

A.T.X.[®] JBEP and ECEP Series Undrilled Fiberglass Reinforced Polyester Enclosures

Increased Safety

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

Applications

- Designed for use in Zone 1 or 2 areas, where flammable gases or vapors are present either continuously or intermittently such as:
 - Petroleum
 - Chemical
 - Refineries
 - Other industrial process facilities
- Ideal for wet or corrosive atmospheres.
- Designed for use in Zone 21 or 22 areas where flammable dusts are present either continuously or intermittently such as:
 - Food processing
 - Dairy
 - Brewing
 - Other commercial facilities
- JBEP Series
 - Terminal junction boxes for electrical low voltage and instrumentation connections in hazardous areas.
 - Refer to technical data to define permitted number of terminal blocks and cable entries on selected junction boxes.
- ECEP Series
 - Enclosure for distribution and control applications. Can be modified at our manufacturing facility to house a large range of components; i.e. control units, switches, breakers, transformers, meters, etc.

Features

- Available in a wide range of sizes.
- Operating temperature -67 °F/-55 °C to 140 °F/60 °C (CSPe) and -40 °F/-40 °C to 131 °F/55 °C (CAe).
- Hinges standard on all sizes above 15.75 x 11.81" / 400 x 300 mm.
- Hinged enclosures:
 - Reversible door opening 180°.
 - Door with double bar lock.
 - Key locking facility.
 - Protective flange at top and bottom.

Standard Materials

- Enclosures: static resistant carbon filled fiberglass reinforced polyester (FRP)
- Hardware: stainless steel

Accessories

- Mounting pan.
- Rail mounting.
- Padlocking device.
- Inside pocket for documents.
- Refer to technical data to define permitted number and size of terminals and cable entries.

Options

- Removable gland plates.
- Nameplates.
- Consult factory for custom drilling and assembly requirements.
- Empty enclosure with Ex "U" component marking for re-certification by notified body for CAe type.

Certifications and Compliances

- Certification Type CSPe
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 G
 - ATEX/IEC Protection: Ex e II, Ex ia IIC, Ex ib IIC, Ex de IIC, Ex demb IIC
 - T Rating: T6

CSPe Type – Small Version



CAe Type – Non-Hinged Version



CAe Type – Hinged Versions



- Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 D
 - ATEX/IEC Protection: Ex tD A21
 - Surface Temperature: T167 °F/T75 °C
 - Ambient Temperature: -67 °F/-55 °C to 140 °F/60 °C
 - CE Declaration of Conformity: 50284
 - ATEX Certificate: LCIE 09 ATEX 3032X
 - IECEx Certificate: IECEx LCI 09.0016X
 - Other Certifications: GOST
- Certification Type CAe
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 G
 - ATEX/IEC Protection: Ex e II, Ex ia IIC, Ex ib IIC, Ex de IIC, Ex demb IIC
 - T Rating: T6 to T2
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 D
 - ATEX/IEC Protection: Ex tD A21
 - Surface Temperature: T176 °F to T203 °F / T80 °C to T95 °C
 - Ambient Temperature: -40 °F/-40 °C to 131 °F/55 °C
 - CE Declaration of Conformity: 50235
 - ATEX Certificate: LCIE 02 ATEX 6248X
 - IECEx Certificate: IECEx LCI 04.0016
 - Other Certifications: GOST
 - Certification Type CAe U
 - Gas, Zones 1 and 2
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 G
 - ATEX/IEC Protection: Ex e II,
 - Dust, Zones 21 and 22
 - Conforming to ATEX 94/9/CE: CE 0081 Ⓢ II 2 D
 - ATEX/IEC Protection: Ex tD A21
 - Ambient Temperature: -40 °F/-40 °C to 131 °F/55 °C
 - CE Declaration of Conformity: 5C241
 - ATEX Certificate: LCIE 09 ATEX 3036 U
 - IEC Certificate: LCIE Ex 09.002 U
 - Ingress Protection (solid and liquid): IP66
 - Impact Resistance (shock): IK10
 - Ex Standards: EN/IEC 60079-0; 60079-1; 60079-7; 60079-11, 61241-0; 61241-1; 61241-11
 - Other Standards: EN/IEC 60529 (IP), 62262 (IK)

