

Enclosure: Junction Box with Terminals, JBE1 Series

Increased Safety and Dust protection by enclosure

Zone 1 & 2 – 21 & 22

Application

JBE1 junction boxes are designed for tapping, splicing, or connecting conductors for control, instrumentation, or power circuits. These boxes are suitable for use in explosive atmospheres, including Zones 1, 2, 21, and 22.

Specification

- Body, cover : Marine grade copper-free aluminium alloy with polyester powder coated, RAL 7032 (Grey) (optional offshore painting - acrylic polyurethane coating)
- Sealing (O-ring) : Silicone -40°C to +175°C
- Bolts : Stainless steel, SS 304 (optional SS 316)

Technical Data

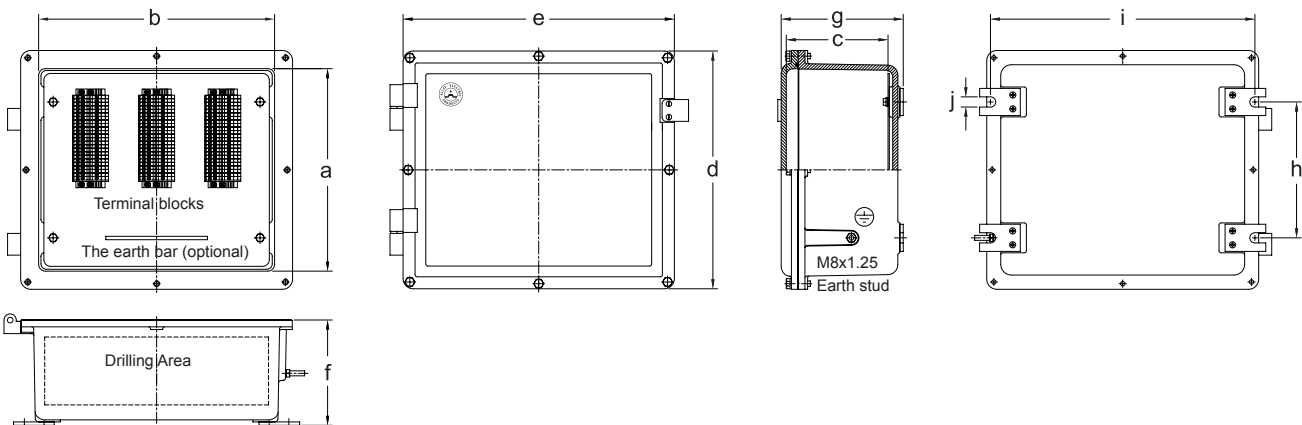
Hazardous Area	Gas	Dust
Zones	1 & 2	21 & 22
Equipment Group/Category	Ex e II 2G	Ex tD II 2D
Symbol of Protection	Ex e II T6/T5 or Ex e ia/ib IIC T6/T5	Ex tD A21 IP66 T85°C/ T100°C
Certificate	PTB 04 ATEX 1089	
Conformity to Standards	EN IEC 60079-0, EN IEC 60079-7, EN 60079-11, EN IEC 60079-31	
Ambient Temperature	-20°C to +55°C	
Index of Protection	IP66	
Entry Threads	NPT or Metric threads	
Mounting	Wall mount	

Electrical Rating

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



Ordering Requirements and Dimensions



Cat. No.	Maximum thread size for entries NPT (Metric)					Dimensions in mm											Empty weight (kg)
	1/2" NPT (M20x1.5)	3/4" NPT (M25x1.5)	1" NPT (M32x1.5)	1-1/4" NPT (M40x1.5)	1-1/2" NPT (M50x1.5)	Internal			External			Mounting					
						a	b	c	d	e	f	g	h	i	j		
JBE1 1923 *	4	3	3	2	2	140	180	95	190	230	99	124	110	210	10	5.05	
JBE1 2530	11	9	8	5	3	198	248	150	250	300	155	180	110	280	12	8.55	
JBE1 3540	17	12	10	6	4	300	350	150	352	402	155	180	200	390	12	12.35	
JBE1 4550	26	18	14	10	6	398	448	174	450	500	179	205	276	490	12	19.55	
JBE1 4866	46	32	26	17	12	423	603	220	480	660	230	255	500	472	12	44.55	
JBE1 5882	58	42	32	20	15	523	763	220	580	820	230	255	372	810	12	59.65	

