



# S4XEBPB

Series Explosionproof  
Breaker Panelboards



## Lighting and Power Distribution Solutions



Spike Electric Control's S4XEBPB panelboards offer a high quality encapsulated breaker solution for lighting, power and heat tracing circuits designed for use in hazardous locations.

### Catalog Number System



### S4XEBPB Solutions:

S4XEBPB Encapsulated breaker panelboards provide a flexible, labor cost saving solution for the field. Constructed from nema 4X stainless steel and utilizing Crouse Hinds encapsulated breakers, the S4XEBPB series panelboards are the ideal product for lighting and power distribution in hazardous locations. Paired with Spike's nema 7 main circuit option for an ease of use alternative to the SN7PB and SN7SPB series panel boards. Circuit breakers are pre-wired to terminal blocks.

### For Use:

- In hazardous locations where flammable gases, vapors, and combustible fuse are present.
- In areas where weather, moisture and corrosion is present
- For branch protection to motors, starters, pumps, lighting, heat tracing etc.
- For indoor/outdoor use in refineries and chemical plants where hazards exist.

### Compliances:

Cl. I, Div. 2, Groups A, B, C, D  
Cl. I, Zone 2, AEx nA IIC Gc T4  
Ex nA IIC T4 Gc  
NEMA 3R, 4, 4X

### Standard Material:

- Panel board enclosure-316 stainless steel
- Neutral and ground--tin plated aluminum.
- Breather/drain--stainless steel
- Crouse Hinds GHG series
- Encapsulated breakers

### Options:

- Breather/drain
- Viewing window



**S4XEBPB 42 250 34 2 T - 6130,2EPD110,2GF1240B - S756**

#### # POLES

##### # Description

6	6 Pole
12	12 Pole
18	18 Pole
24	24 Pole
30	30 Pole
36	36 Pole
342	42 Pole

#### BUS AMPS

2 - 250A

#### POWER ENTRY

T - Top Entry  
B - Bottom Entry

#### BRANCH BREAKERS

120/240-120/208V			277/480V		
TYPE	POLES	AMPS	TYPE	POLES	AMPS
GHG	1	10-40A	GHG	1	10-40A
GHG	2	10-40A	GHG	2	10-40A
GHG	3	10-40A	GHG	3	10-40A
GFI	1	15-40A	GFI	1	15-40A
EPD	1	15-40A	EPD	1	15-40A

QTY TYPE POLES AMPS. EACH CONFIGURATION WILL BE FOLLOWED BY A COMMA. GHG ARE STANDARD AND DO NOT REQUIRE A TYPE PREFIX

#### Disconnect AMPS

##### AMPS Description

30-250a Main beaker  
MLO Main lug only

#### WIRING SYSTEM

3 - 3 Phase  
1 - Single phase

#### BREAKER VOLTAGE

2 - 240V  
4 - 480V

#### ENCLOSURE MODIFICATION AND ACCESSORIES

S756V-BREATHER/DRAIN CL.1, Zone 1, Ex CII, Iecex / Atex N4x, IP66  
W-VIEWING WINDOW

\* Place a dash(-) between each option in the order listed above



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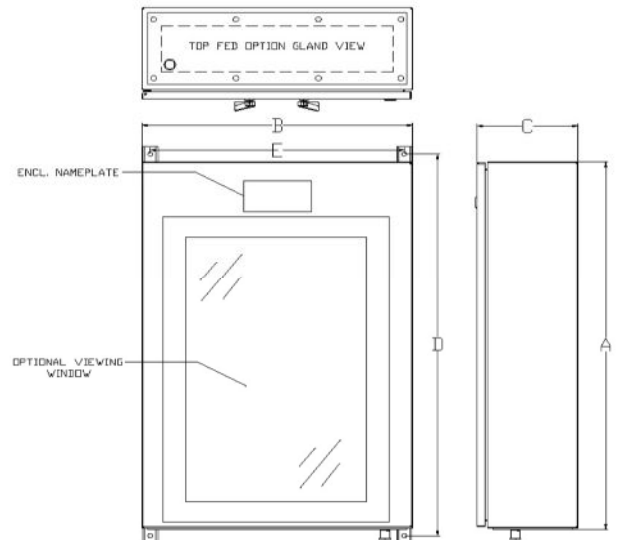
### Vertical Main Breaker