Enclosures and Junction Boxes

ENCLOSURES AND JUNCTION BOXES: HAZARDOUS LOCATION OUTLET BOXES – CABLE

A.T.X.[®] JBEP and ECEP Series Undrilled Fiberglass Reinforced Polyester Enclosures

Increased Safety

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

Catalog Numbering Guide

JBEP

Series

ATEX/IEC Certified:
 EC - Enclosure and Controls
 JB - Junction Box
 E - Increased Safety
 I - Intrinsic Safety
 P - Polyester

12

Length Dimensions in/mm:

12 - 4.72/120.0
 17 - 6.69/170.0
 21 - 8.27 /210.0
 23 - 9.06 /230.0
 32 - 12.60 /320.0
 40 - 15.75 /400.0
 42 - 16.73 /425.0
 50 - 19.68 /500.0
 57 - 22.64 /575.0
 60 - 23.62 /600.0
 80 - 31.50 /800.0
 10 - 39.37 /1000.0

12

Width Dimensions in/mm:

12 - 4.72/120.0
 20 - 7.87/200.0
 30 - 11.81/300.0
 40 - 15.75/400.0
 60 - 23.62/600.0
 80 - 31.50/800.0

09

Depth Dimensions in/mm:

09 - 3.58/91.0
 15 - 5.91/150.0
 20 - 7.87/200.0
 25 - 9.84/250.0
 30 - 11.81/300.0

0

Gland plate for
 hinged enclosures only:
 0 - None
 1 - One Bottom
 2 - One Top and Bottom
 3 - Two Sides and Bottom
 4 - All Sides

0

Options:

(options must be listed
 alphabetically)

E - Earth Continuity Brass Plate
 M - Mounting Pan
 U - Component Certification "U"
 # - Customized Enclosure
 (6 Digit number will be assigned
 at time of order placement.)

A.T.X.[®] JBEP Series Undrilled Fiberglass Reinforced Polyester Enclosures

Increased Safety

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

JBEP Series

Type	Dimension L x W x D in/mm	Rail Length Capacity in/mm	Weight lb/kg	Volume in ³ /dm ³	Catalog Number
------	------------------------------	-------------------------------	-----------------	--------------------------------------------	-------------------

Exe II Small Polyester Junction Boxes

For use with Ex certified terminals only (not supplied). Mounting rails supplied. Yellow laminated plastic label with black lettering.



CSPe1	4.72 x 4.72 x 3.58 / 120 x 120 x 91	2.44/62.0	1.76/0.8	244/4	JBEP1212090
CSPe2	6.69 x 4.72 x 3.58 / 170 x 120 x 91	4.41/112.0	2.20/1.0	244/4	JBEP1712090
CSPe3	9.06 x 4.72 x 3.58 / 230 x 120 x 91	6.77/172.0	2.65/1.2	244/4	JBEP2312090

Exe II Non-Hinged Junction Boxes

For use with Ex terminals only (not supplied). Mounting rails to be ordered separately. Yellow laminated plastic label with black lettering.



CAe1	8.47 x 7.87 x 5.91 / 215 x 200 x 150	7.52/191.0	6.61/3.0	793/13	JBEP2120150
CAe2	12.60 x 7.87 x 5.91 / 320 x 200 x 150	11.54/293.0	8.38/3.8	1404/23	JBEP3220150
CAe3	16.73 x 7.87 x 5.91 / 425 x 200 x 150	15.75/400.0	10.80/4.9	1587/26	JBEP4220150
CAe4	22.64 x 7.87 x 5.91 / 575 x 200 x 150	21.81/554.0	13.67/6.2	2014/33	JBEP5720150

Exe II Hinged Junction Boxes without Gland Plate

For use with Ex terminals only (not supplied). Mounting pan and rails to be ordered separately.



CAe6	15.75 x 11.81 x 8.11 / 400 x 300 x 206	9.57/243.0	9.70/4.4	2014/33	JBEP4030200
CAe7	19.68 x 15.75 x 8.11 / 500 x 400 x 206	13.50/343.0	11.68/5.3	2868/47	JBEP5040200
CAe8	24.02 x 15.75 x 10.12 / 610 x 400 x 257	13.50/343.0	17.00/7.7	5126/8.4	JBEP6040250
CAe10	32.28 x 24.02 x 11.81 / 820 x 610 x 300	21.38/543.0	40.34/18.3	11595/190	JBEP8060300
CAe11	40.16 x 31.89 x 11.81 / 1020 x 810 x 300	29.25/743.0	52.03/23.6	19100/313	JBEP1080300

Exe II Hinged Junction Boxes with Bottom Opening for Gland Plate

For use with Ex terminals only (not supplied). Opening at bottom 4.49 x 12.68 in / 114 x 322 mm. Mounting pan, rails and gland plate to be ordered separately.



