

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

Increased Safety. Factory Drilled and Equipped

Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

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 and Zone 20 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 mm
 - 500 x 320 x 230 mm
 - 750 x 320 x 150 mm
 - 750 x 320 x 230 mm
- Removable glands plates
- Nameplates
- Mounting pan
- Inside pocket for document
- Consult factory for custom drilling, assembly requirements and other ambient temperatures.

Certifications and Compliances ②

◆ATEX/IECEx 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 Ta ≤ +40 °C and T5 for Ta ≤ +60°C



Cable Glands are available as an Option.

- Dust, 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 Ta ≤ +40 °C , T90 °C for Ta ≤ +60 °C
- 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 Ta ≤ +40°C and T5 for Ta ≤ +60°C
- Dust, Zone 20:
 - Conforming to ATEX: Ⓔ II 1D
 - Conforming to IECEx: EPL Da
 - Type of Protection: Ex ta IIIC
 - Surface Temperature:
T60 °C for Ta ≤ +40 °C , T90 °C for Ta ≤ +60 °C
- Ambient Temperatures : -55 °C ≤ Ta ≤ +60 °C
- 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

◆EURASEC Certification

- EURASEC N° TC RU C-FR.Г505.B.00911

◆Others Certification

- INMETRO Certificate: BVC 13.3238 - X ①

① Inmetro certification available on special request only. Contact your local sales for more information

② The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

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◆ Components ambient temperature

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

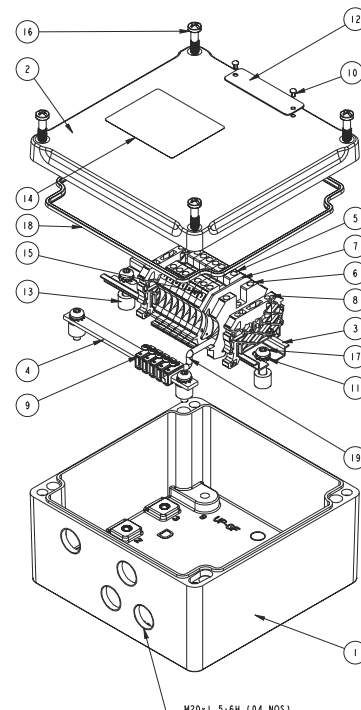
The ambient temperature for complete assembly is equal to the lowest ambient temperature of the components used.

Related Products

- For a complete offering of cable glands for use with armored and unarmored cable, see *Fittings: Cable Glands*.

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; NBR IEC: Ex e
6	Terminal Block - ATEX/IECEX: WPE 2.5; NBR IEC: Ground
7	Plate - ATEX/IECEX: WAP 2.5/10; NBR IEC: Plate
8	End Bracket
9	Cable Clamp 2.5 mm ² - 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



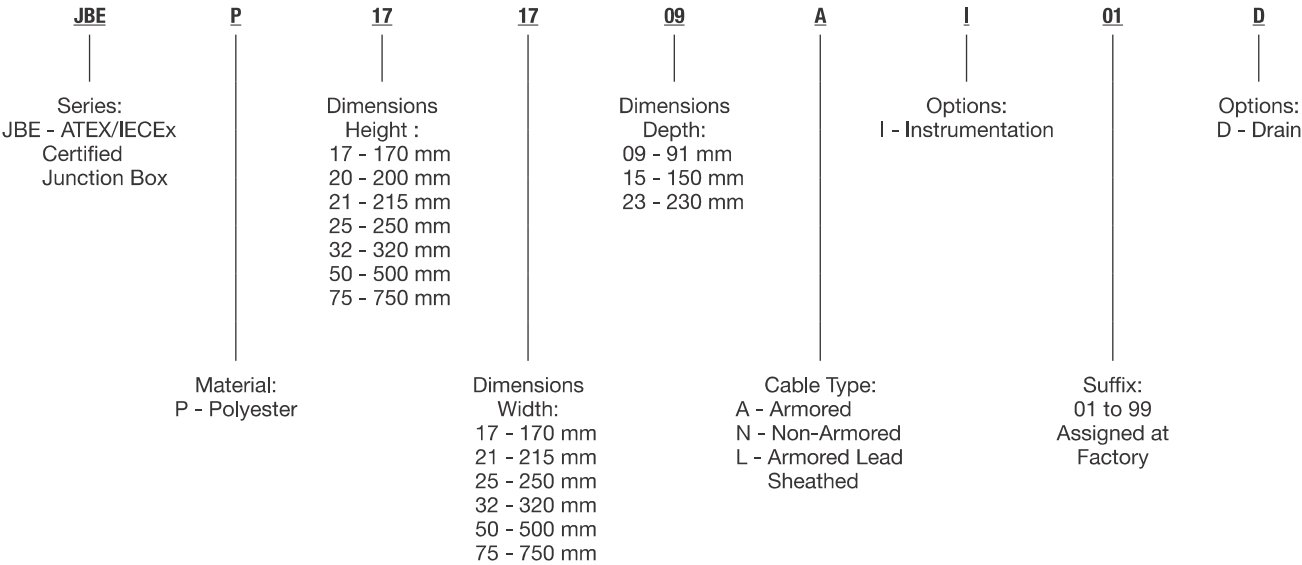
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The Catalog Numbering Guide is a reference tool to explain the make-up of the catalog number. It is not to be used to create a custom product for ordering.

