

EJBE, EJBXE

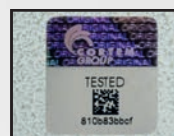
- Zones 1, 2, 21, 22
- Ex d enclosures in stainless steel or aluminium
- Different sizes
- IP66

*Ex d IIB enclosure
in aluminium or
stainless steel*

Fixing brackets

*Ex e enclosure
in stainless steel*

*Enclosures connected
by sealed bushings
and connection flange*



ORIGINAL PRODUCT

Series EJBE, EJBXE Control boards

The control, monitoring and distribution boards in 'Ex de' execution of the EJBE series, in aluminium and stainless steel, and the EJBXE series, in stainless steel, were designed to meet specific installation requirements in environments with an explosion risk. In fact they allow you to install electric components such as switches, inverters, fuses, relays, etc. in 'Ex d' enclosures to develop the control, monitoring and signalling units, housing the auxiliary terminal block in intrinsically safe 'Ex e' enclosures.

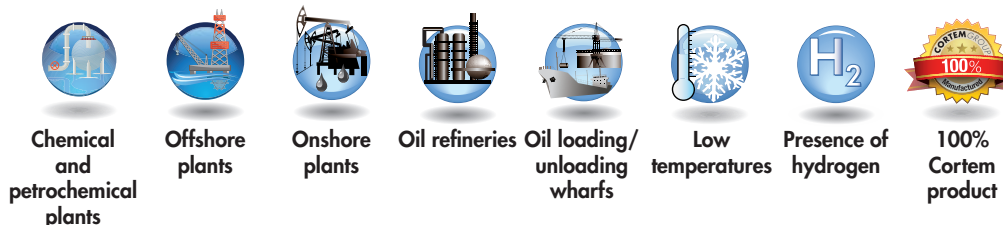
EJBE control boards consist of an 'Ex d' enclosure of the EJB series, in aluminium alloy, and an 'Ex e' enclosure of the CTB series in stainless steel. Whereas EJBXE control boards consist of an 'Ex d' enclosure of the EJBX series and an 'Ex e' enclosure of the CTB series in stainless steel. This fully stainless steel structure is suitable for especially difficult environments, such as marine environments, which require greater protection against corrosion. 'Ex d' enclosures are mechanically linked to 'Ex e' enclosures by means of a flange and electrically linked by Cortem TP sealed bushings in nickel plated brass or in stainless steel. The number and diameter of the sealed bushings varies depending on the size of the enclosures and the number and cross-section of the cables. The IP protection between two enclosures is guaranteed by a flat silicone gasket resistant to acids, to hydrocarbons and to high and low temperatures. The lids of the 'Ex d' enclosures can be supplied with a tempered glass window to see and monitor the electric equipment inside.

Ex de

Cortem Group labels its products with a non-removable adhesive label featuring a hologram and an alphanumerical univocal code, as a safety measure against the illegal sale of fakes so that all the products are guaranteed as original. Non-compliance with the International standards entails serious risks for the environment, especially for those working daily on the plants.



Application sectors:



CERTIFICATION DATA EJBE, EJBXE - EMPTY ENCLOSURES

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Execution:	CE 0722 Ex II 2 GD - Ex de IIB+H2 Gb - Ex tb IIIC Db IP66			
Certificate:	ATEX	CESI 15 ATEX 066U		
	IEC Ex	IECEX CES 15.0018U		
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2014, and EUROPEAN DIRECTIVE 2014/34/UE			
 Ambient temperature:	 -40°C	+80°C 	With polycarbonate indicator lights installed on the lid	
	 -50°C	+80°C 	Without polycarbonate indicator lights installed on the lid	
Degree of protection:	IP66			

This equipment can be used in an environment with an explosive atmosphere and with the presence of hydrogen.

Series EJBE, EJBXE Control boards

Ex de

CERTIFICATION DATA EJBE, EJBXE -ENCLOSURES FOR CONTROL, MONITORING AND SIGNALLING UNITS

Classification:	Group II	Category 2GD		
Installation: EN 60079.14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Execution:	CE 0722  II 2 GD - Ex de IIB+H2 T6,T5 Gb - Ex tb IIIC T85°C, T100°C Db - IP66			
Certificate:	ATEX	CESI 12 ATEX 026		
	TR CU	AVAILABLE	All TR CU certification data can be downloaded from www.cortemgroup.com	
Standards:	CENELEC EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE			
 Ambient temperature:	 -40°C +(40°C)55°C 	With polycarbonate indicator lights installed on the lid		
	 -50°C +(40°C)55°C 	Without polycarbonate indicator lights installed on the lid		
Degree of protection:	IP66			

CERTIFICATION DATA EJBE-...I, EJBXE-...I - ENCLOSURES FOR INTERFACE UNITS

Classification:	Group II	Category 2GD		
Installation: EN 60079-14	zone 1 - zone 2 (Gas)	zone 21 - zone 22 (Dust)		
Execution:	CE 0722  II(1)GD - Ex de [ia Ga] IIB+H2 T... Gb - Ex tb [ia Da] IIIC T...°C Db - IP66			
Certificate:	ATEX	CESI 12 ATEX 026		
	IEC Ex	IECEX CES 12.0019		
Standards:	CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-11: 2012, EN 60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE			
 Ambient temperature:	 -40°C +55°C 		With polycarbonate indicator lights installed on the lid	
	 -50°C +55°C 		Without polycarbonate indicator lights installed on the lid	
Degree of protection:	IP66			

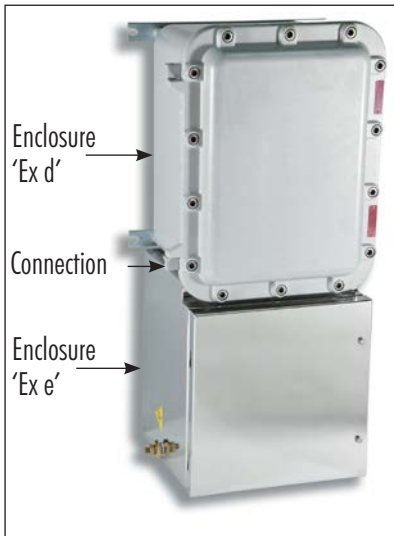
This equipment can be used in an environment with an explosive atmosphere and with the presence of hydrogen.

Stainless steel properties: The stainless steel used by Cortem to produce enclosures and accessories designed for use in cryogenic plants and highly corrosive environments is a very low carbon Iron-Chromium-Nickel-Molybdenum alloy. This alloy is highly resistant to intergranular (or intercrystalline) corrosion and to pitting corrosion. It is classified as an austenitic stainless steel UNI EN 10088-3 X 2 CrNiMo 17-12-2-E or AISI 316L according to the American Iron and Steel Institute. Its main quality is the spontaneous formation of a thin layer of chromium oxide on the surface that protects the metal underneath from corrosion attack. In addition, even if the metal is inadvertently damaged by abrasion or scratches, this film is self-renewing.

Series EJBE, EJBXE Control boards

MECHANICAL CHARACTERISTICS

EJBE



'Ex d' enclosure in aluminium:

Body and lid:

Hinges:

Gasket:

Certification label:

Bolts and screws:

Earth screws:

Mounting brackets:

Coating:

Corrosion Resistance:

Low copper content aluminium alloy

Cast, in stainless steel for new models

Acid, hydrocarbon and high temperature-resistant silicone, located between body and lid

Adhesive label located inside on empty enclosures; aluminium label riveted onto lid on other versions

Stainless steel

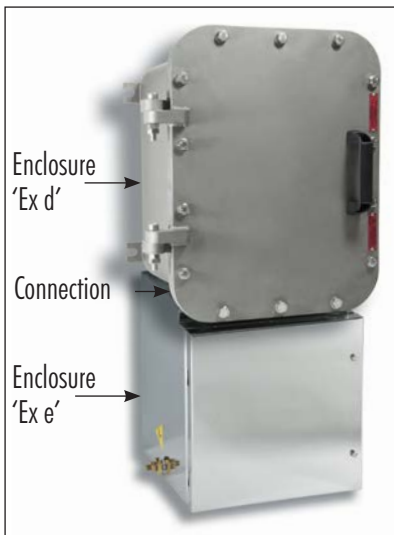
Stainless steel M6. On inside and outside of body and on lid complete with anti-rotation brackets

