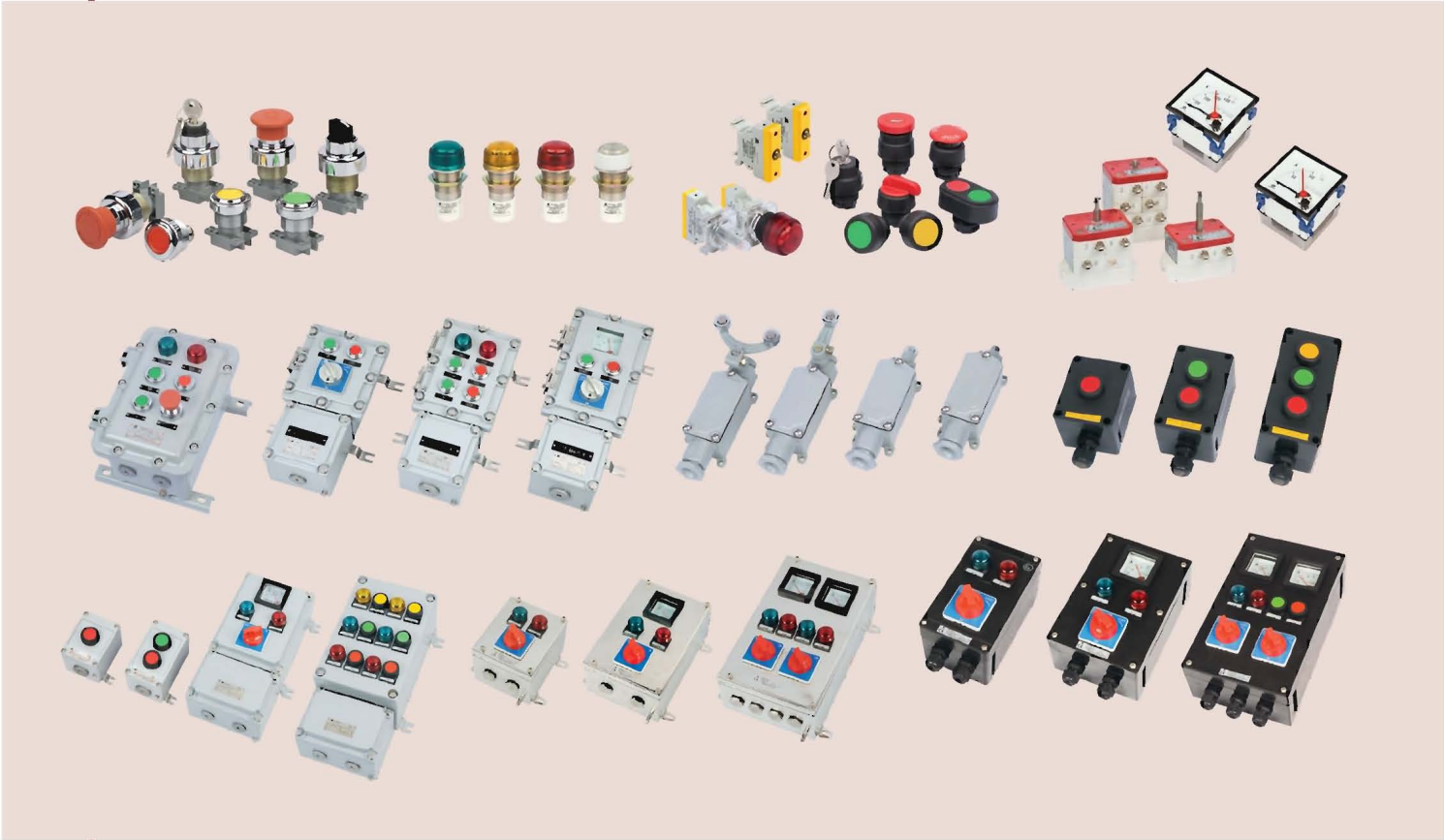


4

Control Equipments



Contents

Position Switches

BZX51-6 Series Explosion-proof Position Switches (Ex de IIC)	4/2
--	-----

Control Stations

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Components for BZC Control Stations

HA Series Pushbuttons	4/12
HD Series Indicators	4/14
HK Series Control Switches	4/16

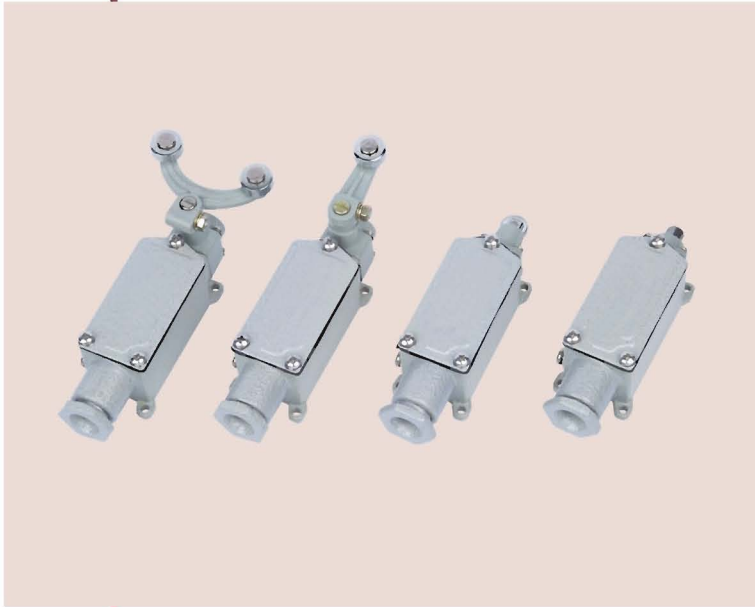
Control Unit Systems and Control Stations

BZA8050 Series Explosion-proof Control Unit Systems (Ex de IIC, GRP Enclosure)	4/20
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Components for Control Stations

BA8050 Series Explosion-proof Control Buttons	4/36
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More products are under development. Please contact us or visit our website for the latest development. We reserve the right to make alteration to the technical data, weight, dimensions, designs and products available without notice.

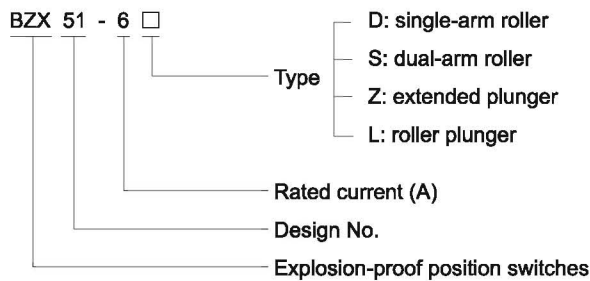


Position Switches

BZX51-6 Series Explosion-proof Position Switches

- ◆ Explosion protection to
 - CENELEC
 - IEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
- ◆ Types: D, S, Z, L.
- ◆ Increased safety enclosure with explosion-proof components.
- ◆ Copper-free aluminium enclosure; powder coated surface.

■ Catalogue number logic



Selection table					
Type	Rated voltage (V)	Rated current (A)	Type of contact	Ordering code	Weight (kg)
BZX51-6D	250	6	1NO+1NC	40001	0.35
	250	6	2NO	40002	0.35
	250	6	2NC	40003	0.35
BZX51-6S	250	6	1NO+1NC	40004	0.35
	250	6	2NO	40005	0.35
	250	6	2NC	40006	0.35
BZX51-6Z	250	6	1NO+1NC	40007	0.25
	250	6	2NO	40008	0.25
	250	6	2NC	40009	0.25
BZX51-6L	250	6	1NO+1NC	40010	0.30
	250	6	2NO	40011	0.30
	250	6	2NC	40012	0.30

Zones 1&2; 21&22

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Technical data

Explosion-proof position switches **BZX51-6**□

Explosion protection

Gas explosion protection

II 2 G Ex de IIC T6 Gb

Dust explosion protection

II 2 D Ex tb IIIC T80°C Db IP65

Certificates

DNV 13 ATEX____; IECEX; PCEC (China)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009
IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Switch

BZX-6

Ex-mark: II 2 G Ex de IIC T6

Type of contact

1NO+1NC, 2NO, 2NC

Swing angle or distance of roller arm

BZX51-6D	BZX51-6S	BZX51-6Z	BZX51-6L
45°	45°	4mm	4mm

Rated voltage

Max. 250V AC

Rated current

6A

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

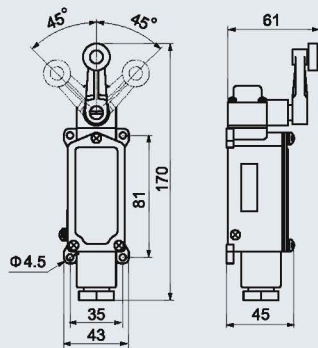
Cable entries

1 x G1/2"

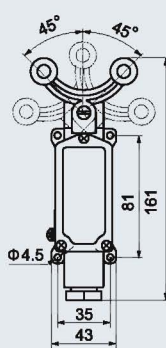
Available cable outer diameter

Φ6.5~Φ9(mm)

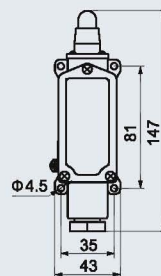
Dimension drawings (all dimensions in mm) - subject to alteration



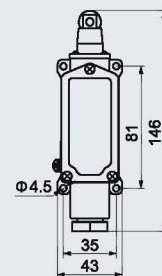
BZX51-6D



BZX51-6S



BZX51-6Z



BZX51-6L

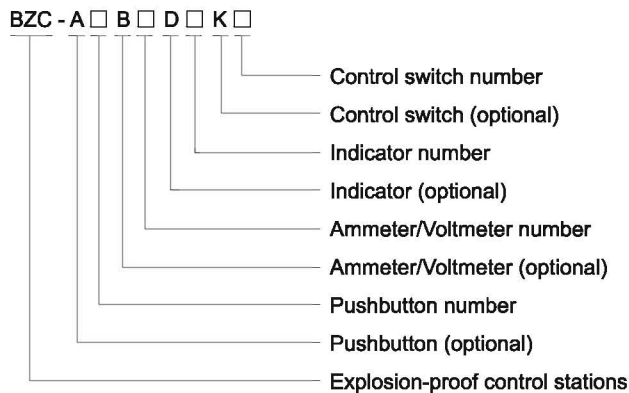


Control Stations (Ex d IIB)

BZC Series Explosion-proof Control Stations

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups C, D
- ◆ Copper-free aluminium enclosure; powder coated surface.
- ◆ Six types of enclosure .

■ Catalogue number logic



■ Note

1. Please refer to the Selection Table on P4/5.
2. Please select internal components as below:
 - HA pushbutton selection table on P4/12~13 (Nominal contact is 1NO+1NC);
 - HD indicator selection table on P4/14~15;
 - HK control switch selection table on P4/16~19;
 - BB8050 explosion-proof ammeter/voltmeter selection table on P4/49~51;
3. Example: BZC-A2B1K1
 - Components: Two pushbuttons, one ammeter, one control switch ;
 - Tech. Details: One start pushbutton (40036B-1 + 40033-1, green, 1NO+1NC);
 - One stop pushbutton (40036A-1 + 40033-1, red, 1NO+1NC);
 - One ammeter (40139, 100/5A);
 - One control switch (Function A, stop-run-start);
4. Special requirements on request.