Catalog Number	Available Poles	Phases	Voltage Rating	Bus AMPS	Dimensions				
					A	B	C	D	E
S4XEBPB12*122*.*.*	12	1	240	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB18*122*.*.*	18	1	240	250	36.00	24.00	12.00	37.25	18.00
S4XEBPB24*122*.*.*	24	1	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30*122*.*.*	30	1	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB36*122*.*.*	36	1	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42*122*.*.*	42	1	240	250	60.00	36.00	12.00	61.57	30.00
S4XEBPB12*322*.*.*	12	3	240	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB18*322*.*.*	18	3	240	250	36.00	24.00	12.00	37.25	18.00
S4XEBPB24*322*.*.*	24	3	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30*322*.*.*	30	3	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB36*322*.*.*	36	3	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42*322*.*.*	42	3	240	250	60.00	36.00	12.00	61.57	30.00
S4XEBPB12*342*.*.*	12	3	480	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB18*342*.*.*	18	3	480	250	36.00	24.00	12.00	37.25	18.00
S4XEBPB24*342*.*.*	24	3	480	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30*342*.*.*	30	3	480	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB36*342*.*.*	36	3	480	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42*342*.*.*	42	3	480	250	60.00	36.00	12.00	61.57	30.00

### Main Lug Only

Catalog Number	Available Poles	Phases	Voltage Rating	Bus AMPS	Dimensions				
					A	B	C	D	E
S4XEBPB12MLO122*.*.*	12	1	240	250	24.00	24.00	12.00	25.24	18.00
S4XEBPB18MLO122*.*.*	18	1	240	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB24MLO122*.*.*	24	1	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30MLO122*.*.*	30	1	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB36MLO122*.*.*	36	1	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42MLO122*.*.*	42	1	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB12MLO322*.*.*	12	3	240	250	24.00	24.00	12.00	25.24	18.00
S4XEBPB18MLO322*.*.*	18	3	240	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB24MLO322*.*.*	24	3	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30MLO322*.*.*	30	3	240	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB36MLO322*.*.*	36	3	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42MLO322*.*.*	42	3	240	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB12MLO342*.*.*	12	3	480	250	24.00	24.00	12.00	25.24	18.00
S4XEBPB18MLO342*.*.*	18	3	480	250	30.00	24.00	12.00	31.26	18.00
S4XEBPB24MLO342*.*.*	24	3	480	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB30MLO342*.*.*	30	3	480	250	40.00	24.00	12.00	40.95	18.00
S4XEBPB36MLO342*.*.*	36	3	480	250	48.00	24.00	12.00	48.81	18.00
S4XEBPB42MLO342*.*.*	42	3	480	250	48.00	24.00	12.00	48.81	18.00

(\* ) EQUALS 1, 2, 3, AND 4 IN CATALOG PART NUMBERING





# GHG623

Encapsulated Circuit Breakers



### Technical Data - Hazardous Location

Master Contract	240 700
Explosion Category (For USL)	AEx de IIB / IIC (Depending on temperature)
Explosion Category (For CNL)	Ex de IIB / IIC (Depending on temperature)
Certifications and Compliances (for USL)	Class I, Zone 1 Class I, Division 2, Groups A,B, C, D
Certifications and Compliances (for CNL)	Zone 1 Class I, Division 2, Groups A,B, C, D
Ambient temperature range	IIC: 20°C to +55°C (GHG62-1/2 3/4...R...) IIB: 45°C to +5110°C (GHG62-1/2 ...R...)
Permissible service temperature range (Other temperatures possible with special versions)	IIC: 20°C to +110°C (GHG62-1/2 3/4...R...) IIB: 45°C to +110°C (GHG62-1/2 ...R...)
Permissible ambient temperature in original packing	-50°C to +80°C