Electrogalvanised steel

Polyester coating Ral 7035 (light grey)

The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot/humid cycles) and EN60068-2-11 (salt mist tests)

EJBXE



'Ex d' stainless steel enclosure:

Body and lid:

Hinges:

Treatment:

Gasket:

Certification label:

Bolts and screws:

Earth screws:

Mounting brackets:

AISI 316L stainless steel

Lost-wax cast and welded onto enclosure

Quartz sand blasting

Acid, hydrocarbon and high temperature-resistant silicone, located between body and lid

Adhesive label located inside on empty enclosures; stainless steel label riveted onto lid on other versions

Stainless steel

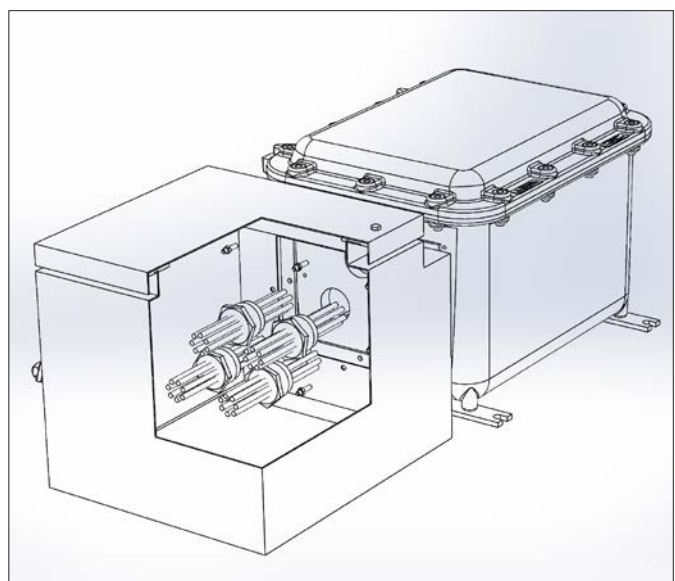
Stainless steel M6. On inside and outside of body and on lid complete with anti-rotation brackets

4 feet welded onto body

ENCLOSURE CONNECTION

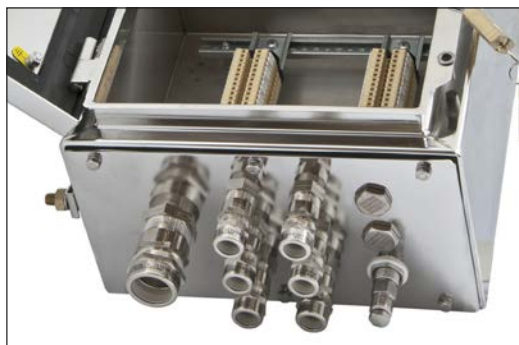


Connection made with Cortem TP sealed bushings in nickel plated brass or stainless steel. The number and diameter of the sealed bushings are determined based on the number and cross-sections of the bushing cables. The IP protection between enclosures is guaranteed by a flat silicone gasket.



Ex de

Series EJBE, EJBXE Control boards



Ex e enclosure:

Body and lid:

AISI 316L stainless steel

Hinges:

AISI 316L stainless steel

Impact protection rating:

IK10

Gasket:

Acid, hydrocarbon and high temperature-resistant silicone, located between body and lid.

Removable gland plates:

Stainless steel thickness 30/10

Bolts and screws:

Stainless steel captive variety

Earth screws:

Stainless steel. On inside and outside of body complete with anti-rotation brackets

ACCESSORIES AVAILABLE / SPECIAL REQUESTS

For aluminium 'Ex d' enclosure:

Internal anti-condensation coating RAL 2004 (pure orange)

External polyester coating in different colour (specify the RAL number)

Rectangular windows on lid (see section Enclosures with windows for inspection and reading instruments)

Internal mounting plate: 25/10-thick aluminium (code BFE-...).

2.5mm-thick electrogalvanised steel (code BFE-...AC)

For stainless steel 'Ex d' enclosure:

Internal mounting plate in 25/10-thick stainless steel (code BFE-...SS). See accessories section

Enclosures with windows on lid for instrument viewing / reading (see section Enclosures with windows for inspection and reading instruments)

External coating in different colour (specify the RAL number)

For "Ex e" enclosure:

Internal anti-condensation coating RAL 2004 (pure orange)

External polyester coating in different colour (specify the RAL number)

Internal mounting plate: stainless steel (code B...-443)

Terminal block mounting rails (code OBO2060/S)

Enclosure with removable gland (e.g. code EJBE-5BS1)

Padlocking system. Padlock (code VIRO552)

ATEX-CERTIFIED TERMINALS: terminals must be chosen from the list of approved manufacturers: Cabur, Phonix, ABB Entelec, Wago, Weidmuller. When supplied as an Ex i enclosure (for low-voltage instruments), it comes with suitably identified blue terminals. DIN rail.

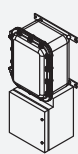
Hole options: through holes with no threading

Only use cable glands that meet ATEX, IECEx directive requirements. Use gaskets and lock nuts on entries to ensure IP66 protection.

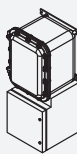
Applications with radio source antennas.

Possibility of using different sealed bushings, certified separately (ext. n.01/13 CESI 12 ATEX 026).