Zones 1&2; 21&22

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Control station BZC (Ex d IIB) selection table

Enclosure type	Components arrangement	Cable entries and direction	Ordering code	Enclosure weight (kg)
I		2-M25 x 1.5 Bottom entry	40017.....	8.00
II		1-M32 x 1.5 or 2-M25 x 1.5 Bottom entry	40018.....	9.10
III		1-M32 x 1.5 or 3-M25 x 1.5 Bottom entry	40019.....	10.20
IV		1-M40 x 1.5 or 2-M32 x 1.5 or 4-M25 x 1.5 Bottom entry	40020.....	15.90
V		1-M40 x 1.5 or 4-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40021.....	27.50
VI		1-M40 x 1.5 or 4-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40022.....	40.00

Control Stations (Ex d IIB)

BZC Series Explosion-proof Control Stations

Technical data

Explosion-proof control stations BZC (Ex d IIB)

Explosion protection

Gas explosion protection

⊕ II 2 G Ex d IIB T6 Gb

Dust explosion protection

⊕ II 2 D Ex t IIC T80°C Db IP66

Certificates

LCIE 11 ATEX 3070X; IECEx CQM 11.0043; GOST.R (Russia)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-31:2009

IEC 60079-0:2007, IEC 60079-1:2007, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Rated voltage

Max. 415V AC

Rated current

10A

Degree of protection

IP66

Ambient temperature

-60°C~+55°C

Components

1. HA pushbutton technical data on P4/12~13;
2. HD indicator technical data on P4/14~15;
3. HK control switch technical data on P4/16~19;
4. BB8050 explosion-proof ammeter/voltmeter technical data on P4/49~51;

Cable entries

Standard M□ x 1.5 plug. Please see the Selection Table on P4/5

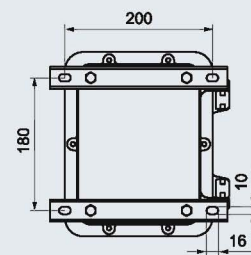
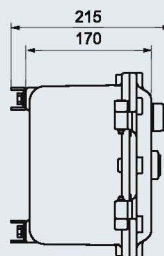
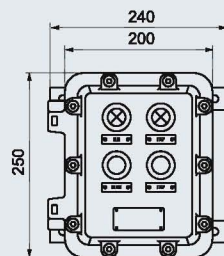
Cable gland (optional)

DQM-II (Ex d) or DQM-III (Ex d) is recommended. Please see P7/20~25

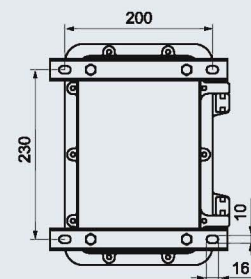
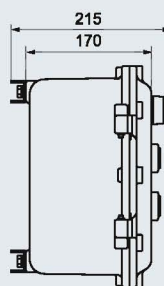
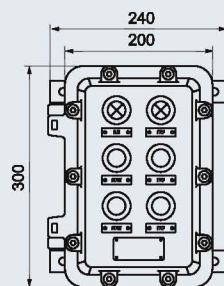
Mounting

Surface type

Dimension drawings (all dimensions in mm) - subject to alteration

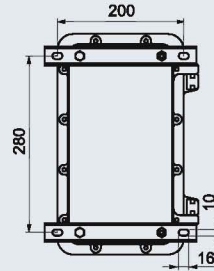
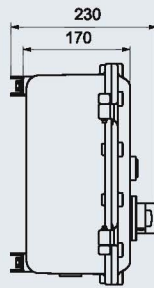
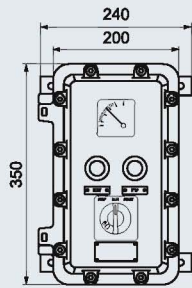


Enclosure I

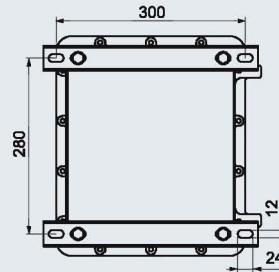
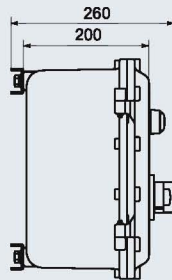
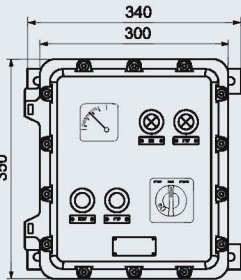


Enclosure II

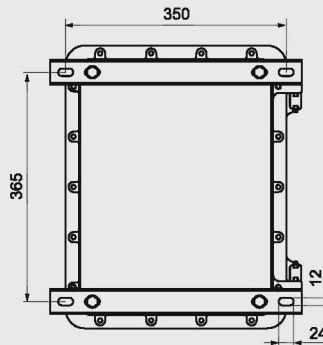
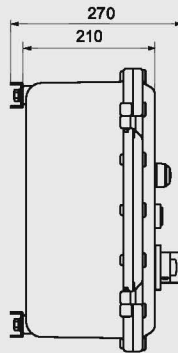
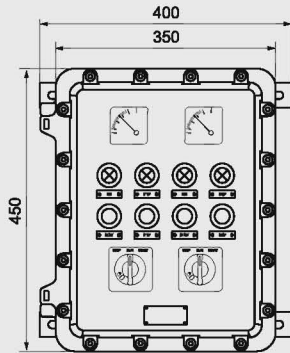
Dimension drawings (all dimensions in mm) - subject to alteration



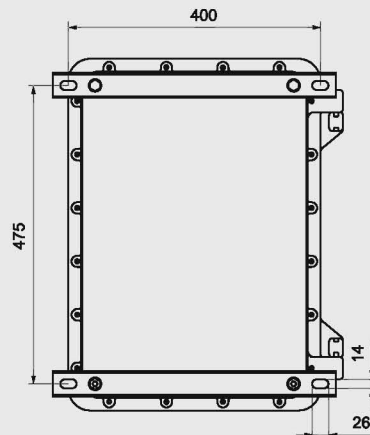
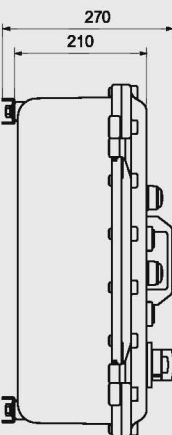
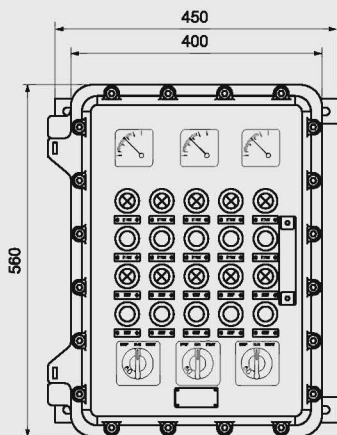
Enclosure III



Enclosure IV

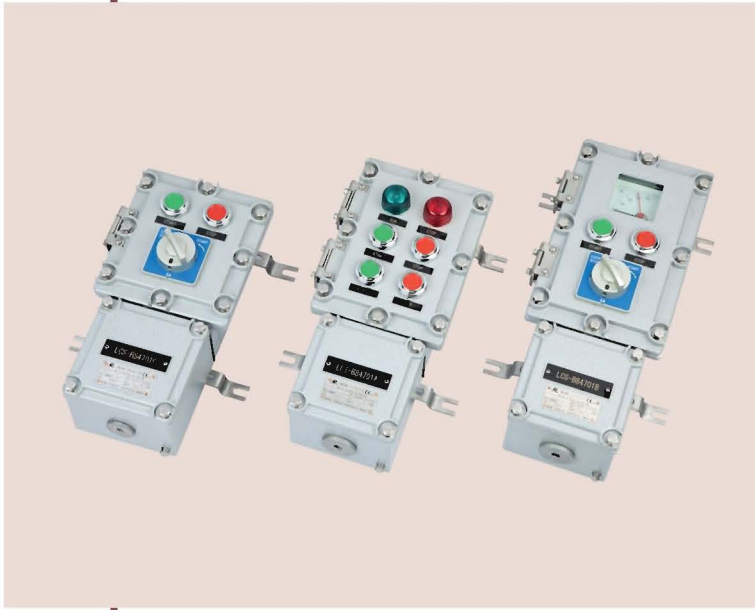


Enclosure V



Enclosure VI

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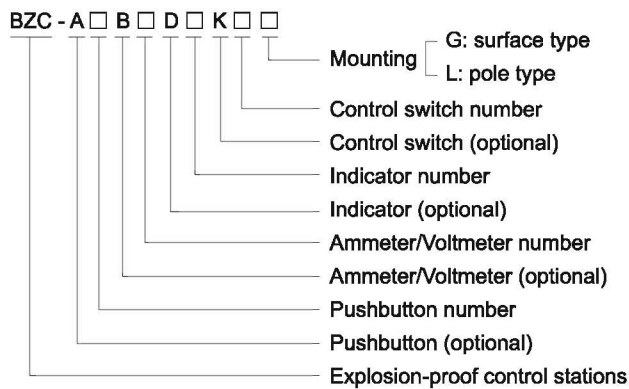


Control Stations (Ex de IIB)

BZC Series Explosion-proof Control Stations

- ◆ Explosion protection to
 - CENELEC
 - IEC
- ◆ Can be used in
 - Zone 1 and Zone 2
- ◆ Copper-free aluminium enclosure; powder coated surface.
- ◆ Seven types of enclosure .

■ Catalogue number logic



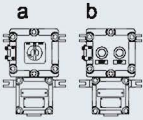
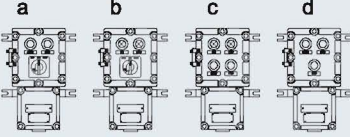
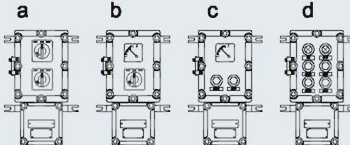
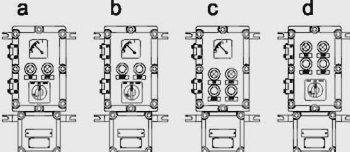
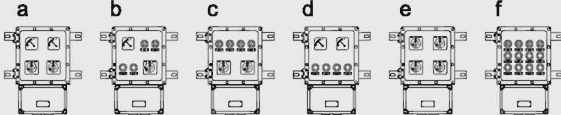
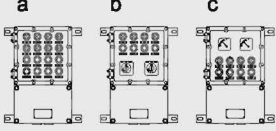
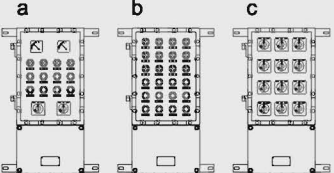
■ Note

1. Please refer to the Selection Table on P4/9.
2. Please select internal components as below:
 - HA pushbutton selection table on P4/12~13 (Nominal contact is 1NO+1NC);
 - HD indicator selection table on P4/14~15;
 - HK control switch selection table on P4/16~19;
 - BB8050 explosion-proof ammeter/voltmeter selection table on P4/49~51;
3. Example: BZC-A2B1K1L
 - Components: Two pushbuttons, one ammeter, one control switch; pole type;
 - Tech. Details: One start pushbutton (40036B-1 + 40033-1, green, 1NO+1NC);
 - One stop pushbutton (40036A-1 + 40033-1, red, 1NO+1NC);
 - One ammeter (40139, 100/5A);
 - One control switch (Function A, stop-run-start);
4. Special requirements on request.

Zones 1&2

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Control station BZC (Ex de IIB) selection table

Enclosure type	Components arrangement	Cable entries and direction	Ordering code	Enclosure weight (kg)
I		1-M32x 1.5 Bottom entry	40025.....	4.15
II		1-M32 x 1.5 Bottom entry	40026.....	5.30
III		1-M32 x 1.5 Bottom entry	40027.....	6.65
IV		1-M32 x 1.5 Bottom entry	40028.....	6.80
V		1-M32 x 1.5 or 2-M25x 1.5 or Bottom entry	40029.....	13.0
VI		1-M40 x 1.5 or 1-M32 x 1.5 or 4-M25 x 1.5 Bottom entry	40030.....	15.25
VII		1-M40 x 1.5 or 4-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40031.....	40.65

Control Stations (Ex de IIB)

BZC Series Explosion-proof Control Stations

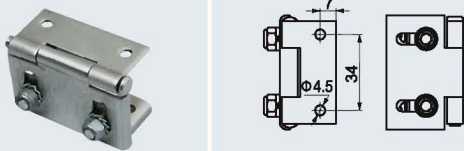
Technical data

Explosion-proof control stations

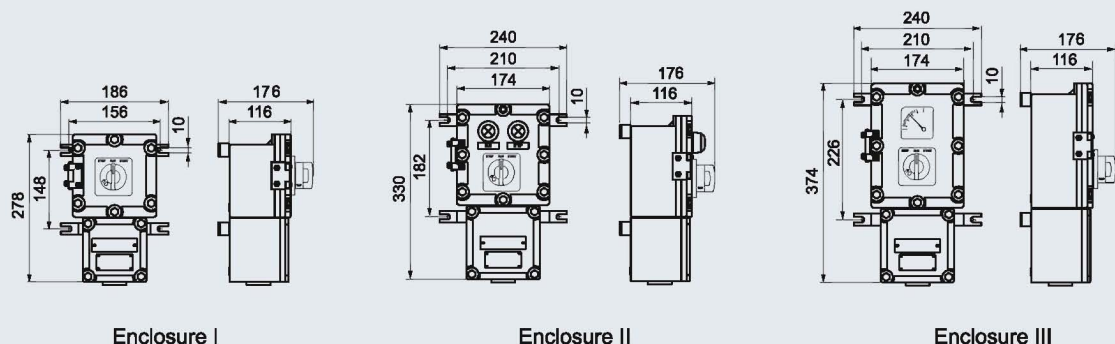
BZC (Ex de IIB)

Explosion protection	Ex II 2 G Ex de IIB T6
Certificates	PTB 03 ATEX 1076; IECEx CQM 07. 0011
Conformity to standards	EN 50014:1997+A1+A2, EN 50018:2000+A1, EN 50019:2000 IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2001
Enclosure material	Copper-free aluminium; powder coated surface
Enclosure colour	Window grey (RAL7040)
Exposed fastener	Stainless steel
Rated voltage	Max. 415V AC
Rated current	10A
Degree of protection	IP65
Ambient temperature	-20°C~+55°C
Components	1. HA pushbutton technical data on P4/12~13; 2. HD indicator technical data on P4/14~15; 3. HK control switch technical data on P4/16~19; 4. BB8050 explosion-proof ammeter/voltmeter technical data on P4/49~51
Cable entries	Bottom, M□ x 1.5 plug. Please see the Selection Table on P4/9
Cable gland (optional)	DQM-I (Ex e) is recommended. Please see P7/17~19
Mounting	Surface type Pole type (for enclosure I, II, III, IV only)
Note	1. Please specify the number and size of entries (applicable for surface type only); 2. For pole type, only G1" entry is applicable;

