



Main

Range of product	Harmony XB4
Product or component type	Complete double-headed push-button
Device short name	XB4
Bezel material	Chromium plated metal
Fixing collar material	Zamak
Head type	Standard
Mounting diameter	0.87 in (22 mm)
Shape of signaling unit head	Rectangular
Type of operator	Spring return
Operator profile	1 flush - 1 projecting push-buttons
Operators description	Green "I" - red "O"
Contacts type and composition	1 NO + 1 NC
Contact operation	Slow-break
Connections - terminals	Screw clamp terminals: $\leq 2 \times 1.5 \text{ mm}^2$ with cable end conforming to EN/IEC 60947-1 Screw clamp terminals: $\geq 1 \times 0.22 \text{ mm}^2$ without cable end conforming to EN/IEC 60947-1

Complementary

Product weight	0.26 lb(US) (0.116 kg)
Resistance to high pressure washer	1015.26 psi (7000000 Pa) at 131 °F (55 °C), distance: 0.1 m
Colour of marking	Black marking when white caps White marking when green, red or black caps
Operator profile	Green flush, white I Red projecting, white O
Contacts usage	Standard contacts
Positive opening	With positive opening conforming to EN/IEC 60947-5-1 appendix K
Operating travel	0.06 in (1.5 mm) (NC changing electrical state) 0.1 in (2.6 mm) (NO changing electrical state) 0.17 in (4.3 mm) (total travel)
Operating force	3.5 N (NC changing electrical state) 3.8 N (NO changing electrical state)
Mechanical durability	1000000 cycles
Tightening torque	7.08...10.62 lbf.in (0.8...1.2 N.m) conforming to EN 60947-1
Shape of screw head	Cross head compatible with JIS No 1 screwdriver Cross head compatible with Philips no 1 screwdriver Cross head compatible with pozidriv No 1 screwdriver Slotted head compatible with flat Ø 4 mm screwdriver Slotted head compatible with flat Ø 5.5 mm screwdriver
Contacts material	Silver alloy (Ag/Ni)
Short-circuit protection	10 A cartridge fuse type gG conforming to EN/IEC 60947-5-1
[Ith] conventional free air thermal current	10 A conforming to EN/IEC 60947-5-1
[Ui] rated insulation voltage	600 V (degree of pollution: 3) conforming to EN 60947-1
[Uimp] rated impulse withstand voltage	6 kV conforming to EN 60947-1
[Ie] rated operational current	3 A at 240 V, AC-15, A600 conforming to EN/IEC 60947-5-1 6 A at 120 V, AC-15, A600 conforming to EN/IEC 60947-5-1 0.1 A at 600 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 0.27 A at 250 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 0.55 A at 125 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 1.2 A at 600 V, AC-15, A600 conforming to EN/IEC 60947-5-1
Electrical durability	1000000 cycles, AC-15, 2 A at 230 V, operating rate: 3600 cyc/mn, load factor: 0.5 conforming to EN/IEC 60947-5-1 1000000 cycles, AC-15, 3 A at 120 V, operating rate: 3600 cyc/mn, load factor: 0.5 conforming to EN/IEC 60947-5-1

1000000 cycles, AC-15, 4 A at 24 V, operating rate: 3600 cyc/mn, load factor: 0.5
conforming to EN/IEC 60947-5-1
1000000 cycles, DC-13, 0.2 A at 110 V, operating rate: 3600 cyc/mn, load factor: 0.5
conforming to EN/IEC 60947-5-1
1000000 cycles, DC-13, 0.5 A at 24 V, operating rate: 3600 cyc/mn, load factor: 0.5
conforming to EN/IEC 60947-5-1

Electrical reliability	$\Lambda < 10\text{exp}(-6)$ at 5 V, 1 mA in clean environment conforming to EN/IEC 60947-5-4 $\Lambda < 10\text{exp}(-8)$ at 17 V, 5 mA in clean environment conforming to EN/IEC 60947-5-4
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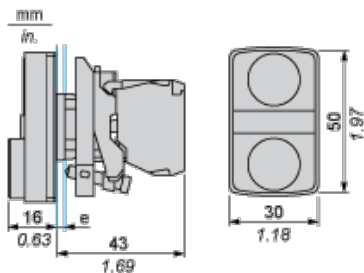
Environment

protective treatment	TH
ambient air temperature for storage	-40...158 °F (-40...70 °C)
ambient air temperature for operation	-40...158 °F (-40...70 °C)
electrical shock protection class	Class I conforming to IEC 60536
IP degree of protection	IP67 conforming to IEC 60529 IP69K IP69
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK06 conforming to IEC 50102
standards	EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 JIS C 4520 UL 508 CSA C22.2 No 14
product certifications	BV CSA DNV GL LROS (Lloyds register of shipping) RINA UL listed
vibration resistance	5 gn ($f = 2...500$ Hz) conforming to IEC 60068-2-6
shock resistance	30 gn (duration = 18 ms) half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) half sine wave acceleration conforming to IEC 60068-2-27

Contractual warranty

Warranty period	18 months
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Dimensions



