclosure manufacturer and electrical equipment integration specialist.

As an independent, 100% Australian family owned and operated business, we champion the virtues of quality, innovation, service and value. The emphasis on these aspects has sustained B&R's growth leading to Australian manufacturing and distribution facilities in Brisbane, Adelaide and Sydney and internationally in China and Saudi Arabia.

B&R's knowledge, precision, quality and unwavering commitment to creating repeatable solutions for our clients supports our position as preferred manufacturer for many private, government and commercial projects in some of Australia's harshest environments.

B&R champions the virtues of quality, service and value. Combined with our unrivalled industry and application knowledge, we are in a unique position to meet the needs of our clients. The business encompasses four divisions: Industrial, Data ICT, Hazardous Areas and Residential Commercial. Each division focuses on the unique needs of different market segments.

B&R regularly works with partners to provide integrated solutions for major infrastructure and hazardous projects. These include 'plug and play' switchboard solutions for Rio Tinto's Oyu Tolgoi mine and local control stations for Ichthys on-shore LNG processing plant. Ongoing relationships and collaboration are results of our ability to articulate the customer's problem and combine previous experience and knowledge with compliance to local standards.

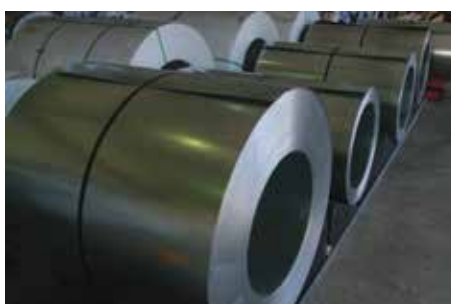
Electrical integration usually involves the installation, commissioning and testing of 3rd party components and we are adept at managing the acquisition and storage of technical components through a global supply chain that is structured, customised, agile, repeatable and results-based.

Project management and execution is effectively managed at B&R by the co-location of design, supervision, supply coordination and quality control along with manufacturing. Our incorporation of Industry 4.0 delivers real-time data to our project management teams, built around the requirements of individual projects.

Extensive investment in research and development includes an environmental testing facility focussing on climate control to support cooling solutions for equipment exposed to high ambient temperatures and solar radiation.

When utilised as designed, B&R's enclosures are built to out-perform against expectations.

Contact us today to find out how B&R can deliver reliable and trusted outcomes for your project.



# Our Locations



B&R Enclosures have purpose-built manufacturing facilities in three locations across Australia, as well as strategic locations in the Gulf and China.



## **Australia**

### ***Brisbane (QLD)***

Global head office, manufacturing, sales and warehousing

### ***Sydney, NSW***

Hazardous manufacturing, sales and warehousing

### ***Adelaide, SA***

Manufacturing, sales and warehousing

### ***Townsville (QLD), Newcastle (NSW),***

### ***Melbourne (VIC), Perth (WA)***

Sales and warehousing

### ***Launceston (TAS), Darwin (NT)***

Distribution

## **New Zealand**

### ***Auckland***

Sales and warehousing

## **Saudi Arabia**

### ***Dammam***

Hazardous manufacturing, sales and warehousing

## **China**

### ***Suzhou***

Manufacturing, sales and warehousing

# Our Capabilities

Over the years as the company has grown, we have invested significantly in machinery, technology and testing to be able to provide capabilities which our customers benefit from in every order they place. Our current capabilities include:

- Purpose-built Australian facilities in Brisbane (18,000m<sup>2</sup>), Adelaide (4,000m<sup>2</sup>) and Sydney (1,874m<sup>2</sup>), providing local labour and logistics
- Complete in-house design and engineering services to assist with creating custom solutions
- Dedicated facilities for design, manufacture, wiring and distribution of hazardous area electrical equipment
- End-to-end manufacturing, from coiled steel raw material to commissioning the end product, we provide efficiency and complete quality control
- Variety of substrates and high quality finishes including stainless steel, powder coated and zinc to suit even the most demanding application
- Modern machinery for any design to be formed and fabricated including automated sheet metal panel benders, punching and shearing centres, electrical equipment integration lines, press brakes, powder coat lines, fabrication cells and assembly lines
- Fully documented process available with full configuration management to support a detailed documentation experience
- Complete project management including supply chain, warehousing and logistics
- In-house and external testing for hazardous area electrical equipment and impact, IP, type testing, static load, seismic, wind load, salt spray, line inspection, shock, vibration, EMC and MIL-STD
- Continuous improvement with our environmental testing facility for ongoing research and development
- Existing supply agreements with leading OEMs and major raw products distributors supporting loyal and valued relationships climate control and cooling solutions

# Our Supply Strategies



## Made to Stock

These products are available ex-stock from all our sales & warehousing branches. Contact your local sales representative to discuss requirements.



## Assembled-to-Order

These products are assembled to order upon receipt of a customer order. All components required to build an ATO item cannot be sold separately and must form part of a kit. Standard lead time is 4-6 weeks from date of order.



## Made to Order

These products are manufactured according to a customer's specification. They are marked in our catalogues as "▲ Available on request" and have a standard lead time of 2-3 weeks.



## Engineered-to-Order

These products are a custom designed product that is 100% fit-for-purpose, delivered on-site and ready for installation. Our design & engineering team can customise an enclosure to suit the application requirements. Contact us for more information.

# Customisable Project Services



## Collaboration

- Convert customer requirements to product build specifications
- Work to customer delivery schedule
- Initiate procurement or consignment of stock allocations
- Supply of equipment configuration

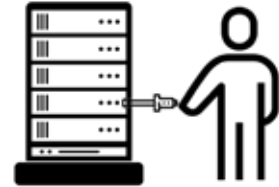


## Complete Project Management

- One point of contact
- Responsive communication channels
- DIFOTIS - Delivered In Full On Time In Specification
- Accountability for the delivery of our commitment to customers

## Electrical & Equipment Integration

- Wiring and equipment installed to exact requirements
- Management of free issue, consigned and/or B&R sourced components and equipment
- Stock reporting and job allocation



## Testing & Reporting To Customer Specifications

- Digital reports of product testing and acceptance
- Serialised codes to customer requirements, digital signature, component traceability and unique identifiers
- Real time quality assurance authorisation, approval and confirmation

## Customer Specific Logistics

- Storage and warehouse management
- Site delivery logistics
- Option for removal of product packaging after installation



# The B&R Engagement Loop

## (Project Services)

In order to engage successfully with our project customer's, B&R representatives follow a structured service plan.

We take our responsibility seriously, and pride ourselves on the collaborative and open relationships we undertake with our project customers. This makes sure we understand and provide value, because our customer's needs vary greatly across the different types of project applications and technical requirements.

1. Our first action before we reach out or after a customer had reached out to us, is to **INVESTIGATE**. This includes researching the customer/ project and any other relevant stakeholders.
2. The second action of **UNDERSTAND** is when we speak to the customer at length about their issue and challenges for current and future projects. From these discussions we can begin to see how our product solutions can solve the customer's issues and challenges.
3. We take our newly acquired customer knowledge back to our in-house design, engineering and estimating teams for our third action to **SCOPE** the work, and prepare quotes and drawings as required.
4. Once we have created the tailored offer for the customer we process any variations which might be needed before our fourth action of **AGREE**. With everything signed off we move into manufacturing and equipment integration.
5. Once the product solution is ready our fifth action of **DELIVER** takes place. We make sure the goods are shipped to site according to agreed upon timelines.
6. To learn from our experience and confirm our service level we take an **EVALUATION** action. This is when we reflect on the job we've completed and depending on the size and extent of the order we will seek customer feedback as well.





# Our Customers



## Accreditations & Compliance

At B&R, quality and value are just the beginning. We strive to deliver quality products developed and manufactured by a team dedicated to excellence, backed by standards, approvals and industry accreditations.



Quality  
ISO 9001  
SAI GLOBAL

ISO 9001:2015

Every B&R Enclosures manufacturing facility is externally audited to ensure that the quality of our products meet the stringent ISO9001 standards. B&R's products are carefully inspected at the end of lines during the manufacturing process to ensure that the enclosures will withstand their intended environment and application.



Environment  
ISO 14001  
SAI GLOBAL

ISO 14001:2015

Sets out the criteria for an environmental management system. It maps out a framework that a company or organisation can follow to set up an effective environmental management system.



OHS  
ISO 45001  
SAI GLOBAL

ISO 45001:2018

An externally audited Occupational Health and Safety Management System.



RoHS

The RoHS directive aims to restrict certain dangerous substances commonly used in electronic and electronic equipment.



ASSDA

The Australian Stainless Steel Development Association provides comprehensive technical information on stainless steel. This includes information for users, equipment manufacturers and stainless steel suppliers.



IEC IECEx

IECEx is the IEC System for Certification to Standards Relating to Equipment for Use in Explosive Atmospheres. It uses quality assessment specifications that are based on International Standards prepared by the International Electrotechnical Commission (IEC).

# Technical Information

B&R Hazardous Area products are certified and approved for use in above ground Group II applications.

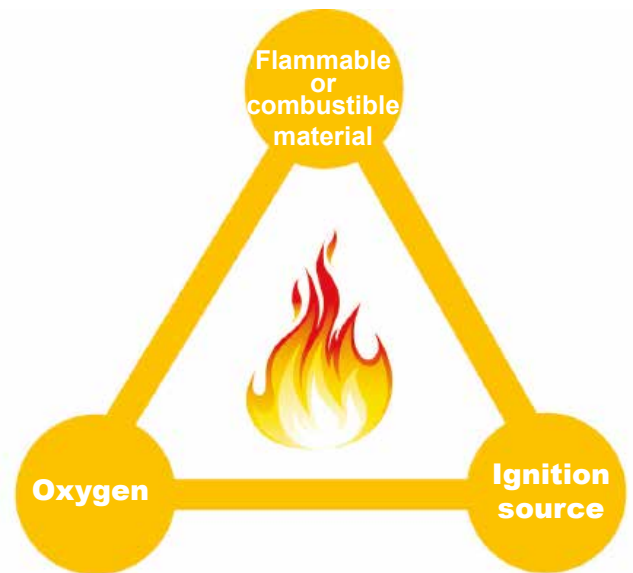
## WHAT IS A HAZARDOUS AREA?

A hazardous area is an area where flammable liquids, vapours, gases or combustible dusts are likely to occur in sufficient quantities to cause fire or explosion.

There are three basic conditions that must be satisfied to create a fire or explosion.

1. Flammable or combustible material – such as flammable liquid, vapour or combustible dust must be present in sufficient quantity and concentration.
2. Oxygen
3. Ignition source

Hazardous area electrical equipment works by suppressing or separating one or more of these three components to avoid a fire or explosion. Where suppression cannot be done the use of explosion containment Ex d is used.



## IGNITION SOURCES

- Electric arc and sparks
- Flames
- Hot surfaces
- Electrostatic sparks
- Thermite sparks
- Mechanical friction
- Mechanical sparks produced by grinding
- Smouldering deposits
- Compression ignition
- Electromagnetic radiation
- Chemical reactions
- Ultrasonics

## IEC STANDARDS & CERTIFICATIONS

IECEX is an internationally recognised scheme for the certification of hazardous area electrical equipment. The IECEX system is designed to facilitate international trade in equipment and services for use in hazardous areas, whilst maintaining the required level of safety.