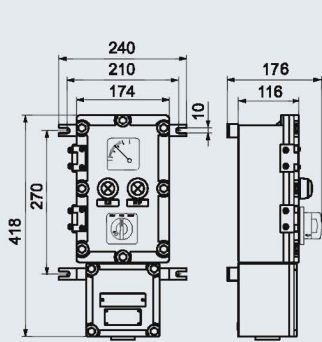
Accessories and parts

Description	Illustration	Material	Ordering code	Weight (kg)
Hinge		Stainless steel	40032	0.06

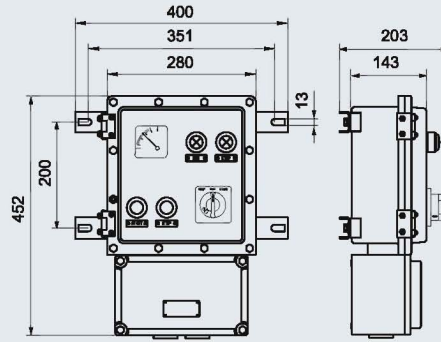
Dimension drawings (all dimensions in mm) - subject to alteration



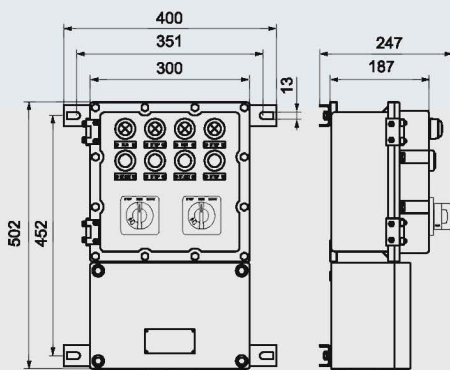
Dimension drawings (all dimensions in mm) - subject to alteration



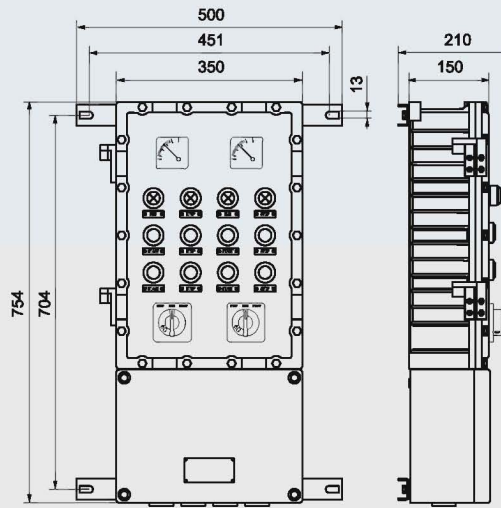
Enclosure IV



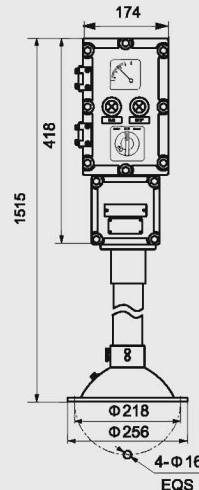
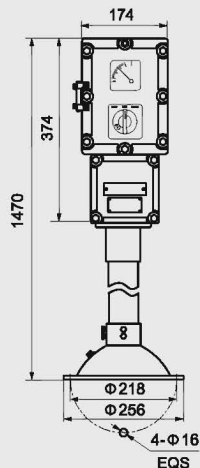
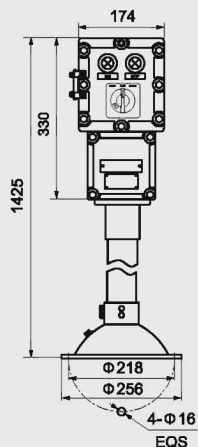
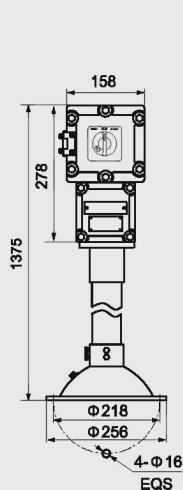
Enclosure V



Enclosure VI



Enclosure VII



Pole type (for enclosure I, II, III, IV only)

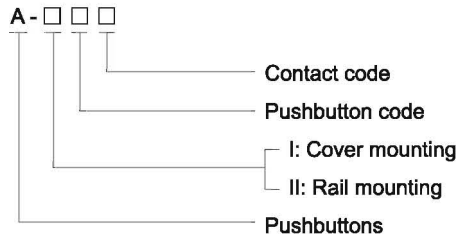


Components for BZC Control Stations HA Series Pushbuttons

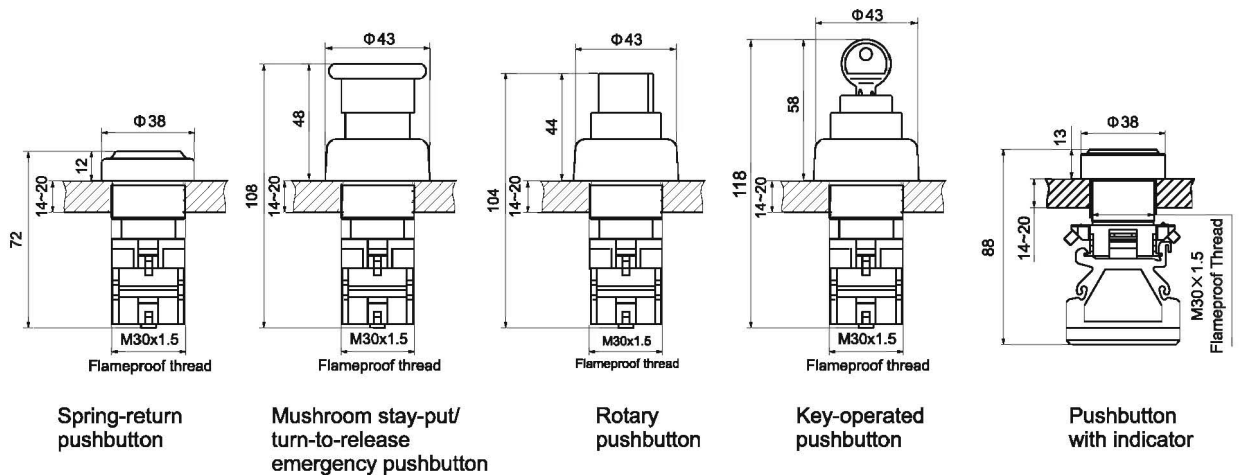
- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups A, B, C, D
- ◆ Five different ways of operation
 - Spring-return pushbutton
 - Key-operated pushbutton
 - Mushroom stay-put emergency pushbutton
 - Mushroom turn-to-release emergency pushbutton
 - Rotary pushbutton

■ Catalogue number logic

HA (A for short)




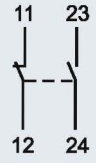

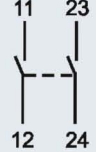
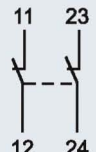
■ Dimension drawings (all dimensions in mm) - subject to alteration












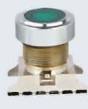

Zones 1&2; 21&22

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Selection table of pushbutton contact

Version	Specification	Contact code	Ordering code	Weight (kg)
 I: Cover mounting	 1 NO+1NC	R	40033-1	0.05
			40033-2	0.10
 II: Rail mounting	 2 NO	S	40034-1	0.05
			40034-2	0.10
	 2 NC	T	40035-1	0.05
			40035-2	0.10

Selection table

Cover mounting	Rail mounting	Specification	Code	Ordering code	Weight (kg)	
		Spring-return pushbutton ● Red ● Green ● Yellow	a	40036A-1 / 40036A-2	0.15	
			b	40036B-1 / 40036B-2	0.15	
			c	40036C-1 / 40036C-2	0.15	
		Mushroom stay-put emergency pushbutton	Red	d	40037-1 / 40037-2	0.27
		Mushroom turn-to-release emergency pushbutton	Red	e	40040-1 / 40040-2	0.27
		Rotary pushbutton	Black	f	40039-1 / 40039-2	0.27
		Key-operated pushbutton	Black	g	40038-1 / 40038-2	0.27
		Pushbutton with indicator ● Red ● Green ● Yellow	a	40057A-1 / 40057A-2	0.15	
			b	40057B-1 / 40057B-2	0.15	
			c	40057C-1 / 40057C-2	0.15	

The last number of ordering code: 1 - cover mounting; 2 - rail mounting



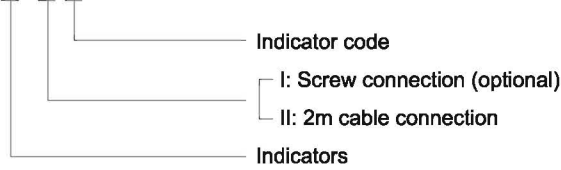
Components for BZC Control Stations HD Series Indicators

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups A, B, C, D
- ◆ Available in
 - red
 - green
 - yellow
 - white
- ◆ Two types
 - screw connection
 - 2m cable connection

■ Catalogue number logic

HD(D for short)











D - □ □



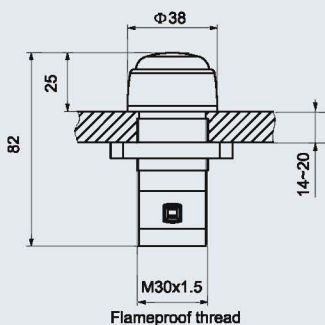
Zones 1&2; 21&22

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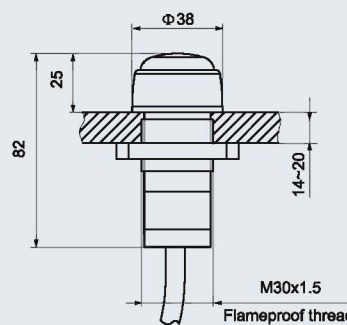
Selection table

Type	Rated voltage	Schematic diagram	Colour	Code	Ordering code	Weight (kg)
I: Screw connection 	220~415V AC		Red	Ra	40041A	0.10
			Green	Ga	40042A	
			Yellow	Ya	40043A	
			White	Wa	40044A	
	220V DC		Red	Rb	40045A	0.10
			Green	Gb	40046A	
			Yellow	Yb	40047A	
			White	Wb	40048A	
	48~120V AC/DC		Red	Rc	40049A	0.10
			Green	Gc	40050A	
			Yellow	Yc	40051A	
			White	Wc	40052A	
	12~36V AC/DC		Red	Rd	40053A	0.10
			Green	Gd	40054A	
			Yellow	Yd	40055A	
			White	Wd	40056A	
II: 2m cable connection 	220~415V AC		Red	Ra	40041B	0.30
			Green	Ga	40042B	
			Yellow	Ya	40043B	
			White	Wa	40044B	
	220V DC		Red	Rb	40045B	0.30
			Green	Gb	40046B	
			Yellow	Yb	40047B	
			White	Wb	40048B	
	48~120V AC/DC		Red	Rc	40049B	0.30
			Green	Gc	40050B	
			Yellow	Yc	40051B	
			White	Wc	40052B	
	12~36V AC/DC		Red	Rd	40053B	0.30
			Green	Gd	40054B	
			Yellow	Yd	40055B	
			White	Wd	40056B	

Dimension drawings (all dimensions in mm) - subject to alteration



I: Screw connection



II: 2m cable connection (cable specification: 2×1.5mm²)

Components for BZC Control Stations HK Series Control Switches

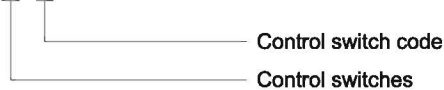


- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 1, Groups A, B, C, D
- ◆ Available in latching and spring-return forms.
- ◆ Different function options.
- ◆ Max. 6 poles.
- ◆ The switch shall be fitted inside Ex d enclosure.

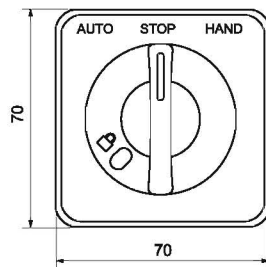
■ Catalogue number logic

HK(K for short)

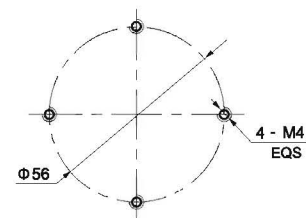
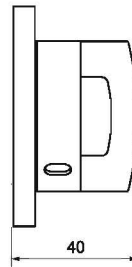
K - □



■ Dimension drawings (all dimensions in mm) - subject to alteration



Operating handle



Mounting hole

Zones 1&2; 21&22

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Selection table

Switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
a				a.Functional wiring is the same as double buttons with auto-reset function.
b				b.Functional wiring is the same as double buttons; auto-reset after start; lock-stop gear added to avoid mistake operation.
c				c.Button with 2 NO contacts and available at auto-reset function. Suitable for high-voltage engine control circuit or function panel uses switch code "a".
d				d.Low-power switch.
e				e.Function is same as three buttons; able to control engine in forward and backward rotation. FW&BW starting positions can auto-reset.
f				f.Selection switch with stop gear in midst.
g				g.Be equal to mounting two buttons and one changeover switch in one axis. Possible to output contact signal or monitoring signal between start and stop.
h				h.Multi-signals transmit gradually.
i				i.Add function of transmitting resultant signal on the base of function panel uses switch code "h".