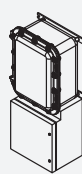
EJBE-... enclosures



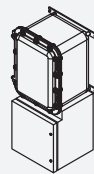
EJBE-3B



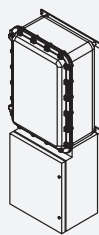
EJBE-3



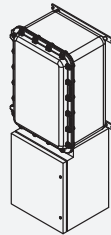
EJBE-4B



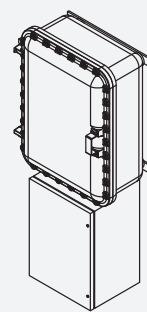
EJBE-4



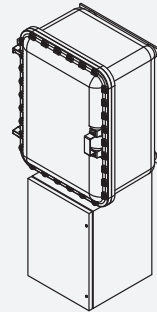
EJBE-5B



EJBE-5

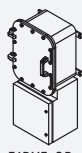


EJBE-6B

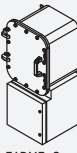


EJBE-6

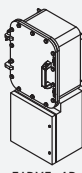
EJBXE-... enclosures



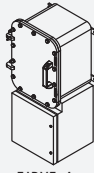
EJBXE-3B



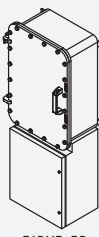
EJBXE-3



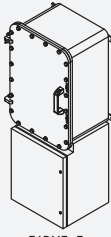
EJBXE-4B



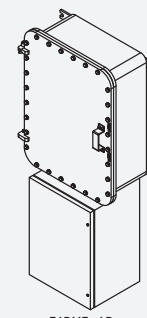
EJBXE-4



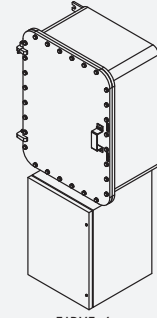
EJBXE-5B



EJBXE-5



EJBXE-6B



EJBXE-6

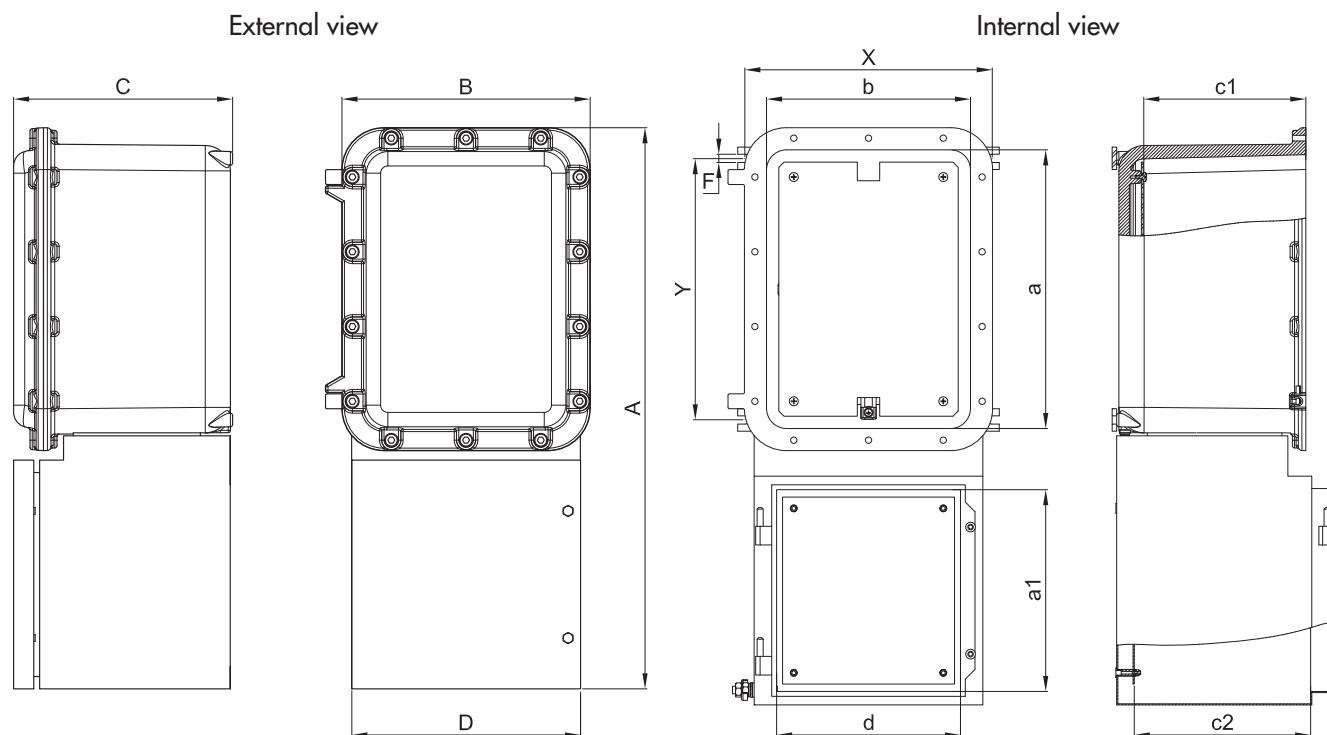
Series EJBE, EJBXE Control boards

ENCLOSURE SELECTION CHART

Code	Outside dimensions				Inside dimensions						Mounting			Weight Kg
	A	B	C	D	a	b	c1	a1	d	c2	X	Y	F	
EJBE-3	661	284	273	260	300	220	214	224	200	215	290	290	9	25
EJBE-3B	661	284	213	260	300	220	154	224	200	155	290	290	9	23
EJBE-4	771	332	293	306	360	260	233	270	246	236	350	330	11	55
EJBE-4B	771	332	223	306	360	260	163	270	246	166	350	330	11	34
EJBE-5	1115	432	335	382	560	360	256	414	322	275	550	430	11	73
EJBE-5B	1115	432	265	382	560	360	186	414	322	205	550	430	11	65
EJBE-6	1527	650	470	450	760	540	353	584	390	405	680	580	14	182
EJBE-6B	1527	650	370	450	760	540	253	584	390	305	680	580	14	169

Ex de

DIMENSIONAL DRAWING

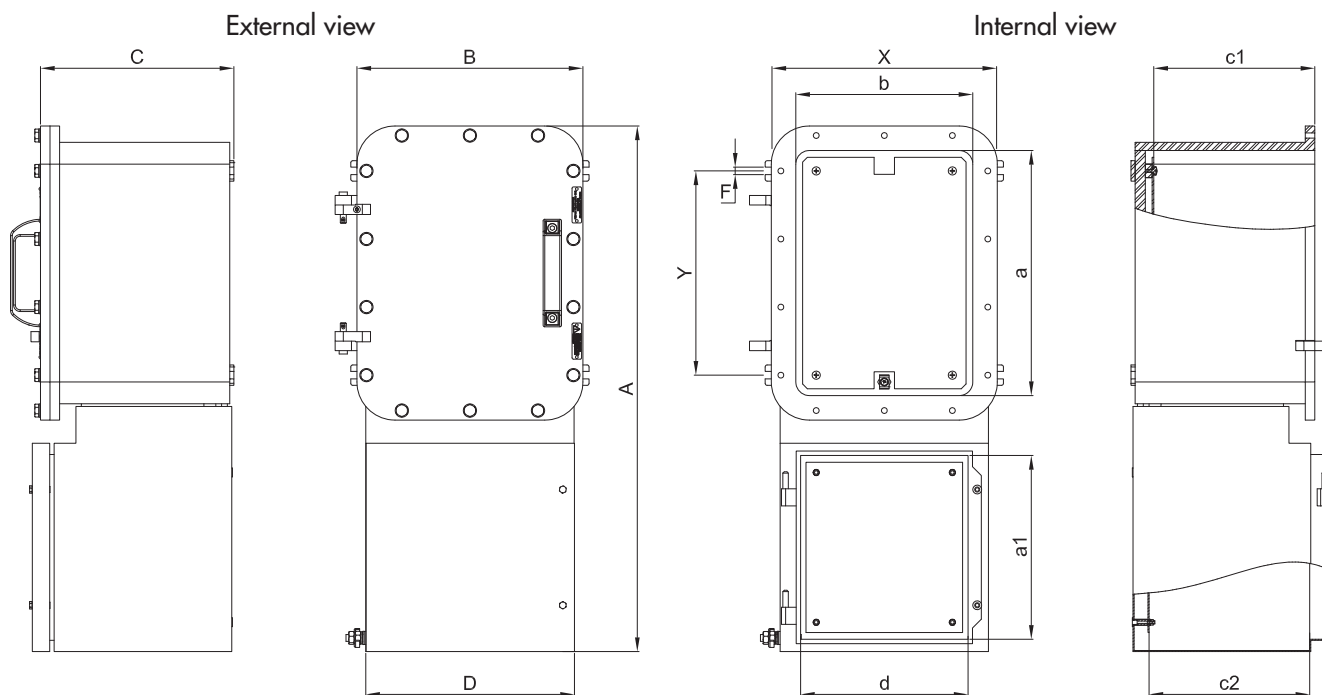


Series EJBE, EJBXE Control boards

ENCLOSURE SELECTION CHART

Code	Outside dimensions				Inside dimensions						Mounting			Weight Kg
	A	B	C	D	a	b	c1	a1	d	c2	X	Y	F	
EJBXE-3	665	284	267	260	300	220	215	224	200	215	290	240	11	63
EJBXE-3B	665	284	207	260	300	220	155	224	200	155	290	240	11	57
EJBXE-4	771	332	287	306	360	260	235	270	246	236	300	330	11	81
EJBXE-4B	771	332	217	306	360	260	165	270	246	166	300	330	11	73
EJBXE-5	1115	432	327	382	632	360	275	414	322	275	500	430	11	147
EJBXE-5B	1115	432	257	382	632	360	205	414	322	205	500	430	11	134
EJBXE-6	1508	640	409	450	860	540	345	584	390	405	680	680	20	297
EJBXE-6B	1508	640	309	450	860	540	245	584	390	305	680	680	20	271

DIMENSIONAL DRAWING



Series EJBE, EJBXE Control boards

LID DRILLING DATA FOR 'Ex d' ENCLOSURE



Ex de

THREAD COMPARISON CHART

D1	ISO 228	G 3/8"	G 1/2"	G 3/4"	-	-	-	-
	ISO 261/965	M16x1.5	M20x1.5	M25x1.5	M32x1.5	M35x1.5	M40x1.5	M42x1.5

TYPE OF ENCLOSURE	HOLE DRILLING IN LID	
	Max. n°. of holes allowed for ribbed lids	Max. n°. of holes allowed for solid lids
EJBE-3 /3B	8	12
EJBE-4 /4B	12	20
EJBE-5 /5B	32	40
EJBE-6 /6B	-	60

TYPE OF ENCLOSURE	HOLE DRILLING IN LID
	Max. n°. of holes allowed
EJBXE-3 /3B	12
EJBXE-4 /4B	17
EJBXE-5 /5B	40
EJBXE-6 /6B	70

