

Enclosure: Junction Box with Terminals, JBE1 Series

Increased Safety and Dust protection by enclosure

Zone 1 & 2 – 21 & 22



Application

The JBE1 junction boxes are designed for tap, splice or connecting of conductors for control, instrument or power circuit. These boxes are designed for explosive atmospheres zone 1, 2 and zone 21, 22.

Specification

Body, cover : Marine grade copper-free aluminium alloy with polyester powder coated, RAL 7032 (Grey)
 Sealing (O-ring) : Silicone -40°C to +175°C
 Lid screws : Stainless steel, SUS 304

Electrical Rating

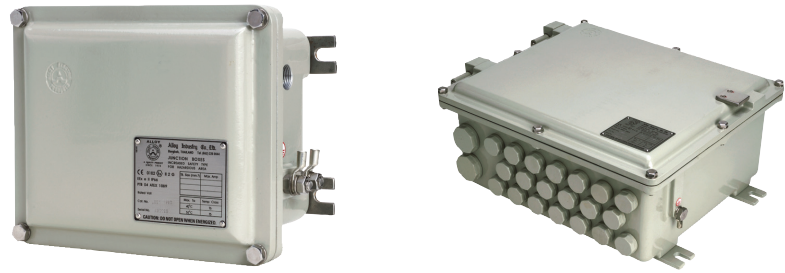
Rated voltage : up to 1000V.
 Rated current : up to 420A.
 (depending on type of terminal used)

Option

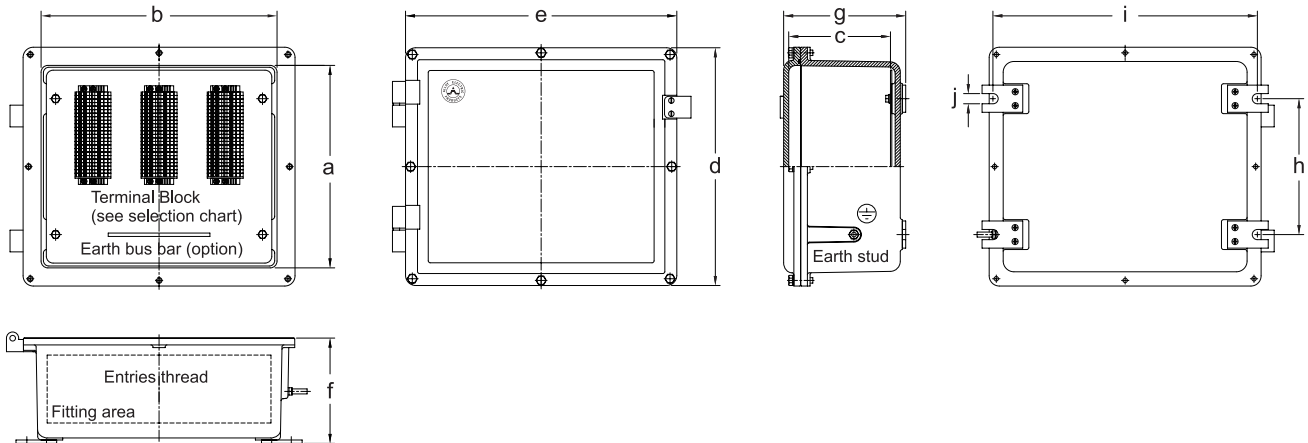
Body, cover : Offshore painting
 (Acrylic polyurethane coating)
 Lid screws : Stainless steel, SUS 316

Technical Data

Hazardous Area	Gas	Dust
Zones	1 & 2	21 & 22
Equipment Group/Category	Ex e II 2G	Ex tD II 2D
Symbol of Protection	Ex e II T6/T5 or Ex e ia/ib IIC T6/T5	Ex tD A21 IP66 T85°C/ T100°C
Certificate	PTB 04 ATEX 1089	
Conformity to Standards	EN 60079-0:2006, EN 60079-7:2007, EN 60079-11:2007, EN 61241-0:2006, EN 61241-1:2004	
Ambient Temperature	-20°C to +55°C	
Index of Protection	IP66	
Entries	NPT or Metric threads	
Mounting	Wall mount	