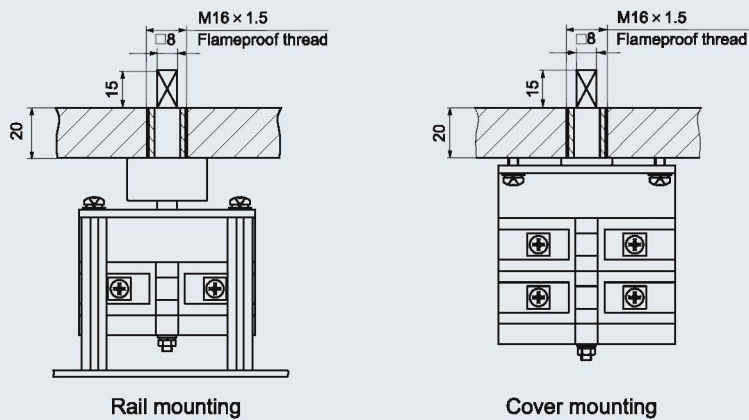
Selection table

Switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
j				j. Two positions step; change-over gradually.
k				k. Changeover switch.
l				l. Selection switch with three poles and two launches.
m				m. Three-position changeover switch among auto, manual and start; auto-reset after start; it can convert to auto gear only after passing stop gear.
n				n. Structure is a little different to universal structure of switch code "m"; It directly rotates to auto gear without passing stop gear after starts.
o				o. Double contacts auto reset for start, with lock-stop gear.
p				p. Double contacts for stop, to substitute switch code "a" and "c" for start and stop; auto-reset.
q				q. Stop with double contacts, with lock stop gear; auto-reset after start.
r				r. Double contacts for both start and stop; it is same as universal panel of switch code "a", with auto-reset for start and stop.

Selection table

Switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
S				s. Transmit a contact signal before start and stop.
t				t. With lock-stop gear for start and stop to prevent mistake operation; without auto-reset.
u				u. Double-control selection switch.
v				v. Changeover switch for voltage phase-changing and measuring.
w				w. One 2NO auto-reset pushbutton, both left and right are the same.
x				x. Two 2NO auto-reset buttons.

Dimension drawings (all dimensions in mm) - subject to alteration



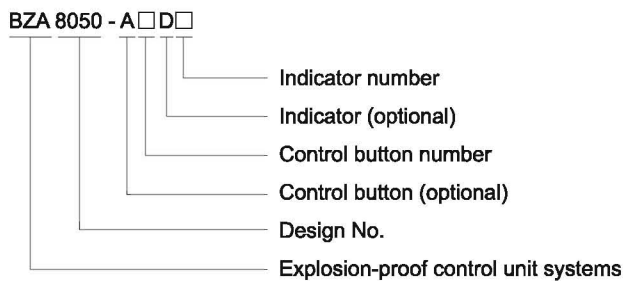


Control Unit Systems

BZA8050 Series Explosion-proof Control Unit Systems

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ GRP enclosure (glass fibre-reinforced polyester resin).
- ◆ Three types of enclosure.
- ◆ Individual unit can be combined into larger units.

■ Catalogue number logic





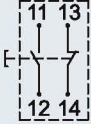



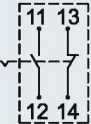
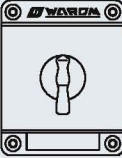
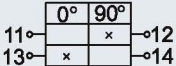
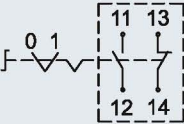
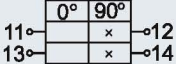
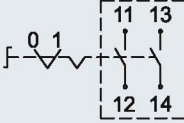
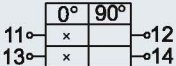
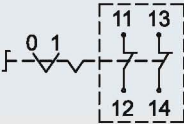
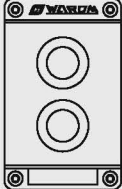

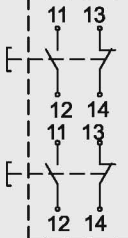

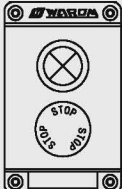

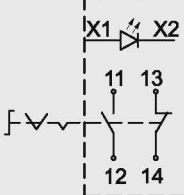

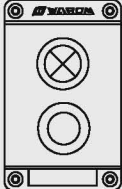

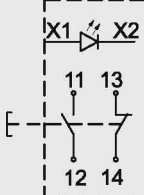

■ Note

1. Please refer to the Selection Table on P4/21~22.
2. Please select internal components as below:
 - BA8050 explosion-proof control button selection table on P4/36~39 (Nominal contact is 1NO+1NC);
 - BD8050 explosion-proof indicator selection table on P4/40~42;
3. Example: BZA8050-A2
 - Components: two control buttons
 - Tech. Details: One start control button (40092B + 40090-1+40091-1, green, 1NO+1NC);
 - One stop control button (40092A+ 40090-1+40091-1, red, 1NO+1NC);
4. Special requirements on request.

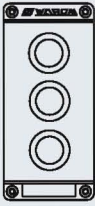




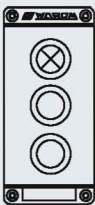

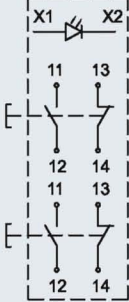


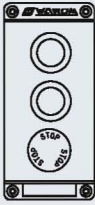














Zones 1&2; 21&22

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Selection table

Outline	Colour	Chart of contact	Ordering code	Weight (kg)
Spring-return button 	Red 		40063A	0.65
	Green 		40063B	
Mushroom stay-put emergency button 	Red 		40064	0.65
Rotary button 			40065A	0.65
			40065B	0.65
			40065C	0.65
Spring-return button 	Green 		40066	0.85
	Red 			
Indicator and mushroom stay-put emergency button 	Red 		40067	0.85
	Red 			
Indicator and spring-return button 	Red 		40068	0.85
	Red 			

Selection table

Outline	Colour	Chart of contact	Ordering code	Weight (kg)
Spring-return button 	Yellow 		40069	1.10
	Green 			
	Red 			
Spring-return button and indicator 	Red 		40070	1.10
	Green 			
	Red 			
Spring-return button and mushroom stay-put emergency button 	Green 		40071	1.10
	Red 			
	Red 			
Spring-return button and rotary button 	Green 		40072	1.10
	Red 			
	Red 			
Indicator, spring-return button and mushroom stay-put emergency button 	Red 		40073	1.10
	Red 			
	Red 			

Technical data

Explosion-proof control unit systems BZA8050

Explosion protection

Gas explosion protection

II 2 G Ex de IIC T6 Gb

Dust explosion protection

II 2 D Ex tb IIIC T80°C Db IP65

Certificates

LCIE 09 ATEX 3097; IECEx CQM 11.0018; BVC10.0204 (Brazil); FM (USA)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009
IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Enclosure material

GRP (glass fibre-reinforced polyester resin)

Enclosure colour

Black

Exposed fastener

Stainless steel

Rated voltage

Max. 415V AC

Rated current

10A

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

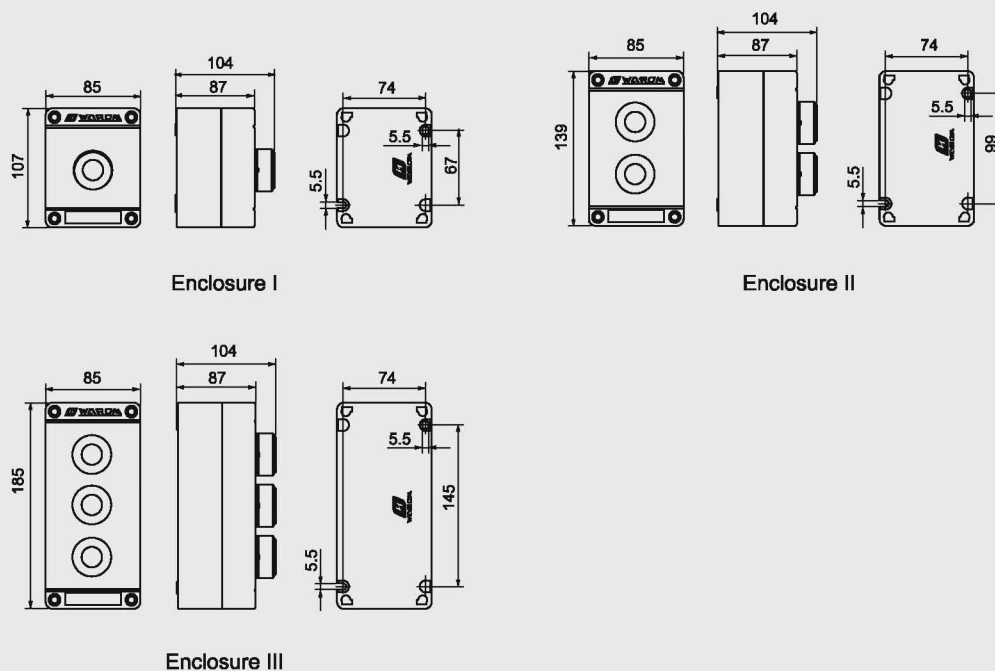
Cable entries

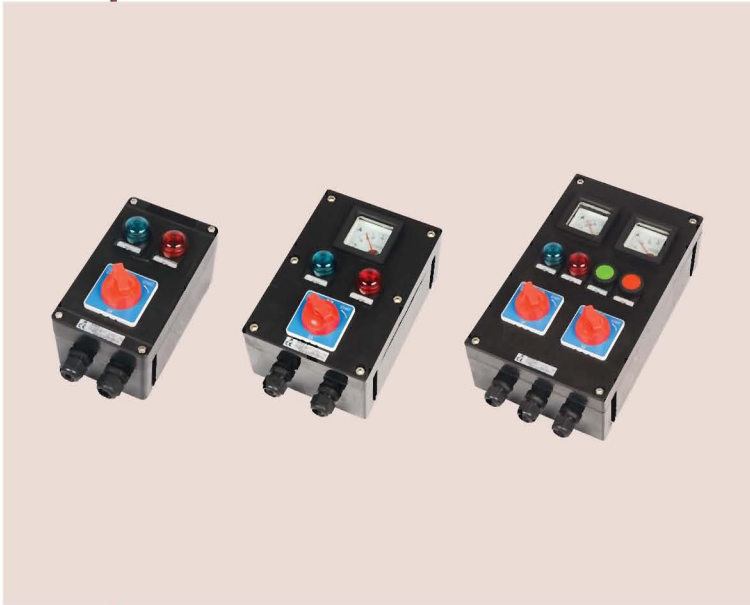
1 x M25 x 1.5 Cable gland (DQM- I, plastic)

Available cable outer diameter

Φ9~Φ16 (mm)

Dimension drawings (all dimensions in mm) - subject to alteration

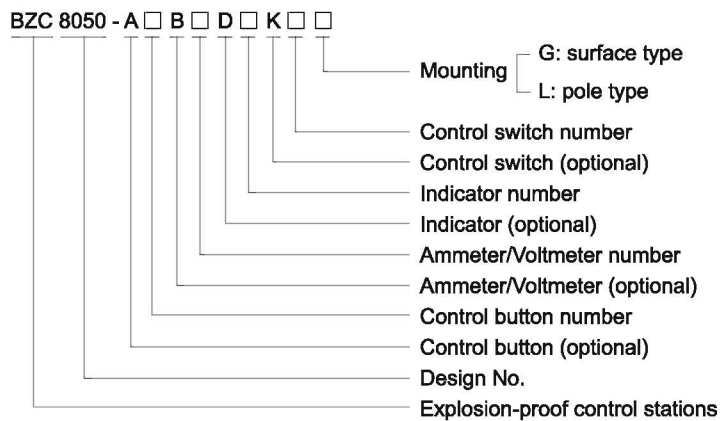




Control Stations (GRP) BZC8050 Series Explosion-proof Control Stations

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ GRP enclosure (glass fibre-reinforced polyester resin).
- ◆ Four types of enclosure.

■ Catalogue number logic



■ Note

1. Please refer to the Selection Table on P4/25.
2. Please select internal components as below:
 - BA8050 explosion-proof control button selection table on P4/36~39 (nominal contact is 1NO+1NC);
 - BD8050 explosion-proof indicator selection table on P4/40~42;
 - BK8050 explosion-proof control switch selection table on P4/43~48;
 - BB8050 explosion-proof ammeter/voltmeter selection table on P4/49~51;
3. Example: BZC8050-A2D2G
 - Components: Two control buttons, two indicators; surface type
 - Tech. Details: One start control button (40092B + 40090-1+40091-1, green, 1NO+1NC);
 - One stop control button (40092A+ 40090-1+40091-1, red, 1NO+1NC);
 - One indicator (40116+40100-2, green, 230V AC);
 - One indicator (40115+40099-2, red, 230V AC);
4. Special requirements on request.

