



ENCLOSURES
B7E SERIES

JUNCTION BOXES



B7E

Empty / Control Enclosure

NEC / CEC Certifications

Class I, Div. 1 & 2, Groups B, C, & D

Class I Zone 1 IIB+H2 Gb

Class II, Div. 1 & 2, Groups E, F, & G

Class III

Type 3, 4, 4X

Ta = -25°C to +40°C

Ta = -50°C to +40°C



File E83969

Certificate LR11716

FEATURES-SPECIFICATIONS

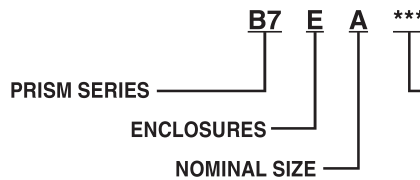
Features

- Copper-free cast aluminum construction – high strength, light in weight, corrosion resistant
- Quick release, captive cover bolts of 316 Grade Stainless Steel. Triple-lead bolts require only 3-½ turns to disengage. Stainless steel (316 grade) for maximum protection from corrosion.
- Nitrile (BUNA-N) “O” ring gasket is located inside bolt circle to prevent water seeping into enclosure
- Mounting lugs are made of ductile aluminum alloy to adjust to irregular mounting surfaces without damaging the enclosure.
- Hinged cover is standard
- Recessed Flange Notches – Flanges are notched to allow for easier cover opening with prying instrument without flange damage
- Conduit openings can be supplied at factory, or can be field installed

Materials

- Enclosure: Copper-free aluminum (less than ¼ of 1%)
- Hinges: Aluminum with stainless steel hardware
- Cover Bolts: 316 stainless steel
- Finish: Aluminum lacquer standard except B7EP and B7EQ which are powder epoxy.

CATALOG LOGIC



SUFFIXES

- SU3B-4X – Type 4X drain and breather installed Groups BCD
 - SU3B-ATEX – ATEX IEC Ex drain & breather installed Groups B & Ex d+IIB
 - SU2 – Install hinges
 - SU9 – Special paint
 - SU93 – Do not paint
- Additional suffixes are available*



JUNCTION BOXES

Figure 1

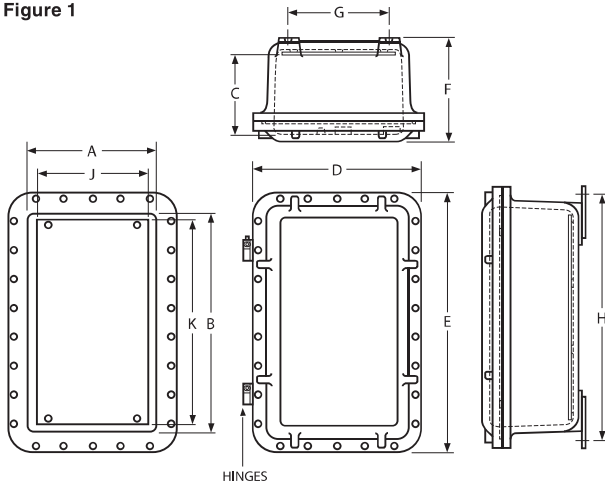
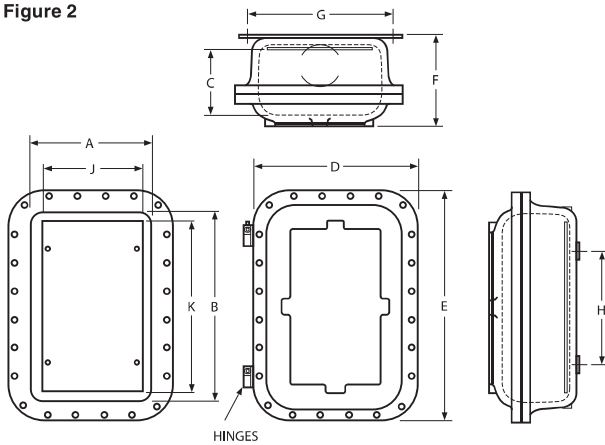


Figure 2



MODIFICATIONS	
SUFFIX NUMBER	DESCRIPTION
KIT-251	100 amp ground lug
KIT-252	225 amp ground lug
SU3B-QA	cCSAus, ATEX, IEC Ex drain and breather installed Class I Groups C & D & Ex d IIB, Type 4, 4X, IP66
SU3B-4X	UL and CSA drain and breather installed Class I Groups B, TYPE 4, 4X
SU9PEEX	External gray powder coated epoxy paint
SU14	Fungus proof internally
SU9	Special paint- specify
SU93	Do not paint enclosure
TOE PLATE KIT	Door guide plate to assist in aligning and installing cover bolts

