

**E* Series Explosion proof appliance cabinet
Operation manuals**

Version: V0

1. Overview

The E* Series Explosion proof appliance cabinet have multiple functions, for example: achieve functions such as wiring, busbar distribution, power distribution, main power cut-off, secondary circuit control, communication, etc. The enclosure materials include aluminum alloy, stainless steel and carbon steel, and each material comes in various enclosure sizes. The interior of the box can accommodate various electrical components, for example: power distribution components, control components, communication components, display components or measurement components etc, as well as terminal or copper busbar etc, certified intrinsically safe circuits or safety barriers can also be fitted. The cover can be equipped with button, indicator, operating handle and actuator or windows (rectangular windows or circular windows) etc. and the box can have various types of flameproof threaded holes. Different functions can be achieved based on the electrical components installed inside, and they can be used in various application scenarios, including: EJB series explosion-proof Junction Box/Communication Box, ECP series explosion-proof Control Panel and EDB series explosion-proof Distribution Board. Internal and external earthing screws are provided on these enclosures. The product fulfills the requirements of IP66 according to IEC 60529.

This series of products meets the following standards:

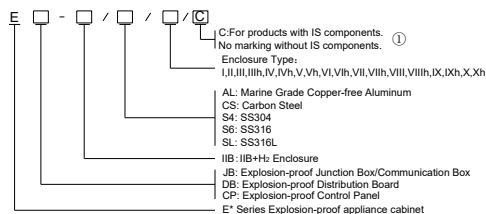
IEC 60079-0 Explosive atmospheres - Part 0: Equipment – General requirements.

IEC 60079-1 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

IEC 60079-11 Explosive atmospheres- Part 11: Equipment protection by intrinsic safety "i".

IEC 60079-31 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t".

2. Model Definition



Note ①: Only for products with type EJB*/*/*/C series Explosion-proof Junction Box and

EJB*/*/*/C Communication Box.

3. Technical Parameter

3.1 Rated Voltage: Max.1000 AC; Max.1500V DC;

3.2 Rated Current: Max.1000A

3.3 For output peak voltage of optional ignition transformer: up to 25 kV

3.4 IP Rating: IP66

3.5 Ambient Temperature:

-60°C~+40°C/60°C for product without intrinsic safety module

-40°C~+40°C/60°C for product with intrinsic safety module

3.6 Ex marking:

Ex db IIB+H₂ T6/T5/T4 Gb

Ex db ia IIB+H₂ T6 Gb

Ex db ia ib [ia Ga] IIB+H₂ T6 Gb

Ex db ib [ia Ga] IIB+H₂ T6 Gb

Ex tb IIIC T80°C/T95°C/T130°C Db

Ex II 2 G Ex db IIB+H₂ T6/T5/T4 Gb

Ex II 2 G Ex db ia IIB+H₂ T6 Gb

Ex II 2 G Ex db ia ib [ia Ga] IIB+H₂ T6 Gb

Ex II 2 G Ex db ib [ia Ga] IIB+H₂ T6 Gb

Ex II 2 D Ex tb IIIC T80°C/T95°C/T130°C Db

3.7 Certificate No.: IECEx CQM 26.0021X;ACE26ATEX039X

3. Enclosure and power consumption

The enclosure and power consumption are shown in tables 1

Tables 1(SS304, SS316, SS316L, carbon steel)

N0	Code	Max power dissipation Ta=+40°C			Max power dissipation Ta=+60°C		
		T4/T130 °C	T5/T95 °C	T6/T80 °C	T4/T130 °C	T5/T95 °C	T6/T80 °C
1	I	135.3	82.8	50.8	104.6	54.5	24.8
2	III	204.6	115	69.8	152.7	77.8	34.1
3	IIIh	233.2	147	97.3	183.8	92.3	43.7
4	IV	241.5	153	102.9	187.9	99.5	47.6
5	IVh	252.6	162	119.5	192.8	101.3	49.8
6	V	258.6	169	121.3	194.1	103.2	51.5
7	Vh	312.7	194.1	143.6	243.7	126.6	59.8
8	VI	350.5	218.6	150.2	277.5	132.3	53.9
9	VIh	364.7	227.2	159.3	287.3	141.2	62.1
10	VII	385.5	242.3	172.4	295.8	150.8	71.9
11	VIIh	391.2	243.9	174.7	297.2	151.3	72.8
12	VIII	890.4	536.5	370.6	710.3	356.3	174.5
13	VIIIh	894.7	539.2	372.8	711.8	359.4	175.9
14	IX	995.8	636.5	450.6	820.3	415.8	213.4
15	IXh	997.9	638.8	452.7	823.5	417.8	214.6
16	X	1275.7	833.5	523.9	995.5	510.5	243.6
17	Xh	1278.9	836.3	525.2	997.8	513.8	246.1

Tables 2(Marine grade copper-free aluminum alloy)

N0	Code	Max power dissipation Ta=+40°C			Max power dissipation Ta=+60°C		
		T4/T130 °C	T5/T95 °C	T6/T80 °C	T4/T130 °C	T5/T95 °C	T6/T80 °C