Zones 1&2; 21&22

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Control station BZC8050(GRP) selection table

Enclosure type	Components arrangement	Cable entries and direction	Ordering code	Enclosure weight (kg)
I		2-M25 x 1.5 Bottom entry	40074.....	1.30
II		1-M32 x 1.5 or 2-M25 x 1.5 Bottom entry	40075.....	2.10
III		1-M32 x 1.5 or 3-M25 x 1.5 Bottom entry	40076.....	3.25
IIIx		1-M40 x 1.5 or 2-M32 x 1.5 or 4-M25 x 1.5 Bottom entry	40077.....	3.25
IV		1-M40 x 1.5 or 2-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40078.....	4.15

Technical data

Explosion-proof control stations BZC8050 (GRP)

Explosion protection

Gas explosion protection

II 2 G Ex de IIC T6 Gb

Dust explosion protection

II 2 D Ex tb IIIC T80°C Db IP65

Certificates

LCIE 09 ATEX 3099; IECEX CQM 11.0029; BVC10.0205 (Brazil); FM (USA)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009

IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Enclosure material

GRP (glass fibre-reinforced polyester resin)

Enclosure colour

Black

Exposed fastener

Stainless steel

Rated voltage

Max. 415V AC

Rated current

10A

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Components

1. BA8050 explosion-proof control button technical data on P4/36~39;
2. BD8050 explosion-proof indicator technical data on P4/40~42;
3. BK8050 explosion-proof control switch technical data on P4/43~48;
4. BB8050 explosion-proof ammeter/voltmeter technical data on P4/49~51;

Cable entries

M□ x 1.5 plug, please see the Selection Table on P4/25

Cable gland (optional)

DQM-I (Ex e) is recommended. Please see P7/16

Mounting

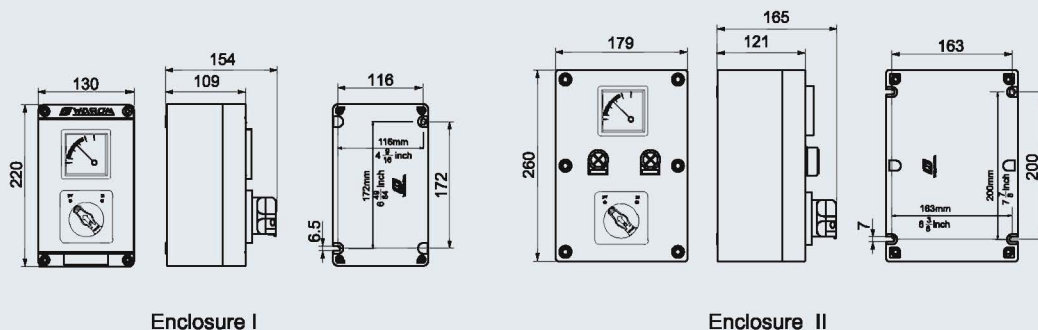
Surface type

Pole type (for enclosure I, II, III only)

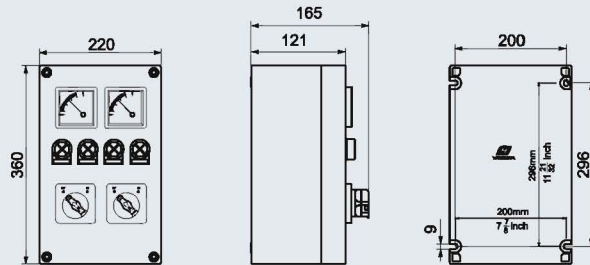
Note

1. Please specify the number and size of entries (applicable for surface type only);
2. For pole type, only G1" entry is applicable;

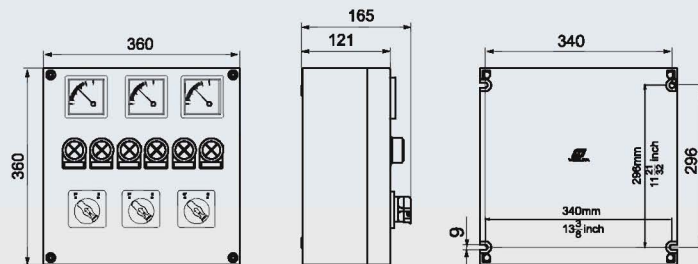
Dimension drawings (all dimensions in mm) - subject to alteration



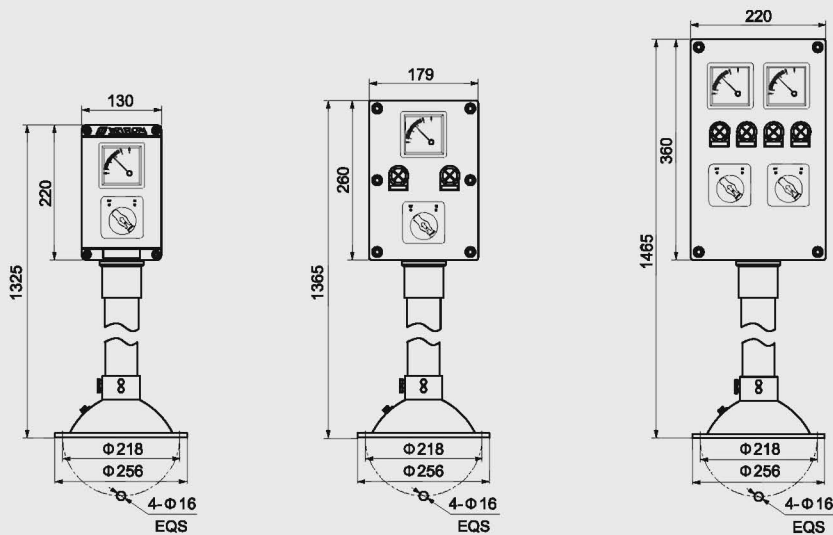
Dimension drawings (all dimensions in mm) - subject to alteration



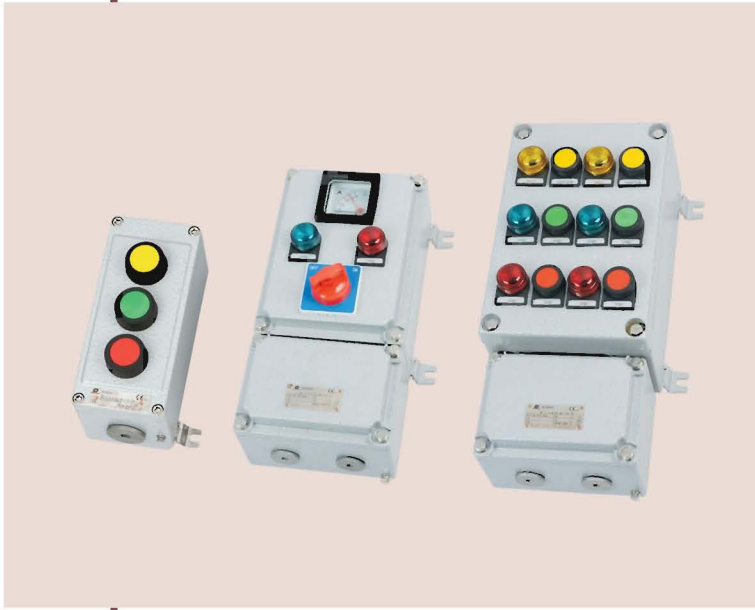
Enclosure III



Enclosure IV



Pole type (for enclosure I, II, III only)

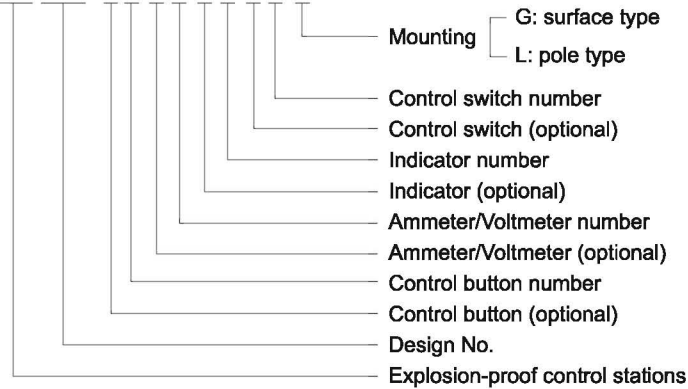


Control Stations (Aluminium Alloy) BZC8050 Series Explosion-proof Control Stations

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ Copper-free aluminium enclosure; powder coated surface.
- ◆ Seven types of enclosure.

■ Catalogue number logic

BZC 8050 - A □ B □ D □ K □ □



■ Note



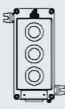




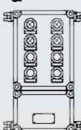
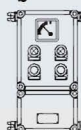
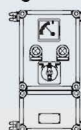







1. Please refer to the Selection Table on P4/29.
2. Please select internal components as below:
 - BA8050 explosion-proof control button selection table on P4/36~39 (Nominal contact is 1NO+1NC);
 - BD8050 explosion-proof indicator selection table on P4/40~42;
 - BK8050 explosion-proof control switch selection table on P4/43~48;
 - BB8050 explosion-proof ammeter/voltmeter selection table on P4/49~51;
3. Example: BZC8050-A2D2G
 - Components: Two control buttons , two indicators; surface type
 - Tech. Details: One control start button (40092B + 40090-1+40091-1, green, 1NO+1NC);
 - One control stop button (40092A+ 40090-1+40091-1, red, 1NO+1NC);
 - One indicator (40116+40100-2, green, 230V AC);
 - One indicator (40115+40099-2, red, 230V AC);
4. Special requirements on request.

Zones 1&2; 21&22

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Control Stations (Aluminium Alloy) BZC8050 Series Explosion-proof Control Stations

Control station BZC8050 (aluminium alloy) selection table

Enclosure type	Components arrangement	Cable entries and direction	Ordering code	Enclosure weight (kg)
I		1-M25 x 1.5 Bottom entry	40079	0.65
II		1-M25 x 1.5 Bottom entry	40080	0.85
III		1-M25 x 1.5 Bottom entry	40081	1.10
IV	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">a </div> <div style="text-align: center;">b </div> <div style="text-align: center;">c </div> <div style="text-align: center;">d </div> </div>	2-M25 x 1.5 Bottom entry	40082.....	3.75
V	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">a </div> <div style="text-align: center;">b </div> <div style="text-align: center;">c </div> </div>	1-M32 x 1.5 or 2-M25 x 1.5 Bottom entry	40083.....	6.50
VI	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">a </div> <div style="text-align: center;">b </div> <div style="text-align: center;">c </div> </div>	1-M40 x 1.5 or 2-M32 x 1.5 or 4-M25 x 1.5 Bottom entry	40084.....	9.00
VII	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">a </div> <div style="text-align: center;">b </div> <div style="text-align: center;">c </div> <div style="text-align: center;">d </div> </div>	1-M40 x 1.5 or 2-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40085.....	13.70

Control Stations (Aluminium Alloy)

BZC8050 Series Explosion-proof Control Stations

Technical data

Explosion-proof control stations **BZC8050 (aluminium alloy)**

Explosion protection

Gas explosion protection

⊕ II 2 G Ex de IIC T6 Gb

Dust explosion protection

⊕ II 2 D Ex tb IIIC T80°C Db IP65

Certificates

LCIE 09 ATEX 3099; IECEx CQM 11. 0029; BVC10.0205 (Brazil); FM (USA)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009
IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Enclosure material

Copper-free aluminium; powder coated surface

Enclosure colour

Window grey (RAL7040)

Exposed fastener

Stainless steel

Rated voltage

Max. 415V AC

Rated current

10A

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Components

1. BA8050 explosion-proof control button technical data on P4/36~39;
2. BD8050 explosion-proof indicator technical data on P4/40~42;
3. BK8050 explosion-proof control switch technical data on P4/43~48;
4. BB8050 explosion-proof ammeter/voltmeter technical data on P4/49~51;

Cable entries

M□ x 1.5 plug, please see the Selection Table on P4/29

Cable gland (optional)

DQM-I (Ex e) is recommended. Please see P7/17~19

Mounting

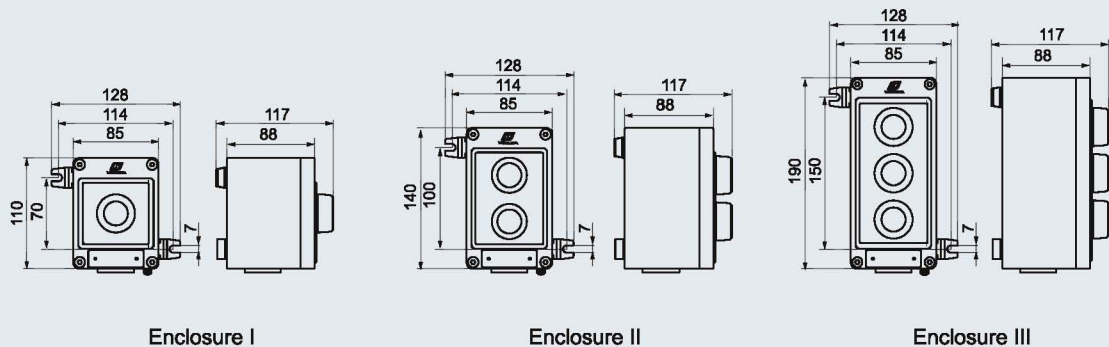
Surface type

Pole type (for enclosure IV, V, VI only)