B7E JUNCTION BOXES AND ENCLOSURES			
CATALOG NUMBER	PAN		
	CATALOG NUMBER	WIDTH (J)	LENGTH (K)
B7EA	19919	5"	11-3/4"
B7EB	19920	8-1/4"	16-3/4"
B7EC	18245	6-1/4"	13-3/4"
B7ED	19921	8-3/8"	19-3/8"
B7EE	19923	6-3/8"	20-3/8"
B7EF	18472	11-5/8"	21-1/4"
B7EG	19924	10"	28"
B7EH	19925	15-3/8"	28-3/8"
B7EK	19926	11"	18"
B7EL	19927	11"	27"
B7EM	19928	11"	39"
B7EN	19929	11"	47"
B7EP	—	N/A	N/A
B7EQ	—	N/A	N/A

Internal Mounting Pan Thickness is 1/8" except on B7EJ it is 3/16" thick.

B7E JUNCTION BOXES AND ENCLOSURES												
CATALOG NUMBER	DIMENSIONS								DRAWING FIGURE	MAXIMUM CONDUIT SIZE		MAXIMUM NUMBER OF OPERATORS
	NOMINAL INSIDE			OUTSIDE			MOUNTING			TOP AND BOTTOM	SIDES	
	WIDTH (A)	LENGTH (B)	DEPTH (C)	WIDTH (D)	LENGTH (E)	DEPTH (F)	WIDTH (G)	LENGTH (H)				
B7EA	6-1/2"	13-1/2"	6-11/16"	11"	18"	9-1/8"	3-5/8"	16-3/8"	1	1-1/2"	1"	4 rows of 2 = 8
B7EB	10"	18-1/2"	6-5/8"	14-1/2"	23"	9-1/8"	7"	21-3/8"	1	1-1/2"	1"	7 rows of 3 = 21
B7EC	8"	15-1/2"	6-11/16"	12-1/2"	20"	9-1/8"	5"	18-3/8"	1	1-1/2"	1"	5 rows of 2 = 10
B7ED	10"	21"	6-11/16"	14-1/2"	25-1/2"	9-1/8"	7"	23-7/8"	1	1-1/2"	1"	8 rows of 3 = 24
B7EE	8"	21-3/4"	8-5/16"	12-1/2"	26-1/4"	10-3/4"	5"	24-5/8"	1	2"	2"	8 rows of 2 = 16
B7EF	13"	22-3/4"	8-3/8"	17-7/8"	27-1/4"	11"	10-3/8"	25-5/8"	1	4"	4"	8 rows of 4 = 32
B7EG	12"	29-3/4"	8-7/8"	16-1/2"	34-1/4"	11-1/2"	9"	32-5/8"	1	5"	4"	8 rows of 3 = 24
B7EH	17"	29-3/4"	8-11/16"	21-1/2"	34-1/4"	11-7/8"	14"	32-5/8"	1	5"	4"	9 rows of 5 = 45
B7EK	13"	20"	6-5/8"	17-1/2"	24-3/4"	9-1/2"	15-1/4"	13"	2	3"	1-1/2"	6 rows of 4 = 24
B7EL	13"	29"	6-5/8"	17-1/2"	33-3/8"	9-1/2"	15-1/4"	21"	2	3"	1-1/2"	9 rows of 4 = 36
B7EM	13"	41"	6-5/8"	17-1/2"	45-3/8"	9-1/2"	15-1/4"	33"	2	3"	1-1/2"	14 rows of 4 = 56
B7EN	13"	50"	6-5/8"	17-1/2"	54-3/8"	9-1/2"	15-1/4"	42"	2	3"	1-1/2"	17 rows of 4 = 68
B7EP	3-5/8"	5-13/16"	5-1/16"	5-3/4"	8-1/16"	6-5/16"	3-1/8"	8-1/8"	1	1"	1"	1 row of 2 = 2
B7EQ	4-1/4"	9-3/16"	6-5/16"	8-1/8"	13-1/16"	7-13/16"	6-3/8"	7-1/2"	2	1-1/2"	1-1/2"	1 row of 4 = 4

All Conduits must be sealed within 18" when used in Group B Locations.

