

Product data sheet

Specifications



Push button head, Harmony XB4, metal, 22mm, spring return, without cap

ZB4BA0

Main

Range of product Harmony XB4

Product or component type Head for non-illuminated push-button

Device short name XB4

Bezel material Chromium plated metal

Mounting diameter 22 mm

Sale per indivisible quantity 1

Head type Standard

Shape of signaling unit head Round

Type of operator spring return

Operator profile without cap

Complementary

CAD overall width 29 mm

CAD overall height 29 mm

CAD overall depth 28 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

Environment

Protective treatment TH

Ambient air temperature for storage -40...70 °C

Ambient air temperature for operation -40...70 °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

IK degree of protection	IK06 conforming to IEC 50102
Standards	EN/IEC 60947-1 JIS C8201-5-1 UL 508 EN/IEC 60947-5-1 EN/IEC 60947-5-4 CSA C22.2 No 14 EN/IEC 60947-5-5 JIS C8201-1
Product certifications	BV GL CSA DNV LROS (Lloyds register of shipping) UL listed
Vibration resistance	5 gn (f= 2...500 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	4.400 cm
Package 1 Width	3.400 cm
Package 1 Length	5.400 cm
Package 1 Weight	27.0 g
Unit Type of Package 2	S03
Number of Units in Package 2	300
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	8.648 kg
Unit Type of Package 3	P06
Number of Units in Package 3	2400
Package 3 Height	77.000 cm
Package 3 Width	80.000 cm
Package 3 Length	60.000 cm
Package 3 Weight	79.004 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information

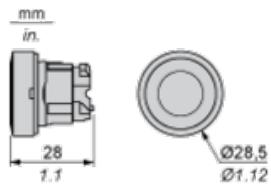
California proposition 65

WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

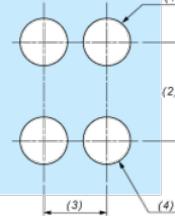
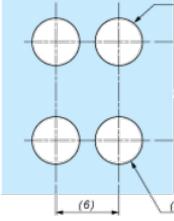
Contractual warranty**Warranty**

18 months

Dimensions

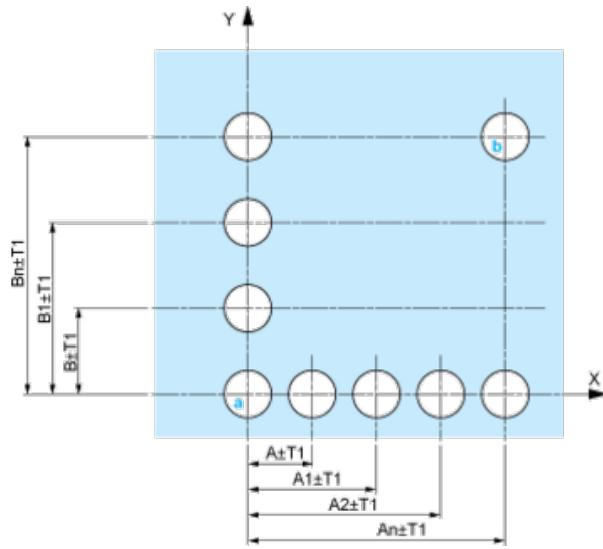


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board	Connection by Faston Connectors
 <p>(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 $^{+0.4}$ / 0.88 in. $^{+0.016}$) (5) 45 mm min. / 1.78 in. min. (6) 32 mm min. / 1.26 in. min.</p>	 <p>(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 $^{+0.4}$ / 0.88 in. $^{+0.016}$) (5) 45 mm min. / 1.78 in. min. (6) 32 mm min. / 1.26 in. min.</p>