Note

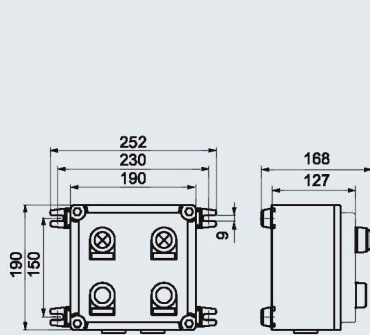
1. Please specify the number and size of entries (applicable for surface type only);
2. For pole type, only G1" entry is applicable;

Dimension drawings (all dimensions in mm) - subject to alteration

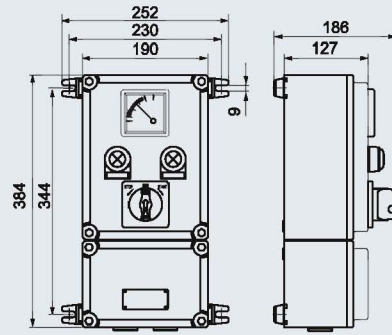


Control Stations (Aluminium Alloy) BZC8050 Series Explosion-proof Control Stations

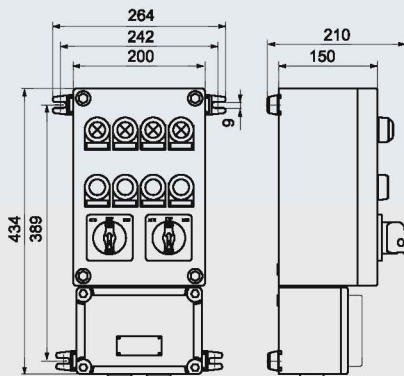
Dimension drawings (all dimensions in mm) - subject to alteration



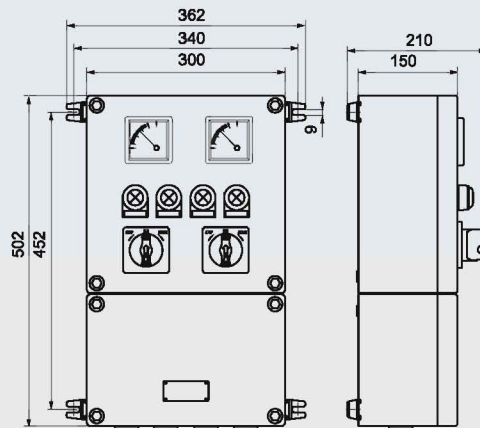
Enclosure IV



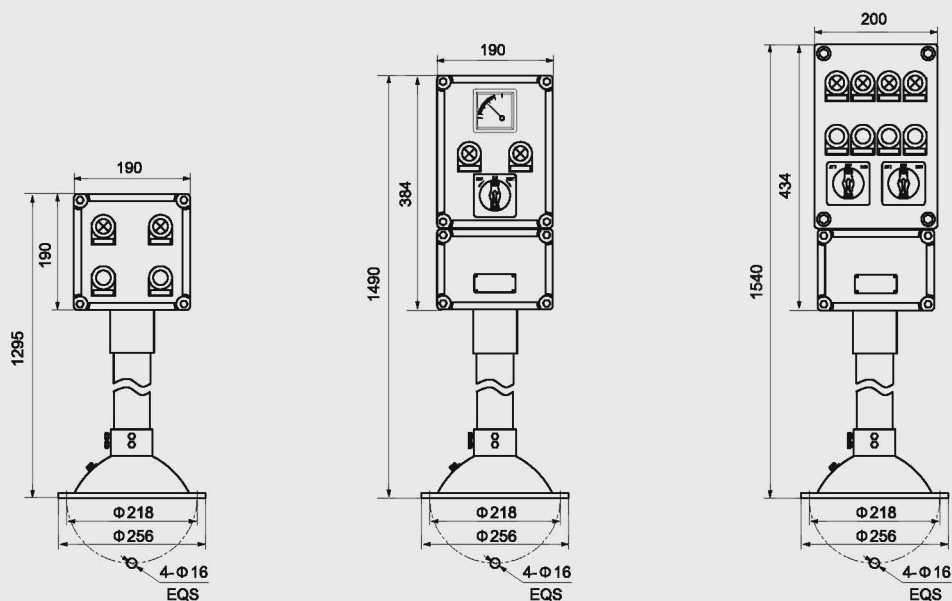
Enclosure V



Enclosure VI

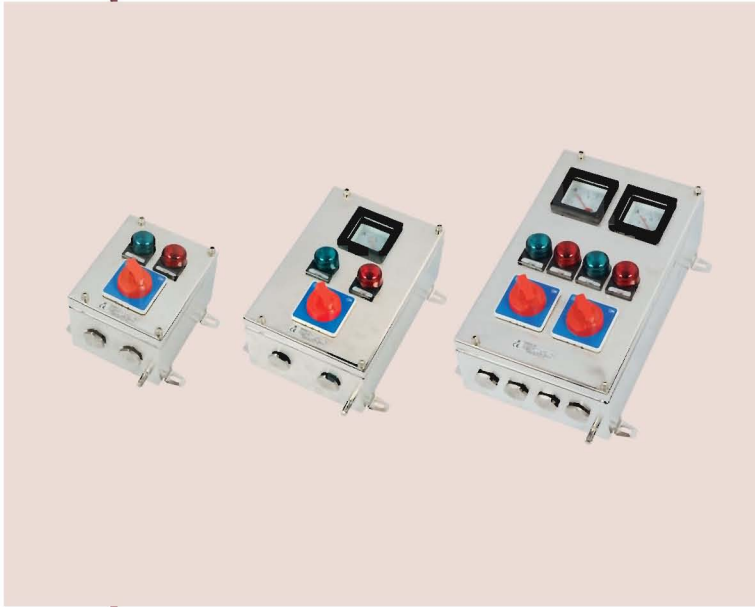


Enclosure VII



Pole type (for enclosure IV, V, VI only)

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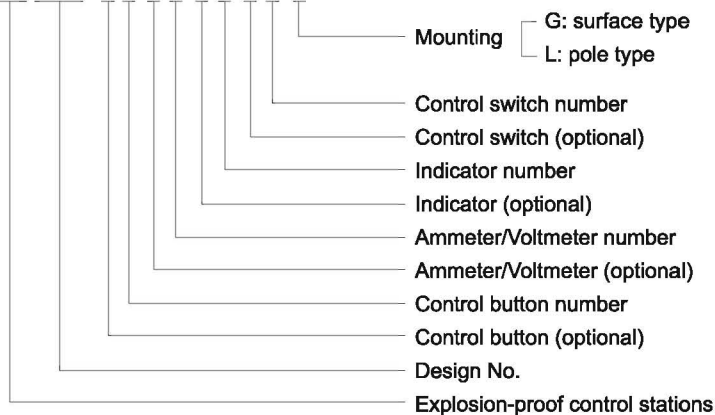


Control Stations (Stainless Steel) BZC8050 Series Explosion-proof Control Stations

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ Stainless steel enclosure.
- ◆ Four types of enclosure.

■ Catalogue number logic

BZC 8050 - A □ B □ D □ K □ □



■ Note

1. Please refer to the Selection Table on P4/33.
2. Please select internal components as below:
 - BA8050 explosion-proof control button selection table on P4/36~39 (Nominal contact is 1NO+1NC);
 - BD8050 explosion-proof indicator selection table on P4/40~42;
 - BK8050 explosion-proof control switch selection table on P4/43~48;
 - BB8050 explosion-proof ammeter/voltmeter selection table on P4/49~51;
3. Example: BZC8050-A2D2G
 - Components: Two control buttons, two indicators; surface type
 - Tech. Details: One control start button (40092B + 40090-1+40091-1, green, 1NO+1NC);
 - One control stop button (40092A+ 40090-1+40091-1, red, 1NO+1NC);
 - One indicator (40116+40100-2, green, 230V AC);
 - One indicator (40115+40099-2, red, 230V AC);
4. Special requirements on request.

Zones 1&2; 21&22

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Control Stations (Stainless Steel) BZC8050 Series Explosion-proof Control Stations

Control station BZC8050 (stainless steel) selection table

Enclosure type	Components arrangement	Cable entries and direction	Ordering code	Enclosure weight (kg)
I		2-M25 x 1.5 Bottom entry	40086.....	2.80
II		1-M32 x 1.5 or 2-M25 x 1.5 Bottom entry	40087.....	4.50
III		1-M40 x 1.5 or 2-M32 x 1.5 or 4-M25 x 1.5 Bottom entry	40088.....	6.75
IV		1-M40 x 1.5 or 2-M32 x 1.5 or 6-M25 x 1.5 Bottom entry	40089.....	10.25

Control Stations (Stainless Steel)

BZC8050 Series Explosion-proof Control Stations

Technical data

Explosion-proof control stations BZC8050 (stainless steel)

Explosion protection

Gas explosion protection

II 2 G Ex de IIC T6 Gb

Dust explosion protection

II 2 D Ex tb IIIC T80°C Db IP65

Certificates

LCIE 09 ATEX 3099; IECEX CQM 11.0029; BVC10.0205 (Brazil); FM (USA)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007, EN 60079-31:2009
IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006, IEC 60079-31:2008

Enclosure material

Stainless steel

Enclosure colour

Metal colour

Exposed fastener

Stainless steel

Rated voltage

Max. 415V AC

Rated current

10A

Degree of protection

IP65

Ambient temperature

-20°C~+55°C

Components

1. BA8050 Explosion-proof control button technical data on P4/36~39;
2. BD8050 Explosion-proof indicator technical data on P4/40~42;
3. BK8050 Explosion-proof control switch technical data on P4/43~48;
4. BB8050 Explosion-proof ammeter/voltmeter technical data on P4/49~51;

Cable entries

M□ x 1.5 plug, please see the Selection table on P4/33

Cable gland (optional)

DQM-I (Ex e) is recommended. Please see P7/17~19

Mounting

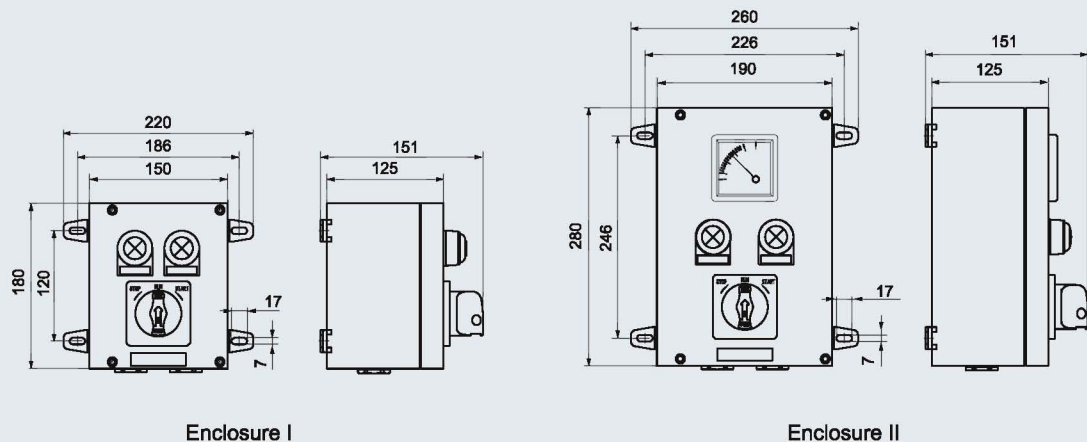
Surface type

Pole type (for enclosure I,II, III only)

Note

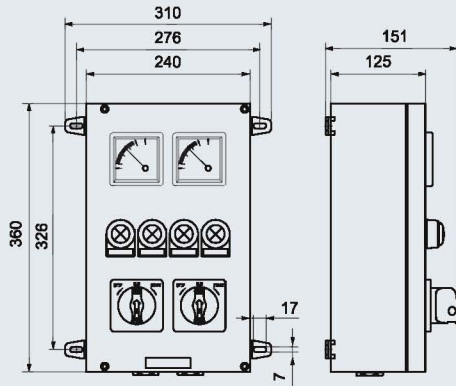
1. Please specify the number and size of entries (applicable for surface type only);
2. For pole type, only G1" entry is applicable;

Dimension drawings (all dimensions in mm) - subject to alteration

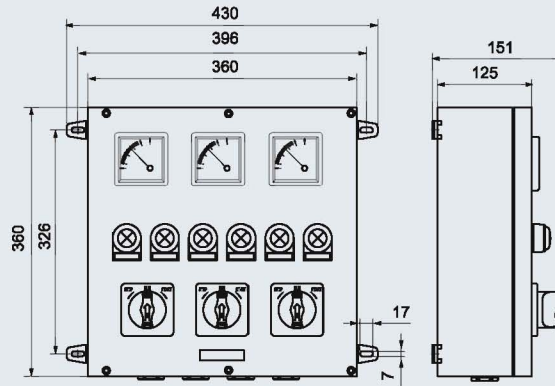


Control Stations (Stainless Steel) BZC8050 Series Explosion-proof Control Stations