Ordering Requirements and Dimension



Cat. No.	Maximum entries thread size NPT (Metric)					Dimension in mm.										Empty Weight (kgs.)
	Ø1/2" (M20x1.5)	Ø3/4" (M25x1.5)	Ø1" (M32x1.5)	Ø1-1/4" (M40x1.5)	Ø1-1/2" (M50x1.5)	Internal			External			Mounting				
						a	b	c	d	e	f	g	h	i	j	
JBE1 1923	4	4	3	2	2	140	180	95	190	230	99	124	110	216	10	5.05
JBE1 2530	13	11	8	5	3	198	248	150	250	300	155	180	110	280	12	8.55
JBE1 3540	20	17	12	8	4	298	348	150	350	400	155	180	200	390	12	12.35
JBE1 4550	26	21	15	10	6	398	448	170	450	500	179	204	276	490	12	19.55
JBE1 4866	46	38	28	18	12	423	603	220	480	660	230	255	500	472	12	44.55
JBE1 5882	58	48	36	24	15	523	763	220	580	820	230	255	372	810	12	59.65



Terminal Selection Chart

TB Model	Rated Current	Rated Voltage	Wire Size	Maximum Numbers of Terminals (Physical Content) Δ					
				JBE1 1923	JBE1 2530	JBE1 3540	JBE1 4550	JBE1 4866	JBE1 5882

Brand: Entelec

ZS4	32A.	630V.	0.5-4.0mm. ²	16	36	72	111	153	279
ZS6	41A.	630V.	0.5-6.0mm. ²	12	20	54	84	114	200
ZS10	57A.	630V.	1.5-10.0mm. ²	12 □	14	42	60	90	160
ZS16	76A.	630V.	1.5-16.0mm. ²	10 □	12 □	21 □	48	60	53
ZS35	125A.	630V.	4.0-35.0mm. ²	5 □	8 □	16 □	22 □	32 □	42 □
ZS70	192A.	630V.	16.0-70.0mm. ²	–	–	11 □	16 □	24 □	30 □
ZS95	232A.	630V.	35.0-95.0mm. ²	–	–	10 □	12 □	20 □	24 □
D120/42.FF.Ex	269A.	1000V.	16.0-120.0mm. ²	–	–	–	8 □	12 □	16 □
D185/55.FF.Ex	353A.	1000V.	35.0-185.0mm. ²	–	–	–	–	6 □	12 □
D300/55.FF.Ex	520A.	1000V.	70.0-240.0mm. ²	–	–	–	–	6 □	12 □

Brand: Phoenix Contact

UK 3N	23A.	690V.	0.5-2.5mm. ²	19	48	86	135	180	325
UK 5N	30A.	690V.	0.5-4.0mm. ²	16	36	70	99	138	255
UK 6N	41A.	690V.	1.5-6.0mm. ²	11	20	32	67	100	170
UK 10 N	57A.	690V.	1.5-10.0mm. ²	8 □	11	39	59	69	128
UK 16 N	74A.	690V.	6.0-16.0mm. ²	6 □	12 □	18 □	47	56	75
UKH 50	133A.	690V.	16.0-50.0mm. ²	–	–	10 □	16 □	24 □	32 □
UKH 70	180A.	880V.	10.0-70.0mm. ²	–	–	10 □	16 □	24 □	32 □
UKH 95	216A.	880V.	25.0-95.0mm. ²	–	–	8 □	12 □	18 □	24 □

Brand: Weidmüller

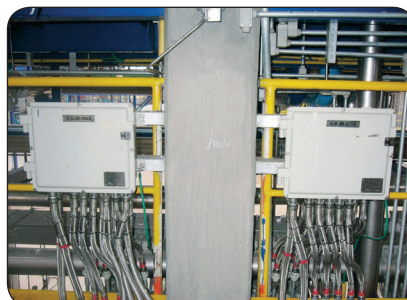
WDU2.5N	21A.	440V.	0.5-2.5mm. ²	19	48	86	135	180	325
WDU4N	27A.	440V.	0.5-4.0mm. ²	16	36	70	108	150	279
WDU6	36A.	550V.	0.5-6.0mm. ²	12	20	32	76	117	200
WDU10	50A.	550V.	1.5-10.0mm. ²	12 □	14	26 □	62	84	160
WDU16	66A.	690V.	1.5-16.0mm. ²	6 □	12 □	21 □	50	60	75
WDU35	109A.	690V.	2.5-35.0mm. ²	4 □	8 □	16 □	22 □	32 □	42 □
WDU50N	126A.	690V.	10.0-50.0mm. ²	–	–	14 □	18 □	28 □	36 □
WDU70N	167A.	690V.	10.0-70.0mm. ²	–	–	12 □	16 □	26 □	32 □
WDU95N/120N	243A.	880V.	16.0-95.0mm. ²	–	–	8 □	12 □	18 □	24 □
WDU95N/120N	243A.	880V.	16.0-120.0mm. ²	–	–	8 □	12 □	18 □	24 □
WDU120/150	309A.	1000V.	35.0-150.0mm. ²	–	–	–	–	16 □	20 □
WDU240	415A.	1000V.	70.0-240.0mm. ²	–	–	–	–	8 □	18 □

Δ The maximum numbers of terminals in this table are specified by concerning the physical content of each terminal size and the wiring space within the boxes. Please see the operating instruction for maximum numbers of terminals permitted for load current of each terminal size with corresponding to the temperature class T6 or T5.