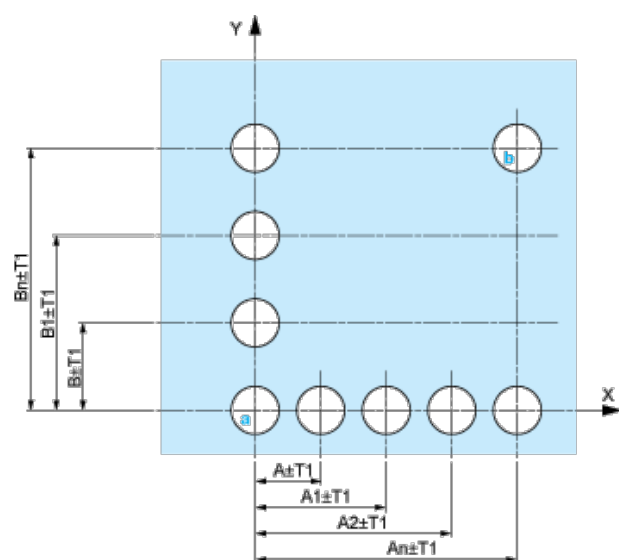
Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board	Connection by Faston Connectors
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(1) Diameter on finished panel or support (2) 40 mm min. / 1.57 in. min. (3) 30 mm min. / 1.18 in. min. (4) $\varnothing 22.5 \text{ mm} / 0.89 \text{ in. recommended } (\varnothing 22.3 \text{ mm } _0^{+0.4} / 0.88 \text{ in. } _0^{+0.016})$ (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)

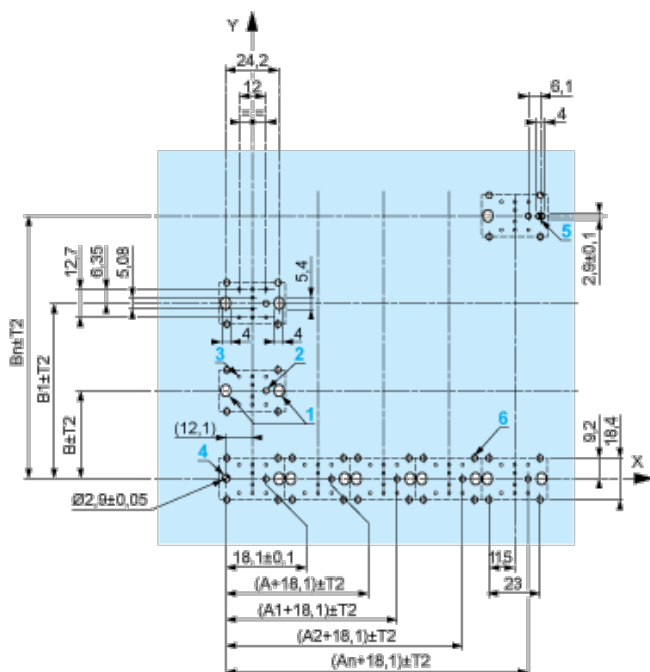


A: 30 mm min. / 1.18 in. min.

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

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

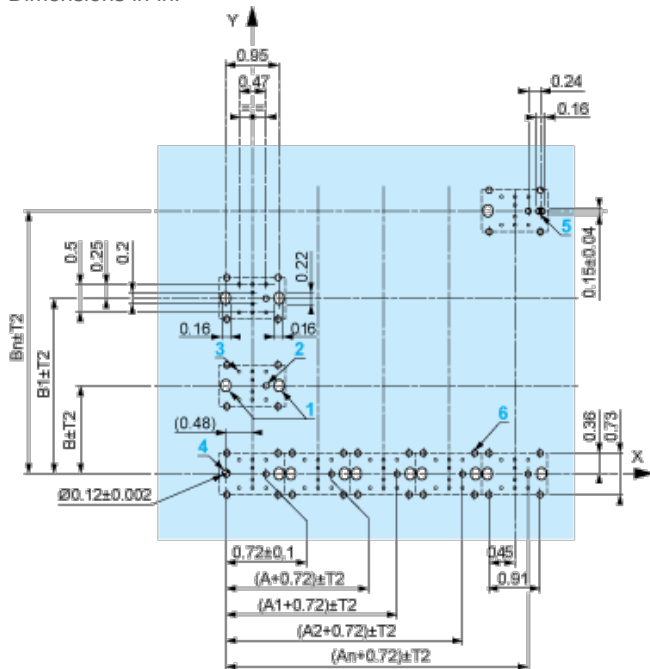
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

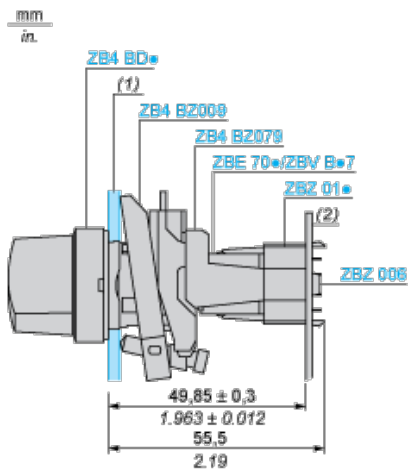
General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in: $T1 + T2 = 0.3 \text{ mm max.}$

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: $\pm 2^\circ 30'$ (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 $8 \times \varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$ 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 $\varnothing 2.4 \text{ mm} / 0.09 \text{ in.}$ for clipping in adapter ZBZ 01•

Dimensions An + 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•.