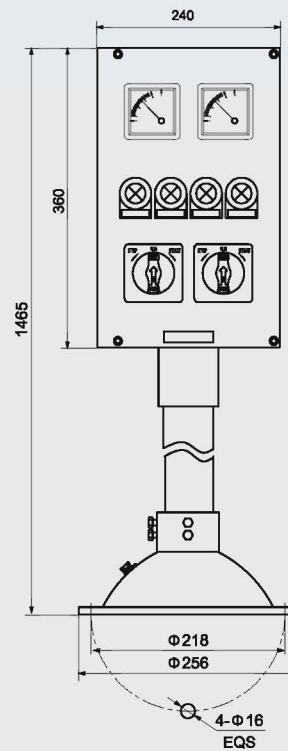
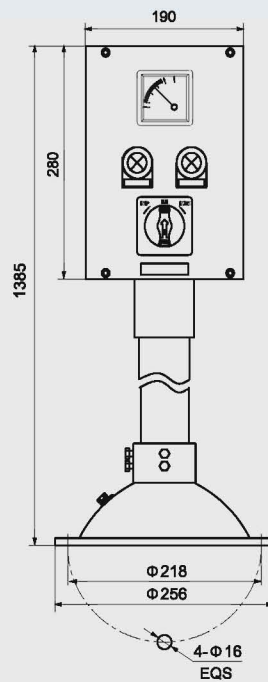
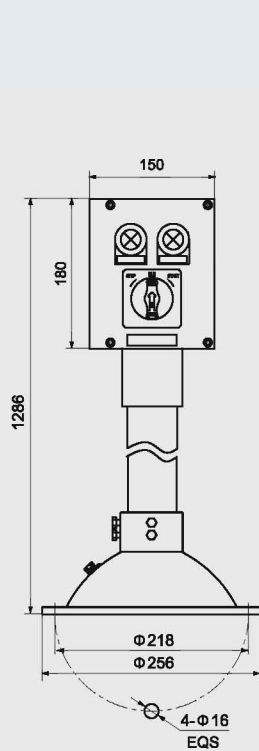
Dimension drawings (all dimensions in mm) - subject to alteration



Enclosure III



Enclosure IV



Pole type (for enclosure I, II, III only)



Components for Control Stations

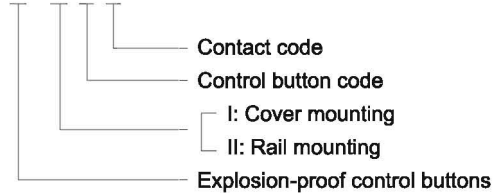
BA8050 Series Explosion-proof Control Buttons

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ 2 versions of components
 - 1 NO
 - 1 NC
- ◆ Six different ways of operation
 - Spring-return control button
 - Mushroom stay-put emergency control button
 - Key-operated control button
 - Rotary control button
 - Double control button
 - Mushroom turn-to-release emergency control button

■ Catalogue number logic

BA8050(A for short)

A - □ □ □







Zones 1&2; 21&22

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Components for Control Stations BA8050 Series Explosion-proof Control Buttons

Selection table

Type	Description	Contact code	Ordering code	Weight (kg)
 I: Cover mounting	 11 12 1NC	R	40090-1 / 40090-2	0.06
 II: Rail mounting	 11 12 1NO	S	40091-1 / 40091-2	0.05

The last number of ordering code: 1 - cover mounting; 2 - rail mounting

Selection table

Type	Description	Code	Ordering code	Weight (kg)	
	Spring-return control button ● Red ● Green ● Yellow	a b c	40092A 40092B 40092C	0.05	
	Mushroom stay-put emergency control button	Red	d	40093	0.05
	Key-operated control button	Black	e	40094	0.05
	Rotary control button	Red	f	40095	0.05
	Mushroom turn-to-release emergency control button	Red	g	40096	0.05
	Double control button	Red/Green	h	40097	0.05
	Pushbutton with indicator	● Red ● Green ● Yellow	i j k	40098A 40098B 40098C	0.05

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Components for Control Stations



BA8050 Serie Explosion-proof Control Buttons

Technical data

Explosion-proof control buttons BA8050

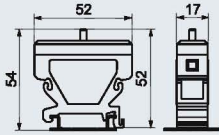
Explosion protection	⊕ II 2 G Ex de IIC Gb															
Certificates	LCIE 07 ATEX 0006U; IECEX LCI 08.0013U; FM (USA)															
Conformity to standards	EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007 IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006															
Enclosure material	Polyamide (PA66)															
Rated voltage	Max. 415V AC															
Rated current	6A															
Contact type																
Switch capacity	<table border="1"> <tr> <td>AC 11, $\cos\phi=0.7$</td> <td>230V-4A</td> <td>415V-2.5A</td> </tr> <tr> <td>DC1 L/R=1ms</td> <td>60V-4A</td> <td>110V-2.5A</td> </tr> <tr> <td>DC11 L/R=15ms</td> <td>60V-6A</td> <td>110V-2.5A</td> </tr> <tr> <td>L/R=30ms</td> <td>4A</td> <td>1.6A</td> </tr> <tr> <td>L/R=100ms</td> <td>2.5A</td> <td>1.0A</td> </tr> </table>	AC 11, $\cos\phi=0.7$	230V-4A	415V-2.5A	DC1 L/R=1ms	60V-4A	110V-2.5A	DC11 L/R=15ms	60V-6A	110V-2.5A	L/R=30ms	4A	1.6A	L/R=100ms	2.5A	1.0A
AC 11, $\cos\phi=0.7$	230V-4A	415V-2.5A														
DC1 L/R=1ms	60V-4A	110V-2.5A														
DC11 L/R=15ms	60V-6A	110V-2.5A														
L/R=30ms	4A	1.6A														
L/R=100ms	2.5A	1.0A														
Mechanical life	10 ⁶ times															
Electrical life	10 ⁶ times															
Ambient temperature	-20°C~+70°C															
Terminal	Suitable for 2.5mm ² cable															
Button element																
Material	Polyamide (PA66)															
Washer	Silicon rubber															
Function																
Spring-return control button	Spring-return control button															
Mushroom stay-put emergency control button	Self-latching when pulled, self-locking															
Key-operated control button	Rotate to lock; release with key, key movable in both ways															
Rotary control button	Two-position switch function, key movable in 90°															
Double control button	Spring-return control button, 1 control button element has the function of 2 control buttons															
Mushroom turn-to-release emergency control button	Rotary resetting control button; self-locking															

Accessories

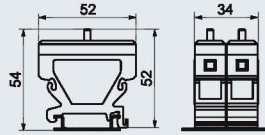
Description	Material	Ordering code	Weight (kg)
Cover mounting bracket 	PC	40098	0.01
Rail 	aluminium alloy (1m)	40120	0.12

Components for Control Stations BA8050 Serie Explosion-proof Control Buttons

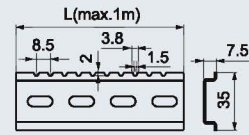
Dimension drawings (all dimensions in mm) - subject to alteration



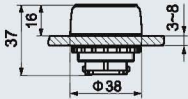
Control button, single (rail mounting)



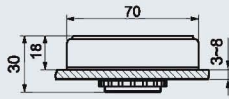
Control button, double (rail mounting)



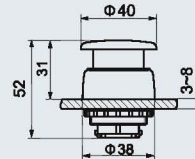
Rail



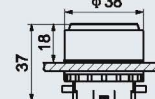
Spring-return control button



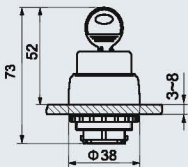
Double control button



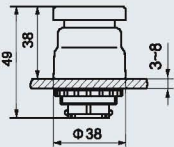
Mushroom stay-put emergency control button



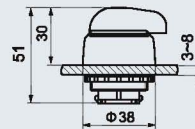
Pushbutton with indicator



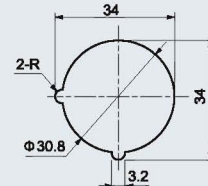
Key-operated control button



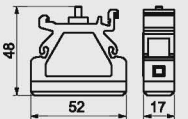
Mushroom turn-to-release emergency control button



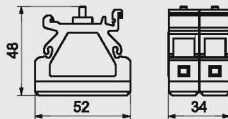
Rotary control button



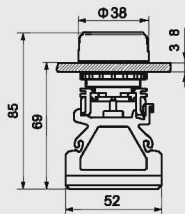
Mounting hole



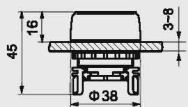
Control button, single (cover mounting)



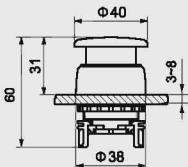
Control button, double (cover mounting)



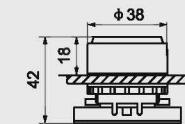
Control button cover mounting



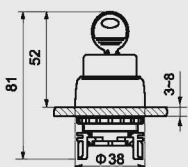
Operation for spring-return control button



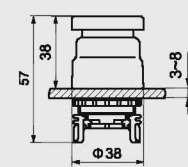
Mushroom stay-put emergency control button



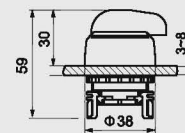
Pushbutton with indicator



Key-operated control button



Mushroom turn-to-release emergency control button



Rotary control button

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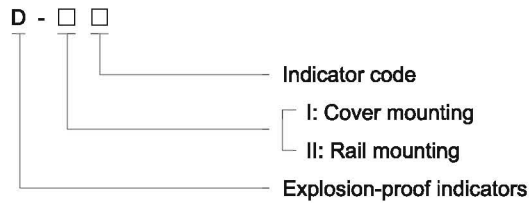


Components for Control Stations BD8050 Series Explosion-proof Indicators

- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A , B, C, D
- ◆ Available in
 - red
 - green
 - yellow
 - white
- ◆ Two mounting types
 - cover mounting
 - rail mounting

■ Catalogue number logic

BD8050(D for short)



Zones 1&2; 21&22

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Selection table

Type	Voltage	Schematic diagram	Colour	Code	Ordering code	Weight (kg)
Explosion-proof Indicator  I: Cover mounting  II: Rail mounting	Rated voltage: AC 230V...AC 415V Voltage range: -10%...+6% Frequency: 0Hz...60Hz		Red	Ra	40099A/40099B	0.05
			Green	Ga	40100A/40100B	
			Yellow	Ya	40101A/40101B	
			White	Wa	40102A/40102B	
	Rated voltage: AC/DC 48V...110V Voltage range: -10%...+6% Frequency: 0Hz...60Hz		Red	Rb	40103A/40103B	0.05
			Green	Gb	40104A/40104B	
			Yellow	Yb	40105A/40105B	
			White	Wb	40106A/40106B	
	Rated voltage: AC/DC 12V...36V Voltage range: -10%...+6% Frequency: 0Hz...60Hz		Red	Rc	40107A/40107B	0.05
			Green	Gc	40108A/40108B	
			Yellow	Yc	40109A/40109B	
			White	Wc	40110A/40110B	
	Rated voltage: DC 220V, 380V Voltage range: -10%...+6%		Red	Rd	40111A/40111B	0.05
			Green	Gd	40112A/40113B	
			Yellow	Yd	40113A/40113B	
			White	Wd	40114A/40114B	
Indicator cover 			Red	a	40115	0.05
			Green	b	40116	
			Yellow	c	40117	
			White	d	40118	

The last letter of ordering code: A-cover mounting; B-rail mounting.

