

# ZB5AA48

red flush pushbutton head Ø22 spring return  
unmarked



## Main

Range of product	Harmony XB5
Product or component type	Head for illuminated pushbutton
Device short name	ZB5
Product compatibility	Integral LED
Bezel material	Plastic
Mounting diameter	22 mm
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Spring return
Operator profile	Red flush unmarked
Operator additional information	For insertion of legend

## Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	30 mm
Product weight	0.018 kg
Resistance to high pressure washer	7000000 Pa at 55 °C, distance: 0.1 m
Mechanical durability	5000000 cycles
Station name	XALK 2...5 cut-outs XALD 1...5 cut-outs
Electrical composition code	MR1 for <= 2 contacts using single blocks in rear mounting with integral LED MF1 for <= 2 contacts using single blocks in front mounting with integral LED SR2 for <= 2 contacts using single blocks in rear mounting SF2 for <= 2 contacts using single blocks in front mounting M10 for <= 2 contacts using single blocks in front mounting with integral LED M6 for <= 2 contacts using single blocks in front mounting with integral LED and transformer M2 for <= 6 contacts using single and double blocks in front mounting with integral LED M1 for <= 6 contacts using single blocks in front mounting with integral LED C14 for <= 2 contacts using single blocks in front mounting C4 for <= 6 contacts using single and double blocks in front mounting C3 for <= 6 contacts using single blocks in front mounting

## Environment

Protective treatment	TC
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-25...70 °C
Class of protection against electric shock	Class II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529
NEMA degree of protection	NEMA 4X NEMA 13
IK degree of protection	IK05 conforming to EN 50102

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Standards	CSA C22-2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 JIS C 4520 UL 508 GB 14048.5
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	50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27 30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27

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Dimensions

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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



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

Connections	a in mm	a in in.	b in mm	b in in.
By screw clamp terminals or plug-in connector	40	1.57	30	1.18
By Faston connectors	45	1.77	32	1.26
On printed circuit board	30	1.18	30	1.18

Detail of Lug Recess



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

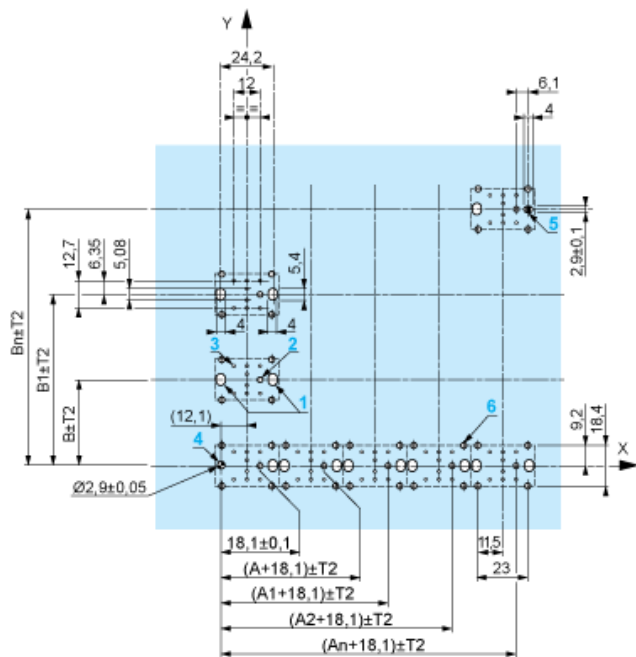
### Panel Cut-outs (Viewed from Installer's Side)



- 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.

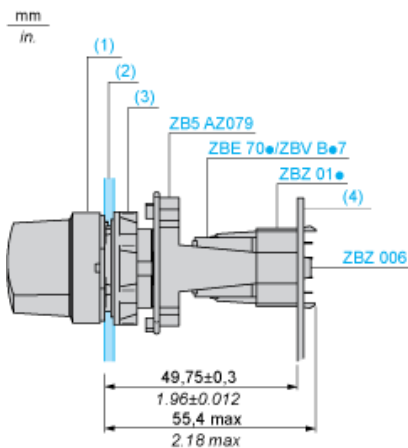
### General Tolerances of the Panel and Printed Circuit Board

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 ZB5AZ009: ± 2° 30' (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB5AZ079 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 (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked a and b are diagonally opposed and must align with those marked 4 and 5.



- (1) Head ZB5AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

### Mounting of Adapter (Socket) ZBZ01•

- 12 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 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 ZBZ01•

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 ZBZ01•.

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Electrical Composition Corresponding to Code C3

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Electrical Composition Corresponding to Code C4

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Electrical Composition Corresponding to Codes C14, SF2 and SR2

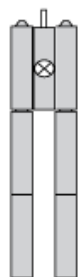
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Electrical Composition Corresponding to Codes M1 and M7

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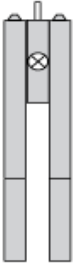


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Electrical Composition Corresponding to Codes M2 and M8

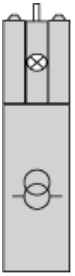
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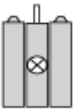
Electrical Composition Corresponding to Codes M6 and P2

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Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2

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Legend

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Single contact



Double contact



Light block



Possible location