Notes:

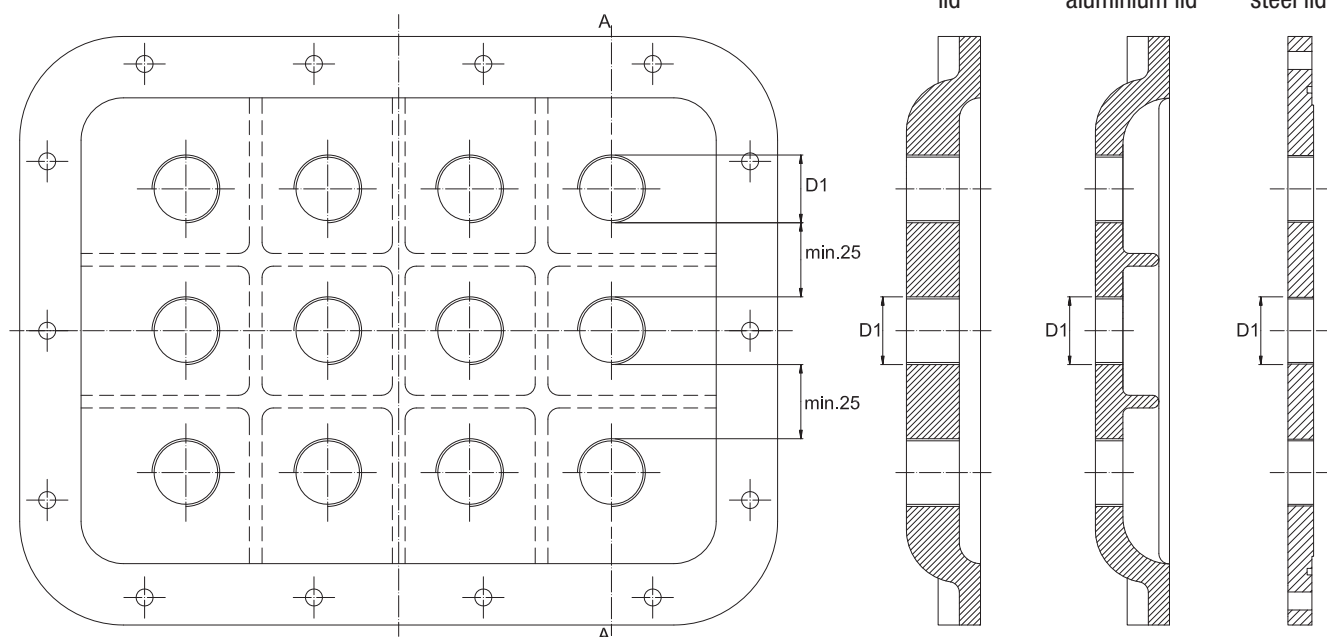
- The standard featured is for illustrative purposes only since it has been designed exclusively for M42 holes.
- Standard holes refer to mounting of Cortem control and signalling devices.
- 3/8" Ø holes for Cortem std. side-mounted handles centre-to-centre distance >70mm.
- 1/2" Ø holes for Cortem std. heavy-duty series side-mounted handles centre-to-centre distance >120mm.

SECT. A - A

Solid aluminium lid

ribbed aluminium lid

Stainless steel lid



Series EJBE, EJBXE Control boards

BODY DRILLING DATA FOR 'Ex e' ENCLOSURE

THREAD COMPARISON CHARTS

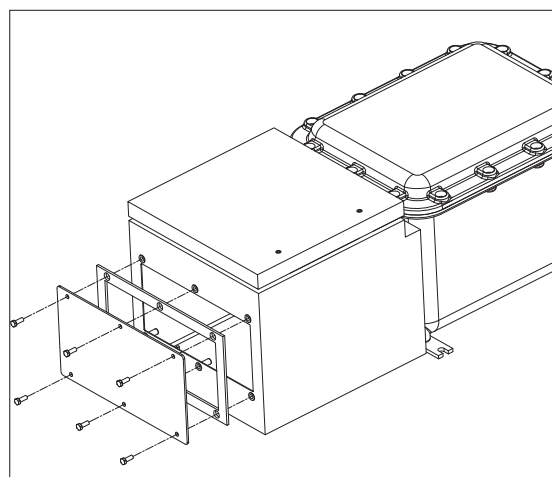
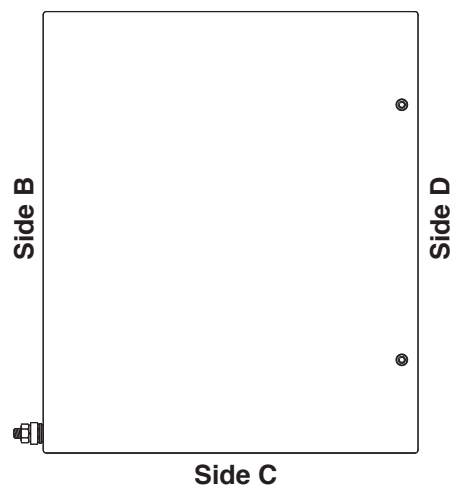
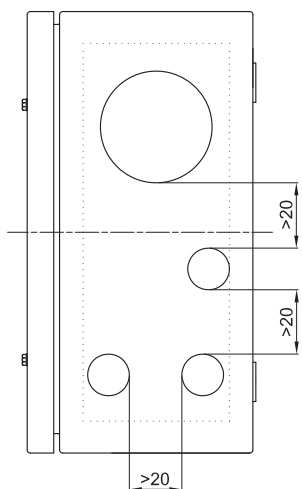
D	01	1	2	3	4	5	6	7
Thread diameter								
ISO 261/965	16x1.5	20x1.5	25x1.5	32x1.5	40x1.5	50x1.5	63x1.5	75x1.5
Through hole	Ø17	Ø20.5	Ø25.5	Ø32.5	Ø40.5	Ø50.5	Ø63.5	Ø75.5

As required by the current standard, holes can be drilled by Cortem or by authorised partners who hold a production notification in accordance with ATEX Directive .



Ex de

TYPE OF ENCLOSURE	'Ex e' ENCLOSURE BODY DRILLING																	
	Side C									Sides B and D								
	Drilling area mm	MAXIMUM QUANTITY PER HOLE TYPE								Drilling area mm	MAXIMUM QUANTITY PER HOLE TYPE							
		01	1	2	3	4	5	6	7		01	1	2	3	4	5	6	7
EJB..E-3B	215x80	20	10	10	4	3	2	0	0	115x80	10	6	3	2	1	1	0	0
EJB..E-3	215x125	28	21	15	8	6	3	0	0	115x125	20	10	6	4	2	1	0	0
EJB..E-4B	260x80	24	16	12	5	4	3	0	0	215x80	24	10	10	4	3	2	0	0
EJB..E-4	260x125	32	24	12	10	4	3	0	0	215x125	32	15	10	8	3	2	0	0
EJB..E-5B	337x80	22	18	14	6	5	4	3	0	337x80	22	18	14	6	5	4	3	0
EJB..E-5	337x124	44	27	21	12	8	4	3	0	337x124	44	27	21	12	8	4	3	0
EJB..E-6B	404x80	26	22	16	7	6	5	4	0	404x80	26	22	16	7	6	5	4	0
EJB..E-6	404x124	52	33	24	14	12	5	4	3	404x124	52	33	24	14	12	5	4	3



TYPE OF ENCLOSURE	REMOVABLE GLAND DRILLING								
	Drilling area mm	MAXIMUM QUANTITY PER HOLE TYPE							
		01	1	2	3	4	5	6	7
EJB..E-3BS1	214x80	10	10	8	4	3	2	-	-
EJB..E-3S1	214x80	10	10	8	4	3	2	-	-
EJB..E-4BS1	258x124	18	18	13	8	4	3	-	-
EJB..E-4S1	258x124	18	18	13	8	4	3	-	-
EJB..E-5BS1	334x124	24	24	20	12	8	4	3	-
EJB..E-5S1	334x124	24	24	20	12	8	4	3	-
EJB..E-6BS1	404x124	29	29	23	14	10	5	4	3
EJB..E-6S1	404x124	29	29	23	14	10	5	4	3

Cortem manufactures any type of custom-made products according to customer specifications and in compliance with the certification data.