### Part Numbers

Spike Electric Part #'s	Poles	Amperage	Voltage
GHG6232001E2001	1	10	120V
GHG6232001E2002	1	15	120V
GHG6232001E2003	1	20	120V
GHG6232001E2004	1	25	120V
GHG6232001E2005	1	30	120V
GHG6232001E2006	1	35	120V
GHG6232001E2007	1	40	120V
GHG6233001E2002	2	15	120/240V
GHG6233001E2003	2	20	120/240V
GHG6233001E2005	2	30	120/240V
GHG6233001E2007	2	40	120/240V
GHG6233001E0275	3	15	277/480V
GHG6233001E0277	3	20	277/480V
GHG6233001E1007	3	30	277/480V
GHG6233001E1010	3	40	277/480V

### Mechanical Data

Terminal Cross Section	Wire Gauge	Stripping Length
15A or Less	AWG 14	11 MM / 0.4"
20A	AWG 12	11 MM / 0.4"
25A	AWG 10	11 MM / 0.4"
30A	AWG 10	11 MM / 0.4"
40A	AWG 8	11 MM / 0.4"
Auxiliary Terminals	1 AWG 14	11 MM / 0.4"
Quantity Terminals for the Module Size	1 2 3	
Main Terminals	1 2 3	
Aux. Terminals	1 3 4	
Enclosure Material	Polyamide	

### Electrical Data

#### Circuit Breaker 1-, 2-, 3-

Rated Voltage (Main Contact)	to 277/480VAC: 60 Hz
Rated Current (Main Contact)	10A to 25A
1 Pole	GHG 623 1101 R...
2 Pole	GHG 623 2101 R...
3 Pole	GHG 623 3101 R...
Rated Switch Capacity	10kA
Non-ambient compensated Temperature	25°C

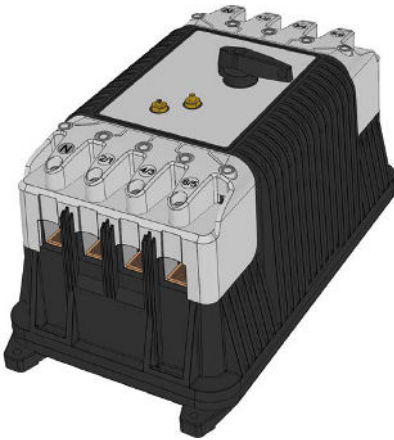
#### Circuit Breaker 1-, 2-

Rated Voltage (Main Contact)	to 120/240VAC: 60 Hz
Rated Current (Main Contact)	10A to 40A
1 Pole	GHG 623 1101 R...
2 Pole	GHG 623 2101 R...
Rated Switch Capacity	10kA
Non-ambient compensated Temperature	40°C



# GHG 6277

Series MCCB



## New MCCB type GHG 6277

from 63 A up to 160 A 3 & 4 Pole MCCB for Ex-Zone 1 & 2

### New Molded Case Circuit Breaker (MCCB) for more reliability

GHG 6277 tamper-proof encapsulated breakers provide maximum safety for your facility and feature the proven reliability of Eaton MCCBs.

#### Application:

Provide overcurrent and short circuit protection for low voltage power, lighting, and heat tracing applications in hazardous locations such as refineries, chemical and petrochemical plants, mining, food processing, corrosive, and industrial processing facilities.

Encapsulated MCCBs are available certified to IEC standards making them a global solution ideal for use as power circuit breakers and distribution board mains.

#### Cost savings

With the introduction of Spike Electric Controls Ex-d MCCBs up to 160 A it becomes easier and cost-effective to release a power distribution board for hazardous environment.