Operator spacing is 2-1/2" \pm to \pm except on B7EG & B7EH spacing is 3" \pm to \pm . Internal Mounting Pan Thickness is 1/8". Consult Killark for drawing details before layout of cover devices. Maximum number of "G" series control operators permitted in cover, down + across = total.



ENCLOSURES B7E SERIES

CONDUIT OPENING DATA

Instructions

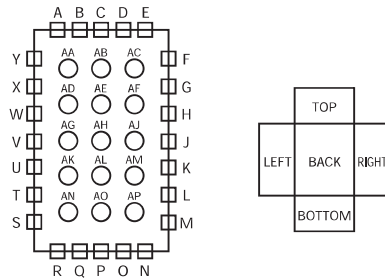
Drilled and tapped conduit openings will be evenly spaced and located in the area indicated on the location chart. Critical conduit opening locations may be indicated by supplying a diagram similar to the one shown at right indicating critical dimensions and locations. Specific conduit openings must be located dimensionally from box centerlines to conduit centerlines and from outside back surface of box to conduit centerline.

Ordering Information:

- Select the letter on location chart which indicates conduit opening position desired.
- Select symbol number from chart which indicates conduit opening type and size.

- Combine the conduit location letter, size and type number, and add as a suffix to junction box catalog number.

Example: EXB-12248 N34-C3-J5-PI3-AH4



Drawing indicates position as looking into open face of box with short side (top) up.

EXB/EXBLT/B7/GR SYMBOL NUMBERS		
CONDUIT SIZE	CONDUIT OPENINGS DRILLED AND TAPPED	UNION
1/2"	1	11
3/4"	2	12
1"	3	13
1-1/4"	4	14
1-1/2"	5	15
2"	6	16
2-1/2"	7	17
3"	8	18
3-1/2"	9	19
4"	0	10
5"	02	—
6"	04	—