## SELECTION OF ELECTRICAL EQUIPMENT

There are important pieces of information required when selecting equipment for hazardous areas. These include:

- Zone classification
- Gas group
- Temperature or 'T' Rating
- IP Rating
- Application

## TYPICAL HAZARDOUS AREA INDUSTRIES:

### Gases and Vapours

- Oil refineries & chemical plants
- Offshore drilling rigs
- Spray booths
- Sewerage treatment plants
- Oxygen and acetylene
- Aircraft hangers
- LNG plants
- Wharves for petroleum & LNG vessels
- Paint manufacturers
- Distilling
- Laboratories & fume cupboards

### Dust

- Food manufacturing
- Grain handling & storage
- Chemicals / fertiliser
- Plastics
- Wood / pulp / paper
- Milk powder
- Flour mills
- Pharmaceuticals
- Metal processing
- Recycling operations
- Fibreglass manufacturing
- Explosive factories

# Technical Information

## Zone classifications



### ZONE CLASSIFICATIONS

Equipment that is used in hazardous areas is classified into zones, depending on the potential of an explosion under normal operating conditions. The table below is a guide to zone classification of hazardous areas. B&R Enclosures do not classify areas for customers, it is the responsibility of the installer or end user to know which zone their area falls within.

It is recommended a qualified person is engaged to complete a risk analysis and classify the area in accordance with standard IEC 60079-14.

The hazardous areas are classified in the table below according to IEC 60079-10-1 and IEC 61241-10-2. The IEC Standard is the international standard and local standard must be used where applicable.

Gases and Vapours		Dust	
Zone 0 Ga	An area in which an explosive gas-air mixture is continuously present or present for long periods.	Zone 20 Da	An area in which an explosive dust-air mixture is continuously present or present for long periods.
Zone 1 Gb	Area in which an explosive gas-air mixture is likely to occur for short periods in normal operation.	Zone 21 Db	Combustible or conductive dusts are present, and is likely to occur for short periods in normal operation.
Zone 2 Gc	Area in which an explosive gas-air mixture is not likely to occur and if it occurs it will only exist for a very short time due to an abnormal condition.	Zone 22 Dc	Area in which an explosive dust mixture is not likely to occur and if it occurs it will only exist for a very short time due to an abnormal condition.



# Technical Information

## Gas groups, temperature ratings and dust

### GAS GROUPS

Electrical apparatus for use in areas with flammable gases and vapours are divided into groups:

Group I	Underground coal mining applications.
Group II	Industries other than underground coal mining.
Group III	Industries having combustible dust or fibres.

Group II is subdivided into 3 group groups based on their explosive properties (see table below).

Groups	Example Types
Group I	Methane
Group IIA	Propane
Group IIB	Ethylene
Group IIC	Hydrogen, Acetylene, Carbon Disulphide

### TEMPERATURE OR 'T' RATING

Hot surfaces are a potential ignition source in hazardous applications. Hazardous materials will have different minimum temperatures at which ignition becomes a danger.

Electrical equipment for hazardous areas is tested and allocated a 'T Rating' based on the maximum temperature of the equipment.

The 'T Rating' must always have a lower maximum temperature than the ignition temperature of the gas group present. Temperatures are either measured internally or externally depending on protection.

T Rating	Maximum Temperature
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

Examples of ignition temperatures and 'T' ratings for gases.

Example Gas	Ignition Temperature	T Rating
Methane	580°C	T1
Hydrogen	500°C	T1
Kerosene	295°C	T3
Petroleum	400°C	T2
Carbon Disulphide	95°C	T6
Diethyl Ether	160°C	T4
Ethyl Nitrite	95°C	T6
Hydrogen Sulphide	270°C	T3

### COMBUSTIBLE DUST

Dust fibres or flyings, which are combustible or ignitable when mixed with air are known as combustible dusts. Dust explosions may be initiated by ignition of a cloud of dust. It is not unusual for an explosion, which starts from the ignition of a dust layer, to cause the dislodging of dust accumulated on various surfaces, which then leads to a chain reaction dust cloud explosion.

Characteristics of some common combustible dusts are:

Material	Ignition temperature	
	Cloud, °C	Layer, °C
Coal Dust	380	225
Polythene	420	(melts)
Methyl Cellulose	420	320
Starch	460	435
Flour	490	340
Sugar	490	460
Grain Dust	510	300
Phenolic Resin	530	>450
Aluminium	590	>450
PVC	700	>450
Soot	810	570

NOTE: The data given in this table is derived from AS2430.2:1986 (superseded by AS/NZS 61241.3 which is superseded by AS/NZS 61241.10)

# Technical Information

## Types of protection for electrical equipment



### TYPE OF EXPLOSION PROTECTION FOR ELECTRICAL EQUIPMENT

Type of Protection	Description	Standard	Zone
Flameproof enclosure Ex d	Containment – explosion within an enclosure will not be propagated outside the enclosure.	IEC 60079-1	Zone 1 & 2
Pressurised enclosure Ex p	Enclosure in a protective gas is maintained at a pressure greater than that of the external atmosphere.	IEC 60079-2	Zone 1 & 2
Powder Filling Ex q	Mounting of potentially incandive components in an enclosure filled with quartz or solid glass particles.	IEC 60079-5	Zone 1 & 2
Oil Immersion Ex o	Equipment or parts are immersed in protective liquid such as oil. The protective liquid acts as an insulating medium.	IEC 60079-6	Zone 1 & 2
Increased safety Ex e	Non sparking components are designed to substantially reduce the likelihood of the occurrence of fault conditions which could cause ignition.	IEC 60079-7	Zone 1 & 2
Intrinsic safety Ex i	The potential spark energy of a circuit is reduced to below the amount required for ignition.	IEC 60079-11	Zone 0, 1 & 2
Non-sparking Ex n	Electrical apparatus in normal operating conditions and in certain specified abnormal conditions, that is not capable of igniting a surrounding explosive gas atmosphere.	IEC 60079-15	Zone 2
Encapsulation Ex m	Parts that are capable of igniting an explosive atmosphere by either sparking or heating, are enclosed in a compound so that the explosive atmosphere cannot be ignited under operating or installation conditions.	IEC 60079-18	Zone 0, 1 & 2
Dust protection by enclosure Ex t	Electrical equipment is protected by the enclosure and surface temperature limitation for use in explosive and dust atmospheres.	IEC 60079-31	Zone 20, 21 & 22

# Ex d Enclosure - Aluminium

Zones 1 & 2, 21 & 22



- Certified for use in Zone 1, 2 & 21, 22 hazardous areas.
- Suitable for use as junction boxes, control stations, terminal boxes, local control stations, motor starters motor distribution and switchracks.
- Designed to house pushbuttons, terminals and cable terminations.
- For protection of electrical equipment in applications where flammable liquids, gases and vapours or combustible dusts are present.
- Full range of pushbuttons, stop buttons, pilot lights and selector switches available for integration.
- Customised etched identification labels.
- Epoxy coated.
- Windows available on request.
- Manufactured from Copper Free Aluminum Alloy.

Comes standard with:

- Stainless steel hinges
- External stainless steel mounting feet
- Internal mounting pan
- Internal/ external earth stud
- Drilled and tapped entries as required



## PROTECTION TECHNIQUES

Ex db IIB or IIB + H2 T db, tb, [ia] or [ib] IP66

Ex tb IIIC T...°C Db IP66 Ta...°C

Ex db [ia Ga] IIB or IIB + H2 Gb db, tb, [ia] or [ib] IP66

Ex db [ia Gb] IIB or IIB + H2 Gb db, tb, [ia] or [ib] IP66

*(Refer to certificate for detailed markings)*

## CERTIFICATION

IECEx INE 20.0046X

## AMBIENT TEMPERATURE

-50°C up to +60°C

# Ex d Enclosure - Aluminium

Zones 1 & 2, 21 & 22



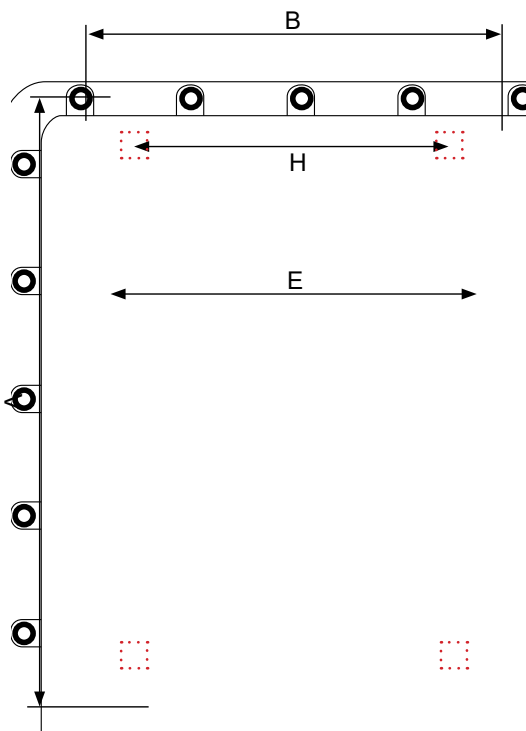
## ORDERING GUIDE

**!** These enclosures are only sold with IECEx certified operators and/or terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Dimensions (mm)												Weight (kg)
	External			Internal			Mounting Centers			Mounting Plates			
	Height (A)	Width (B)	Depth (C)	Height (D)	Width (E)	Depth (F)	Height (G)	Width (H)	Earth Stud	Height	Width		
FJB224/A <sup>▲</sup>	315	250	175	230	160	130	180	241	M8	215	150	10	
FJB425/A <sup>▲</sup>	425	247	230	330	153	188	290	249	M8	320	150	15	
FJB446/A <sup>▲</sup>	489	412	260	375	300	208	335	414	M8	360	290	35	
FJB456/A <sup>▲</sup>	530	492	258	418	385	203	360	480	M8	395	360	43	
FJB566/A <sup>▲</sup>	594	540	312	464	414	233	400	559	M10	445	395	78	
FJB656/A <sup>▲</sup>	832	445	315	720	340	235	630	449	M10	670	295	90	
FJB666/A <sup>▲</sup>	832	610	315	720	500	235	630	604	M10	670	450	120	
FJB667/A <sup>▲</sup>	832	610	410	720	500	330	630	604	M10	670	450	135	

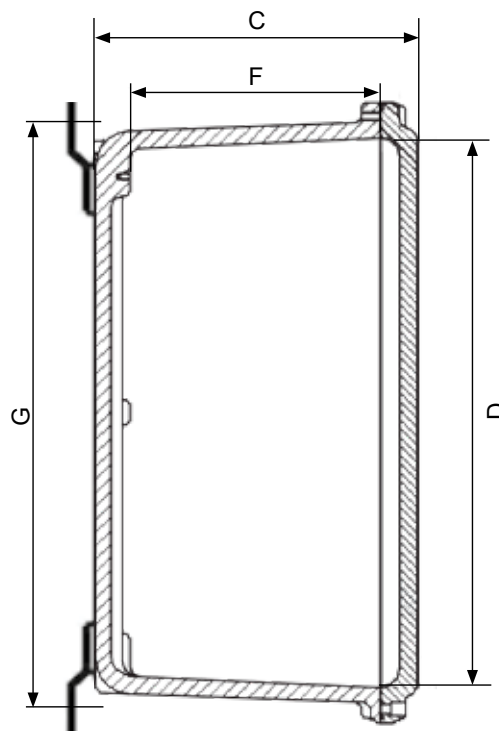
<sup>▲</sup>Available on request

## TECHNICAL DRAWINGS



Top/ Front View

*\*Red squares are indicative of mounting centres on the back of the enclosure and are not shown at the correct scale*



Side View

# Ex d Enclosure - Stainless Steel

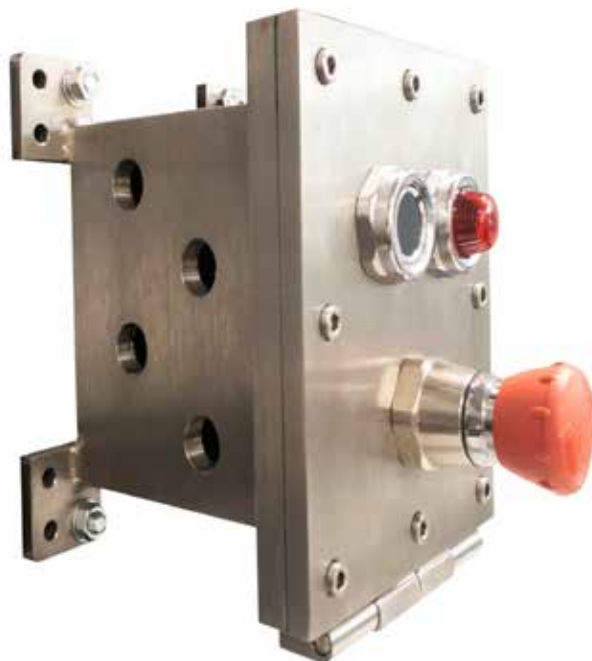
Zones 1 & 2, 21 & 22



- Certified for use in Zone 1, 2 & 21, 22 hazardous areas.
- Suitable for use as junction boxes, control stations, terminal boxes, local control stations, motor starters, motor distribution and switchracks.
- Designed to house pushbuttons, terminals and cable terminations.
- For protection of electrical equipment in applications where flammable liquids, gases and vapours or combustible dusts are present.
- Full range of pushbuttons, stop buttons, pilot lights and selector switches available for integration.
- Customised etched identification labels.
- Windows available on request.
- Manufactured from 316 Stainless Steel.