CAe7	19.68 x 15.75 x 8.11 / 500 x 400 x 206	13.50/343.0	11.68/5.3	2868/47	JBEP5040201
CAe8	24.02 x 15.75 x 10.12 / 610 x 400 x 257	13.50/343.0	17.00/7.7	5126/84	JBEP6040251

Removable Gland Plate

Description	Size in/mm	Drilling	Weight lb/kg	Volume in ³ /dm ³	Catalog Number
Gland Plate	4.49 x 12.68 / 114 x 322	Blank	3.09/1.4	24.41/0.4	JBEPGP400
Gland Plate	4.49 x 12.68 / 114 x 322	Clearance holes for 17 x M20 + 3 x M25	3.09/1.4	24.41/0.4	JBEPGP400D12
Gland Plate	5.12 x 10.39 / 130 x 264 †	Blank	2.87/1.3	18.31/0.3	JBEPGP300

Coupling Flange

Description	Size in/mm	Weight lb/kg	Volume in ³ /dm ³	Catalog Number
Coupling Flange	4.49 x 12.68 / 114 x 322	2.87/1.3	12.20/0.2	JBEP CF1

† To be used with customized enclosure CAe6.

A.T.X.[®] JBEP Series Undrilled Fiberglass Reinforced Polyester Enclosures

Increased Safety

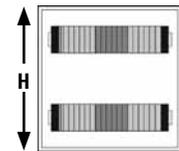
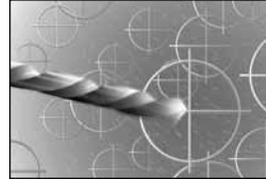
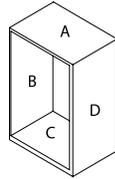
Zone 1 and 2 – 21 and 22
 II 2 GD
 ATEX / IECEx
 IP66 – IK10

JBEP Series for Terminal Junction Box Application Only.

The size of the junction box needed to meet your requirements can be selected based on the table shown below. We also offer you the possibility to drill and equip, please consult our drilling guide available online at: www.egsatx.com

1. Define maximum cable entries according to number of modules available per side.

Cable Entry Metric Thread	Number of Modules
M20	1
M25	1
M32	1
M40	2
M50	3



Type	Dimensions in/mm			B/D	Number of Modules		Allowable Max. Size	Terminal Dim. H — in/mm
	Length	Width	Depth		A/C	A'/C' (1)		
CSPe1	4.72/120	4.72/120	3.58/91	2	2	–	M25	4.72/120
CSPe2	6.69/170	4.72/120	3.58/91	3	2	–	M32	4.72/120
CSPe3	9.06/230	4.72/120	3.58/91	4	2	–	M32	4.72/120
CAe1	8.46/215	7.87/200	5.91/150	11	8	–	M50	7.87/200
CAe2	12.60/320	7.87/200	5.91/150	18	8	–	M50	7.87/200
CAe3	16.73/425	7.87/200	5.91/150	26	8	–	M50	7.87/200
CAe4	22.64/575	7.87/200	5.91/150	38	8	–	M50	7.87/200
CAe6	15.75/400	11.81/300	8.11/206	18	18	–	M50	15.75/400
CAe7	19.68/500	15.75/400	8.11/206	24	10	10	M50	19.68/500
CAe8	24.02/610	15.75/400	10.12/257	48	10	10	M75	24.02/610
CAe10	32.28/820	24.02/610	11.81/300	72	54	–	M100	32.28/820
CAe11	40.16/1020	31.89/810	11.81/300	96	78	–	M100	40.16/1020

