

ZB4BA9

flush pushbutton head Ø22 spring return with 6
coloured caps unmarked



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 diameter	22 mm
Sale per indivisible quantity	1
Head type	Standard
Shape of signaling unit head	Round
Type of operator	Spring return
Operator profile	6 colors choice flush unmarked
Operator additional information	With set of 6 color cap

Complementary

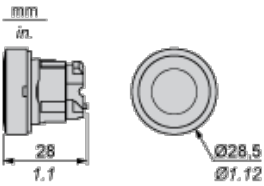
CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	28 mm
Mechanical durability	10000000 cycles
Electrical composition code	C15 for 1 contacts using single blocks in front mounting C15 for 1 contacts using single blocks in front mounting C11 for 3 contacts using single blocks in front mounting C1 for 9 contacts using single blocks in front mounting C2 for 9 contacts using single and double 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	IP67 IP66 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) 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

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Dimensions

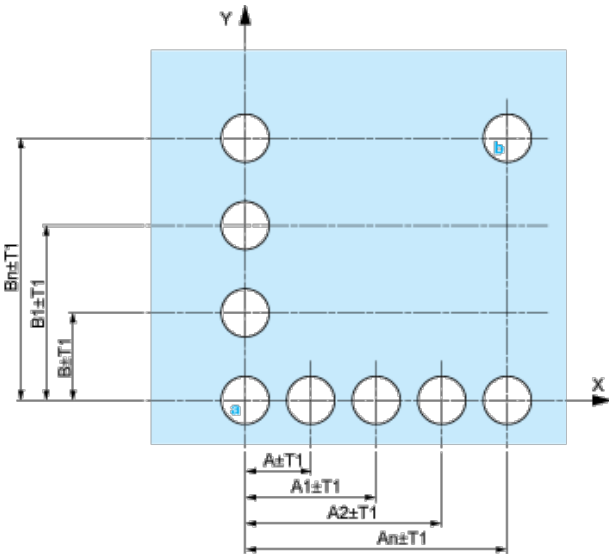


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board	Connection by Faston Connectors
(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 $^{+0.4}_0$ / 0.88 in. $^{+0.016}_0$) (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.

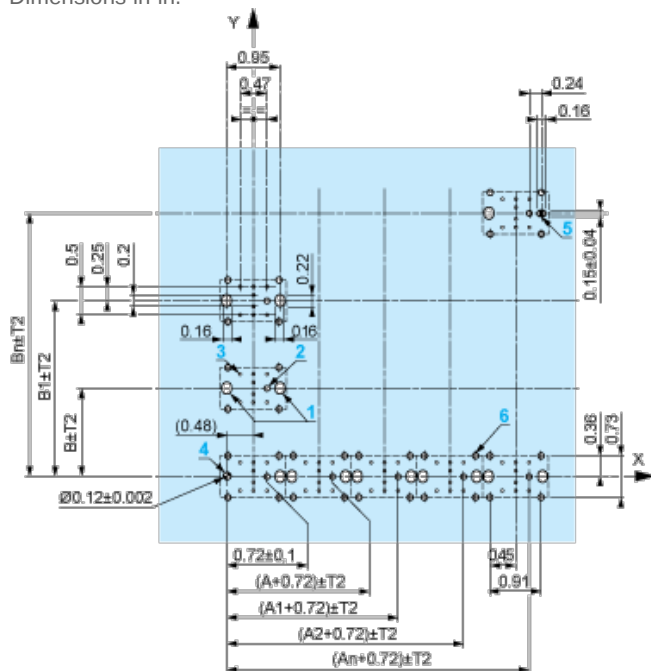
Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Technical drawing of a rectangular plate with a grid of holes. The plate has a width B and a height B . The grid is defined by dimensions A and B . The holes are arranged in a grid with a pitch of 18.1 ± 0.1 . The drawing includes various dimension lines and labels for the holes and the plate dimensions.

Key dimensions and labels:

- Plate width: B
- Plate height: B
- Grid pitch: 18.1 ± 0.1
- Hole diameter: $\varnothing 2.9 \pm 0.05$
- Grid dimensions: $(A \pm 18.1) \pm T2$, $(A1 \pm 18.1) \pm T2$, $(A2 \pm 18.1) \pm T2$, $(An \pm 18.1) \pm T2$
- Grid dimensions: $(B \pm T2)$, $(B1 \pm T2)$
- Grid dimensions: $(12, 1)$
- Grid dimensions: $(24, 2)$
- Grid dimensions: $(6, 1)$
- Grid dimensions: $(4, 1)$
- Grid dimensions: $(5, 1)$
- Grid dimensions: $(9, 2)$
- Grid dimensions: $(18, 4)$
- Grid dimensions: $(15, 23)$
- Grid dimensions: $(12, 7)$
- Grid dimensions: $(6, 35)$
- Grid dimensions: $(5, 08)$
- Grid dimensions: $(4, 1)$
- Grid dimensions: $(5, 4)$
- Grid dimensions: $(2, 1)$
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- Grid dimensions: $(98, 1)$
- Grid dimensions: $(99, 1)$
- Grid dimensions: $(100, 1)$

Dimensions in in.



B: 1.57 in. min.

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

- ┆ 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:
 - ┆ 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•).

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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 $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$ 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•.

Electrical Composition Corresponding to Code C1



Electrical Composition Corresponding to Code C2

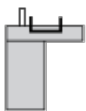


Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1



Electrical Composition Corresponding to Code C15

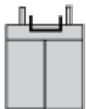
1 N/O



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