Series EJBE, EJBXE Control boards

'Ex d' ENCLOSURES ELECTRICAL FEATURES

Rated voltage:	max. 690 Vac
Rated current:	50 A
Rated frequency:	50 ÷ 60Hz
Max. wattage for lamps:	5 W (for Ta +40°C) / 3 W (for Ta +55°C)

Code		Maximum power dissipation (Watts) with ambient temperature of +40°C			Maximum power dissipation (Watts) with ambient temperature of +55°C		
		T6 class without indicator lights. Only indicator LEDs are allowed.	T5 class with indicator lights and/or LEDs	T5 class without indicator lights. Only indicator LEDs are allowed.	T6 class without indicator lights. Only indicator LEDs are allowed.	T5 class with indicator lights and/or LEDs	T5 class without indicator lights. Only indicator LEDs are allowed.
EJBE-3	EJBXE-3	75	75	110	56	56	82
EJBE-3B	EJBXE-3B	55	55	80	40	40	60
EJBE-4	EJBXE-4	100	100	175	75	75	130
EJBE-4B	EJBXE-4B	75	75	130	56	56	100
EJBE-5	EJBXE-5	210	210	315	160	160	235
EJBE-5B	EJBXE-5B	170	170	250	130	130	190
EJBE-6	EJBXE-6	600	600	910	460	460	680
EJBE-6B	EJBXE-6B	490	490	720	370	370	550

Features of equipment that can be installed in enclosures to produce control and monitoring units.

Table of electrical features of components that can be installed in enclosures to produce control, monitoring and signalling units. (The values refer to the catalogues of the leading manufacturers of electrical/electronic components available on the market)

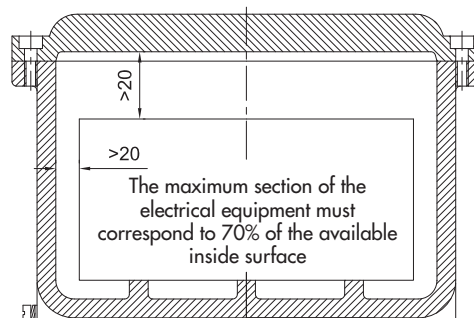
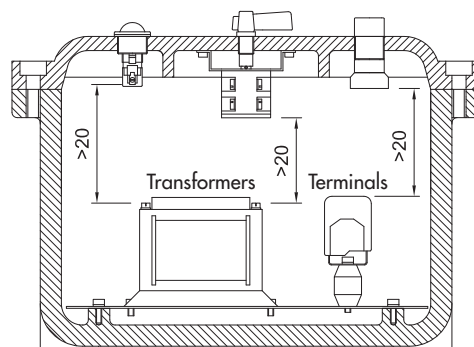
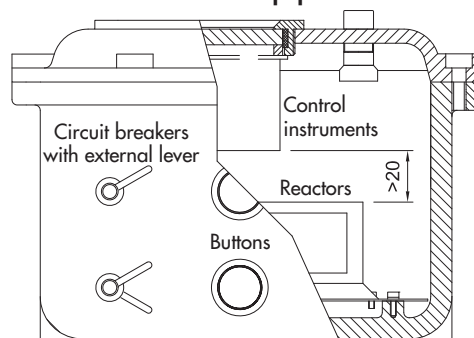
TYPE OF COMPONENT	Max V (Volts)	Max I. (Amperes)	Max power (Watts)
Analogue and digital instruments	660	5	10
Electronic inverters/reactors	400	-	10
PLCs. Multiplexers and amplifiers	240	-	80
Testing and measuring devices	240	-	100
Circuit breakers	660	50	-
Fuses	660	50	-
Relays	500	10	12
Electronic control devices	660	-	100
Contactors	660	650	30
Timers	240	10	5
Twilight relays	240	-	2
Capacitors	660	-	-
Transformers	660	-	200
Resistors	220	-	300
Terminals	660	-	-
Reactors	220	7.5	40

Minimum air gap between components

Component voltage (V ac)	Min. air gap (mm)
60 - 250	6
250 - 380	8
380 - 500	10
500 - 660	12
660 - 1000	20

Component voltage (V dc)	Min air gap (mm)
12 - 250	6

Minimum installation distances electrical equipment

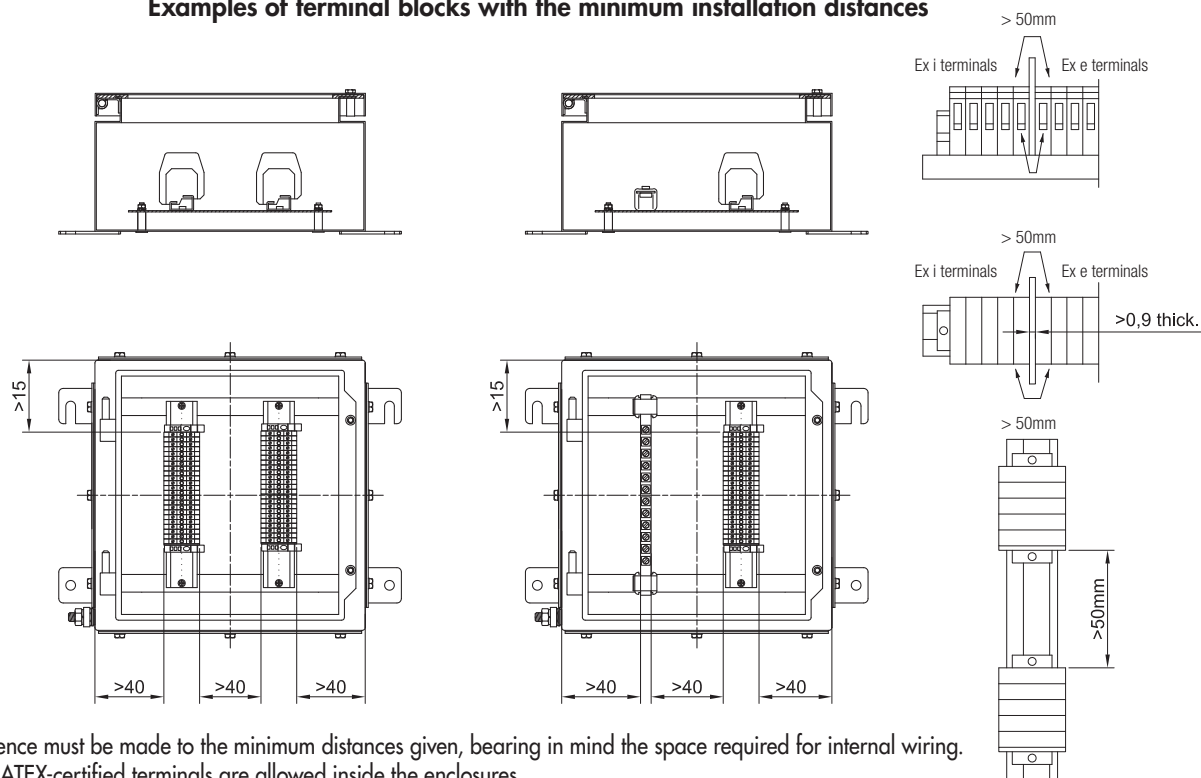


Series EJBE, EJBXE Control boards

'Ex e' ENCLOSURES ELECTRICAL FEATURES

Rated voltage: max. 690 Vac
Rated current: 50 A
Terminal cross-sectional area from 1.5mm² to 16mm²

Examples of terminal blocks with the minimum installation distances



Note:

Reference must be made to the minimum distances given, bearing in mind the space required for internal wiring.

Only ATEX-certified terminals are allowed inside the enclosures.

Ex i rated terminals must be suitably labelled or coloured differently so they are clearly identifiable.

Ex i cable entries must be suitably identified with either labelling or blue markings on cable glands or the enclosure's sides.