Conventionally an Ex-d enclosure with a minimum volume of 20 litres (e.g. GHG 64 -size 4 or 5) must be selected to build with an industrial MCCB and add Ex-d cable bushings for wiring. To actuate the MCCB an Ex-d handle must be installed as well. Using the new GHG6277 series in a standard Ex e enclosure (GHG 619) with an external operating handle, the Ex d aluminum enclosure can be eliminated from the panel. This concept saves money and time for installation and maintenance.

#### Features:

- Protection against electrical overload. Provides upstream protection for elevated electrical currents occurring outside of normal operation
- Protection against electrical faults. Immediately interrupts damaging high currents which occur during a line fault or short circuit
- Function as a switch-disconnector. Rated with AC3 switching capacity for making & breaking electrical loads.

### FEATURES AND PRODUCT DETAILS

#### Test button

Push-to-trip mechanism for manual trip and testing of the breaker operation

#### Adjustable settings

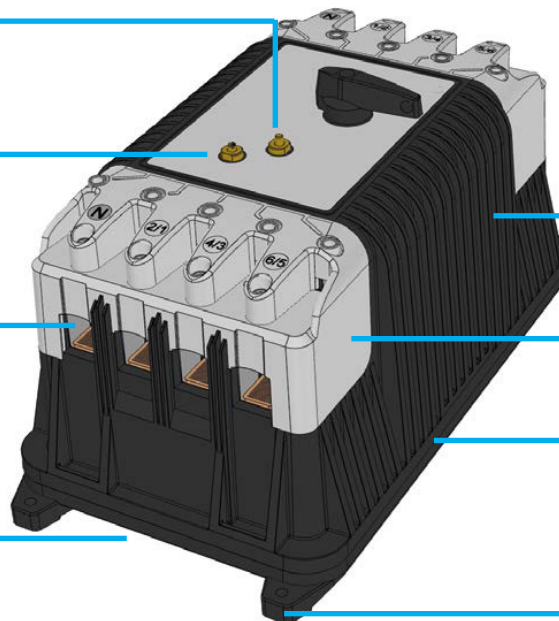
Allows to adjust/set the trip setting down to the next available amperage (i.e. 160 A down to 125 A). (IEC version only)

#### Wire connecting terminals

Allows for single conductor up to 185 mm<sup>2</sup>

#### Engineered air gap

Aids in temperature reduction and improves air flow



#### Heat dissipation ribs

Enlarged surface area for better cooling of the integrated components

#### IP20

Touch safe (IP20) operating controls

#### Tamper-proof friction

Welded design Maximum security to eliminate risk of flame path damage and prevent safety critical changes to the MCCB during

#### Mounting feet

Easy access for mounting/removing breakers



# GHG 6277

Series MCCB



### Type

GHG6277  
Encapsulated MCCB

## GHG6277

### X

### YY

### RO

### A

### B

### C

#### Configuration X

- 0=MCCB only
- 1=MCCB + 1NO
- 2=MCCB =1NC
- 3=MCCB + trip indicator 1 NO
- 4=MCCB=1NO/1NC
- 5=MCCB = 2NO
- 6=MCCB = 2NC
- 7=NCCB = 2NO + trip indicator 1NO
- 8=MCCB = 2NC = trip indicator 1 NO
- 9=MCCB = 1NO + 1NC + trip indicator 1NO

#### Accessories YY

- 00 = MCCB only
- 01 = shunt trip 24V AC/DC + early make 1NO
- 02 = shunt trip 110V-130V AC/DC + early make 1NO
- 03 = shunt trip 208V-250V AC/DC + early make
- 04 = shunt trip 380V-440VAC/DC + early make 1NO
- 05 = uv release 24V 50/60Hz + early make 1NO
- 06 = uv release 110V-130V 50/60Hz + early make
- 07 = uv release 208V-240V 50/60Hz + early make
- 08 = uv release 380V-440V 50/60Hz + early make
- 09 = uv release 480V-525V 50/60Hz + early make
- 10 = shunt trip 24V AC/DC
- 11 = shunt trip 110V-130V AC/DC
- 12 = shunt trip 208V-250V AC/DC
- 13 = shunt trip 380V-440VAC/DC
- 14 = uv release 24V 50/60Hz
- 15 = uv release 110V-130V 50/60Hz
- 16 = uv release 208V-240V 50/60Hz
- 17 = uv release 380V-440V 50/60Hz
- 18 = uv release 480V-525V 50/60Hz
- 19 = early make aux switch 2NO