Union = GUM series male NPT unions

EXB/EXBLT/B7/GR - MINIMUM CENTER TO CENTER SPACING FOR DRILLED AND TAPPED OPENINGS AND UNION HUBS

NPT (METRIC)	SPACE CENTERS	1/2" (M16)	3/4" (M20)	1" (M25)	1-1/4" (M32)	1-1/2" (M40)	2" (M50)	2-1/2" (M63)	3" (M75)	3-1/2" (M80)	4" (M100)	5"	6"
1/2" (M16)	MIN	1.18 (30)	—	—	—	—	—	—	—	—	—	—	—
	PRE	1.38 (35)	—	—	—	—	—	—	—	—	—	—	—
	GU	1.63 (41)	—	—	—	—	—	—	—	—	—	—	—
3/4" (M20)	MIN	1.38 (35)	1.5 (38)	—	—	—	—	—	—	—	—	—	—
	PRE	1.5 (38)	1.63 (41)	—	—	—	—	—	—	—	—	—	—
	GU	1.75 (44)	1.81 (46)	—	—	—	—	—	—	—	—	—	—
1" (M25)	MIN	1.5 (38)	1.75 (44)	1.81 (46)	—	—	—	—	—	—	—	—	—
	PRE	1.75 (44)	1.88 (48)	2 (108)	—	—	—	—	—	—	—	—	—
	GU	1.88 (48)	2 (108)	2.13 (54)	—	—	—	—	—	—	—	—	—
1-1/4" (M32)	MIN	1.69 (43)	1.94 (49)	2.06 (52)	2.31 (59)	—	—	—	—	—	—	—	—
	PRE	1.94 (49)	2.06 (52)	2.25 (57)	2.5 (64)	—	—	—	—	—	—	—	—
	GU	2.06 (52)	2.25 (57)	2.31 (59)	2.5 (64)	—	—	—	—	—	—	—	—
1-1/2" (M40)	MIN	1.94 (49)	2.06 (52)	2.19 (56)	2.5 (64)	2.63 (67)	—	—	—	—	—	—	—
	PRE	2.13 (54)	2.25 (57)	2.38 (60)	2.63 (67)	2.75 (70)	—	—	—	—	—	—	—
	GU	2.19 (56)	2.28 (58)	2.44 (62)	2.63 (67)	2.75 (70)	—	—	—	—	—	—	—
2" (M50)	MIN	2.25 (57)	2.38 (60)	2.56 (65)	2.81 (71)	2.94 (75)	3.19 (81)	—	—	—	—	—	—
	PRE	2.38 (60)	2.5 (64)	2.75 (70)	3 (76)	3.13 (97)	3.38 (86)	—	—	—	—	—	—
	GU	2.5 (64)	2.59 (66)	2.75 (70)	3 (76)	3.13 (97)	3.38 (86)	—	—	—	—	—	—
2-1/2" (M63)	MIN	2.44 (62)	2.56 (65)	2.75 (70)	3 (76)	3.13 (97)	3.38 (86)	3.63 (92)	—	—	—	—	—
	PRE	2.63 (67)	2.75 (70)	3 (76)	3.25 (82)	3.38 (86)	3.63 (92)	4 (102)	—	—	—	—	—
	GU	3.13 (97)	3.22 (82)	3.38 (86)	3.56 (90)	3.69 (94)	4 (102)	4.63 (117)	—	—	—	—	—
3" (M75)	MIN	2.81 (71)	2.94 (75)	3.06 (78)	3.31 (84)	3.44 (87)	3.75 (95)	4 (102)	4.31 (110)	—	—	—	—
	PRE	3 (76)	3.13 (97)	3.38 (86)	3.63 (92)	3.75 (95)	4 (102)	4.38 (111)	4.75 (121)	—	—	—	—
	GU	3.56 (90)	3.66 (93)	3.81 (97)	4 (102)	4.13 (105)	4.44 (113)	5.06 (129)	5.5 (140)	—	—	—	—
3-1/2" (M80)	MIN	3.13 (97)	3.25 (82)	3.38 (86)	3.63 (92)	3.75 (95)	4.06 (103)	4.31 (110)	4.63 (117)	4.94 (125)	—	—	—
	PRE	3.38 (86)	3.5 (89)	3.63 (92)	3.88 (98)	4 (102)	4.38 (111)	4.63 (117)	5 (127)	5.38 (136)	—	—	—
	GU	4 (102)	4.09 (104)	4.25 (108)	4.44 (113)	4.56 (116)	4.88 (124)	5.5 (140)	5.94 (151)	6.38 (162)	—	—	—
4" (M100)	MIN	3.44 (87)	3.56 (90)	3.69 (94)	3.94 (100)	4.06 (103)	4.38 (111)	4.63 (117)	4.94 (125)	5.25 (133)	5.56 (141)	—	—
	PRE	3.75 (95)	3.88 (98)	4 (102)	4.25 (108)	4.38 (111)	4.75 (121)	5 (127)	5.75 (146)	5.63 (143)	6 (152)	—	—
	GU	4 (102)	4.09 (104)	4.25 (108)	4.44 (113)	4.56 (116)	4.88 (124)	5.5 (140)	5.94 (151)	6.38 (162)	6.38 (162)	—	—
5"	MIN	4.13 (105)	4.25 (108)	4.38 (111)	4.63 (117)	4.75 (121)	5 (127)	5.25 (133)	5.56 (141)	5.88 (149)	6.19 (157)	6.19 (157)	—
	PRE	4.38 (111)	4.5 (114)	4.63 (117)	4.88 (124)	5 (127)	5.38 (136)	5.63 (143)	6 (152)	6.25 (159)	6.63 (168)	7.25 (184)	—
	MIN	4.75 (121)	4.88 (124)	5 (127)	5.25 (133)	5.38 (136)	5.63 (143)	5.88 (149)	6.19 (157)	6.5 (165)	6.81 (173)	7.44 (190)	8.13 (206)
6"	MIN	5 (127)	5.13 (130)	5.25 (133)	5.5 (140)	5.63 (143)	6 (152)	6.25 (159)	6.63 (168)	7 (178)	7.25 (184)	8 (203)	8.63 (220)
	LOCKNUT O.D.	1.25 (32)	1.13 (29)	1.69 (43)	2.19 (56)	2.44 (62)	3 (76)	3.44 (87)	4.19 (106)	4.81 (122)	5.38 (136)	6.69 (170)	7.94 (202)
	CONDUIT BUSHING	1 (25)	1.25 (32)	1.5 (38)	1.88 (48)	2.13 (54)	2.63 (67)	3.19 (81)	3.88 (98)	4.44 (113)	5 (127)	6.25 (159)	7.38 (187)
CONDUIT O.D.	—	1.06 (27)	1.38 (35)	1.69 (43)	1.94 (49)	2.38 (60)	2.88 (73)	3.5 (89)	4 (102)	4.5 (114)	5.56 (141)	6.63 (168)	

All dimension in. (mm)

MIN: The minimum space required to provide enough clearance over locknuts and bushings.

PRE: The preferred more liberal center to center spacing of openings. To be used whenever possible.

GU: The required spacing between openings using GUM Series male NPT unions.