* no hinge

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Terminal Selection Chart

TB model	Rated current	Rated voltage	Wire size range	Maximum numbers of terminals (Physical content) Δ					
				JBE1 1923	JBE1 2530	JBE1 3540	JBE1 4550	JBE1 4866	JBE1 5882

Brand: Entelec

ZS4	32 A	630 V	0.5-4.0 mm ²	16	36	72	111	153	279
ZS6	41 A	630 V	0.5-6.0 mm ²	12	20	54	84	114	200
ZS10	57 A	630 V	1.5-10.0 mm ²	12 □	14	42	60	90	160
ZS16	76 A	630 V	1.5-16.0 mm ²	10 □	12 □	21 □	48	60	53
ZS35	125 A	630 V	6.0-35.0 mm ²	5 □	8 □	16 □	22 □	32 □	42 □
ZS50	150 A	630 V	6.0-50.0 mm ²	-	-	14 □	18 □	28 □	36 □
ZS70	192 A	630 V	16.0-70.0 mm ²	-	-	11 □	16 □	24 □	30 □
ZS95	232 A	630 V	35.0-95.0 mm ²	-	-	10 □	12 □	20 □	24 □
ZS150	309 A	1000 V	35.0-150.0 mm ²	-	-	-	-	16 □	20 □
ZS240	415 A	1000 V	50.0-240.0 mm ²	-	-	-	-	8 □	18 □

Brand: Phoenix Contact

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

Brand: Weidmüller

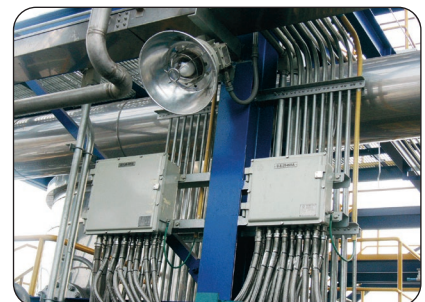
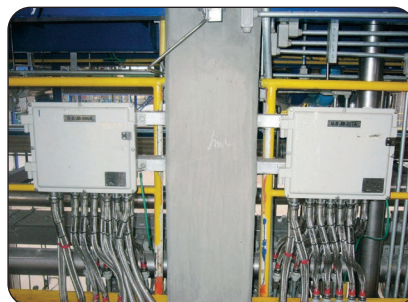
WDU2.5N	21 A	440 V	0.5-2.5 mm ²	19	48	86	135	180	325
WDU4N	27 A	440 V	0.5-4.0 mm ²	16	36	70	108	150	279
WDU6	36 A	550 V	0.5-6.0 mm ²	12	20	32	76	117	200
WDU10	50 A	550 V	1.5-10.0 mm ²	12 □	14	26 □	62	84	160
WDU16	66 A	690 V	1.5-16.0 mm ²	6 □	12 □	21 □	50	60	75
WDU35	109 A	690 V	2.5-35.0 mm ²	4 □	8 □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

Δ The maximum number of terminals in this table is determined based on the physical Dimensions of each terminal size and the available wiring space within the boxes. For the maximum number of terminals allowed for the load current of each terminal size, corresponding to temperature classes T6 or T5, please refer to the operating instructions.

□ The terminals will be arranged near the top wall and equipped with a jumper bar for every 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 terminals may result in a higher surface temperature. Please also refer to the table in the technical data of the terminal box for the load current values

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

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Project: _____		Date: _____	
Customer: _____		Owner: _____	
Contact person: _____			Quantity (Set)
Tel: _____	Fax: _____	E-mail: _____	

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

