

Product data sheet

Characteristics

ZB4BG412

selector switch head Ø22 2-position stay put

Ronis 421E

Main

Range of product	Harmony XB4
Product or component type	Head for selector switch
Device short name	ZB4
Bezel material	Chromium plated metal
Mounting diameter	22 mm
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Stay put
Operator profile	Black key switch
Operator position information	2 positions 90°
Type of keylock	Ronis 421E
Key withdrawal position	In any position

Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	62 mm
Product weight	0.098 kg
Resistance to high pressure washer	7000000 Pa at 55 °C, distance: 0.1 m
Mechanical durability	1000000 cycles

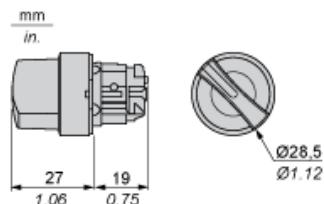
Environment

Protective treatment	TH
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-25...70 °C
Class of protection against electric shock	Class I conforming to IEC 60536
IP degree of protection	IP69 K conforming to IEC 60529
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK06 conforming to IEC 50102
Standards	CSA C22-2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 JIS C 4520 UL 508
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 for 18 ms half sine wave acceleration conforming to IEC 60068-2-27 50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27
RoHS EUR status	Compliant
RoHS EUR conformity date	0636

Dimensions of Heads for Selector Switches

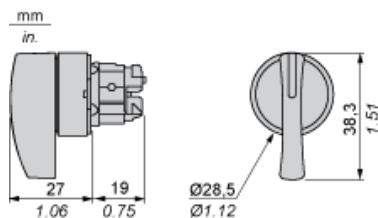
Standard Handle Operator

ZB4 BD•



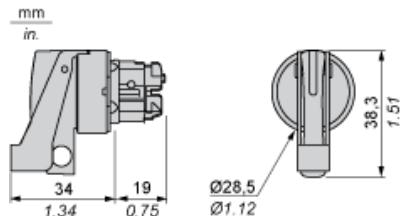
Long Handle Operator

ZB4 BJ•



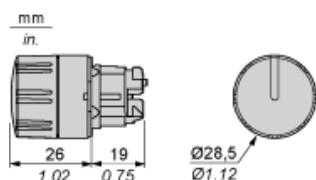
Padlockable Long Handle Operator (6.35 mm (0.25 in.) Shank Max.)

ZB4 BJ•9•



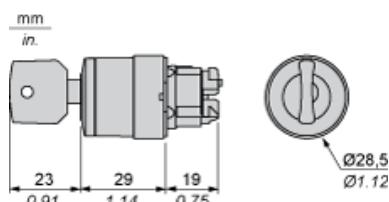
Black Knurled Knob

ZB4 BD•9

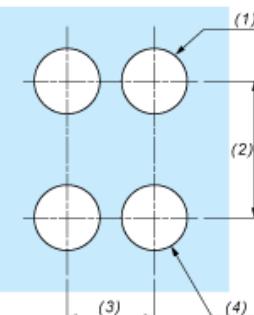
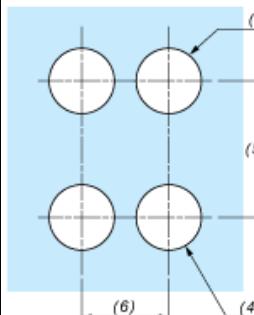


Key Switches

ZB4 BG•, ZB4 BG0•, ZB4 BG0•M



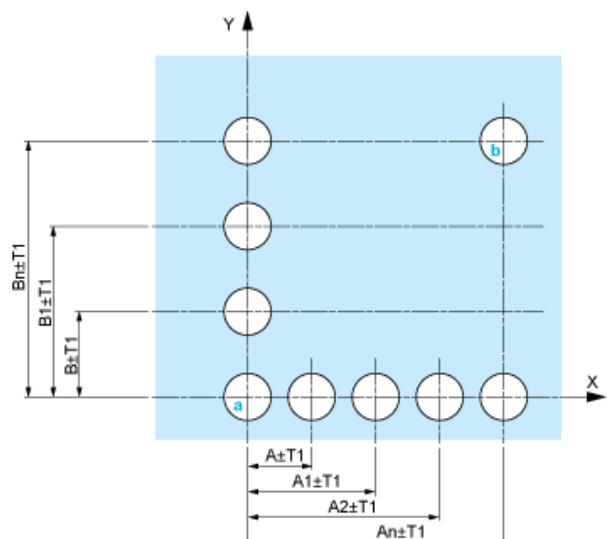
Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

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) \varnothing 22.5 mm / 0.89 in. recommended (\varnothing 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.

