

ATX™ JBEP Series FRP Terminal Junction Boxes for Instrumentation Applications

Fiberglass Reinforced Polyester. Increased Safety. Factory Drilled and Equipped.

NEC/CEC:
Class I, Zone 1, AEx e IIC, T5 or T6
Ex e IIC, T5 or T6
IP66

ATEX/IECEx:
Zone 1 and 2 – 21 and 22
Ⓜ II 2 GD
IP66 – IK10

Applications

- Instrumentation junction boxes are used to run process or remote information to control room.
- For use in intrinsic safety or non intrinsic safety systems.
- Designed for Zones 1 or 2 areas, where flammable gases or vapors are present either continuously, often or accidentally such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for indoor/outdoor use with wet or corrosive atmospheres.
- Designed for use in Zones 21 or 22 areas where flammables dusts (conductive and non conductive) are present either continuously, often or accidentally such as:
 - Food processing
 - Dairy
 - Brewing
 - Other industrial process facilities
- Designed for Zone 0 Intrinsically Safe applications when used with rated terminals.

Features

- Available in a wide range of sizes:
 - For armored, unarmored or armored lead sheathed cable
 - For use with a variety of connection and earth terminals
- Optional external hinged enclosures:
 - Reversible door opening 120°.
 - Door with double bar lock.
 - Key locking facility.
- Terminal blocks on DIN rail.

Standard materials

- Enclosures: Static resistant carbon filled fiberglass reinforced polyester (FRP)
- Hardware: stainless steel
- Gasket for other sizes: EPDM (ethylene propylene diene monomer rubber)

Options

- External hinges are available on the following sizes:
 - 500 x 320 x 150
 - 500 x 320 x 230
 - 750 x 320 x 150
 - 750 x 320 x 230
- Nameplates
- Mounting pan
- Inside pocket for document
- Consult factory for custom drilling, assembly requirements and other ambient temperatures.

NEC/CEC Certifications and Compliances

- UL Standard: UL 60079-0; 60079-7
- CSA Standard: C22.2 No. 60079-0: 11; 60079-7: 12
- cCSAus Certified: 2625458
- CSA Listed: 013017



Cable Glands are available as an Option.

ATEX/IECEx Certifications and Compliances ①

- Certification Type JBEP
 - Gas, Zones 1 and 2:
 - Conforming to ATEX 94/9/EC: Ⓜ II 2G
 - Conforming to IECEx : EPL Gb
 - Type of Protection: Ex eb IIC, Ex eb ia IIC, Ex eb ib IIC, Ex ib IIC
 - Temperature Class: T6 for $T_a \leq +40^\circ\text{C}$ (+104 °F) and T5 for $T_a \leq +60^\circ\text{C}$ (+140 °F)
 - Dusts, Zones 21 and 22:
 - Conforming to ATEX: Ⓜ II 2D
 - Conforming to IECEx: EPL Db
 - Type of Protection: Ex tb IIIC
 - Surface Temperature : T60 °C for $T_a \leq +40^\circ\text{C}$ (+104 °F), T90 °C (T194 °F) for $T_a \leq +60^\circ\text{C}$ (+140 °F)
 - Gas, Zone 0:
 - Conforming to ATEX 94/9/EC: Ⓜ II 1G
 - Conforming to IECEx : EPL Ga
 - Type of Protection: Ex ia IIC
 - Temperature Class: T6 for $T_a \leq +40^\circ\text{C}$ (+104 °F) and T5 for $T_a \leq +60^\circ\text{C}$ (+140 °F)
- Ambient Temperatures : $-55^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$ ($-67^\circ\text{F} \leq T_a \leq +140^\circ\text{F}$)
- ATEX Certificate: LCIE 12 ATEX 3037X
- EC Declaration of Conformity: 50291
- IECEx Certificate: IECEx LCIE 13.0003X
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance: IK10

① The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

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Components Ambient Temperature ①