Technical data

Explosion-proof indicators

BD8050

Explosion protection

Ex II 2 G Ex de IIC Gb

Certificates

LCIE 09 ATEX 3098U; IECEx CQM 11.0012U; FM (USA)

Conformity to standards

EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007
IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006

Rated voltage

12V...415V AC/DC (-10%...+6%)

Rated current

Max.15mA

Frequency

0Hz...60Hz

Rated output wattage

Max.1W

Service life

10⁵ hours

Ambient temperature

-20°C~+60°C

Colour

Red, green, yellow, white

Lamp

LED

Enclosure material

Polyamide (PA66)

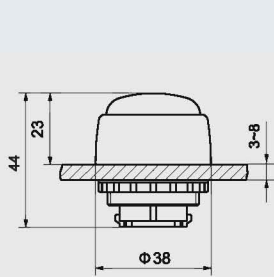
Terminal

Suitable for 2.5mm² cable

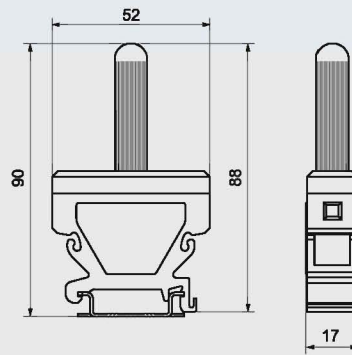
Indicator cover material

PC

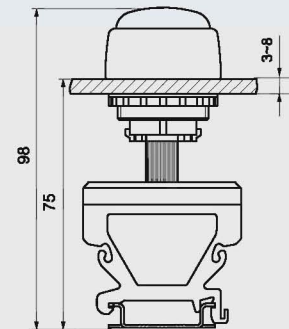
Dimension drawings (all dimensions in mm) - subject to alteration



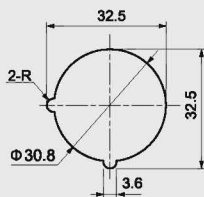
Indicator cover



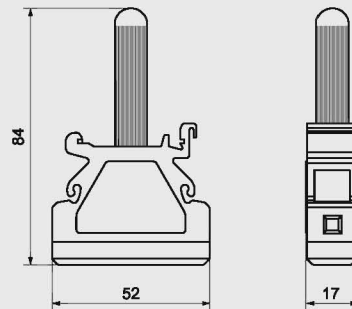
Explosion-proof indicator
(rail mounting)



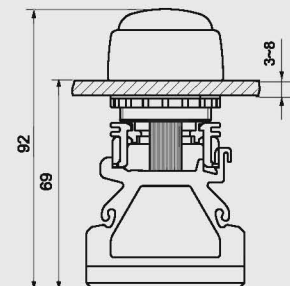
Rail mounting



Mounting hole



Explosion-proof indicator
(cover mounting)



Cover mounting

Components for Control Stations

BK8050 Series Explosion-proof Control Switches

- ◆ Explosion protection to
 - GENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ Max. 6 poles.
- ◆ Available in latching and spring-return forms.



■ Catalogue number logic

BK8050(K for short)

K - □

Control switch code

Explosion-proof control switches

Zones 1&2; 21&22

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Selection table of control switches

Control switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
a				a. Functional wiring is the same as double buttons with auto-reset function.
b				B. Functional wiring is the same as double buttons; auto-reset after start; lock-stop gear added to avoid mistake operation.
c				c. Button with 2 NO contacts and available at auto-reset function. Suitable for high-voltage engine control circuit or function panel uses switch code "a".
d				d. Low-power switch.
e				e. Function is the same as three buttons; able to control engine in forward and backward rotation. FW&BW starting positions can auto-reset.
f				f. Selection switch with stop gear.
g				g. Be equal to mounting two buttons and one changeover switch in one axis. Possible to output contact signal or monitoring signal between start and stop.
h				h. Multi-signals transmit gradually.

Components for Control Stations BK8050 Series Explosion-proof Control Switches

Selection table of control switches				
Control switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
i				I. Add function of transmitting resultant signal on the base of function panel uses switch code "h" .
j				J. Two positions step; change-over gradually.
k				k. Changeover switch.
i				I. Selection switch with three poles and two launches.
m				m. Three-position changeover switch among auto, manual and start; auto-reset after start; it can convert to auto gear only after passing stop gear.
n				n. Structure is a little different to universal structure of switch code "m" ; it directly rotates to auto gear without passing stop gear after starts.

Selection table of control switches

Control switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
o				O. Double contacts auto reset for start, with lock-stop gear; lock switch at stop gear to prevent mistake operation.
p				p. Double contacts for stop, to substitute switch code "a" and "c" for start and stop; auto-reset.
p				q. Stop with double contacts, with lock stop gear; auto-reset after start; possible to add lock-stop gear to add lock-stop gear to lock switch at stop gear to prevent mistake operation.
r				r. Double contacts for both start and stop; it is same as universal panel of switch code "a", with auto-reset for start and stop.
s				s. Transmit a contact signal before start and stop.
t				t. With lock-stop gear for start and stop to prevent mistake operation; without auto-reset.
u				u. Double-control selection switch.
v				v. Changeover switch for voltage phase-changing and measuring.

Components for Control Stations BK8050 Series Explosion-proof Control Switches

Selection table of control switches

Control switch code	Chart of contact	Equivalent switch	Position (solid line: location; dash line: spring return)	Instruction for equivalent function
w				w. One 2NO auto-reset pushbutton, both left and right are the same.
x				x. Two 2NO auto-reset buttons.

Technical data

Explosion-proof control switches BK8050

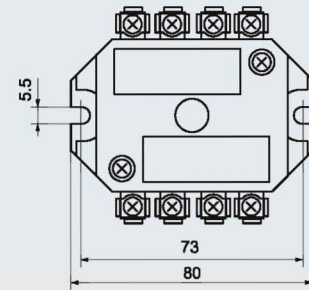
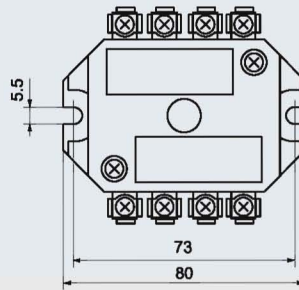
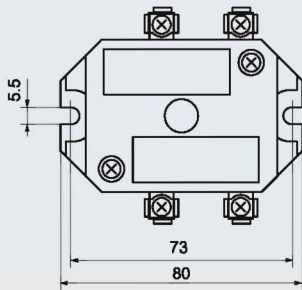
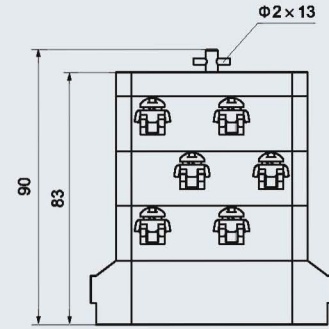
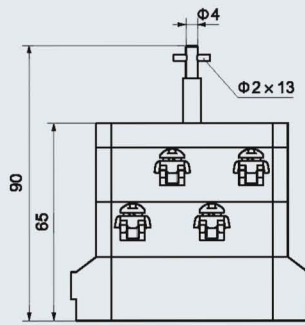
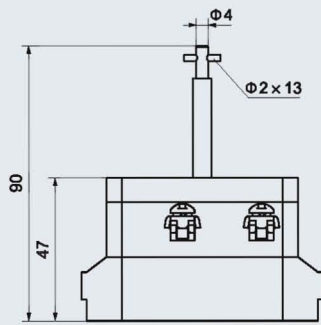
Explosion protection	II 2 G Ex de IIC Gb
Certificates	LCIE 09 ATEX 3096U; IECEx CQM 11.0011U; FM (USA)
Conformity to standards	EN 60079-0:2009, EN 60079-1:2007, EN 60079-7:2007 IEC 60079-0:2011, IEC 60079-1:2007, IEC 60079-7:2006
Enclosure material	Plastic
Rated voltage	Max. 415V AC
Rated current	16A
Switch angle	n x 45° / n x 90°
Service life	10 ⁵ times
Ambient temperature	-20°C~+60°C
Cable connection	2.5mm ²
Handle material	PC
Panel material	ABS
Seal material	NBR

Accessories

Description	Illustration	Ordering code	Weight (kg)
Operation handle (padlockable)		40119	0.05

Components for Control Stations BK8050 Series Explosion-proof Control Switches

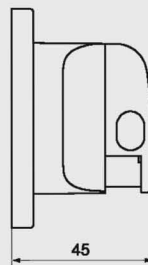
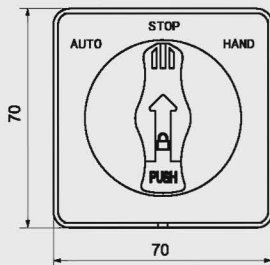
Dimension drawings (all dimensions in mm) - subject to alteration



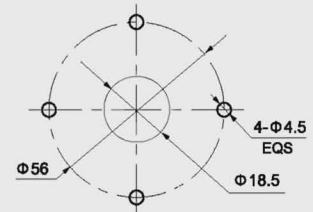
Control switch 2 poles

Control switch 3 or 4 poles

Control switch 6 poles



Operation handle

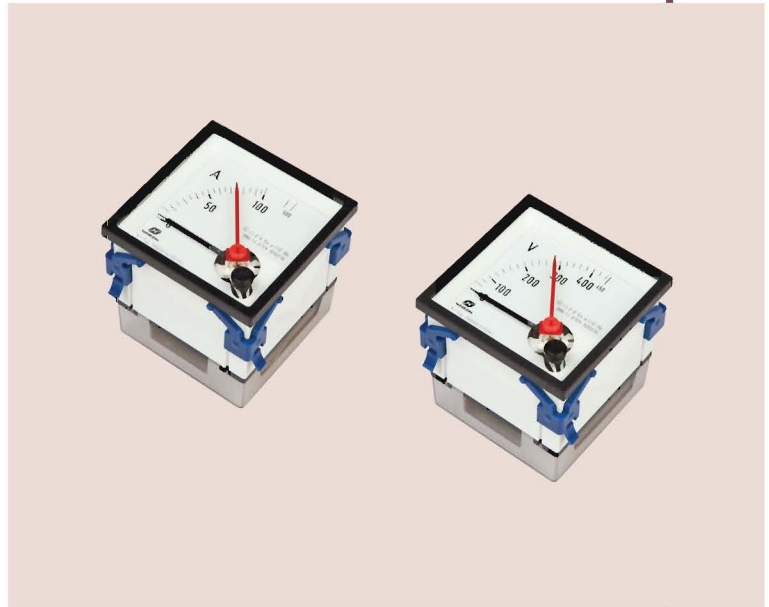


Mounting hole

Components for Control Stations

BB8050 Series Explosion-proof Ammeters/Voltmeters

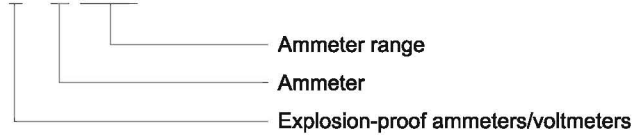
- ◆ Explosion protection to
 - CENELEC
 - IEC
 - NEC
- ◆ Can be used in
 - Zone 1 and Zone 2
 - Class I, Zone 1 and Zone 2
 - Class I, Division 2, Groups A, B, C, D
- ◆ Fast comparison of measured with set values
- ◆ Versions available
 - Ammeter (type 72)
 - Voltmeter (type 72)



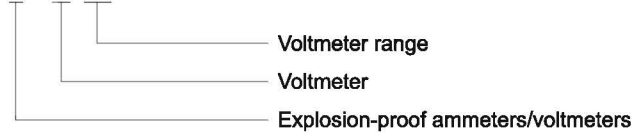
■ Catalogue number logic

BB8050(B for short)

B - A (□/□)



B - V (□)




Zones 1&2

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Components for Control Stations

BB8050 Series Explosion-proof Ammeters/Voltmeters

Selection table

Type	Description	Secondary current	Specification	Overload times	Ordering code	Weight (kg)
Ammeter BB8050-A(□/□) 	Connect to current transformer (secondary current 5A or 1A)	5A	10A	5	40121	0.20
		1A			40122	
		5A	15A	5	40123	
		1A			40124	
		5A	20A	5	40125	
		1A			40126	
		5A	25A	5	40127	
		1A			40128	
		5A	30A	5	40129	
		1A			40130	
		5A	40A	5	40131	
		1A			40132	
		5A	50A	5	40133	
		1A			40134	
		5A	60A	5	40135	
		1A			40136	
		5A	75A	5	40137	
		1A			40138	
		5A	100A	5	40139	
		1A			40140	
		5A	150A	5	40141	
		1A			40142	
		5A	200A	5	40143	
		1A			40144	
5A	250A	5	40145			
1A			40146			
5A	300A	5	40147			
1A			40148			

Selection table

Type	Description	Specification	Ordering code	Weight (kg)
Voltmeter BB8050-V(□) 	Connect to voltage transformer (secondary voltage 100V)	30V	40149	0.20
		50V	40150	
		75V	40151	
		100V	40152	
		120V	40153	
		150V	40154	
		200V	40155	
		250V	40156	
		300V	40157	
		400V	40158	
		450V	40159	
		600V	40160	
		450V~450kV	40161	

Components for Control Stations

BB8050 Series Explosion-proof Ammeters/Voltmeters

Technical data

Explosion-proof ammeters/voltmeters BB8050

	Ammeter	Voltmeter
Explosion protection	⊕ II 2 G Ex e IIC Gb	⊕ II 2 G Ex e IIC Gb
Certificates	DNV 11 ATEX 92527U; IECEx CQM 11.0031U	DNV 11 ATEX 92527U; IECEx CQM 11.0031U
Conformity to standards	EN 60079-0: 2009, EN 60079-7:2007 IEC 60079-0:2007, IEC 60079-7:2006	EN 60079-0: 2009, EN 60079-7:2007 IEC 60079-0:2007, IEC 60079-7:2006
Enclosure material	Flame retardant plastic	Flame retardant plastic
Insulation voltage	690V AC	690V AC
Frequency	50/60Hz DC available	50/60Hz DC available
Working mode	Electromagnetic type (moving iron)	Electromagnetic type (moving iron)
Accuracy	Class 1.5	Class 1.5
Overload times	5 times 3 or 6 times on request.	
Ambient temperature	-20°C~+60°C	-20°C~+60°C
Cable connection	Max. 2.5mm ²	Max. 2.5mm ²
Size	72 x 72mm	72 x 72mm

Dimension drawings (all dimensions in mm) - subject to alteration