Comes standard with:

- Stainless steel hinges
- External stainless steel mounting feet
- Internal mounting pan
- Internal/ external earth stud
- Drilled and tapped entries as required



## PROTECTION TECHNIQUES

Ex db IIB or IIB + H2 T3 / T6 Gb

Ex tb IIIC T...°C Db IP66 Ta...°C

Ex db [ja Ga] IIB or IIB + H2 Gb T3 / T6 IP66

Ex db [ja Gb] IIB or IIB + H2 Gb T3 / T6 IP66

*(Refer to certificate for detailed markings)*

## CERTIFICATION

IECEx INE 20.0046X

## AMBIENT TEMPERATURE

-20°C up to +60°C

-60°C up to +60°C



# Ex d Enclosure - Stainless Steel

Zones 1 & 2, 21 & 22



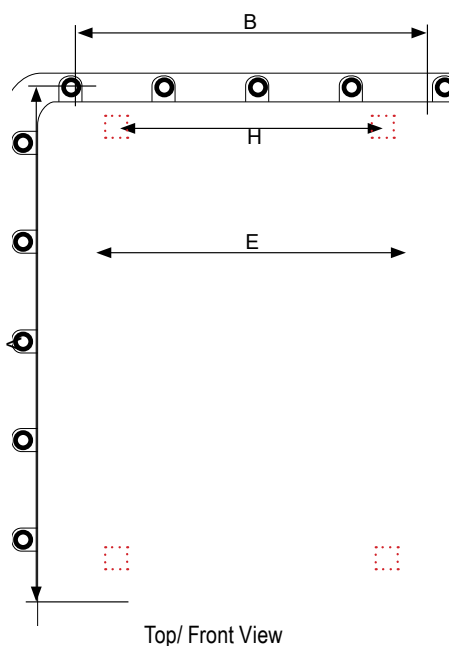
## ORDERING GUIDE

**!** These enclosures are only sold with IECEx certified operators and/or terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Dimensions (mm)										
	External			Internal			Mounting Centre		Mounting Plate		Weight (kg)
	Height (A)	Width (B)	Depth (C)	Height (D)	Width (E)	Depth (F)	Height (G)	Width (H)	Height	Width	
FJB114/S <sup>▲</sup>	180	150	168	130	100	130	140	130	120	90	11
FJB234/S <sup>▲</sup>	290	230	178	230	170	140	225	225	210	150	23
FJB434-A/S <sup>▲</sup>	400	230	180	340	170	140	335	225	320	150	30
FJB434-B/S <sup>▲</sup>	400	280	180	340	220	140	335	275	320	200	34
FJB435/S <sup>▲</sup>	460	270	220	400	210	180	395	265	380	190	42
FJB445-A/S <sup>▲</sup>	410	310	220	350	250	180	345	315	330	230	42
FJB445/S <sup>▲</sup>	450	370	224	390	310	180	385	365	370	290	56
FJB546/S <sup>▲</sup>	600	340	244	530	270	200	525	325	510	250	70
FJB556-A/S <sup>▲</sup>	500	440	250	430	370	200	425	425	410	350	82
FJB556-B/S <sup>▲</sup>	560	470	250	490	400	200	485	455	470	380	96
FJB646/S <sup>▲</sup>	710	330	290	630	250	240	625	305	610	230	103
FJB656/S <sup>▲</sup>	710	420	297	690	340	240	685	395	670	320	146
FJB666/S <sup>▲</sup>	780	530	305	700	450	240	675	520	680	430	207
FJB768/S <sup>▲</sup>	1120	670	450	1020	570	380	1000	650	1000	550	432

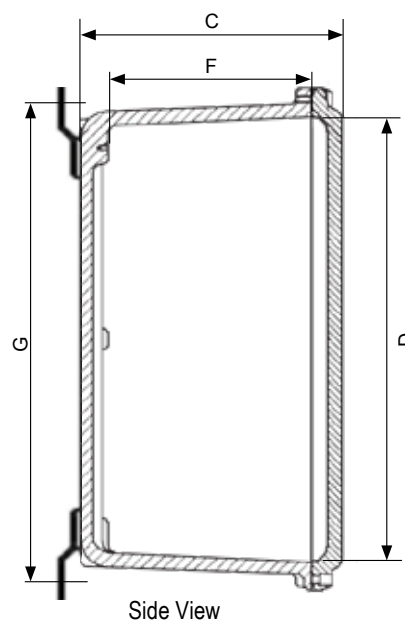
<sup>▲</sup>Available on request

## TECHNICAL DRAWINGS



Top/ Front View

\*Red squares are indicative of mounting centres on the back of the enclosure and are not shown at the correct scale



Side View

# Sloping Roof Control Station

Zones 1 & 2, 21 & 22



- Suitable for use within chemical, petrochemical, dust and grain applications where a small enclosure is required.
- 40° sloping roof with 40mm overhang ensures material slides off the roof and is directed away from the top of the door.
- Available with or without gland plate.
- Gasket material Black Neoprene.
- Silicon option available on request IP65 and IP66 only.
- Certified IP66 glass viewing windows available (298 x 218 or 198 x 118).
- Manufactured from 1.5mm 316 stainless steel with N4 surface finish.

Comes standard with:

- Steel mounting pan
- 7mm stainless steel lock
- External mounting flange
- Internal and external 6mm or 8mm earth stud (10mm available on request)
- 3mm stainless steel gland plate
- Earth strap kit
- Brass gland plate available on request
- Customised etched identification and certification label



## PROTECTION RATINGS

Ex e IIC T6 Gb  
 Ex nA IIC T6 Gb  
 Ex de IIC T6 Gb  
 Ex tD A21/22 T80°C  
 DIP A21/22 Ta80°C  
 Ex t IIIC T80°C Db

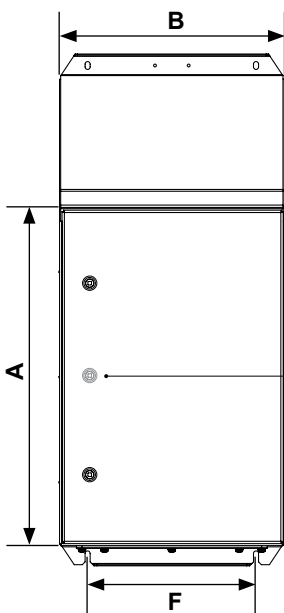
## CERTIFICATION

IECEX ITA 10.0023X

## AMBIENT TEMPERATURE

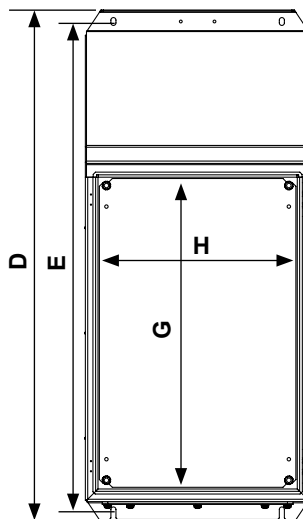
-20°C up to +40°C | 55°C

## TECHNICAL DRAWINGS

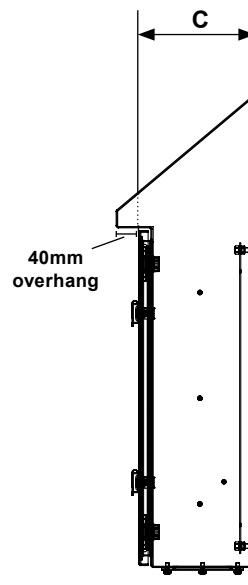


Front View

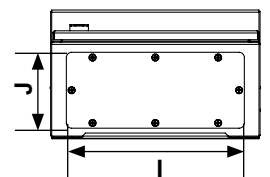
Is indicative of lock position when there is only one lock on enclosures



Front View With Internals



Side View With Internals



Bottom View With Internals

# Sloping Roof Control Station

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

⚠ These enclosures are only sold with IECEx certified operators and/or terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Description	Dimensions (mm)										No. of Locks
		External				Mounting Centres		Mounting Pan		Gland Opening		
		Height (A)	Width (B)	Depth (C) <sup>^</sup>	Total Height (D) <sup>*</sup>	Height (E)	Width (F)	Height (G)	Width (H)	Height (I)	Width (J)	
CBK-S*030215/G0 <sup>^</sup>	No gland plate	300	200	150	551	512	100	250	150	–	–	1
CBK-S*030420/G0 <sup>^</sup>		300	400	200	551	571	300	250	350	–	–	1
CBK-S*040315/G0 <sup>^</sup>		400	300	150	651	612	200	350	250	–	–	1
CBK-S*040420/G0 <sup>^</sup>		400	400	200	651	671	300	350	350	–	–	1
CBK-S*040620/G0 <sup>^</sup>		400	600	200	710	671	500	350	550	–	–	1
CBK-S*040630/G0 <sup>^</sup>		400	600	300	794	755	500	350	550	–	–	1
CBK-S*060420/G0 <sup>^</sup>		600	400	200	910	871	300	550	350	–	–	1
CBK-S*060630/G0 <sup>^</sup>		600	600	300	994	955	500	550	550	–	–	1
CBK-S*080620/G0 <sup>^</sup>		800	600	200	1110	1071	500	750	550	–	–	2
CBK-S*080630/G0 <sup>^</sup>		800	600	300	1194	1155	500	750	550	–	–	2
CBK-S*100620/G0 <sup>^</sup>		1000	600	200	1310	1271	500	950	550	–	–	2
CBK-S*120830/G0 <sup>^</sup>		1200	800	300	1594	1555	700	1150	750	–	–	2
CBK-S*030215 <sup>^</sup>	1 x bottom gland plate	300	200	150	551	512	100	250	150	100	55	1
CBK-S*030420 <sup>^</sup>		300	400	200	551	571	300	250	350	300	105	1
CBK-S*040315 <sup>^</sup>		400	300	150	651	612	200	350	250	200	55	1
CBK-S*040420 <sup>^</sup>		400	400	200	651	671	300	350	350	300	105	1
CBK-S*040620 <sup>^</sup>		400	600	200	710	671	500	350	550	500	105	1
CBK-S*040630 <sup>^</sup>		400	600	300	794	755	500	350	550	500	205	1
CBK-S*060420 <sup>^</sup>		600	400	200	910	871	300	550	350	300	105	1
CBK-S*060630 <sup>^</sup>		600	600	300	994	955	500	550	550	500	205	1
CBK-S*080620 <sup>^</sup>		800	600	200	1110	1071	500	750	550	500	105	2
CBK-S*080630 <sup>^</sup>		800	600	300	1194	1155	500	750	550	500	205	2
CBK-S*100620 <sup>^</sup>		1000	600	200	1310	1271	500	950	550	500	105	2
CBK-S*120830 <sup>^</sup>		1200	800	300	1594	1555	700	1150	750	700	245	2
CBK-S*030215/G3 <sup>^</sup>	1 bottom gland plate, 2 side gland plates	300	200	150	551	512	100	250	150	100	55	1
CBK-S*030420/G3 <sup>^</sup>		300	400	200	551	571	300	250	350	300	105	1
CBK-S*040315/G3 <sup>^</sup>		400	300	150	651	612	200	350	250	200	55	1
CBK-S*040420/G3 <sup>^</sup>		400	400	200	651	671	300	350	350	300	105	1
CBK-S*040620/G3 <sup>^</sup>		400	600	200	710	671	500	350	550	500	105	1
CBK-S*040630/G3 <sup>^</sup>		400	600	300	794	755	500	350	550	500	205	1
CBK-S*060420/G3 <sup>^</sup>		600	400	200	910	871	300	550	350	300	105	1
CBK-S*060630/G3 <sup>^</sup>		600	600	300	994	955	500	550	550	500	205	1
CBK-S*080620/G3 <sup>^</sup>		800	600	200	1110	1071	500	750	550	500	105	2
CBK-S*080630/G3 <sup>^</sup>		800	600	300	1194	1155	500	750	550	500	205	2
CBK-S*100620/G3 <sup>^</sup>		1000	600	200	1310	1271	500	950	550	500	105	2
CBK-S*120830/G3 <sup>^</sup>		1200	800	300	1594	1555	700	1150	750	700	245	2