- Type : Bve (plastic close up plug)
— Ambient Temperatures : -40 °C to +55 °C (-40 °F to +131 °F)
- Type : 757 (nickel plated close up plug)
— Ambient Temperatures : -60 °C to +100 °C (-40 °F to +212 °F)
- Type : EEXe (plastic cable gland)
— Ambient Temperatures : -20 °C to +55 °C (-4 °F to +131 °F)
- Type : E1FX, E2FX, E1FW, E2FW, T3, A2F (metal cable gland)
— Ambient Temperatures : -60 °C to +130 °C (-76 °F to +266 °F)
- Type : PX, PX2K (metal cable gland)
— Ambient Temperatures : -60 °C to +100 °C (-76 °F to +212 °F)
- Type : DBE (drain/breather)
— Ambient Temperatures : -50 °C to +85 °C (-58 °F to +185 °F)
- Type : WDU, WFF (terminal)
— Ambient Temperatures : -50 °C to +120 °C (-58 °F to +248 °F)
- Type : SAK, AKZ (terminal)
— Ambient Temperatures : -50 °C to +100 °C (-58 °F to +212 °F)

EURASEC Certification

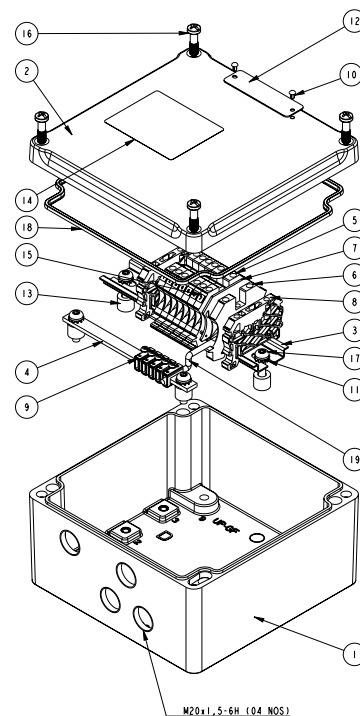
- EURASEC N° TC RU C-FR.F505.B.00911

Other Certification

- INMETRO Certificate: BVC 13.3238 - X ②

Illustrated Features — Sample of JBEP171709NI01

Description	
1	Body Of Polyester Box 170 x 170 x 90
2	Cover Of Polyester Box 170 x 170 x 91
3	DIN Rail
4	Copper Bar 10 x 3
5	Terminal Block - ATEX/IECEX: WDU 2.5
6	Terminal Block - ATEX/IECEX: WPE 2.5
7	Plate - ATEX/IECEX: WAP 2.5/10
8	End Bracket
9	Cable Clamp 2.5 mm ² (14AWG)- Capacity
10	Stainless Steel Rivet 2.5 x 5
11	Serrated Washer 5
12	Label Gravoply - Yellow
13	Nylons Spacer Lg. 10 Mm
14	Label 54 x 68
15	Terminal Marker
16	Screw M6 x 20 x 10
17	Screw M5 x 20
18	Gasket For Polyester Box 170 x 170 x 91
19	G/Y Cable 2.5 mm ² (14AWG)



① The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.
② INMETRO certification available on special request only. Contact your local sales representative for more information.

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The Catalog Numbering Guide is a reference tool to explain the make-up of the catalog number. It is not to be used to create a custom product for ordering.

Catalog Numbering Guide - JBEP Polyester Junction Boxes for Instrumentation Applications

JBE	P	17	17	09	A	I	01	D
Series: JBE - NEC/ CEC and ATEX/IECEX Certified Junction Box	Material: P - Polyester	Dimensions Height mm (in): 17 - 170 (6.69) 20 - 200 (7.87) 21 - 215 (8.47) 25 - 250 (9.84) 32 - 320 (12.60) 50 - 500 (19.69) 75 - 750 (29.53)	Dimensions Width mm (in): 17 - 170 (6.69) 21 - 215 (8.47) 25 - 250 (9.84) 32 - 320 (12.60) 50 - 500 (19.69) 75 - 750 (29.53)	Dimensions Depth mm (in): 09 - 91 (3.58) 15 - 150 (5.91) 23 - 230 (9.06)	Cable Type: A - Armored N - Non-Armored L - Armored Lead Sheathed	Options: I - Instrumentation	Suffix: 01 to 99 Assigned at Factory	Options: D - Drain

ATX™ JBEP Series FRP Terminal Junction Boxes for Instrumentation Applications

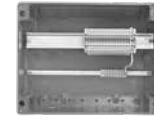
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Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Unarmored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. M16 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Unarmored Cables