2. Maximum rail arrangement according to physical dimensions.

Terminal Capacity (in ² /mm ²)	Maximum Quantity of Horizontal Rails Per Quantity						
	0.004/2.5	0.006/4	0.009/6	0.016/10	0.025/16	0.054/35	0.078/50
CSPe1/2/3	1	1	1	1	0	0	0
CAe1/2/3/4	1	1	1	1	1	1	0
CAe6	3	3	3	2	2	2	1
CAe7	4	4	3	3	3	2	1
CAe8	4	4	4	4	3	3	2
CAe10	6	6	5	5	5	4	3
CAe11	8	8	7	7	6	5	3

Enclosures and Junction Boxes

ENCLOSURES AND JUNCTION BOXES: HAZARDOUS LOCATION OUTLET BOXES – CABLE

A.T.X.[®] JBEP Series Undrilled Fiberglass Reinforced Polyester Enclosures

Increased Safety

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

3. Defining maximum terminal block quantity according to power dissipation:

- Junction boxes used for instrumentation applications have very low current levels, therefore there is no risk of overheating whatever the number of terminals inside the box.
- For applications other than instrumentation, the following tables allow you to define your junction box depending on the number of terminals and the maximum authorized current being carried with feed-through terminals.
- For single feed terminals using cross connection, please consult your local representative for a calculation.

For other terminal block configurations, please consult our drilling guide available online at: www.appletonelec.com

Small Junction Boxes

T Rating: T6	Type		
	CSPe1	CSPe2	CSPe3
	5 x 5 x 4"/ 120 x 120 x 91 mm	7 x 5 x 4"/ 120 x 170 x 91 mm	9 x 5 x 4"/ 120 x 230 x 91 mm
0.004 in ² / 2.5 mm ² Qty. 1 max.	12 15 A	22 13 A	33 12 A
0.006 in ² / 4 mm ² Qty. 1 max.	10 20 A	18 19 A	28 16 A
0.009 in ² / 6 mm ² Qty. 1 max.	7 32 A	14 27 A	21 24 A
0.016 in ² / 10 mm ² Qty. 1 max.	4 50 A	6 50 A	8 50 A

Non-Hinged Junction Boxes

T Rating: T6 @ Ta 104 °F/40 °C T5 @ Ta 131 °F/55 °C	Type			
	CAe1	CAe2	CAe3	CAe4
	8 x 9 x 6"/ 200 x 215 x 150 mm	8 x 13 x 6"/ 200 x 320 x 150 mm	8 x 17 x 6"/ 200 x 425 x 150 mm	8 x 23 x 6"/ 200 x 575 x 150 mm
0.004 in ² / 2.5 mm ² Qty. 1 max.	20 16 A	21 16 A	23 16 A	29 14 A
0.006 in ² / 4 mm ² Qty. 1 max.	19 20 A	20 20 A	23 20 A	33 16 A
0.009 in ² / 6 mm ² Qty. 1 max.	12 32 A	13 32 A	14 32 A	18 28 A
0.016 in ² / 10 mm ² Qty. 1 max.	10 40 A	11 40 A	18 32 A	22 28 A
0.024 in ² / 16 mm ² Qty. 1 max.	8 28 A	10 27 A	13 25 A	15 26 A
0.039 in ² / 25 mm ² Qty. 1 max.	8 67 A	8 73 A	10 69 A	10 70 A
0.054 in ² / 35 mm ² Qty. 1 max.	8 79 A	8 86 A	10 80 A	10 80 A

Hinged Junction Boxes

T Rating: T6 @ Ta 104 °F/40 °C T5 @ Ta 131 °F/55 °C	Type				
	CAe6	CAe7	CAe8	CAe10	CAe11
	16 x 12 x 8"/ 400 x 300 x 206 mm	20 x 16 x 8"/ 500 x 400 x 206 mm	24 x 16 x 10"/ 610 x 400 x 257 mm	32 x 24 x 12"/ 820 x 610 x 300 mm	40 x 32 x 12"/ 1020 x 810 x 300 mm
0.054 in ² / 35 mm ² Qty. 1 Max.	12 100 A	16 100 A	16 100 A	—	—
0.078 in ² / 50 mm ² Qty. 1 Max.	8 125 A	12 125 A	16 125 A	—	—
0.109 in ² / 70 mm ² Qty. 1 Max.	8 160 A	10 160 A	12 160 A	—	—
0.147 in ² / 95 mm ² Qty. 1 Max.	8 200 A	10 200 A	12 200 A	—	—
0.186 in ² / 120 mm ² Qty. 1 Max.	—	8 250 A	8 250 A	12 200 A	16 150 A
0.233 in ² / 150 mm ² Qty. 1 Max.	—	—	6 250 A	9 250 A	12 190 A
0.287 in ² / 185 mm ² Qty. 1 Max.	—	—	—	8 300 A	10 240 A