<sup>^</sup> Available on request

<sup>\*</sup> Total height includes sloping roof and mounting flanges

<sup>^</sup> Total depth space required is depth plus 40mm for roof overhang

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

# Sloping Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



- Suitable for use within chemical, petrochemical, dust and grain applications where a small enclosure is required.
- 40° sloping roof with 40mm overhang ensures material slides off the roof and is directed away from the top of the door.
- Available with or without gland plate.
- Gasket material Black Neoprene.
- Silicon option available on request IP65 and IP66 only.
- Certified IP66 glass viewing windows available (298 x 218 or 198 x 118).
- Manufactured from 1.5mm 316 stainless steel with N4 surface finish.

Comes standard with:

- Steel mounting pan
- 7mm stainless steel lock
- External mounting flange
- Internal and external 6mm or 8mm earth stud (10mm available on request)
- 3mm stainless steel gland plate
- Earth strap kit
- Brass gland plate available on request
- Customised etched identification and certification label



## PROTECTION RATINGS

Ex e IIC T6 Gb  
 Ex nA IIC T6 Gb  
 Ex de IIC T6 Gb  
 Ex tD A21/22 T80°C  
 DIP A21/22 Ta80°C  
 Ex t IIIC T80°C Db

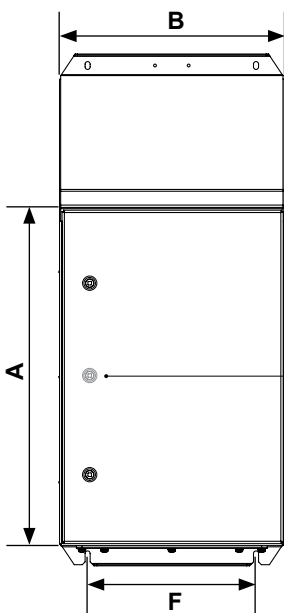
## CERTIFICATION

IECEX ITA 10.0023X

## AMBIENT TEMPERATURE

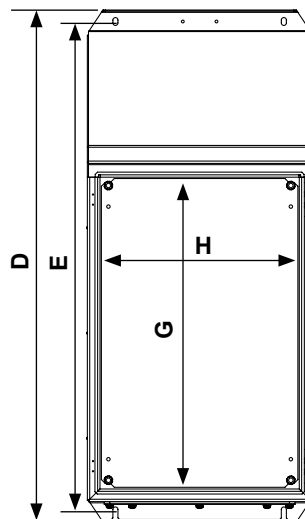
-20°C up to +40°C | 55°C

## TECHNICAL DRAWINGS

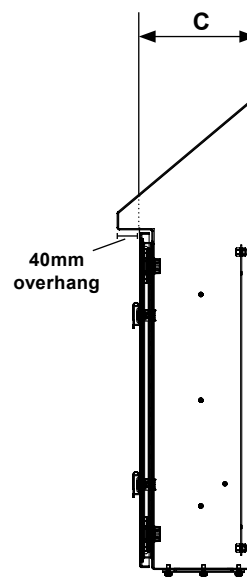


Front View

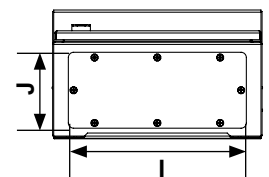
Is indicative of lock position when there is only one lock on enclosures



Front View With Internals



Side View With Internals



Bottom View

# Sloping Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

**!** These enclosures are only sold with terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Description	Dimensions (mm)										No. of Locks
		External				Mounting Centres		Mounting Pan		Gland Opening		
		Height (A)	Width (B)	Depth (C)^	Total Height (D)*	Height (E)	Width (F)	Height (G)	Width (H)	Height (I)	Width (J)	
TBK-S*030215/G0^	No gland plate	300	200	150	551	512	100	250	150	–	–	1
TBK-S*030420/G0^		300	400	200	551	571	300	250	350	–	–	1
TBK-S*040315/G0^		400	300	150	651	612	200	350	250	–	–	1
TBK-S*040420/G0^		400	400	200	651	671	300	350	350	–	–	1
TBK-S*040620/G0^		400	600	200	710	671	500	350	550	–	–	1
TBK-S*040630/G0^		400	600	300	794	755	500	350	550	–	–	1
TBK-S*060420/G0^		600	400	200	910	871	300	550	350	–	–	1
TBK-S*060630/G0^		600	600	300	994	955	500	550	550	–	–	1
TBK-S*080620/G0^		800	600	200	1110	1071	500	750	550	–	–	2
TBK-S*080630/G0^		800	600	300	1194	1155	500	750	550	–	–	2
TBK-S*100620/G0^		1000	600	200	1310	1271	500	950	550	–	–	2
TBK-S*120830/G0^		1200	800	300	1594	1555	700	1150	750	–	–	2
TBK-S*030215^		1 x bottom gland plate	300	200	150	551	512	100	250	150	100	55
TBK-S*030420^	300		400	200	551	571	300	250	350	300	105	1
TBK-S*040315^	400		300	150	651	612	200	350	250	200	55	1
TBK-S*040420^	400		400	200	651	671	300	350	350	300	105	1
TBK-S*040620^	400		600	200	710	671	500	350	550	500	105	1
TBK-S*040630^	400		600	300	794	755	500	350	550	500	205	1
TBK-S*060420^	600		400	200	910	871	300	550	350	300	105	1
TBK-S*060630^	600		600	300	994	955	500	550	550	500	205	1
TBK-S*080620^	800		600	200	1110	1071	500	750	550	500	105	2
TBK-S*080630^	800		600	300	1194	1155	500	750	550	500	205	2
TBK-S*100620^	1000		600	200	1310	1271	500	950	550	500	105	2
TBK-S*120830^	1200		800	300	1594	1555	700	1150	750	700	245	2
TBK-S*030215/G3^	1 bottom gland plate, 2 side gland plates		300	200	150	551	512	100	250	150	100	55
TBK-S*030420/G3^		300	400	200	551	571	300	250	350	300	105	1
TBK-S*040315/G3^		400	300	150	651	612	200	350	250	200	55	1
TBK-S*040420/G3^		400	400	200	651	671	300	350	350	300	105	1
TBK-S*040620/G3^		400	600	200	710	671	500	350	550	500	105	1
TBK-S*040630/G3^		400	600	300	794	755	500	350	550	500	205	1
TBK-S*060420/G3^		600	400	200	910	871	300	550	350	300	105	1
TBK-S*060630/G3^		600	600	300	994	955	500	550	550	500	205	1
TBK-S*080620/G3^		800	600	200	1110	1071	500	750	550	500	105	2
TBK-S*080630/G3^		800	600	300	1194	1155	500	750	550	500	205	2
TBK-S*100620/G3^		1000	600	200	1310	1271	500	950	550	500	105	2
TBK-S*120830/G3^		1200	800	300	1594	1555	700	1150	750	700	245	2

\* Available on request

\* Total height includes sloping roof and mounting flanges

^ Total depth space required is depth plus 40mm for roof overhang

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

# Flat Roof Control Station

Zones 1 & 2, 21 & 22



- Suitable for Hazardous environments in the most demanding conditions.
- Enclosures suited for Zones 1 & 2, 21 & 22.
- Gasket material Black Neoprene.
- Silicon gasket available on request for IP65 and IP66 only.
- Wall mounting brackets, ordered separately (M8 fixings).
- Certified IP66 glass viewing windows available (298 x 218 or 198 x 118).
- Manufactured from 1.5mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel mounting pan
- 3mm stainless steel gland plate
- 7mm stainless steel lock
- Internal and external 6mm or 8mm earth stud (10mm available on request)
- Earth strap kit
- Brass gland plates available on request
- Customised etched identification and certification label
- Factory fitted, full range of IECEx certified operators available



## PROTECTION RATINGS

Ex e IIC T6 Gb  
Ex nA IIC T6 Gc  
Ex de IIC T6 Gb  
Ex tD A21/22 T80°C  
DIP A21/22 Ta80°C  
Ex t IIIC T80°C Db

