Specifications





Head for key selector switch, Harmony XB4, black key, 22mm, 3 positions, center key withdrawal, stay put, key 458A

ZB4BG310

#### Main

Range of product	Harmony XB4			
Product or component type	Head for key selector switch			
Device short name	ZB4			
Bezel material	Chromium plated metal			
Mounting diameter	22 mm			
Head type	Standard			
Sale per indivisible quantity	1			
Shape of signaling unit head	Round			
Operator profile	Black key switch			
Type of operator	Stay put			
Operator position information	3 positions +/- 45°			
type of keylock	Key 458A			
Key withdrawal position	Center			

### Complementary

CAD overall width	29 mm				
CAD overall height	29 mm				
CAD overall depth	72 mm				
Net weight	0.098 kg				
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m				
Mechanical durability	1000000 cycles				
Electrical composition code	C3 for <6 contacts using single blocks in front mounting C4 for <6 contacts using single and double blocks in front mounting C5 for <5 contacts using single blocks in front mounting C6 for <5 contacts using single and double blocks in front mounting C7 for <4 contacts using single blocks in front mounting C8 for <4 contacts using single and double blocks in front mounting C11 for <3 contacts using single blocks in front mounting				
device presentation	Basic element				

#### **Environment**

protective treatment	тн		
ambient air temperature for storage	-4070 °C		
Ambient air temperature for operation	-4070 °C		

Overvoltage category	Class I conforming to IEC 60536				
IP degree of protection	IP66 conforming to IEC 60529 IP67 IP69				
	IP69K				
NEMA degree of protection	NEMA 13 NEMA 4X				
Standards	EN/IEC 60947-5-5 CSA C22.2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-4 UL 508 GB 14048.5 EN/IEC 60947-5-1				
Product certifications	DNV GL BV CSA LROS (Lloyds register of shipping) UL listed				
Vibration resistance	5 gn (f= 2500 Hz) conforming to IEC 60068-2-6				
Shock resistance	30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27				

# **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	8.8 cm
Package 1 Width	3.4 cm
Package 1 Length	5.4 cm
Package 1 Weight	103 g
Unit Type of Package 2	S03
Number of Units in Package 2	100
Package 2 Height	30 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	10.777 kg

# **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

#### Well-being performance



Mercury Free



Rohs Exemption Information

Yes

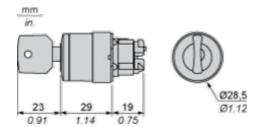
#### **Certifications & Standards**

Reach Regulation	REACh Declaration			
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)			
China Rohs Regulation	China RoHS declaration			
Environmental Disclosure	Product Environmental Profile			
Circularity Profile	End of Life Information			

### **ZB4BG310**

**Dimensions Drawings** 

#### **Dimensions**

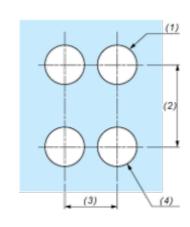


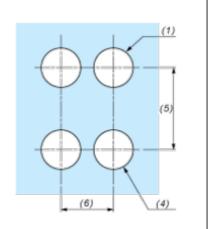
#### Mounting and Clearance

# Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board

**Connection by Faston Connectors** 

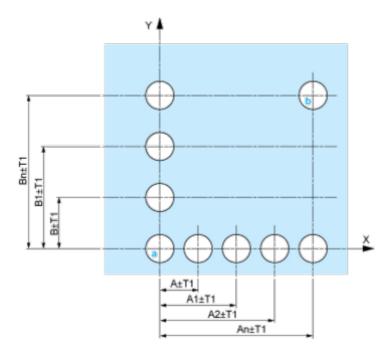




- (1) Diameter on finished panel or support
- (2) 40 mm min. / 1.57 in. min.
- (3) 30 mm min. / 1.18 in. min.
- (4) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm  $_0^{+0.4}$  / 0.88 in.  $_0^{+0.016}$ )
- (5) 45 mm min. / 1.78 in. min.
- (6) 32 mm min. / 1.26 in. min.

#### Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

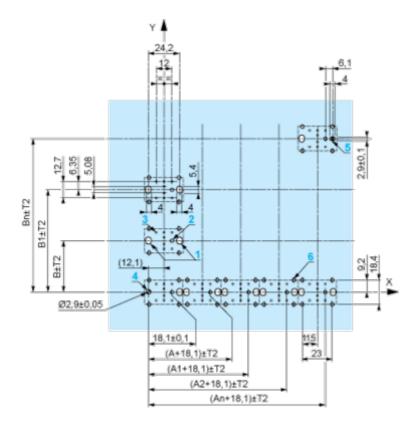
#### Panel Cut-outs (Viewed from Installer's Side)



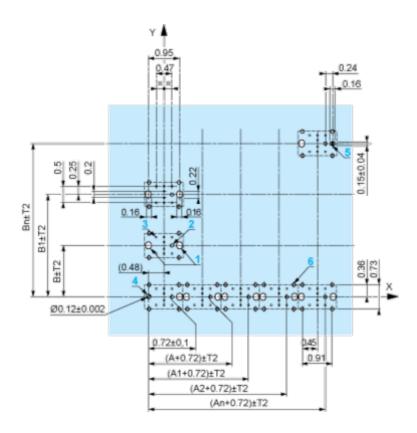
**A:** 30 mm min. / 1.18 in. min. **B:** 40 mm min. / 1.57 in. min.

#### Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm



A: 30 mm min. B: 40 mm min. Dimensions in in.



**A:** 1.18 in. min. **B:** 1.57 in. min.

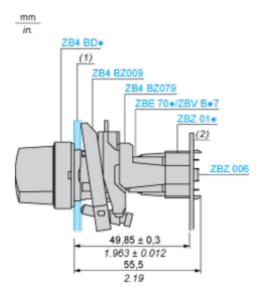
#### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in: T1 + T2 = 0.3 mm max.

#### **Installation Precautions**

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter: 22.4 mm ± 0.1 / 0.88 in. ± 0.004
- Orientation of body/fixing collar ZB4 BZ009: ± 2 30' (excluding cut-outs marked **a** and **b**).
- Tightening torque of screws ZBZ 006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB4 BZ079 fixing collar/pillar and its fixing screws:
  - $_{\circ}\;$  every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - o with each selector switch head (ZB4 BD•, ZB4 BJ•, ZB4 BG•).

The fixing centers marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5**.



- (1) Panel
- (2) Printed circuit board

#### Mounting of Adapter (Socket) ZBZ 01•

- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ 01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- $_{ullet}$  4 1 hole Ø 2.9 mm  $\pm$  0.05 / 0.11 in.  $\pm$  0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- . 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ 01∙

Dimensions An + 18.1 relate to the Ø 2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 holes for centring adapter ZBZ 01•.

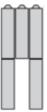
### **ZB4BG310**

**Technical Description** 





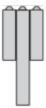
### **ZB4BG310**





### **ZB4BG310**





### ZB4BG310

**Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1** 



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#### Legend

Single contact



Double contact



Light block



Possible location



### Sequence of Contacts Fitted to 3-position Selector Switch Body

#### Position 315°



		Тор			
Push	Position	Bottom			
	Location		Left	Centre	Right
	State		1	1	0
Contacts	N/O		closed	closed	open
	N/C		open	open	closed

#### Position 0°



Push	Position	Тор			
		Bottom			$\triangle$
	Location		Left	Centre	Right
	State		О	0	0
Contacts	N/O		open	open	open
	N/C		closed	closed	closed

#### Position 45°



Push	Position	Тор			
		Bottom			
	Location		Left	Centre	Right
	State		0	1	1
Contacts	N/O		open	closed	closed
	N/C		closed	open	open