#### Version

RO = E- series version (standard)

#### # of poles

- 1 = 3pole IEC
- 2 = 4pole IEC

#### Short Circuit Capacity

- 3 = IEC 10kA @400V

#### Rated Current IEC

- 2 = 63 A
- 3 = 80 A
- 4 = 100 A
- 5 = 125 A
- 6 = 160 A

NOTE: ALL COMBINATIONS OF „CONFIGURATION“ AND „ACCESSORIES“ ARE POSSIBLE





# GHG 6277

E- Series MCCB  
(Molded Case Circuit Breaker)



Technical Data E-Series IEC		MCCB 63 A up to 160 A
Marking accd. to 2014/34/EU		D II 2 G Ex de IIB/IIC Gb
EC-Type Examination Certificate		BVS 09 ATEX E 145 U
Marking accd. to IECEx		Ex de IIB/IIC Gb
IECEX Certificate of Conformity		IECEX BVS 10.0002 U
Functional temperature		-20 °C up to +70 °C
Application temperature <sup>1)</sup>		-20 °C up to +55 °C (IIC / IIB based on
Limits of service temperature		-20 °C up to +110 °C (IIC / IIB)
Storage temperature		-20 °C up to +55 °C in original packing
Built-in position		Vertical and rotated 90 deg in all directions
Release system		thermomagnetic release
Safe Isolation to EN 61140	between aux contacts and main contacts between aux contacts	500 VAC 300 VAC
Rated impulse withstand voltage	main contacts auxiliary contacts	8000 V 6000 V
Rated operating voltage $U_g$		400 V
Rated switching capacity $I_{cu}$	400/415V (50/60Hz) kA/cos $\phi$	10 kA/0.25
Rated current $I_n$	main contact aux. contact	63 A, 80 A, 100 A, 125 A or 160 A max. 5 A
Adjustable setting range $I_r$		0.8 to 1.0 x rated current $I_n$
Short current protection		$I_i = 6 \times I_n$
Utilization category to IEC/EN 60947-2		A
Making/breaking capacity at rated current up to 400 V		AC1 & AC3
Connecting terminals main contact		1 x 4.0 mm <sup>2</sup> up to 1 x 185 mm <sup>2</sup>
Rated voltage aux. contact		max. 500 V AC
Rated current aux contact	AC15 le (up to 230 V) / DC13 le (up to 24 V) AC15 le (up to 400 V) / DC13 le (up to 60 V) AC15 le (up to 500 V) / DC13 le (up to 110 V) DC13 le (up to 220 V)	4 A / 3 A 2 A / 1.2 A 1 A / 0.8 A 0.3 A
Connecting terminals aux./signal contact		1.0 mm <sup>2</sup> up to 4.0 mm <sup>2</sup> fine stranded
Total opening delay on short circuit		< 10 ms
Weight		10.5 kg - 4-pole / 10 kg - 3 pole
Enclosure material		Polyamide
Component degree of protection accd. EN 60529		IP20
1) The limits of the operating temperature range and the max. permissible temperature rise of the components (functional temperature) have to be taken into account		



# GHG 6277

E- Series MCCB  
(Molded Case Circuit Breaker)