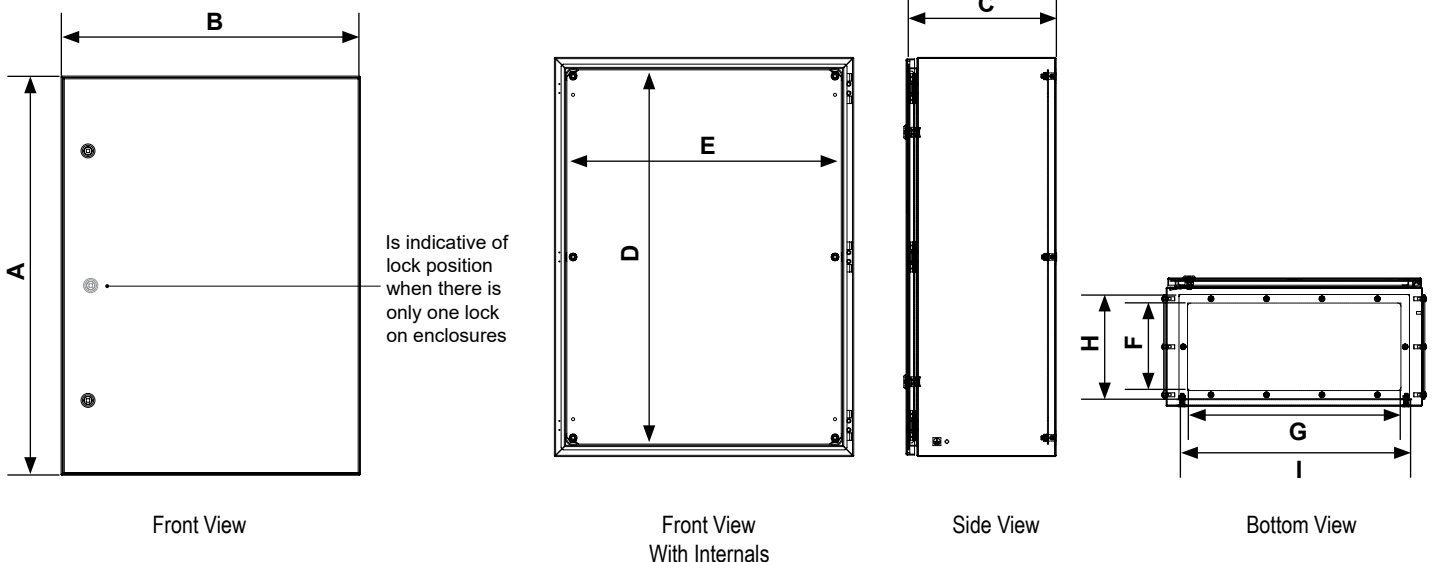
## CERTIFICATION

IECEx ITA 10.0023X

## AMBIENT TEMPERATURE

-20°C up to +40°C | 55°C

## TECHNICAL DRAWINGS



# Flat Roof Control Station

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

⚠ These enclosures are only sold with IECEx certified operators and/or terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Description	Dimensions (mm)									No. of Locks
		External			Mounting Pan		Gland Opening		Gland Plate		
		Height (A)	Width (B)	Depth (C) <sup>▲</sup>	Height (D)	Width (E)	Height (F)	Width (G)	Height (H)	Width (I)	
CBK-F*030215/G0 <sup>▲</sup>	No gland plate	300	200	150	250	150	55	100	–	–	1
CBK-F*030420/G0 <sup>▲</sup>		300	400	200	250	350	105	300	–	–	1
CBK-F*040315/G0 <sup>▲</sup>		400	300	150	350	250	55	200	–	–	1
CBK-F*040420/G0 <sup>▲</sup>		400	400	200	350	350	105	300	–	–	1
CBK-F*040620/G0 <sup>▲</sup>		400	600	200	350	550	105	500	–	–	1
CBK-F*040630/G0 <sup>▲</sup>		400	600	300	350	550	205	500	–	–	1
CBK-F*050420/G0 <sup>▲</sup>		500	400	200	450	350	105	300	–	–	1
CBK-F*060420/G0 <sup>▲</sup>		600	400	200	550	350	105	300	–	–	1
CBK-F*060630/G0 <sup>▲</sup>		600	600	300	550	550	205	500	–	–	1
CBK-F*080620/G0 <sup>▲</sup>		800	600	200	750	550	105	500	–	–	2
CBK-F*080630/G0 <sup>▲</sup>		800	600	300	750	550	205	500	–	–	2
CBK-F*100620/G0 <sup>▲</sup>		1000	600	200	950	550	105	500	–	–	2
CBK-F*120830/G0 <sup>▲</sup>		1200	800	300	1150	750	245	700	–	–	2
CBK-F*030215 <sup>▲</sup>		1 x bottom gland plate	300	200	150	250	150	55	100	95	140
CBK-F*030420 <sup>▲</sup>	300		400	200	250	350	105	300	145	340	1
CBK-F*040315 <sup>▲</sup>	400		300	150	350	250	55	200	95	240	1
CBK-F*040420 <sup>▲</sup>	400		400	200	350	350	105	300	145	340	1
CBK-F*040620 <sup>▲</sup>	400		600	200	350	550	105	500	145	540	1
CBK-F*040630 <sup>▲</sup>	400		600	300	350	550	205	500	245	540	1
CBK-F*050420 <sup>▲</sup>	500		400	200	450	350	105	300	145	340	1
CBK-F*060420 <sup>▲</sup>	600		400	200	550	350	105	300	145	340	1
CBK-F*060630 <sup>▲</sup>	600		600	300	550	550	205	500	245	540	1
CBK-F*080620 <sup>▲</sup>	800		600	200	750	550	105	500	145	540	2
CBK-F*080630 <sup>▲</sup>	800		600	300	750	550	205	500	245	540	2
CBK-F*100620 <sup>▲</sup>	1000		600	200	950	550	105	500	145	540	2
CBK-F*120830 <sup>▲</sup>	1200		800	300	1150	750	245	700	245	740	2
CBK-F*030215/G3 <sup>▲</sup>	1 bottom gland plate, 2 side gland plates		300	200	150	250	150	55	100	95	140
CBK-F*030420/G3 <sup>▲</sup>		300	400	200	250	350	105	300	145	340	1
CBK-F*040315/G3 <sup>▲</sup>		400	300	150	350	250	55	200	95	240	1
CBK-F*040420/G3 <sup>▲</sup>		400	400	200	350	350	105	300	145	340	1
CBK-F*040620/G3 <sup>▲</sup>		400	600	200	350	550	105	500	145	540	1
CBK-F*040630/G3 <sup>▲</sup>		400	600	300	350	550	205	500	245	540	1
CBK-F*050420/G3 <sup>▲</sup>		500	400	200	450	350	105	300	145	340	1
CBK-F*060420/G3 <sup>▲</sup>		600	400	200	550	350	105	300	145	340	1
CBK-F*060630/G3 <sup>▲</sup>		600	600	300	550	550	205	500	245	540	1
CBK-F*080620/G3 <sup>▲</sup>		800	600	200	750	550	105	500	145	540	2
CBK-F*080630/G3 <sup>▲</sup>		800	600	300	750	550	205	500	245	540	2
CBK-F*100620/G3 <sup>▲</sup>		1000	600	200	950	550	105	500	145	540	2
CBK-F*120830/G3 <sup>▲</sup>		1200	800	300	1150	750	245	700	245	740	2

<sup>▲</sup> Available on request

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

# Flat Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



- Suitable for Hazardous environments in the most demanding conditions.
- Enclosures suited for Zones 1 & 2, 21 & 22.
- Silicon gasket available on request for IP65 and IP66 only.
- Wall mounting brackets, ordered separately (M8 fixings).
- Certified IP66 glass viewing windows available (298 x 218 or 198 x 118).
- Manufactured from 1.5mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- Steel mounting pan
- 3mm stainless steel gland plate
- 7mm stainless steel lock
- Internal and external 6mm or 8mm earth stud (10mm available on request)
- Earth strap kit
- Brass gland plates available on request
- Customised etched identification and certification label



## PROTECTION RATINGS

Ex e IIC T6 Gb  
 Ex nA IIC T6 Gb  
 Ex de IIC T6 Gb  
 Ex tD A21/22 T80°C  
 DIP A21/22 Ta80°C  
 Ex t IIIC T80°C Db

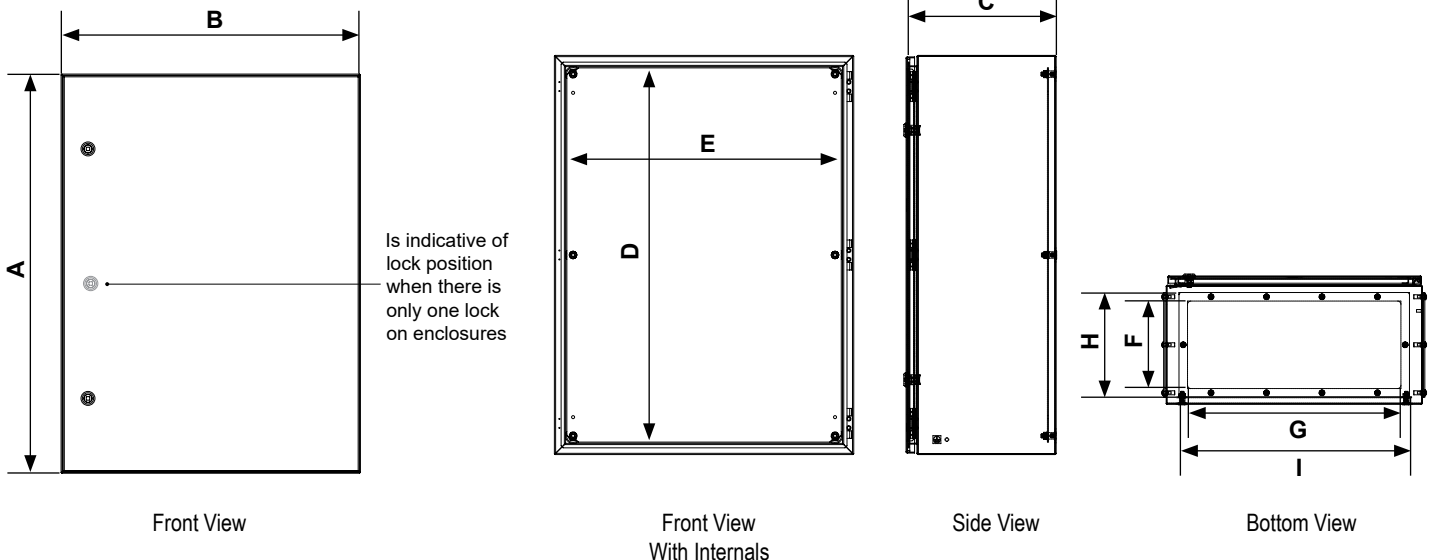
## CERTIFICATION

IECEx ITA 10.0023X

## AMBIENT TEMPERATURE

-20°C up to +40°C | 55°C

## TECHNICAL DRAWINGS





# Flat Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

⚠ These enclosures are only sold with terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Description	Dimensions (mm)									No. of Locks
		External			Mounting Pan		Gland Opening		Gland Plate		
		Height (A)	Width (B)	Depth (C)^	Height (E)	Width (F)	Height (G)	Width (H)	Height (I)	Width (J)	
TBK-F*030215/G0^	No gland plate	300	200	150	250	150	55	100	–	–	1
TBK-F*030420/G0^		300	400	200	250	350	105	300	–	–	1
TBK-F*040315/G0^		400	300	150	350	250	55	200	–	–	1
TBK-F*040420/G0^		400	400	200	350	350	105	300	–	–	1
TBK-F*040620/G0^		400	600	200	350	550	105	500	–	–	1
TBK-F*040630/G0^		400	600	300	350	550	205	500	–	–	1
TBK-F*050420/G0^		500	400	200	450	350	105	300	–	–	1
TBK-F*060420/G0^		600	400	200	550	350	105	300	–	–	1
TBK-F*060630/G0^		600	600	300	550	550	205	500	–	–	1
TBK-F*080620/G0^		800	600	200	750	550	105	500	–	–	2
TBK-F*080630/G0^		800	600	300	750	550	205	500	–	–	2
TBK-F*100620/G0^		1000	600	200	950	550	105	500	–	–	2
TBK-F*120830/G0^		1200	800	300	1150	750	245	700	–	–	2
TBK-F*030215^	1 x bottom gland plate	300	200	150	250	150	55	100	95	140	1
TBK-F*030420^		300	400	200	250	350	105	300	145	340	1
TBK-F*040315^		400	300	150	350	250	55	200	95	240	1
TBK-F*040420^		400	400	200	350	350	105	300	145	340	1
TBK-F*040620^		400	600	200	350	550	105	500	145	540	1
TBK-F*040630^		400	600	300	350	550	205	500	245	540	1
TBK-F*050420^		500	400	200	450	350	105	300	145	340	1
TBK-F*060420^		600	400	200	550	350	105	300	145	340	1
TBK-F*060630^		600	600	300	550	550	205	500	245	540	1
TBK-F*080620^		800	600	200	750	550	105	500	145	540	2
TBK-F*080630^		800	600	300	750	550	205	500	245	540	2
TBK-F*100620^		1000	600	200	950	550	105	500	145	540	2
TBK-F*120830^		1200	800	300	1150	750	245	700	245	740	2
TBK-F*030215/G3^	1 bottom gland plate, 2 side gland plates	300	200	150	250	150	55	100	95	140	1
TBK-F*030420/G3^		300	400	200	250	350	105	300	145	340	1
TBK-F*040315/G3^		400	300	150	350	250	55	200	95	240	1
TBK-F*040420/G3^		400	400	200	350	350	105	300	145	340	1
TBK-F*040620/G3^		400	600	200	350	550	105	500	145	540	1
TBK-F*040630/G3^		400	600	300	350	550	205	500	245	540	1
TBK-F*050420/G3^		500	400	200	450	350	105	300	145	340	1
TBK-F*060420/G3^		600	400	200	550	350	105	300	145	340	1
TBK-F*060630/G3^		600	600	300	550	550	205	500	245	540	1
TBK-F*080620/G3^		800	600	200	750	550	105	500	145	540	2
TBK-F*080630/G3^		800	600	300	750	550	205	500	245	540	2
TBK-F*100620/G3^		1000	600	200	950	550	105	500	145	540	2
TBK-F*120830/G3^		1200	800	300	1150	750	245	700	245	740	2