For Cable	Terminal Block	Earth Terminal	Copper Bar	Cable Clamp	Multi-Cable	Single Cable	Catalog
U1000	0.5/2.5 mm ² Qty.	0.5/2.5 mm ² Qty.	10 x 3 mm Qty.	0.5/2.5 mm ² Qty.	Cable Entry Qty. 1	Entries M20 Qty.	Number ①
R02V							
07G1.5	7	1	1	5	M20	3	JBEP171709NI01
12G1.5	12	1	1	8	M25	6	JBEP202115NI02
19G1.5	19	1	1	11	M25	9	JBEP253215NI03
24G1.5	24	1	1	14	M32	12	JBEP253215NI04
27G1.5	27	1	1	15	M32	13	JBEP253215NI05
37G1.5	37	1	1	20	M32	18	JBEP253215NI06
07G2.5	7	1	1	5	M20	3	JBEP171709NI07
12G2.5	12	1	1	8	M25	6	JBEP202115NI08
19G2.5	19	1	1	11	M32	9	JBEP253215NI09
24G2.5	24	1	1	14	M32	12	JBEP253215NI10
27G2.5	27	1	1	15	M32	13	JBEP253215NI11
37G2.5	37	1	1	20	M40	18	JBEP253215NI12

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EGSF	0.5/2.5 mm ² Qty.	Shield Qty.	Cable Entry Qty. 1	Entries M16 Qty.	Number ①
07IP05	14	7	M20	7	JBEP202115NI21
07IT05	21	7	M20	7	JBEP202115NI22
12IP05	24	12	M25	12	JBEP253215NI23
12IT05	36	12	M25	12	JBEP253215NI24
19IP05	38	19	M32	19	JBEP253215NI25
27IP05	54	27	M32	27	JBEP325015NI26
07IP09	14	7	M25	7	JBEP202115NI27
07IT09	21	7	M25	7	JBEP202115NI28
12IP09	24	12	M32	12	JBEP253215NI29
12IT09	36	12	M32	12	JBEP253215NI30
19IP09	38	19	M32	19	JBEP253215NI31
27IP09	54	27	M40	27	JBEP325015NI32

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EISF	0.5/2.5 mm ² Qty.	Shield Qty.	Cable Entry Qty. 1	Entries M16 Qty.	Number ①
07IP05	15	8	M25	7	JBEP202115NI41
07IT05	22	8	M32	7	JBEP202115NI42
12IP05	25	13	M32	12	JBEP253215NI43
12IT05	37	13	M32	12	JBEP253215NI44
19IP05	39	20	M40	19	JBEP253215NI45
27IP05	55	28	M40	27	JBEP325015NI46
07IP09	15	8	M32	7	JBEP202115NI47
07IT09	22	8	M32	7	JBEP202115NI48
12IP09	25	13	M40	12	JBEP253215NI49
12IT09	37	13	M40	12	JBEP253215NI50
19IP09	39	20	M50	19	JBEP253215NI51
27IP09	55	28	M50	27	JBEP325015NI52

① For JBEP terminal junction box with a drain, add suffix **D** to the end of the catalog number; example: JBEP171709NI01D.

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Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Armored Cables

Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Armored Cables

For Cable	Terminal Block	Earth Terminal	Copper Bar	Cable Clamp	Multi-Cable	Single Cable	Catalog
U1000	0.5/2.5 mm ² Qty.	0.5/2.5 mm ² Qty.	10 x 3 mm Qty.	0.5/2.5 mm ² Qty.	Cable Entry Qty. 1	Entries M20 Qty.	Number ①
RVFV							
07G1.5	7	1	1	5	M20	3	JBEP171709AI01
12G1.5	12	1	1	8	M20	6	JBEP202115AI02
19G1.5	19	1	1	11	M25	9	JBEP253215AI03
24G1.5	24	1	1	14	M25	12	JBEP253215AI04
27G1.5	27	1	1	15	M25	13	JBEP253215AI05
37G1.5	37	1	1	20	M32	18	JBEP253215AI06
07G2.5	7	1	1	5	M20	3	JBEP171709AI07
12G2.5	12	1	1	8	M25	6	JBEP202115AI08
19G2.5	19	1	1	11	M25	9	JBEP253215AI09
24G2.5	24	1	1	14	M32	12	JBEP253215AI10
27G2.5	27	1	1	15	M32	13	JBEP253215AI11
37G2.5	37	1	1	20	M32	18	JBEP253215AI12