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

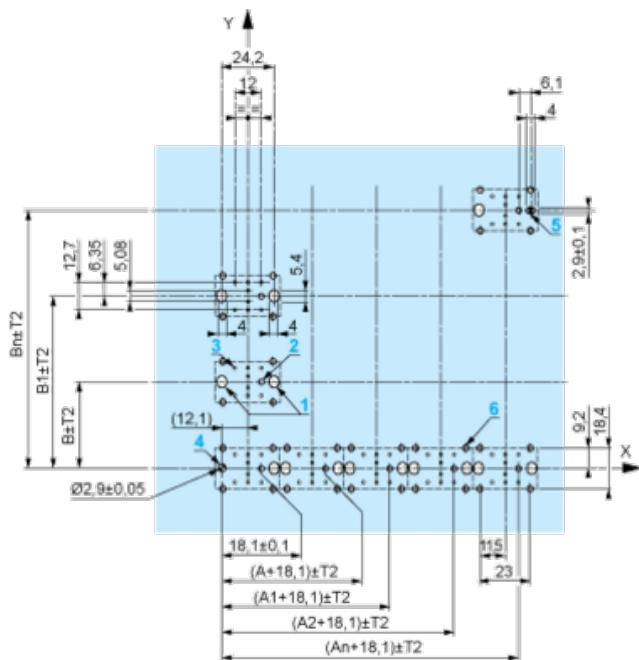


A: 30 mm min. / 1.18 in. min.

B: 40 mm min. / 1.57 in. min.

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

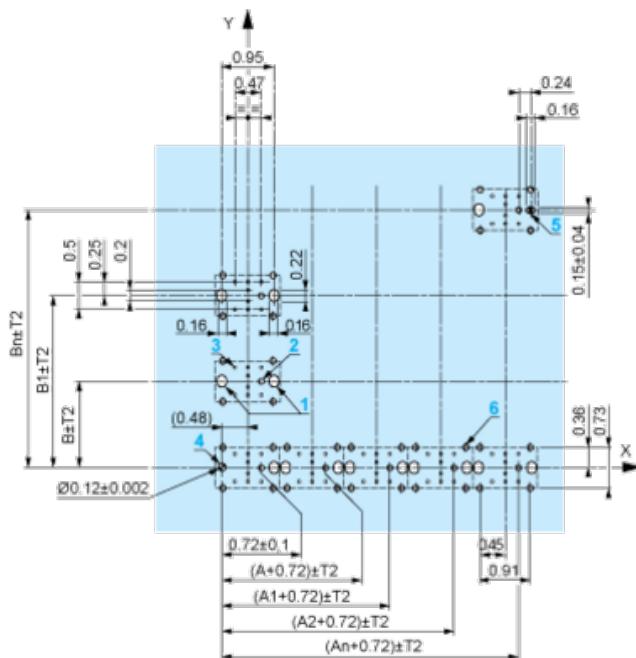
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

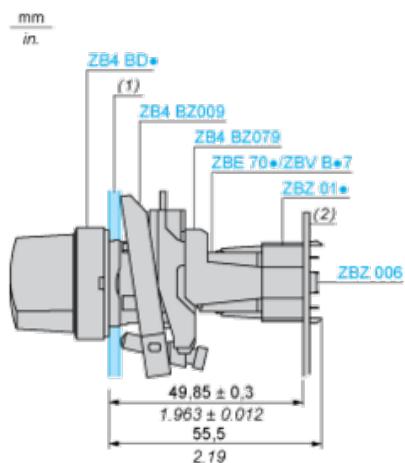
General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in: $T_1 + T_2 = 0.3$ mm max.