### Type

GHG6277  
encapsulated  
MCCB

## GHG6277

## W

## XX

## RO

## Y

## 3

## Z

Configuration	W	Accessories	XX
MCCB only	0	shunt trip 24V AC/DC + early make 1NO	01
MCCB + 1NO	1	shunt trip 110V-130V AC/DC + early make 1NO	02
MCCB + 1NC	2	shunt trip 208V-250V AC/DC + early make 1NO	03
MCCB + trip indicator 1NO	3	shunt trip 380V-440VAC/DC + early make 1NO	04
MCCB + 1NO/1NC	4	uv release 24V 50/60Hz + early make 1NO	05
MCCB + 2NO	5	uv release 110V-130V 50/60Hz + early make 1NO	06
MCCB + 2NC	6	uv release 208V-240V 50/60Hz + early make 1NO	07
MCCB + 2NO + trip indicator 1NO	7	uv release 380V-440V 50/60Hz + early make 1NO	08
MCCB + 2NC + trip indicator 1NO	8	uv release 480V-525V 50/60Hz + early make 1NO	09
MCCB + 1NO + 1NC + trip indicator	9	shunt trip 24V AC/DC 10	10
		shunt trip 110V-130V AC/DC	11
		shunt trip 208V-250V AC/DC	12
		shunt trip 380V-440VAC/DC	13
		uv release 24V 50/60Hz	14
		uv release 110V-130V 50/60Hz	15
		uv release 208V-240V 50/60Hz	16
		uv release 380V-440V 50/60Hz	17
		uv release 480V-525V 50/60Hz	18
		early make aux. switch 2NO	19

### # of poles (Y)

3 pole	1
4 pole	2

### Rated Current (Z)

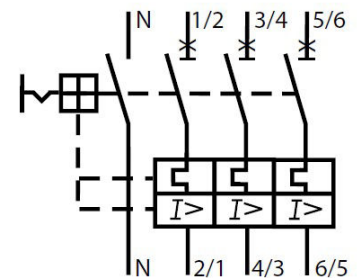
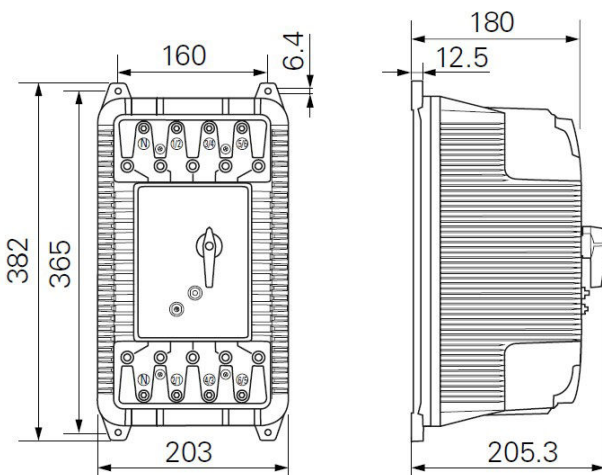
63 A	2
80 A	3
100 A	4
125 A	5
160 A	6

### Power Loss at In (IEC-E Series)

In (A)	3p & 4p	
	P (W)	
63A	20.2	
80A	20.5	
100A	25.7	
125A	27.6	
160A	38.4	

EXAMPLE: MCCB + 2NO, SHUNT TRIP 208V-250V AC/DC + EARLY MAKE 1NO, 4 POLES, RATED CURRENT 100 A  
GHG 6277 5 03 RO 2 3 4

### Dimension drawing /connection diagram





# Redapt DPE

increased safety (exe)  
Breather / Drains



### Features:

- International Ex approvals
- IP66, CSA enclosure type (NEMA) 4X
- Available in two thread lengths: 10mm two drain holes or 15mm three drain holes
- Available in brass, stainless steel and glass-filled nylon
- Metric and NPT threads available terminal blocks.