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EGFA	0.5/2.5 mm ² Qty.	Shield Qty.	Cable Entry Qty. 1	Entries M20 Qty.	Number ①
07IP05	14	7	M20	7	JBEP202115AI21
07IT05	21	7	M20	7	JBEP202115AI22
12IP05	24	12	M25	12	JBEP253215AI23
12IT05	36	12	M25	12	JBEP253215AI24
19IP05	38	19	M25	19	JBEP253215AI25
27IP05	54	27	M32	27	JBEP325015AI26
07IP09	14	7	M25	7	JBEP202115AI27
07IT09	21	7	M25	7	JBEP202115AI28
12IP09	24	12	M25	12	JBEP253215AI29
12IT09	36	12	M32	12	JBEP253215AI30
19IP09	38	19	M32	19	JBEP253215AI31
27IP09	54	27	M40	27	JBEP325015AI32

For Cable	Terminal Block	Continuity	Multi-Cable	Single Cable	Catalog
EIFA	0.5/2.5 mm ² Qty.	Shield Qty.	Cable Entry Qty. 1	Entries M20 Qty.	Number ①
07IP05	15	8	M25	7	JBEP202115AI41
07IT05	22	8	M25	7	JBEP202115AI42
12IP05	25	13	M32	12	JBEP253215AI43
12IT05	37	13	M32	12	JBEP253215AI44
19IP05	39	20	M32	19	JBEP253215AI45
27IP05	55	28	M40	27	JBEP325015AI46
07IP09	15	8	M32	7	JBEP202115AI47
07IT09	22	8	M32	7	JBEP202115AI48
12IP09	25	13	M40	12	JBEP253215AI49
12IT09	37	13	M40	12	JBEP253215AI50
19IP09	39	20	M40	19	JBEP253215AI51
27IP09	55	28	M50	27	JBEP325015AI52

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Ex eb IIC Factory Drilled JBEP Polyester Junction Boxes Equipped with Terminals for Instrumentation Applications with Lead Sheath Armored Cables
Fitted with: Horizontal beige terminal block. Copper bar with cable clamps or continuity shields. Yellow laminated plastic label with black lettering. Earth continuity brass plate. M8 external earth crossing terminal. M20 to M32 threaded entries. M40 to M50 clearance holes. Cable glands and plugs ordered separately.



Armored Cables
With lead sheath

For Cable U1000 RGPFV	Terminal Block 0.5/2.5 mm ² Qty.	Earth Terminal 0.5/2.5 mm ² Qty.	Copper Bar 10 x 3 mm Qty.	Cable Clamp 0.5/2.5 mm ² Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07G1.5	7	1	1	5	M20	3	JBEP171709LI01
12G1.5	12	1	1	8	M25	6	JBEP202115LI02
19G1.5	19	1	1	11	M25	9	JBEP253215LI03
24G1.5	24	1	1	14	M32	12	JBEP253215LI04
27G1.5	27	1	1	15	M32	13	JBEP253215LI05
37G1.5	37	1	1	20	M32	18	JBEP253215LI06
07G2.5	7	1	1	5	M20	3	JBEP171709LI07
12G2.5	12	1	1	8	M25	6	JBEP202115LI08
19G2.5	19	1	1	11	M32	9	JBEP253215LI09
24G2.5	24	1	1	14	M32	12	JBEP253215LI10
27G2.5	27	1	1	15	M32	13	JBEP253215LI11
37G2.5	37	1	1	20	M40	18	JBEP253215LI12
For Cable EGPF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.			Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07IP05	14	7			M20	7	JBEP202115LI21
07IT05	21	7			M20	7	JBEP202115LI22
12IP05	24	12			M25	12	JBEP253215LI23
12IT05	36	12			M25	12	JBEP253215LI24
19IP05	38	19			M25	19	JBEP253215LI25
27IP05	54	27			M32	27	JBEP325015LI26
07IP09	14	7			M25	7	JBEP202115LI27
07IT09	21	7			M25	7	JBEP202115LI28
12IP09	24	12			M32	12	JBEP253215LI29
12IT09	36	12			M32	12	JBEP253215LI30
19IP09	38	19			M40	19	JBEP253215LI31
27IP09	54	27			M40	27	JBEP325015LI32
For Cable EIPF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.			Multi-Cable Cable Entry Qty. 1	Single Cable Entries M20 Qty.	Catalog Number ①
07IP05	15	8			M25	7	JBEP202115LI41
07IT05	22	8			M32	7	JBEP202115LI42
12IP05	25	13			M32	12	JBEP253215LI43
12IT05	37	13			M32	12	JBEP253215LI44
19IP05	39	20			M40	19	JBEP253215LI45
27IP05	55	28			M50	27	JBEP325015LI46
07IP09	15	8			M32	7	JBEP202115LI47
07IT09	22	8			M32	7	JBEP202115LI48
12IP09	25	13			M40	12	JBEP253215LI49
12IT09	37	13			M40	12	JBEP253215LI50
19IP09	39	20			M50	19	JBEP253215LI51
27IP09	55	28			M50	27	JBEP325015LI52