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

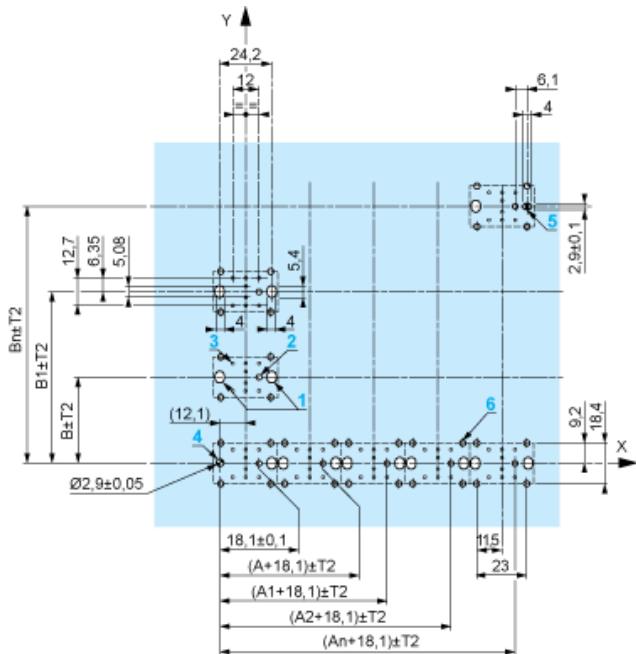


A: 30 mm min. / 1.18 in. min.

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

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

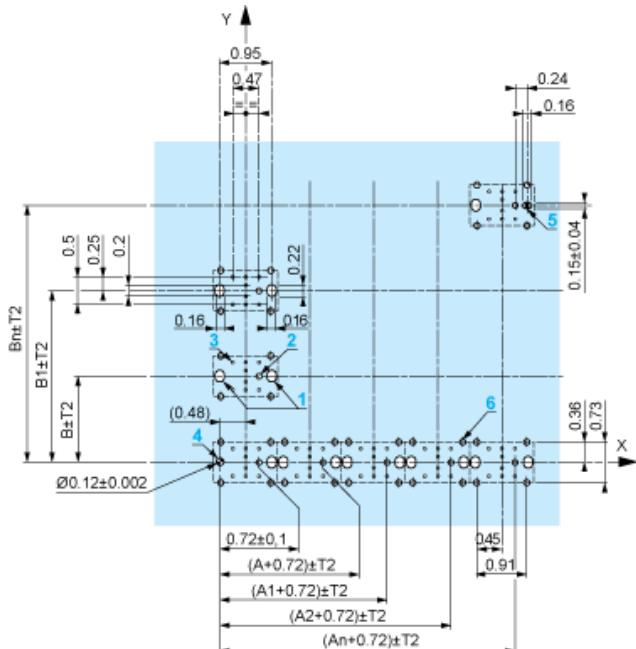
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

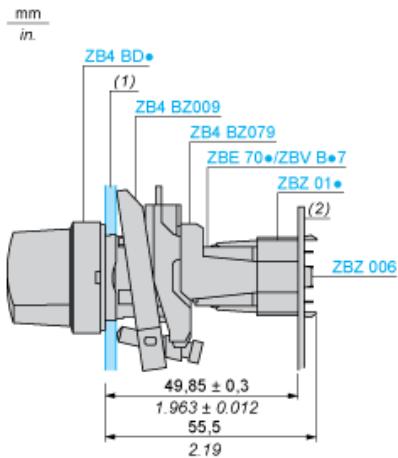
General Tolerances of the Panel and Printed Circuit Board

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: $22.4 \text{ mm} \pm 0.1$ / $0.88 \text{ in.} \pm 0.004$
- Orientation of body/fixing collar ZB4 BZ009: $\pm 2.30^\circ$ (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 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
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 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 ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ 01•.