^ Available on request

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

# Screwed Flat Roof Control Station

Zones 1 & 2, 21 & 22



- Suitable for Hazardous environments in the most demanding conditions.
- Enclosures suited for Zones 1 & 2, 21 & 22.
- Manufactured from 1.5mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- External fixed mounting flanges
- External earth stud
- Internal earth strap kit
- Gasket material Black Neoprene.
- Silicon gasket available on request for IP65 and IP66
- Screwed lid
- Stainless steel fixings
- Internal mounting pan available on request
- Customised etched certification and identification label
- Factory fitted, full range of IECEX certified operators available



## PROTECTION RATINGS

Ex e IIC T6 Gb  
Ex nA IIC T6 Gc  
Ex d e IIC T6 Gb  
Ex tD A21/22 T80°C  
DIP A21/22 T80°C  
Ex t IIIC T80°C Db

## CERTIFICATION

IECEX ITA 10.0023X

## AMBIENT TEMPERATURE

-20°C ~ +40°C / 55°C option

# Screwed Flat Roof Control Station

Zones 1 & 2, 21 & 22



## ORDERING GUIDE



These enclosures are only sold with IECEx certified operators and/or terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Dimensions (mm)						Fixings (mm)		Openings		No. of fixings
	Height* (A)	Width (B)	Depth^ (C)	Total Height* (D)	Depth to rail (E)	Distance From Mounting Surface^ (F)	Height (G)	Width (H)	Height (I)	Width (J)	
CBS-F*010108^	150	150	80	203	59	10	180	125	125	125	4
CBS-F*020212^	200	200	120	253	99	10	230	125	175	175	4
CBS-F*030212^	300	200	120	353	99	10	330	125	275	175	4
CBS-F*040212^	400	200	120	453	99	10	430	125	375	175	6
CBS-F*060212^	600	200	120	653	99	10	630	125	575	175	6

\*Available on request

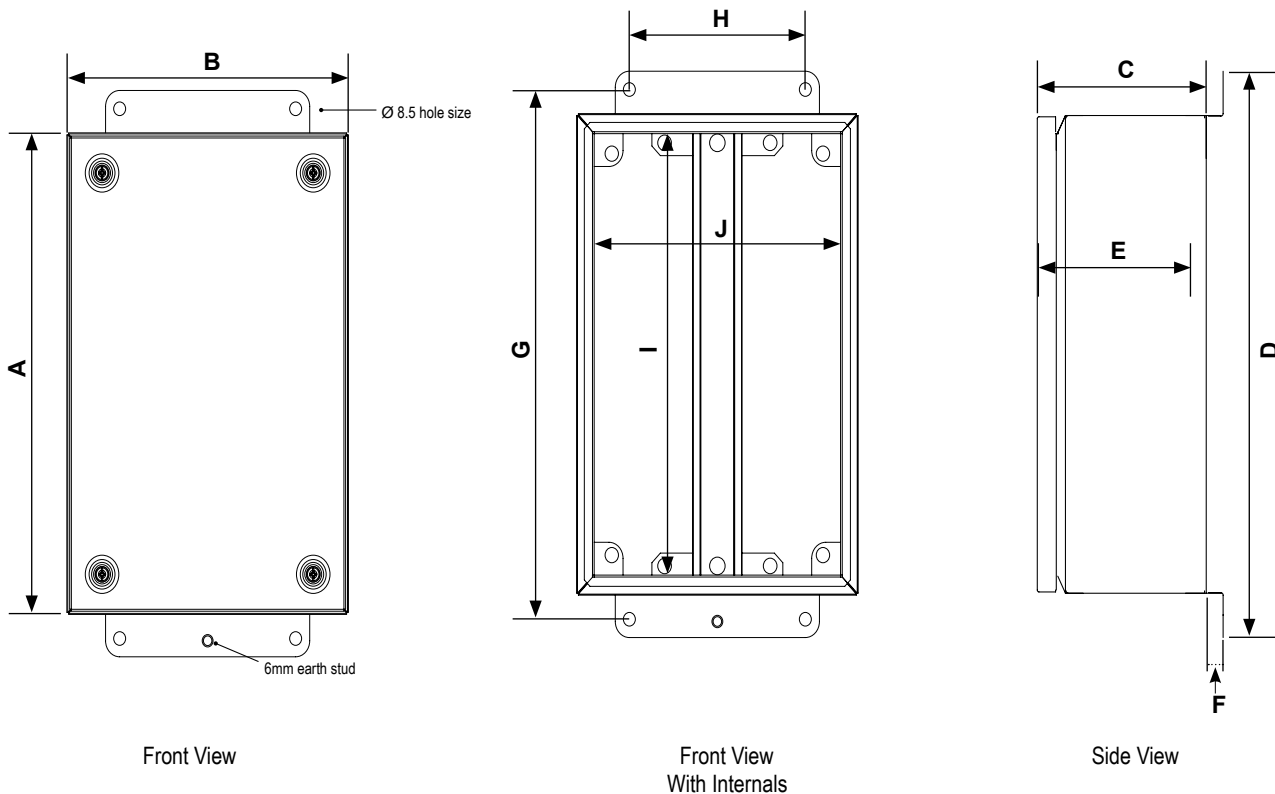
\*Height (A) is enclosure only, Total Height (D) includes top & bottom mounting flanges.

^Total protrusion of enclosure from mounting surface is Depth (C) plus Distance From Mounting Surface (F).

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

## TECHNICAL DRAWINGS



# Screwed Flat Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



- Suitable for Hazardous environments in the most demanding conditions.
- Enclosures suited for Zones 1 & 2, 21 & 22.
- Manufactured from 1.5mm thick 316 stainless steel.
- N4 surface finish.

Comes standard with:

- External fixed mounting flanges
- External earth stud
- Internal earth strap kit
- Gasket material Black Neoprene.
- Silicon gasket available on request for IP65 and IP66
- Internal DIN rail
- Screwed lid
- Stainless steel fixings
- Factory fitted terminals
- Internal mounting pan available on request
- Customised etched certification and identification label

## PROTECTION RATINGS

Ex e IIC T6 Gb  
Ex nA IIC T6 Gc  
Ex d e IIC T6 Gb  
Ex tD A21/22 T80°C  
DIP A21/22 T80°C  
Ex t IIIC T80°C Db

## CERTIFICATION

IECEx ITA 10.0023X

## AMBIENT TEMPERATURE

-20°C ~ +40°C / 55°C option



\*certified enclosures not supplied empty

# Screwed Flat Roof Terminal Enclosure

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

⚠ These enclosures are only sold with terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Dimensions (mm)						Fixings (mm)		Openings		No. of fixings
	Height*	Width	Depth <sup>^</sup>	Total Height*	Depth to rail	Distance From Mounting Surface <sup>^</sup>	Height	Width	Height	Width	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	
TBS-F*010108 <sup>^</sup>	150	150	80	203	59	10	180	125	125	125	4
TBS-F*020212 <sup>^</sup>	200	200	120	253	99	10	230	125	175	175	4
TBS-F*030212 <sup>^</sup>	300	200	120	353	99	10	330	125	275	175	4
TBS-F*040212 <sup>^</sup>	400	200	120	453	99	10	430	125	375	175	6
TBS-F*060212 <sup>^</sup>	600	200	120	653	99	10	630	125	575	175	6

<sup>^</sup>Available on request

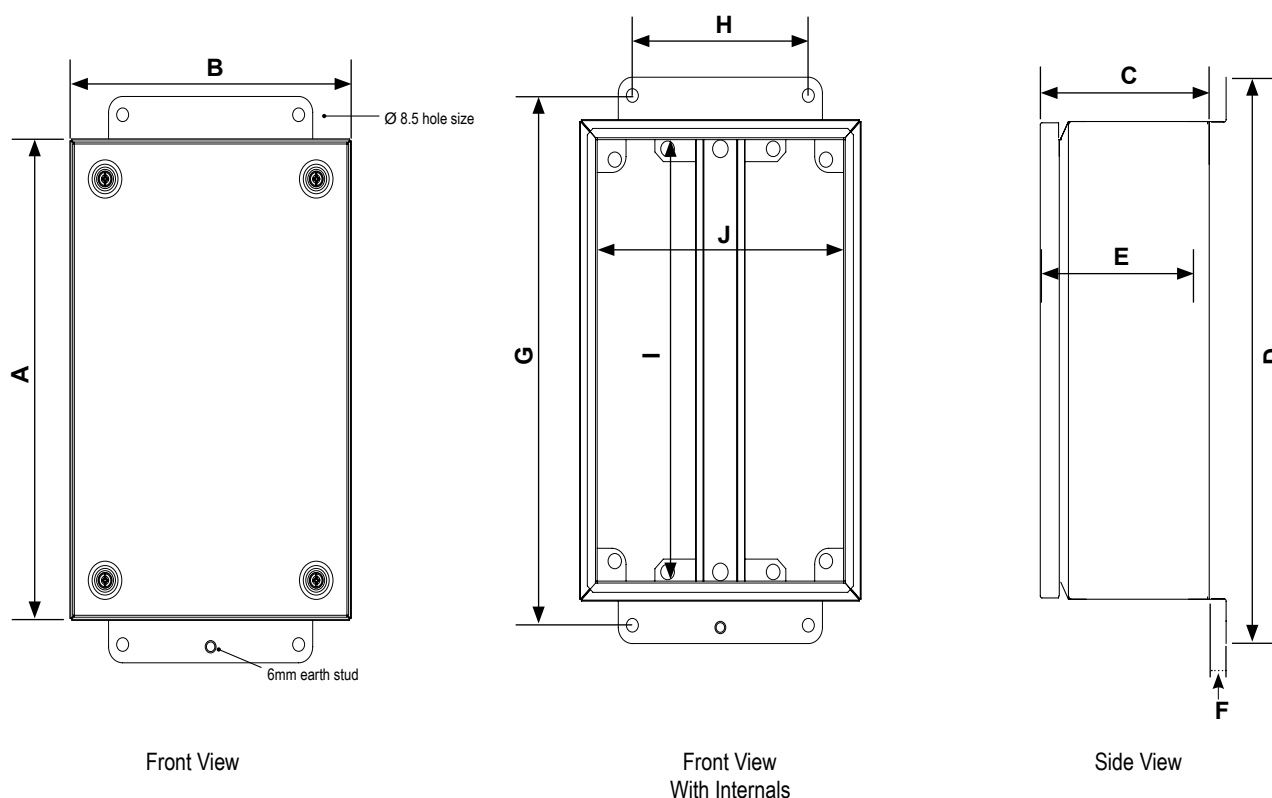
\*Height (A) is enclosure only, Total Height (D) includes top & bottom mounting flanges.

<sup>^</sup>Total protrusion of enclosure from mounting surface is Depth (C) plus Distance From Mounting Surface (F).

Replace the asterisk (\*) in the part number above, with a letter from the table below for the corresponding protection technique that is required.