TYPE OF ENCLOSURE	Terminals installed vertically							Maximum power dissipation	
	WDU 1.5	WDU 2.5	WDU 4	WDU 6	WDU 10	SAK 2.5	SAK 4.0	T6 - Max amb. T 55°C	T6 - Max amb. T 40°C o T5 - Max amb. T 55°C
EJBE-3 /3B	2x27	2x27	2x23	1x17	1x17	1x10	1x10	4.0 W	13.0 W
EJBXE-3 /3B									
EJBE-4 /4B	2x36	2x36	2x30	2x23	2x18	2x30	2x30	4.1 W	18.5 W
EJBXE-4 /4B									
EJBE-5 /5B	3x67	2x67	2x56	2x42	2x33	3x56	3x56	5.8 W	34.0 W
EJBXE-5 /5B									
EJBE-6 /6B	4x99	4x99	3x83	3x62	3x49	4x83	3x83	7.5 W	55.0 W
EJBXE-6 /6B									

TYPE OF ENCLOSURE	Terminals installed horizontally							Maximum power dissipation	
	WDU 1.5	WDU 2.5	WDU 4	WDU 6	WDU 10	SAK 2.5	SAK 4.0	T6 - Max amb. T 55°C	T6 - Max amb. T 40°C o T5 - Max amb. T 55°C
EJBE-3 /3B	2x27	2x27	2x23	1x17	1x13	2x23	2x23	4.0 W	13.0 W
EJBXE-3 /3B									
EJBE-4 /4B	2x36	2x36	2x30	2x23	2x18	2x30	2x30	4.1 W	18.5 W
EJBXE-4 /4B									
EJBE-5 /5B	4x51	3x51	3x42	3x32	3x25	4x42	4x42	5.8 W	34.0 W
EJBXE-5 /5B									
EJBE-6 /6B	5x62	5x62	5x52	4x39	4x31	5x52	5x52	7.5 W	55.0 W
EJBXE-6 /6B									

The data in the table are given as a rough guide only based solely on the size of the enclosures and the space taken up by the terminals.

Series EJBE, EJBXE Control boards

Tables showing maximum number of conductors

 : In this unfilled area, provided the relevant instructions are followed and the permitted measurements given for devices housed inside the enclosure are complied with, any number of terminals can be added up to the space limit of the box.

 : Wiring in this unfilled area is not covered by this certification.

EJBE-3 /3B EJBXE-3 /3B (j.b. 'Ex e')

Current (A)	Cross-section in mm ²							
	1.5	2.5	4	6	10	16	25	35
8	97							
10	47							
12		72						
14		43						
16		31	123					
18			49					
20			35					
23				54				
25				39				
32					66			
35					38			
45						65		
50						31		
58								
63							51	
68								
75								
80								58

EJBE-4 /4B EJBXE-4 /4B (j.b. 'Ex e')

Current (A)	Cross-section in mm ²							
	1.5	2.5	4	6	10	16	25	35
8	105							
10	51							
12		77						
14		46						
16		34	131					
18			52					
20			38					
23				57				
25				41				
32					71			
35					40			
45						69		
50						33		
58								
63							55	
68								
75								
80								62

EJBE-5 /5B EJBXE-5 /5B (j.b. 'Ex e')

Current (A)	Cross-section in mm ²							
	1.5	2.5	4	6	10	16	25	35
8	121							
10	58							
12		88						
14		53						
16		39	151					
18			60					
20			44					
23				66				
25				48				
32					82			
35					46			
45						80		
50						38		
58								
63							63	
68								
75								
80								71

EJBE-6 /6B EJBXE-6 /6B (j.b. 'Ex e')

Current (A)	Cross-section in mm ²							
	1.5	2.5	4	6	10	16	25	35
8	135							
10	65							
12		99						
14		60						
16		43	169					
18			67					
20			49					
23				74				
25				53				
32					91			
35					52			
45						89		
50						43		
58								
63							71	
68								
75								
80								79

Series EJBE, EJBXE Control boards

FEATURES OF EJBE-...I, EJBXE-...I ENCLOSURES FOR INTERFACE UNITS

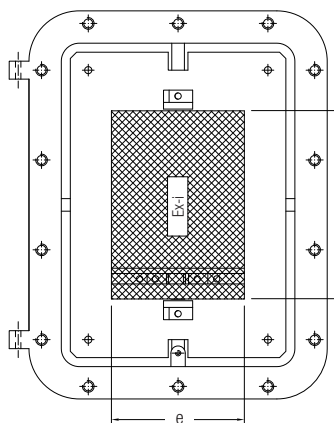
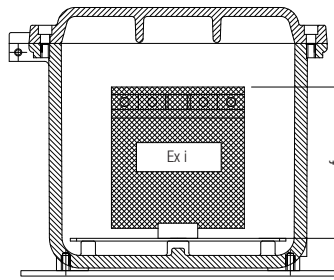
These models are suited to be fitted inside active and passive barriers certified individually with protection '[Ex ia] + H2' suitable for gas groups IIB and IIC.

The active or passive barriers can be installed inside aluminium 'Ex d' (EJBE-...I) or stainless steel (EJBXE-...I) enclosures. The entire assembly complete with interface unit will then have 'Ex de [ia] IIB + H2' execution.

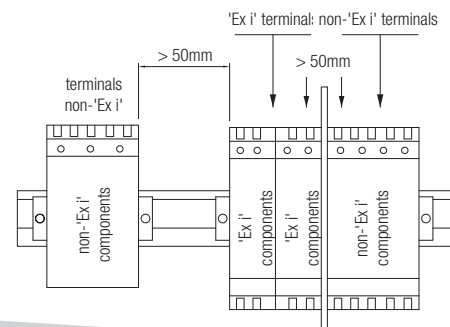
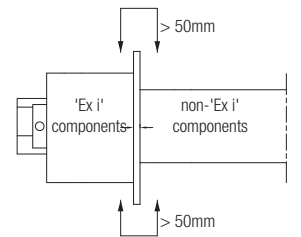
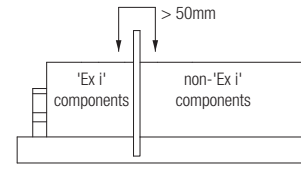
The active and passive barriers allowed to be installed inside the enclosure must have the ATEX certification in compliance with standards EN60079-0, EN60079-11 or IECEx in compliance with standards IEC60079-0 and IEC60079-11 and must respect the distances shown in the figure.

Maximum dimensions of 'Ex ia' equipment that can be installed inside the enclosures.

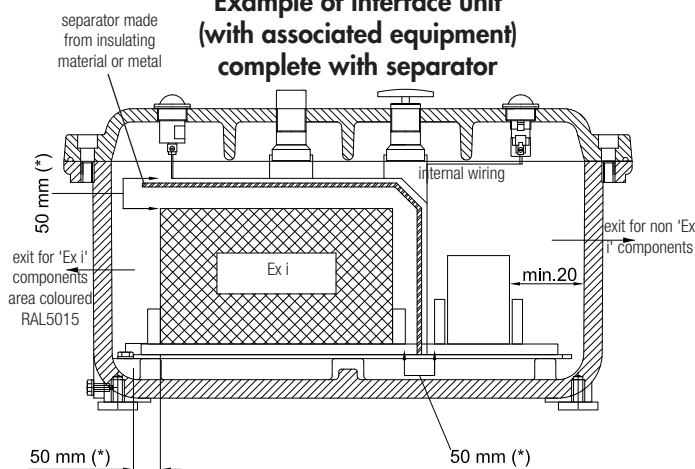
	d	e	f
EJBE-3I	150	140	170
EJBE-3BI	150	140	110
EJBE-4I	280	180	190
EJBE-4BI	280	180	120
EJBE-5I	480	280	220
EJBE-5BI	480	280	150
EJBE-6I	670	450	300
EJBE-6BI	670	450	200
EJBXE-3I	150	140	175
EJBXE-3BI	150	140	115
EJBXE-4I	280	180	195
EJBXE-4BI	280	180	125
EJBXE-5I	480	280	235
EJBXE-5BI	480	280	165
EJBXE-6I	680	460	305
EJBXE-6BI	680	460	205



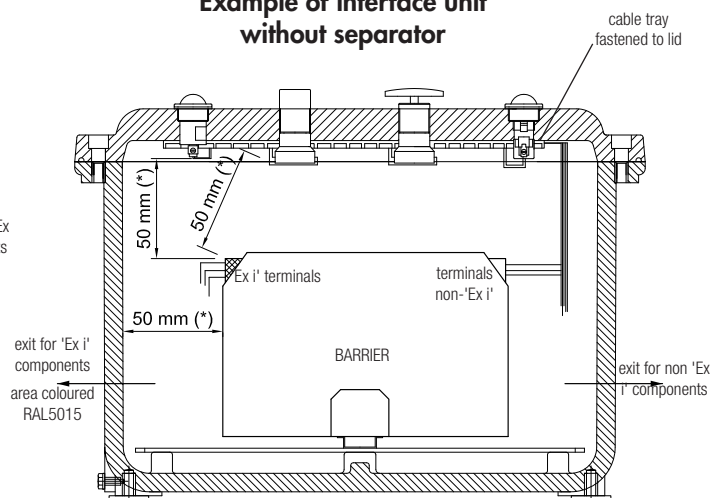
Examples of installation of associated equipment - minimum distances.



