# **Product datasheet**





# white projecting pushbutton head Ø22 spring return unmarked

ZB4BL1

# Main

Range Of Product	Harmony XB4	
Product Or Component Type	Head for non-illuminated push-button	
Device Short Name	ZB4	
Bezel Material	Chromium plated metal	
Mounting Diamete	22.5 mm	
Sale Per Indivisible Quantity	1	
Head Type	Standard	
Shape Of Signaling Unit Head	Round	
Type Of Operator	spring return	
Operator Profile	White projecting, unmarked	
Cap/Operator Or Lens Colour	White	

# Complementary

Cad Overall Width	29 mm	
Cad Overall Height	29 mm	
Cad Overall Depth	33 mm	
Mechanical Durability	10000000 cycles	
Electrical Composition Code	C1 for <9 contacts using single blocks in front mounting C2 for <9 contacts using single and double blocks in front mounting C11 for <3 contacts using single blocks in front mounting C15 for <1 contacts using single blocks in front mounting	
Device Presentation	Basic element	

# **Environment**

Protective Treatment	ТН	
Ambient Air Temperature For Storage	or -4070 °C	
Ambient Air Temperature For -40…70 °C Operation		
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	
Ik Degree Of Protection	IK06 conforming to IEC 50102	

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Standards	CSA C22.2 No 14  JIS C8201-5-1  IEC 60947-1  UL 508  IEC 60947-5-1  IEC 60947-5-5  IEC 60947-5-4  JIS C8201-1
Product Certifications	CSA DNV LROS (Lloyds register of shipping) BV GL 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	3.6 cm
Package 1 Width	5.2 cm
Package 1 Length	3.0 cm
Package 1 Weight	30.0 g
Unit Type Of Package 2	S01
Number Of Units In Package 2	75
Package 2 Height	15.0 cm
Package 2 Width	15.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	2.408 kg

# **Contractual warranty**

Warranty 12 months



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Transparency RoHS/REACh

# Well-being performance

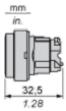
<b>⊘</b>	Reach Free Of Svhc	
<b>Ø</b>	Toxic Heavy Metal Free	
<b>⊘</b>	Mercury Free	
<b>⊘</b>	Rohs Exemption Information	Yes

### **Certifications & Standards**

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

# **Dimensions Drawings**

# **Dimensions**





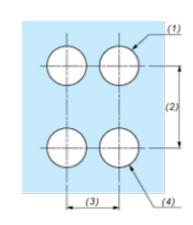
# ZB4BL1

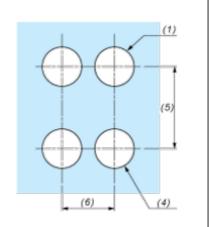
#### Mounting and Clearance

# 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** 

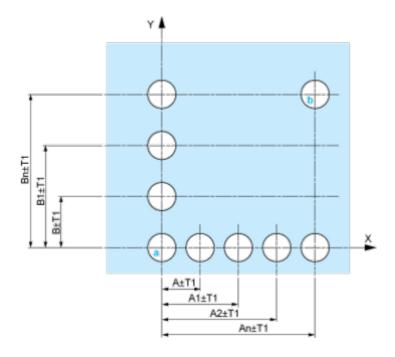




- (1) Diameter on finished panel or support
- (2) 40 mm min. / 1.57 in. min.
- (3) 30 mm min. / 1.18 in. min.
- (4) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm  $_0^{+0.4}$  / 0.88 in.  $_0^{+0.016}$ )
- (5) 45 mm min. / 1.78 in. min.
- (6) 32 mm min. / 1.26 in. min.

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

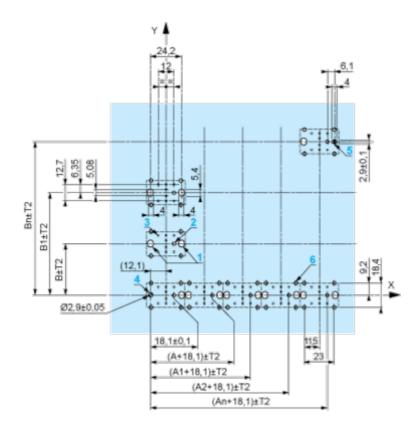
#### Panel Cut-outs (Viewed from Installer's Side)



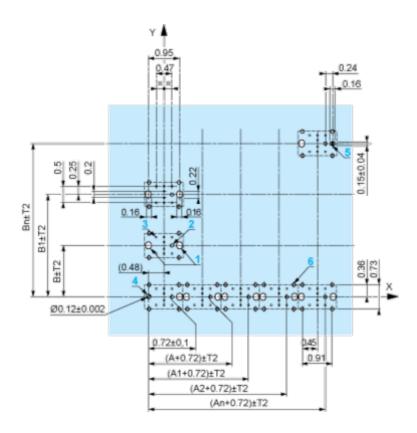
**A:** 30 mm min. / 1.18 in. min. **B:** 40 mm min. / 1.57 in. min.

#### 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

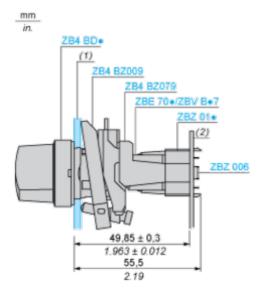
The cumulative tolerance must not exceed 0.3 mm / 0.012 in: T1 + T2 = 0.3 mm max.

#### **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**.

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- (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•.

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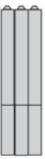
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**Technical Description** 

**Electrical Composition Corresponding to Code C1** 



**Electrical Composition Corresponding to Code C2** 



# **Product datasheet**

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



# ZB4BL1

# **Electrical Composition Corresponding to Code C15**

1 N/O



1 N/C



1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C



# Legend

Single contact



Double contact



Light block



Possible location