### Temperature Rating:

- Metallic body dependent on filter and seal material
- Nylon body: -50°C to +125°C, unless limited by filter material
- HDPE filter: -50°C to 85°C
- Metallic filter dependent on body and interface material

Nitrile: -30°C to +100°C (supplied as standard)

### Standard Materials:

- Brass CZ121
- 316 stainless steel
- Aluminum
- Glass-filled nylon



### Plating Options:

- Electroless nickel
- Zinc
- Others on application

### Certifications and Compliances:

#### Code of protection categories:

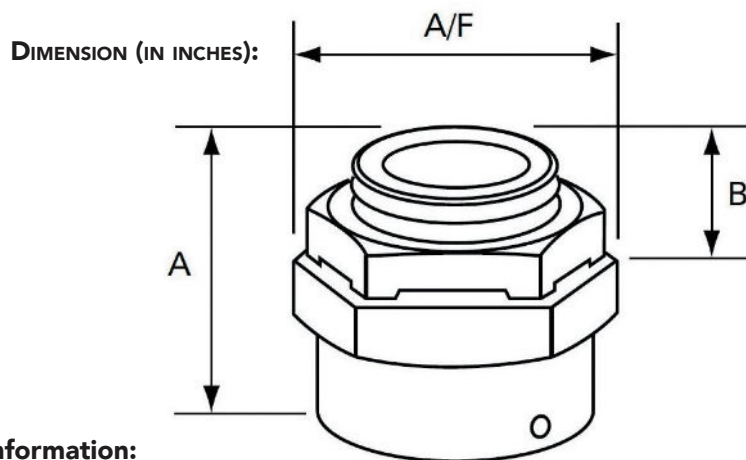
- ATEX: I M2/II 2 GD, Ex e I/II Mb Gb, Ex tb IIIC Db IP66; nylon: II2GD, Ex e IIGb Ex tb IIIC Db IP66
- IECEx: Ex e I/II Mb/Gb, Ex tb IIIC Db IP66; nylon: Ex e IIC Gb, Ex tb Db IP66
- EAC: ExeIU nylon, ExeIIU IP66
- CSA: Class I, Zone 1, Ex e II IP66, CSA enclosure type 4X (NEMA 4X)

### Compliance standards:

- ATEX: EN 60079-0, EN 60079-7, EN 60079-31
- IECEx: IEC 60079-0, IEC 60079-7, IEC 60079-31
- CSA: CSA standard C22.2 No. 0-M, CSA standard C22.2 No. 0.5, CSA standard C22.2 No. 94, CAN/CSA E79-7-95, UL2279

### Certificate details:

- ATEX: ITS16 ATEX101338X
- IECEx: IECEx ITS 16.0014X
- EAC: TR RU C-GB.GB06.B.00106
- CSA: 185887-2500003408 (LR106084)



### Ordering Information:

Part Number Example  
DPE3029S3

DP	E	3	0	29	S3
Certification	Material	Material	Material	Thread Type	Thread Length
E Exe I and IIC	1 Brass	3 Stainless Steel	4 Glass-Filled Nylon <sup>A</sup>	04 M20	S1 10mm, 2 holes, with castellated locknut
				05 M25	S2 10mm, 2 holes, without castellated locknut
				06 M32	S3 15mm, 2 holes, without castellated locknut
				29 1/2" NPT	S4 15mm, 2 holes, without castellated locknut
				30 3/4" NPT	
				31 1" NPT	
	<b>Plating</b>				
	0 Unplated				
	1 Electroless Nickel				
	2 Zinc				

<sup>A</sup>Glass-filled nylon version is only available in S3 and S4 options, and is supplied complete with a brass castellated locknut.

**NOTE: NPT THREADED BREATHER/ DRAINS ARE ONLY AVAILABLE IN S3**

Size	A/F	Minimum Overall Length (A)	Minimum Thread Length (B)
M20	1.13	0.91	0.39
M25	1.37	0.91	0.39
M32	1.63	0.91	0.39
1/2" NPT	1.13	1.10	0.59
3/4" NPT	1.37	1.10	0.59
1" NPT	1.63	1.10	0.59