Example of interface unit (with associated equipment) complete with separator



Example of interface unit without separator



NOTES:

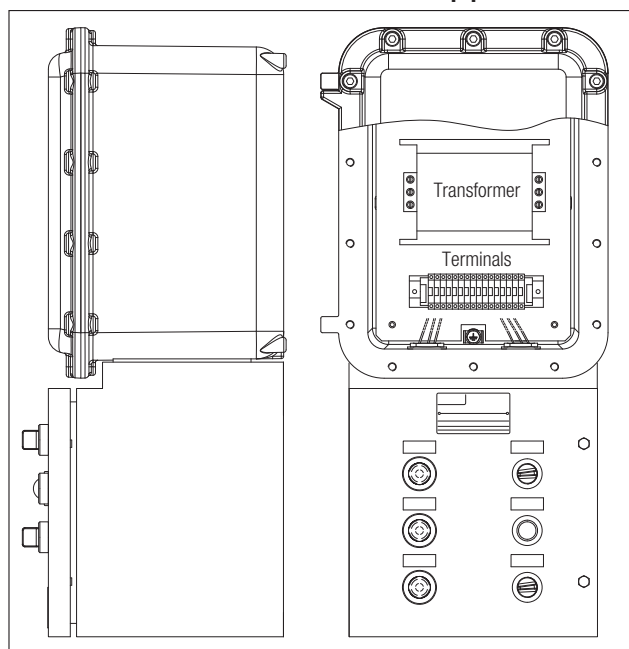
(*) 50 mm is the minimum safe distance between 'Ex i' components and non-'Ex i' components (and/or conducting parts).

- The maximum voltage entering barriers on non-'Ex i' circuits must be less than 250 V.

- Further useful information regarding installation and wiring of these components are contained in the file of the EJB series enclosures.

Series EJBE, EJBXE Control boards

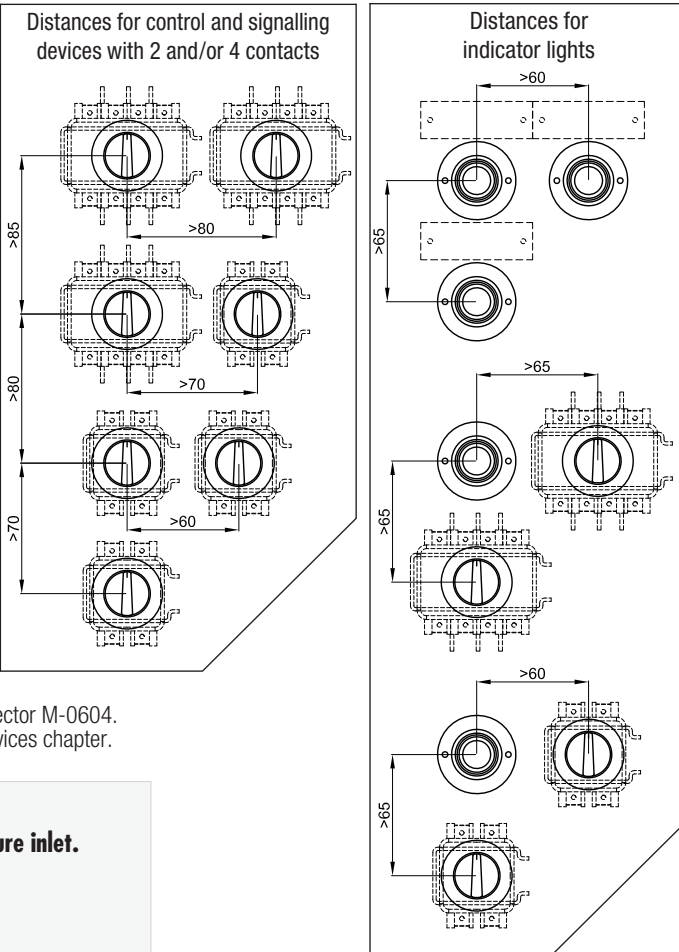
Example of control board with Cortem control and signalling devices installed on 'Ex e' enclosure an internal electrical equipment



Notes:

Option of using up to 4 contacts per device for pushbutton M-0603 and selector M-0604.
For more information, refer to the Ex e control, monitoring and signalling devices chapter.

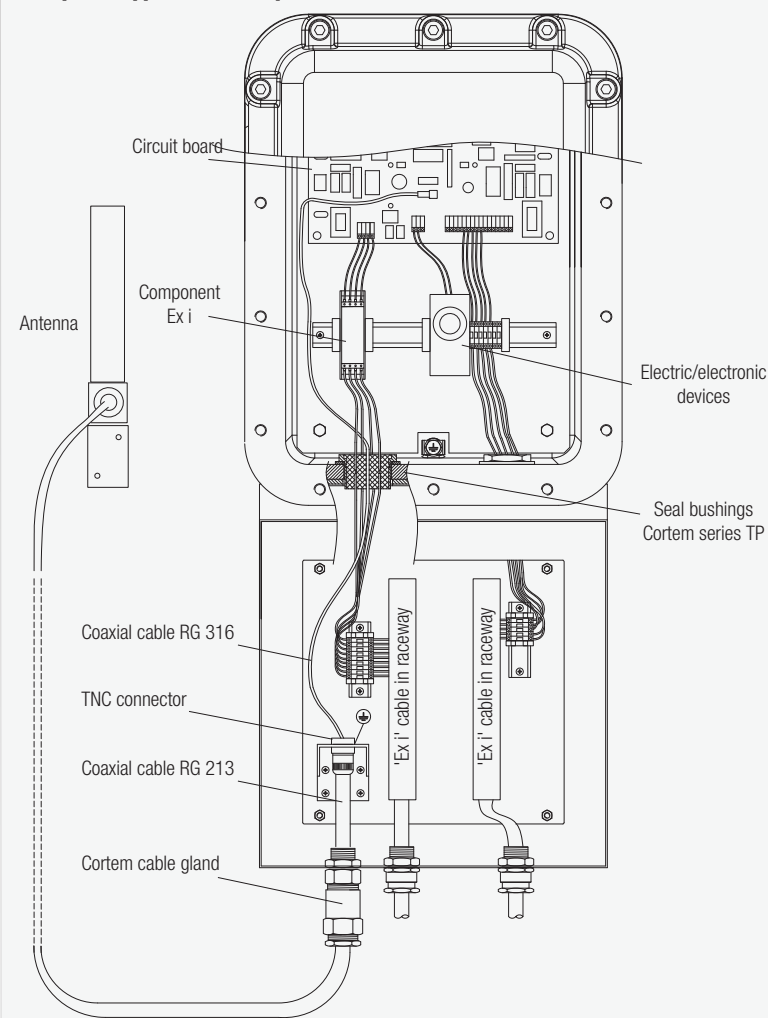
MINIMUM DISTANCES BETWEEN CORTEM 'Ex e' CONTROL AND SIGNALLING DEVICES FOR PUSHBUTTON PANELS



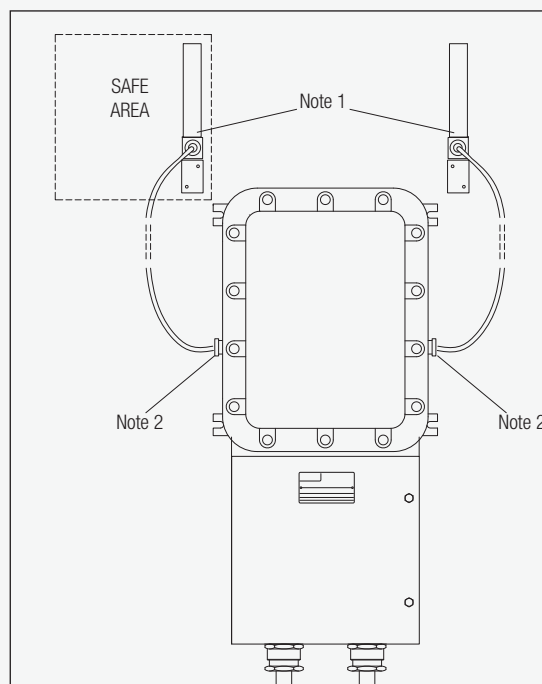
Ex de

ANTENNAS AND RADIO SOURCES

Example of typical antenna plus coaxial cable connection at enclosure inlet.