Enclosures and Junction Boxes

ENCLOSURES AND JUNCTION BOXES: HAZARDOUS LOCATION OUTLET BOXES – CABLE

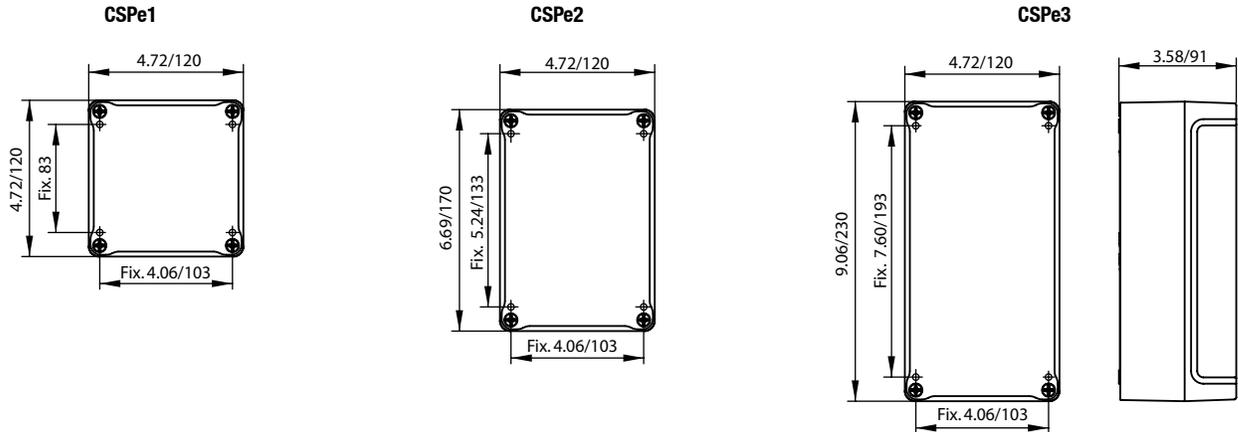
A.T.X.[®] JBEP and ECEP Series Undrilled Fiberglass Reinforced Polyester Enclosure

Dimensions

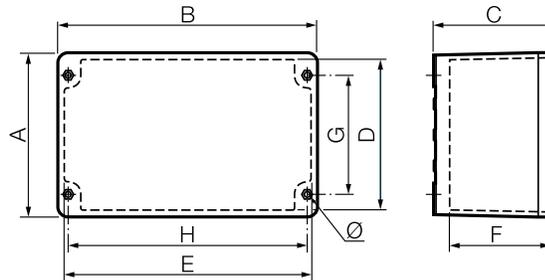
Increased Safety

Dimensions in Inches/Millimeters

Fixing details for below boxes: four holes \varnothing 0.20"/5 mm.



CAe1 to CAe4



Type	External		Internal					Fixings		
	A	B	C	D	E	F	G	H	Thick	\varnothing
CAe1	7.87/200.0	8.46/215.0	5.91/150.0	7.28/185.0	7.87/200.0	4.92/125.0	5.75/146.0	7.44/189.0	0.24/6.0	0.26/6.5
CAe2	7.87/200.0	12.60/320.0	5.91/150.0	7.28/185.0	12.01/305.0	4.92/125.0	5.75/146.0	11.57/294.0	0.24/6.0	0.26/6.5
CAe3	7.87/200.0	16.73/425.0	5.91/150.0	7.28/185.0	16.14/410.0	4.92/125.0	5.75/146.0	15.71/399.0	0.24/6.0	0.26/6.5
CAe4	7.87/200.0	22.64/575.0	5.91/150.0	7.28/185.0	22.05/560.0	4.92/125.0	5.75/146.0	21.57/548.0	0.24/6.0	0.26/6.5

Insulated Side Support (Rail Holder) 096115

Type	Equipment Capacity	
	L	M
CAe1	4.13/105.0	5.08/129.0
CAe2	8.11/206.0	9.21/234.0
CAe3	12.20/310.0	13.35/339.0
CAe4	12.40/315.0	13.58/345.0