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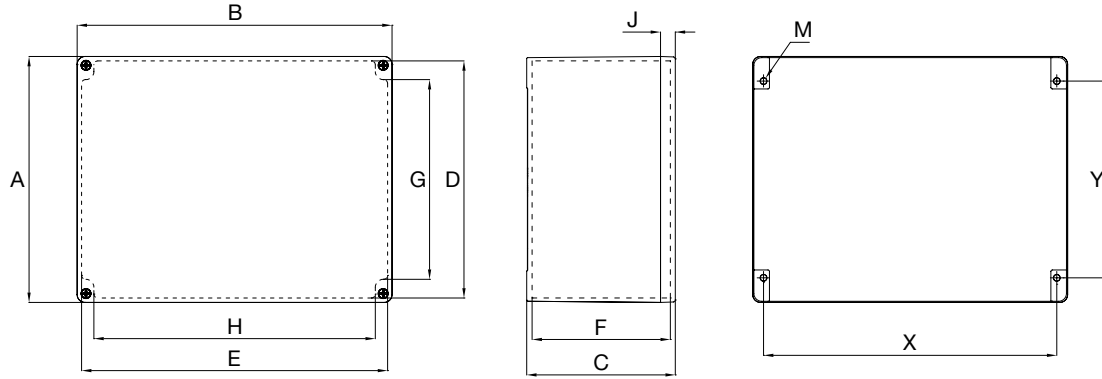
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Dimensions in Millimeters (Inches) ①



Enclosure Catalog Number	External Dimension				Internal Dimensions			Cover J	Body Thickness	Wall Fixing			M ②
	A	B	C	D	E	F	G			X	Y		
JBEP1717090	170 (6.693)	170 (6.693)	91 (3.583)	158.5 (6.240)	158.5 (6.240)	72 (2.835)	112.5 (4.429)	137 (5.394)	15 (0.591)	4.5 (0.177)	153 (6.024)	131 (5.157)	M5
JBEP2021150	200 (7.874)	215 (8.465)	145 (5.709)	185.8 (7.315)	200.8 (7.906)	122.5 (4.823)	114.8 (4.519)	159 (6.260)	20 (0.787)	6.1 (0.240)	189 (7.441)	146 (5.748)	M6
JBEP2532150	250 (9.843)	320 (12.598)	150 (5.906)	241 (9.488)	311 (12.244)	133.5 (5.256)	171 (6.732)	267 (10.512)	15 (0.591)	5 (0.197)	200 (7.874)	298 (11.732)	M6
JBEP3250150	320 (12.598)	500 (19.685)	150 (5.906)	311 (12.244)	491 (19.331)	133.5 (5.256)	267 (10.512)	421 (16.575)	15 (0.591)	5 (0.197)	298 (11.732)	447 (17.598)	M6

① Wall fixing screw diameter 5 mm (0.20"). Wall fixing screw hole 6 mm (0.24").

② Screw to be used for mounting box.