Execution with cable inlet in 'Ex d' enclosure



Notes:

1. The antennas used must comply with indications in EN / IEC 60079-0 or be installed in a safe area.
2. The accessories used for cable inlet must comply with standards EN / IEC 60079-0, EN / IEC 60079-1 and EN / IEC 60079-14.

FEATURES OF ENCLOSURES WITH EJBE WINDOW

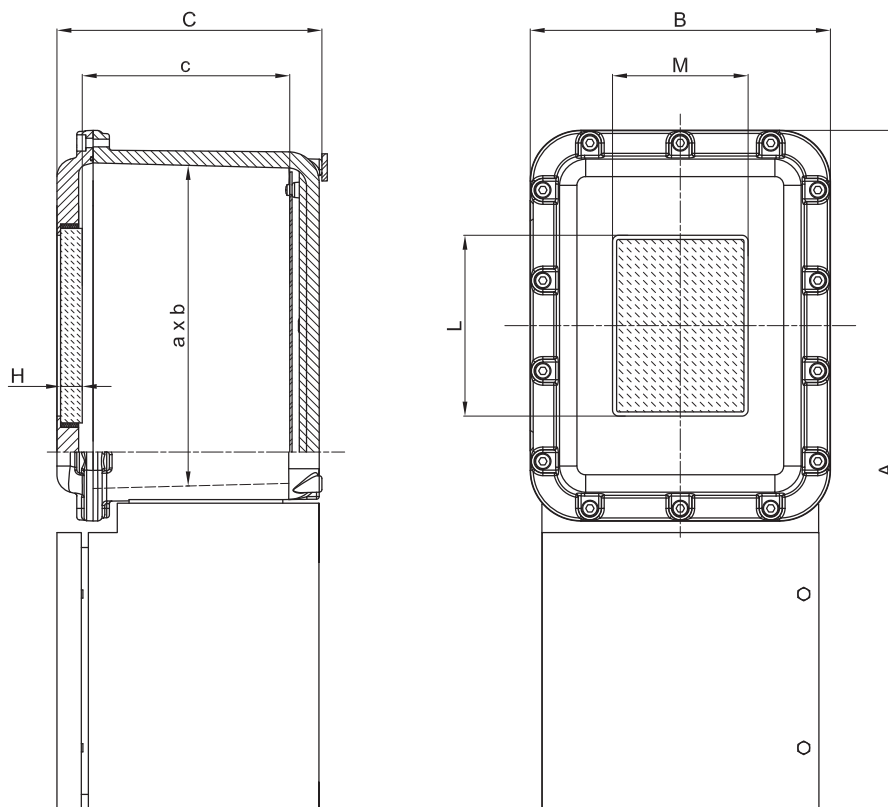
According to customer requirements, standard windows are available with tempered glass for the different types of 'Ex d' aluminium enclosures used for example for viewing analogue or digital instruments, various types of indicators or actuators from touch screen keyboards.

DIMENSIONAL DRAWING OF ENCLOSURES WITH WINDOW

Position of standard window in middle.

Non-standard window positioning or dimensions on request

Several windows can also be made on the same lid, always keeping in mind the maximum size MxL.



Code	Outside dimensions			Inside dimensions			Window size		
	A	B	C	a	b	c	H	M	L
Enclosures with standard machined windows									
EJBE-3/2015	661	284	278	300	220	209	15	150	200
EJBE-3B/2015	661	284	218	300	220	149	15	150	200
EJBE-4/3020	771	332	299	360	260	229	15	200	300
EJBE-4B/3020	771	332	229	360	260	159	15	200	300
EJBE-5/3020	1115	432	341	560	360	271	15	200	300
EJBE-5B/3020	1115	432	271	560	360	201	15	200	300
EJBE-6/3020	1527	650	480	760	540	348	15	200	300
EJBE-6B/3020	1527	650	380	760	540	248	15	200	300

FEATURES OF ENCLOSURES WITH EJBE WINDOW

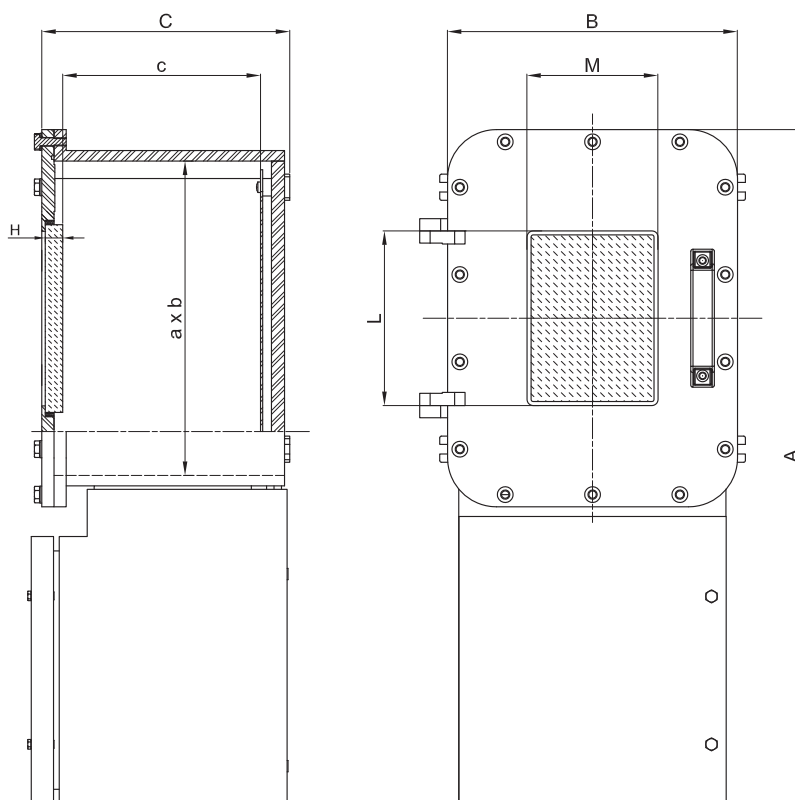
According to customer requirements, standard windows are available with tempered glass for the different types of 'Ex d' aluminium enclosures used for example for viewing analogue or digital instruments, various types of indicators or actuators from touch screen keyboards.

DIMENSIONAL DRAWING OF ENCLOSURES WITH WINDOW

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Code	Outside dimensions			Inside dimensions			Window size		
	A	B	C	a	b	c	H	M	L
Enclosures with standard machined windows									
EJBXE-3/2015	665	284	267	300	220	200	15	150	200
EJBXE-3B/2015	665	284	207	300	220	140	15	150	200
EJBXE-4/3020	771	332	287	360	260	220	15	200	300
EJBXE-4B/3020	771	332	217	360	260	150	15	200	300
EJBXE-5/3020	1115	432	327	560	360	260	15	200	300
EJBXE-5B/3020	1115	432	257	560	360	190	15	200	300
EJBXE-6/3020	1508	640	409	760	540	338	15	200	300
EJBXE-6B/3020	1508	640	309	760	540	238	15	200	300