1	I	247.2	161.3	93.7	201.6	83.03	41.9
2	III	374.5	223.2	148.7	308.1	143.8	69.1
3	IIIh	446.6	247.2	199.5	363.2	152.8	82.9
4	IV	567.3	324.1	216.4	432.6	197.2	108.1
5	IVh	669.2	347.3	231.9	525.5	224.1	113.2
6	V	720.5	425.5	283.2	530.1	240.5	128.6
7	Vh	723.5	430.5	285.2	535.1	243.5	130.6
8	VI	728.1	433.7	287.2	539.1	247.5	132.6
9	VIh	990.5	585.5	400.3	695.5	323.2	170.7
10	VII	996.7	588.4	402.3	697.5	325.2	174.7
11	VIIh	1124.5	826.4	493.6	732.3	478.8	234.2
12	VIII	1185.5	870.5	520.5	930.1	522.4	275.3
13	VIIIh	1189.4	874.9	523.5	932.1	524.4	279.3

5 Ex Components which have separate certificates

Tables 3-1

Internal component					
NO.	Components	Manufacturer	Type	Certificate No.	Ex-marking
1	Temperature Field Transmitter	Endress+Hauser Wetzer GmbH + Co.KG	TMT142, TMT162	IECEX EPS 17.0077X	Ex ia IIC T4 Ga
2	Proximity System	Bently Nevada LLC	330180,330780,3 30980,330850,33 0878,144181,	IECEX CSA 16.0042X	Ex ia IIC T4 Ga

			18745,330880, 330881		
3	Temperture transmitter	Endress+Hauser Wetzer GmbH & Co.KG	TMT82	IECEX EPS 17.0039X	Ex ia IIC T4 Ga Ex ia IIC T4 Gb Ex ib [ia Ga] IIC T4 Gb
4	Head-type temperature transmitter	Endress + Hauser Wetzer GmbH + Co. KG	TMT84, OTMT84, TMT85, OTMT85	IECEX PTB 08.0001X	Ex ia IIC T4 Ga Ex ia IIC T4 Gb

Tables 3-2

Internal component		Explosion-proof distributionpanel					
NO.	Type	Ambiente mperature	Ex Marking String	Ta 40°C		Ta 60°C	
				Carbon	A356.2	Carbon	A356.2
				Steel/SS304/ SS316/SS316L		Steel/SS304/ SS316/SS316L	
1	TMT142, TMT162	-40°C ~ +60°C	Ex db ia IIB+H2 T6Gb Ex tb IIIC T80°C Db	III,V,Vh,VI,VIh,VI II,VIIIh,IX,IXh	IV,Vh	IIIh,IVh,V,Vh,VI, VIh,VII,VIIh, VIII,VIIIh,IX, IXh	IV,V, Vh

2	330180,330780, 330980,330850, 330878, 144181, 18745,330880, 330881	Ex db ia IIB+H2 T6 Gb Ex tb IIIC T80°C Db	I,III, IIIh,IV, IVh,V, Vh,VI, VIh,VII, VIIh,VIII, VIIIh,IX, IXh,Xh	I,III,IV, V, Vh,VI, VIh,VII, VIIh,VII	I,III, IIIh,IV, IVh,V, Vh,VI, VIh,VII, VIIh,VIII, VIIIh,IX, IXh,X, Xh	I,III,IV, IVh,V, VIh,VI, VIh,VII, VIIh,VII I, VIIIh
3	TMT82	Ex db ia IIB+H2 T6 Gb Ex db ib [ia Ga] IIB+H2 T6 Gb Ex tb IIIC T80°C Db	III,V,Vh,VI,VIh,VI II,VIIIh,IX,IXh	IV,Vh	IIIh,IVh,V,Vh,VI, VIh,VII,VIIh, VIII,VIIIh,IX,IXh	IV,V, Vh
4	TMT84, OTMT84, TMT85, OTMT85	Ex db ia IIB+H2 T6 Gb Ex tb IIIC T80°C Db				

6 Installation and Precautions

6.1 Installation should be avoided as much as possible near the heating furnace and other heat sources;

6.2 Try to install it in a position without or with minimal vibration;

6.3 Users are not allowed to arbitrarily change the product structure;

6.4 It should be installed in a gas or vapor environment without obvious damage to insulation;

6.5 There are grounding screws inside and outside the box, which must be reliably grounded during installation;

6.6 During installation and maintenance, the explosion-proof joint surface and explosion-proof threads shall not be damaged;

6.7 On site installation, use, and maintenance shall be carried out in accordance with relevant standards;

6.8 Do not open it when there is a potential danger of electrostatic charging, and wipe it with a damp cloth when cleaning.

6.9 Users are not allowed to disassemble or replace components at will, and must be operated by the manufacturer or professional personnel.

6.10 The atmospheric pressure is 0.086~0.108 (Mpa);

6.11 The relative humidity of the surrounding air shall not exceed 95% (at+25 °C);

6.12 The certified products or components can be installed.

6.13 The power must be cut off before opening the cover.

6.14 The maximum temperature at cable branching point is up to 180°C. The maximum temperature at cable entry point is up to 100°C. Choose proper cable and cable glands during installation.

7 Storage

The packing case shall not be attacked by rain and snow during transportation, and the products shall be placed in the warehouse without rain and snow invasion, air circulation and Corrosive substance.

8 Documents supplied with the product:

- Product user manual (×1)
- Qualified certificate (×1)