E	Ex e, Ex d e
N	Ex nA
T	Ex tD, DIP, Ex t

## TECHNICAL DRAWINGS



# Fixed Lid Control Station

Zones 1 & 2, 21 & 22



- Suitable for use within chemical, petrochemical, dust and grain applications where a small enclosure is required.
- Available pre-configured or customer built for ease of installation from one to six operators.
- Specially designed gutter system to protect equipment.
- Certified control operators.
- Gasket material EDPM black.
- Silicon gasket available on request for IP65 and IP66 only.
- Mounting hardware NOT supplied with product.
- Manufactured from 1.5mm 316 stainless steel with N4 surface finish.

Comes standard with:

- Stainless steel cover fixings
- Mounting flanges
- Earth strap kit
- Customised etched certification and identification label
- 2 x M20 bottom clearance holes, 1 entry fitted with certified plastic plug



## PROTECTION RATINGS

Ex e IIC T6 Gb  
Ex nA IIC T6 Gb  
Ex de IIC T6 Gb  
Ex tD A21/22 T80°C  
DIP A21/22 Ta80°C  
Ex t IIIC T80°C Db

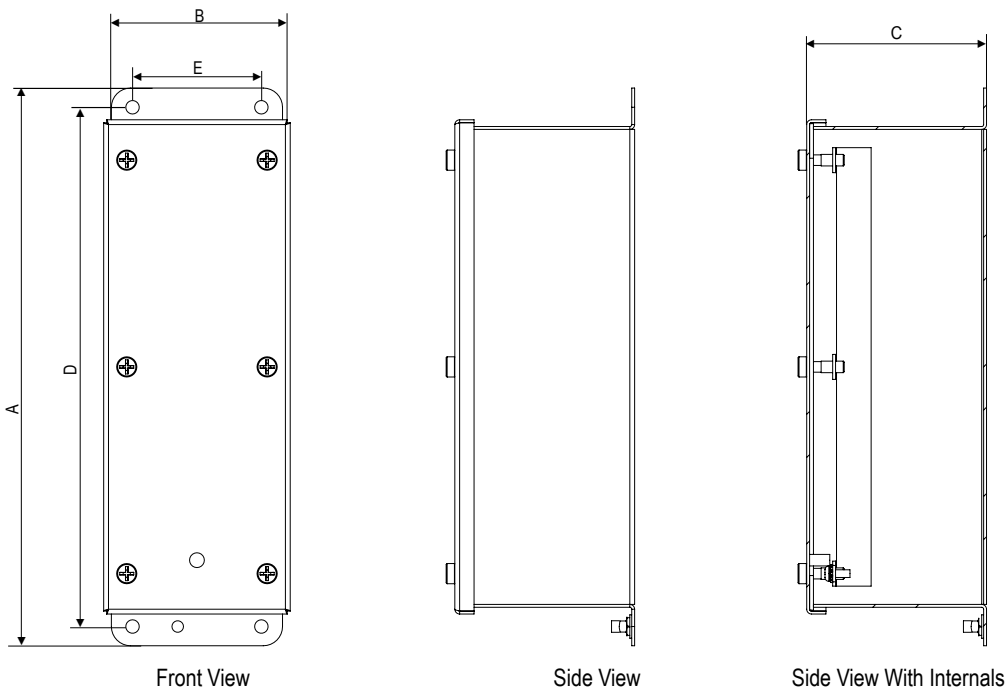
## CERTIFICATION

IECEX ITA 10.0023X

## AMBIENT TEMPERATURE

-20°C ~ +40°C / 55°C option

## TECHNICAL DRAWINGS



# Fixed Lid Control Station

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

**!** These enclosures are only sold with IECEx certified operators fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number		Pole	Dimensions (mm)			Mounting centers		Description
			Height (A)	Width (B)	Depth (C)	Height (D)	Width (E)	
CSS1P1GRN	Pushbutton	—	112	90	90	132	67	1NO+1NC, Start, Green
CSS1P1RED		—	112	90	90	132	67	1NO+1NC, Stop, Red
CSS1P3MH		—	112	90	90	132	67	1NO+2xNC, emergency stop self-locking,
CSS1P2		—	112	90	90	132	67	1NO+1NC, double button, Stop-Start
CSS1P4		—	112	90	90	132	67	1NO+1NC, mushroom head button, Black
CSS2PGPR		—	159	90	90	179	67	1NO+1NC, 2 pushbuttons 1 x Red 1 x Green
CSS2P1GRNLR	Pushbutton & Lamp	—	159	90	90	179	67	1NO+1NC, Green PB Red Lamp
CSS2P1REDLR		—	159	90	90	179	67	1NO+1NC, Red PB Red Lamp
CSS2P1REDLG		—	159	90	90	179	67	1NO+1NC, Red PB Green Lamp
CSS2P1GRNLY		—	159	90	90	179	67	1NO+1NC, Green PB Yellow Lamp
CSS3PGPRLR		—	205	90	90	225	67	1NO+1NC, 2 pushbuttons, 1 x Green 1 + Red, Red Lamp
CSS3PGPRLG		—	205	90	90	225	67	1NO+1NC, 2 pushbuttons, 1 x Green 1 + Red, Green Lamp
CSS1LR	Lamp	—	112	90	90	132	67	AC24~240V, single lamp, Red
CSS1LG		—	112	90	90	132	67	AC24~240V, single lamp, Green
CSS2P2LR	Double Pushbutton & Lamp	—	159	90	90	179	67	1NO+1NC, AC24~240V, double PB Red Green, Lamp Red
CSS2P2LG		—	159	90	90	179	67	1NO+1NC, AC24~240V, double Red Green lamp, Green
CSS1K6	Switch	2-p	112	90	90	132	67	Small handle, Ø39mm
CSS2S6H4		4-p	159	90	90	179	67	2NO+2NC, LL 0

Other configurations are available on request

# GRP Control Station

Zones 1 & 2, 21 & 22



- Suitable for Hazardous environments in the most demanding conditions.
- Enclosures suited for Zones 1 & 2, 21 & 22.
- Light-weight and impact resistant and easy to install.
- Can be customised to suit requirements.
- Flexible configurations.
- High chemical stability.
- Ex de | Ex t D component certified operators and ammeters.
- Manufactured from UV stabilised anti-static construction.
- Surface finish - Textured matt black

Comes standard with:

- Internal brass gland plates  
1 x M20 entry
- Connection joint available to combine two enclosures
- Stainless steel screws
- Customised etched certification and identification label
- Push buttons rated at 16 Amp 250V
- Indicating lamps 1W, 50V-277V AC/DC



## PROTECTION RATINGS

Ex de IIC T6

Ex e IIC T6 with ammeters

Ex tD A21 IP66 T80° with ammeters

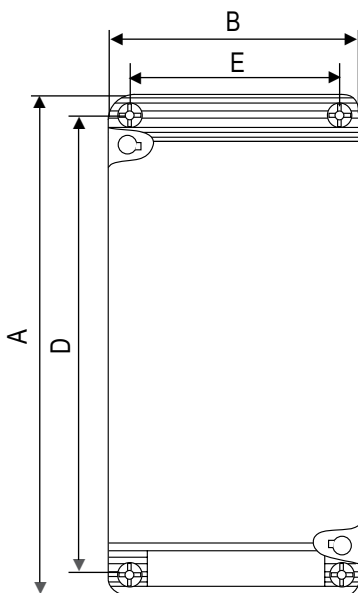
## CERTIFICATION

IECEX CQM 13.0017

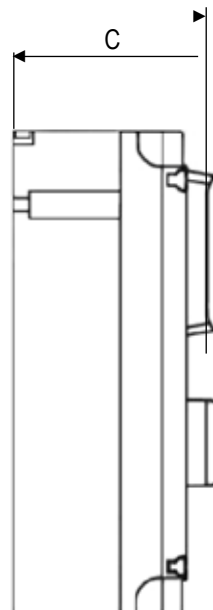
## AMBIENT TEMPERATURE

$-40 < T_a < 40^{\circ}\text{C}$

## TECHNICAL DRAWINGS



Front View



Side View



# GRP Control Station

Zones 1 & 2, 21 & 22



## ORDERING GUIDE

⚠ These enclosures are only sold with IECEx certified operators fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number		Pole	Dimensions (mm)			Mounting centers		Description
			Height (A)	Width (B)	Depth (C)	Height (D)	Width (E)	
CSG1P1GRN	Pushbutton	—	95	80	70	58	73	1NO+1NC, Start, Green
CSG1P1RED		—	95	80	70	58	73	1NO+1NC, Stop, Red
CSG1P3MH		—	95	80	70	58	73	2xNC, emergency stop self-locking, pull to release
CSG1P3MHT		—	95	80	70	58	73	2xNC, emergency stop self-locking, twist to release
CSG1P2		—	95	80	70	58	73	1NO+1NC, double button, Stop-Start
CSG1P4		—	95	80	70	58	73	1NO+1NC, mushroom head button, Black
CSG2PGPR		—	135	80	70	98	73	1NO+1NC, 2 pushbuttons 1 x Red 1 x Green
CSG2P1GRNLR	Pushbutton & Lamp	—	135	80	70	98	73	1NO+1NC, Green PB Red Lamp
CSG2P1REDLR		—	135	80	70	98	73	1NO+1NC, Red PB Red Lamp
CSG2P1REDLG		—	135	80	70	98	73	1NO+1NC, Red PB Green Lamp
CSG2P1GRNLY		—	135	80	70	98	73	1NO+1NC, Green PB Yellow Lamp
CSG3PGPRLR		—	175	80	70	138	73	1NO+1NC, 2 pushbuttons, 1 x Green 1 + Red, Red Lamp
CSG3PGPRLG	—	175	80	70	138	73	1NO+1NC, 2 pushbuttons, 1 x Green 1 + Red, Green Lamp	
CSG1LR	Lamp	—	95	80	70	58	73	AC24~240V, single lamp, Red
CSG1LG		—	95	80	70	58	73	AC24~240V, single lamp, Green
CSG2P2LR	Double Pushbutton & Lamp	—	135	80	70	98	73	1NO+1NC, AC24~240V, double PB Red Green, Lamp Red
CSG2P2LG		—	135	80	70	98	73	1NO+1NC, AC24~240V, double Red Green lamp, Green
CSG3P2LR		—	175	80	70	138	73	1NO+1NC, Double PB Red, Green Lamp Red
CSG1K6	Switch	2-p	95	80	70	58	73	Small handle, Ø39mm
CSG2S6H4		4-p	135	80	70	138	73	2NO+2NC, LL 0

Other configurations are available on request

# GRP Terminal Box

Zones 0 & 1, 2, 21 & 22



- Certified for use in Zones 0, 1, 2 & 21, 22 hazardous areas
- Designed to house terminals.
- For protection of electrical equipment in applications where flammable liquids, gases and vapours or combustible dusts are present.
- Light weight, compact and easy-to-install.
- Cable can connect to terminals from different directions.
- Max rated voltage AC690V.
- Anti-static glass fibre reinforced polyester (GRP) with stainless steel screws.