Catalog Numbering Guide - JBEP Polyester Junction Boxes for Instrumentation Applications



Enclosures and Junction Boxes

INCREASED SAFETY EX E ZONE 1 RATED JUNCTION BOXES

JBEP Series Fiberglass Reinforced Polyester Terminal Junction Boxes for Instrumentation Applications

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Gas (G) and Dust (D)

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 U1000 R02V	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	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 EGSF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M16 Qty.	Catalog 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 EISF	Terminal Block 0.5/2.5 mm ² Qty.	Continuity Shield Qty.	Multi-Cable Cable Entry Qty. 1	Single Cable Entries M16 Qty.	Catalog 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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Zones 1 & 2 – 21 & 22
Gas (G) and Dust (D)

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

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

Shaded catalog numbers are normally stocked items. All other items are made to order.

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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

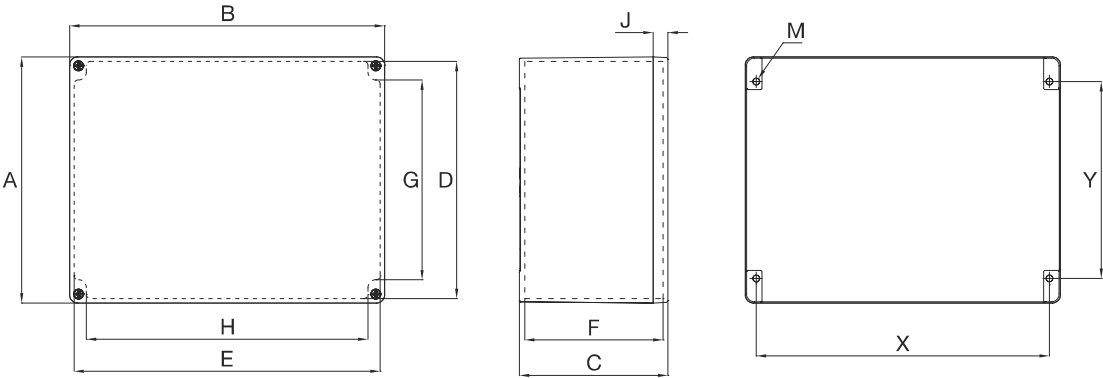
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Dimensions in Millimeters ①



Enclosure Catalog Number	External Dimension			Internal Dimensions					Cover J	Body Thickness	Wall Fixing		
	A	B	C	D	E	F	G	H			X	Y	M ②
JBEP1717090	170	170	91	158.5	158.5	72	112.5	137	15	4.5	153	131	M5
JBEP2021150	200	215	145	185.8	200.8	122.5	114.8	159	20	6.1	189	146	M6
JBEP2532150	250	320	150	241	311	133.5	171	267	15	4.5	200	298	M6
JBEP3250150	320	500	150	311	491	133.5	267	421	15	4.5	298	447	M6

① Wall fixing screw diameter 5 mm . Wall fixing screw hole 6 mm .
② Screw to be used for mounting box.