□ The terminals will be arranged near the top wall and provided with jumper bar for each 2-poles.



M8 earth stud bolt with terminal lug for external ground



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Maximum number of terminals permitted for load current

Current (A)	Cross-section in mm. ² JBE1 1923							
	1.5	2.5	4	6	10	16	25	35
10	59							
16	20	39	152					
20	8	23	44					
25		11	25	48				
35			7	19	47			
50				2	15	39		
63					5	18	64	
80						7	20	71
100							8	19
125								7

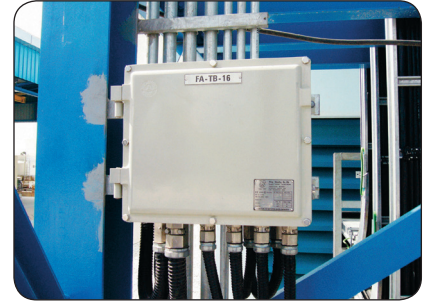
In this area any number of terminals can be added to maximum physical content.

Fitting in this area is not allowed.

Current (A)	Cross-section in mm. ² JBE1 2530							
	1.5	2.5	4	6	10	16	25	35
10	83							
16	28	55	216					
20	12	32	62					
25		15	35	68				
35			10	26	66			
50				4	21	55		
63					7	25	90	
80						9	28	101
100							12	26
125								10

In this area any number of terminals can be added to maximum physical content.

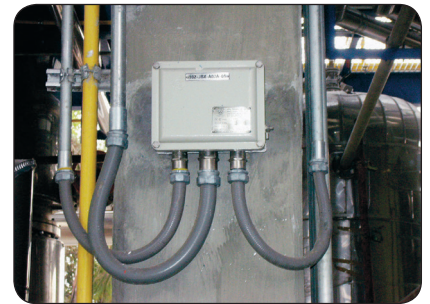
Fitting in this area is not allowed.



Current (A)	Cross-section in mm. ² JBE1 3540									
	1.5	2.5	4	6	10	16	25	35	50	70
10	98									
16	33	65	253							
20	14	38	73							
25		18	41	80						
35			12	31	78					
50				4	25	64				
63					8	30	108			
80						11	33	119		
100							14	31		
125								12	32	
160									11	28
200										10

In this area any number of terminals can be added to maximum physical content.

Fitting in this area is not allowed.



Current (A)	Cross-section in mm. ² JBE1 4550											
	1.5	2.5	4	6	10	16	25	35	50	70	95	
10	118											
16	40	78	305									
20	17	48	88									
25		21	50	96								
35			14	38	94							
50				5	30	78						
63					10	36	128					
80						14	40	143				
100							17	38				
125								15	38			
160									13	34		
200										12	29	
225											4	
250												9

In this area any number of terminals can be added to maximum physical content.

Fitting in this area is not allowed.



Current (A)	Cross-section in mm. ² JBE1 4866														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
10	143														
16	49	95	370												
20	20	55	107												
25		26	61	117											
35			18	46	114										
50				6	37	94									
63					12	44	155								
80						17	48	174							
100							21	46							
125								2	18	46					
160									16	41					
200										14	35	109			
225											5	20	43		
250												11	26	54	
315													5	15	32
400														7	22
500															3

In this area any number of terminals can be added to maximum physical content.

Fitting in this area is not allowed.



Current (A)	Cross-section in mm. ² JBE1 5882														
	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240
10	160														
16	55	106	414												
20	23	62	120												
25		29	68	131											
35			20	51	127										
50				7	41	105									
63					14	49	174								
80						19	54	194							
100							23	51							
125								2	20	52					
160									18	46					
200										16	39	122			
225											6	23	48		
250												12	29	61	
315													6	17	36
400														8	25
500															3

In this area any number of terminals can be added to maximum physical content.

Fitting in this area is not allowed.



Attention: Adding the terminals may lead to higher surface temperature. Please also observe the table indicating for load current value which is provided in the technical data of the terminal box.