Installation Precautions

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter: $22.4 \text{ mm} \pm 0.1$ / $0.88 \text{ in.} \pm 0.004$
- Orientation of body/fixing collar ZB4 BZ009: $\pm 2^\circ 30'$ (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:
 - every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
 - 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

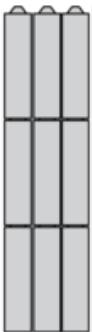
(2) Printed circuit board

Mounting of Adapter (Socket) ZBZ 01•

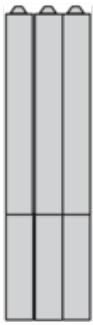
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole $\varnothing 2.4 \text{ mm} \pm 0.05$ / $0.09 \text{ in.} \pm 0.002$ for centring adapter ZBZ 01•
- 3 8 × $\varnothing 1.2 \text{ mm}$ / 0.05 in. holes
- 4 1 hole $\varnothing 2.9 \text{ mm} \pm 0.05$ / $0.11 \text{ in.} \pm 0.002$, for aligning 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 $\varnothing 2.4 \text{ mm}$ / 0.09 in. for clipping in adapter ZBZ 01•

Dimensions $A_n + 18.1$ relate to the $\varnothing 2.4 \text{ mm} \pm 0.05$ / $0.09 \text{ in.} \pm 0.002$ holes for centring adapter ZBZ 01•.

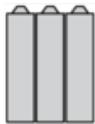
Electrical Composition Corresponding to Code C1



Electrical Composition Corresponding to Code C2

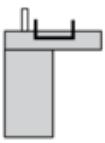


Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1

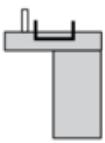


Electrical Composition Corresponding to Code C15

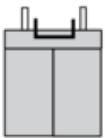
1 N/O



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

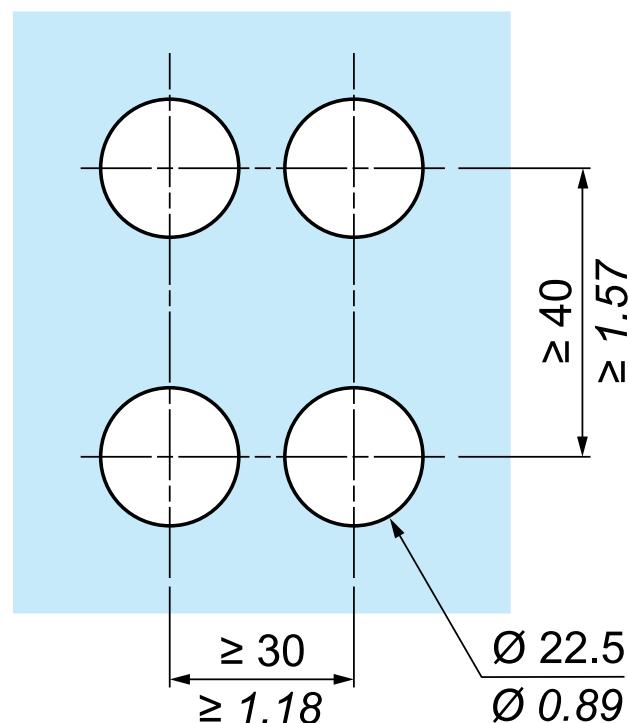
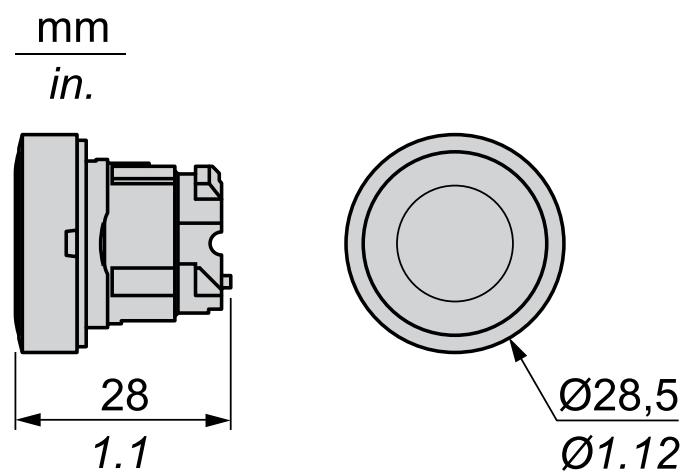


Light block



Possible location



Dimensions**Recommended replacement(s)**