Comes standard with:

- Internal sealing silicone gasket
- Earth continuity
- Terminals



## PROTECTION RATINGS

Ex ia IIC T6/T5 Ga

Ex ib IIC T6/T5 Gb

Ex eb IIC T6/T5 Gb

Ex tb IIIC T80°C/T95°C Db

*(Refer to certificate for detailed markings)*

## CERTIFICATION

IECEX CNEX 18.0029X

## AMBIENT TEMPERATURE

-40°C up to +40°C / 55°C option

# GRP Terminal Box

Zones 0 & 1, 2, 21 & 22



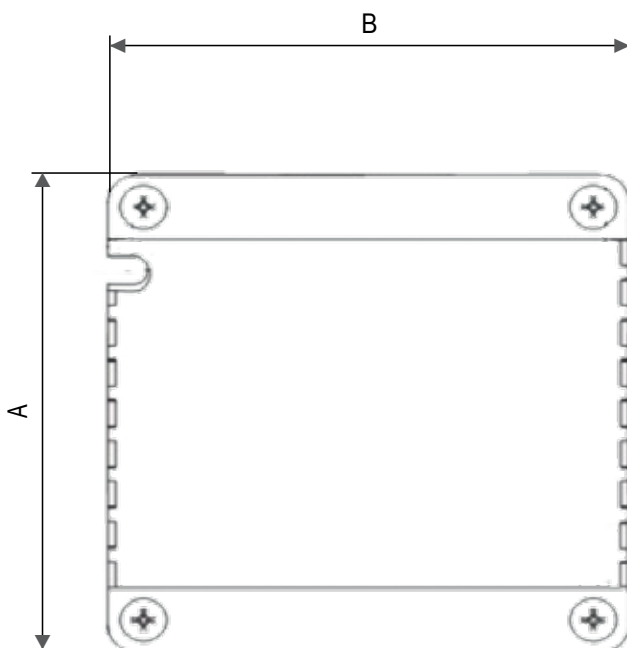
## ORDERING GUIDE

**!** These enclosures are only sold with terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

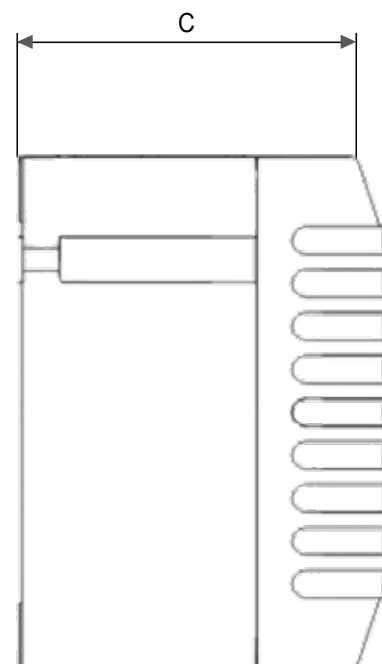
Part Number	Dimensions (mm)			Type	Terminals	Earth Terminals	Cable Entries	Plugs	Weight (kg)
	Height (A)	Width (B)	Depth (C)						
TBGS520E44320 <sup>▲</sup>	95	95	62	Ex e / Ex tb	4 x 2.5mm	2 x 2.5mm	4 x 20mm	3	0.24
TBGS520E44325 <sup>▲</sup>	95	95	62		4 x 2.5mm	2 x 2.5mm	4 x 25mm	3	0.24
TBGS520E64320 <sup>▲</sup>	95	95	62		6 x 2.5mm	2 x 2.5mm	4 x 20mm	3	0.24
TBGS520E64325 <sup>▲</sup>	95	95	62		6 x 2.5mm	2 x 2.5mm	4 x 25mm	3	0.24
TBGS520E88420 <sup>▲</sup>	125	125	69		8 x 2.5mm	4 x 2.5mm	8 x 20mm	4	0.39
TBGS520E88425 <sup>▲</sup>	125	125	69		8 x 2.5mm	4 x 2.5mm	8 x 25mm	4	0.39
TBGS520E18420 <sup>▲</sup>	125	125	69		10 x 2.5mm	4 x 2.5mm	8 x 20mm	4	0.39
TBGS520E18425 <sup>▲</sup>	125	125	69		10 x 2.5mm	4 x 2.5mm	8 x 25mm	4	0.39
TBGS520I44320 <sup>▲</sup>	95	95	62	Ex ia / Ex ib	4 x 2.5mm	2 x 2.5mm	4 x 20mm	3	0.24
TBGS520I44325 <sup>▲</sup>	95	95	62		4 x 2.5mm	2 x 2.5mm	4 x 25mm	3	0.24

<sup>▲</sup>Available on Request

## TECHNICAL DRAWINGS



Front View



Side View

# GRP Terminal Enclosure

Zones 0, 1, 2 & 21, 22



- Suitable for both dust and petrochemical areas where stainless steel is not a requirement.
- Impact resistant and able to withstand high or low temperatures.
- More than one enclosure able to be joined together using certified connecting boards.
- Light weight and flexible in design to accommodate a variety of terminal layouts ranging from 2.5mm to 300mm.
- Can be used with IS terminals.
- Tamper proof internal mounting holes.
- Maximum voltage is 1100V and 400A maximum current.
- Manufactured from
  - Body - GRP UV-stabilised anti-static
  - Surface finish - textured matt black

Comes standard with:

- Earth plate for cable gland entries
- Laser etched certification label

## PROTECTION RATINGS

Ex e II CT6/T5 Gb; Ex tD A21 IP65 T80°C/T95°C  
Ex ia II A/II B /II C T6/T5 Ga; Ex tD A20 IP65 T80°C/T95°C  
Ex ib II A/II B /II C T6/T5 Gb; Ex tD A20 IP65 T80°C/T95°C

## CERTIFICATION

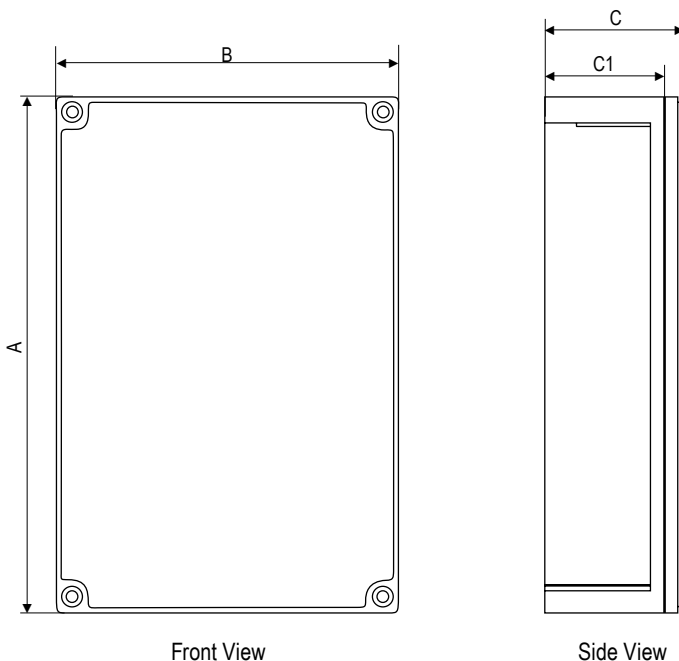
IECEX CQM 13.0016X

## AMBIENT TEMPERATURE

-40°C up to +40°C / 55°C option



## TECHNICAL DRAWINGS



# GRP Terminal Enclosure

Zones 0, 1, 2 & 21, 22



## ORDERING GUIDE

**!** These enclosures are only sold with terminals fitted. Empty enclosures are not available for sale. Contact your local sales engineer to discuss your specific requirements.

Part Number	Dimensions (mm)				Entries			Terminals						
	Height (A)	Width (B)	Depth (C)	(C1)	Size	From side A	From side B	No. of Rows	2.5mm	4mm	6mm	10mm	16mm	32mm
TBG001 <sup>▲</sup>	122	122	96	78	M20	2	2	1	14	12	10			
TBG011 <sup>▲</sup>	170	122	96	78	M20	6	4	1	22	18	12	10	8	4
					M25	4	2							
					M32	2	1							
					M40	2	1							
TBG031 <sup>▲</sup>	220	134	96	78	M20	8	4	1	26	22	16	12	10	8
					M25	5	2							
					M32	3	2							
					M40	3	1							
TBG032 <sup>▲</sup>	220	134	141	123	M20	12	6	1	26	22	16	12	10	8
					M25	8	5							
					M32	6	3							
					M40	4	2							
					M50	2	1							
TBG051 <sup>▲</sup>	275	160	96	78	M20	10	6	1	40	34	25	20	17	13
					M25	10	4							
					M32	5	2							
					M40	4	2							
TBG052 <sup>▲</sup>	275	160	161	143	M20	24	12	1	40	34	25	20	17	13
					M25	15	9							
TBG053 <sup>▲</sup>	275	160	226	143	M32	11	5	1	40	34	25	20	17	13
TBG071 <sup>▲</sup>	352	234	96	78	M20	16	10	1	50	41	31	25	21	18
					M25	10	6							
					M32	7	4							
					M40	5	3							
TBG072 <sup>▲</sup>	352	234	161	143	M40	10	6	1	100	82				
TBG073 <sup>▲</sup>	352	234	231	143	M25	21	12	2	50	40	31	25	21	18
					M32	14	8							
TBG081 <sup>▲</sup>	352	352	96	78	M20	32	18	2	100	82	64	52	44	
					M25	16	16							
					M32	7	7							
					M40	5	5							
TBG082 <sup>▲</sup>	352	352	161	143	M50	4	4	3	150	123				
					M20	32	32							
TBG083 <sup>▲</sup>	352	352	231	143	M25	21	21	2	100	82	64	52	44	
					M32	14	14							
TBG084 <sup>▲</sup>	352	352	201	143	M40	10	10	3	150	123				
TBG092 <sup>▲</sup>	706	352	161	143	M50	4	4	3	300	246				
					M20	64	32							
TBG093 <sup>▲</sup>	706	352	231	143	M25	42	21	1	100	80	64	52	44	28
					M32	28	14							
TBG094 <sup>▲</sup>	706	352	201	143	M40	20	10	2	200	164	128	104	88	56
					M50	12	6							
					M63	8	4	3	300	246				

\*Available on request

\*Larger terminals are available on request.

Note: Above entries and terminal configuration are a guide only and must be validated by manufacturer, please contact B&R sales

## AUSTRALIA

Sales  
T: 1300 Enclosures (1300 362 567)  
E: sales@brenclosures.com.au  
brenclosures.com.au

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51 Stradbroke Street  
Heathwood QLD 4110  
(PO Box 1151)  
Browns Plains BC QLD 4118  
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E: salesqld@brenclosures.com.au

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Townsville Sales & Warehouse  
Unit 4/ 780 Ingham Road  
Mount Louisa, QLD 4814  
(PO Box 7615)  
Garbutt QLD 4814  
T: +61 7 4727 1900  
E: salestvl@brenclosures.com.au

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NSW & ACT Sales & Warehouse  
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Wetherill Park NSW 2164  
T: +61 2 9915 9555  
E: salesnsw@brenclosures.com.au

## NEWCASTLE Distribution

Ross Joice Agencies Pty Ltd  
109-111 Broadmeadow Road  
Broadmeadow NSW 2292  
T: +61 2 4961 4433

## VICTORIA

VIC & TAS Sales & Warehouse  
50-52 Sunmore Close  
Heatherton VIC 3202  
T: +61 3 9552 0552  
E: salesvic@brenclosures.com.au

## TASMANIA Distribution

W P Martin Pty Ltd  
85 Elizabeth Street  
Launceston TAS 7250  
T: +61 3 6331 5545

## SOUTH AUSTRALIA

SA & NT Manufacturing, Sales & Warehouse  
505 Grand Junction Road  
Wingfield SA 5013  
T: +61 8 8417 6222  
E: salessa@brenclosures.com.au

## NORTHERN TERRITORY Distribution

Jewell Distributors Pty Ltd  
Cnr Hidden Valley & Beaton Roads  
Berrimah NT 0828  
T: +61 8 8947 0870

## WESTERN AUSTRALIA

WA Sales Office & Warehouse  
6 Montgomery Way  
Malaga WA 6090  
T: +61 8 6310 4777  
E: saleswa@brenclosures.com.au

## NEW ZEALAND

Sales  
B&R Enclosures Limited  
T: 0800 Enclosures (0800 362 567)  
E: sales@brenclosures.co.nz  
brenclosures.co.nz

## AUCKLAND Distribution

Matchmaster  
Unit 6103 Cryers Road  
East Tamaki Auckland NZ 2013  
T: +64 9 265 2097  
E: sales@brenclosures.co.nz

## CHRISTCHURCH Distribution

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