A
B
C
D
E
F
G
H



Junction Box with Terminals Specification Sheet, JBE1 Series (Certificate number PTB 04 ATEX 1089)

Increased Safety and Dust protection by enclosure

Zone 1 & 2 – 21 & 22

Project: _____ Date: _____

Customer: _____ Owner: _____

Contact person: _____

Tel: _____ Fax: _____ E-mail: _____

Quantity (Set)	
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Junction Box with Terminals

- JBE1 1923
 JBE1 2530
 JBE1 3540
 JBE1 4550
 JBE1 4866
 JBE1 5882

Screw Clamp Terminal Block Specifications, Ex e type

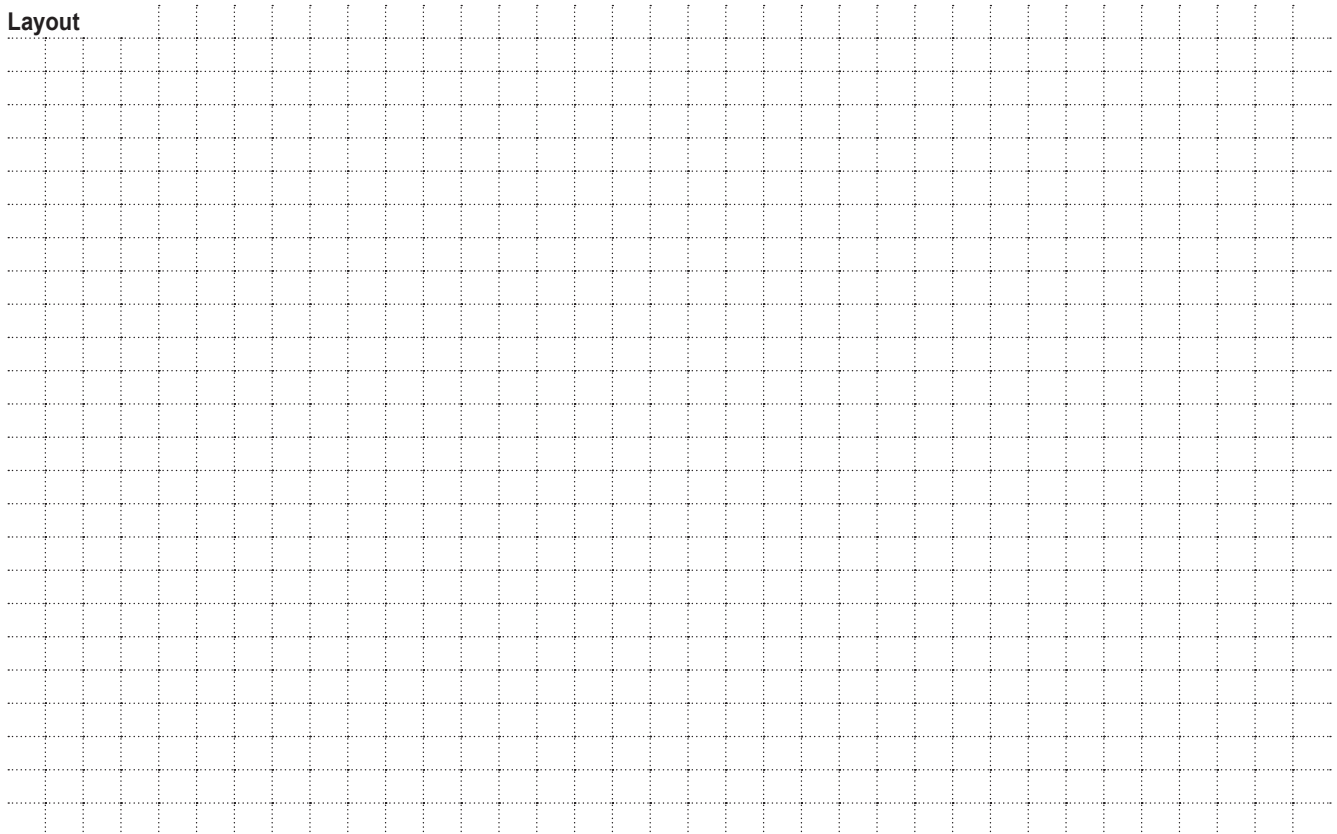
- Brand: **ABB ENTRELEC**
 Brand: **PHOENIX CONTACT**
 Brand: **WEIDMÜLLER**

- Model: _____ Q'ty _____ Poles _____ Marker No. _____
 Model: _____ Q'ty _____ Poles _____ Marker No. _____
 Model: _____ Q'ty _____ Poles _____ Marker No. _____
 Model: _____ Q'ty _____ Poles _____ Marker No. _____

Jumper Bar, _____ Poles Q'ty _____ Sets

Internal Earth Bar _____

Layout



A

B

C

D

E

F

G

H