



## Main

Commercial Status	Commercialised
Range of product	Harmony XB5
Product or component type	Head for emergency switching off pushbutton
Device short name	ZB5
Bezel material	Plastic
Mounting diameter	22 mm
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Trigger action and mechanical latching
Reset	Turn to release
Operator profile	Red mushroom Ø 30 mm unmarked

## Complementary

CAD overall width	30 mm
CAD overall height	30 mm
CAD overall depth	57 mm
Product weight	0.042 kg
Mechanical durability	300000 cycles
Station name	XALK 1...5 cut-outs XALD 1...5 cut-outs
Electrical composition code	C10 for <= 4 contacts using single and double blocks in front mounting SR1 for <= 3 contacts using single blocks in rear mounting SF1 for <= 3 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 C8 for <= 4 contacts using single and double blocks in front mounting C7 for <= 4 contacts using single blocks in front mounting

## 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 II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529
NEMA degree of protection	NEMA 4X NEMA 13
Resistance to high pressure washer	7000000 Pa at 55 °C, distance: 0.1 m
IK degree of protection	IK03 conforming to IEC 50102
Standards	EN/IEC 60204-1 EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 EN/ISO 13850 IEC 60364-5-53 JIS C 4520 UL 508 GB 14048.5 CSA C22.2 No 14

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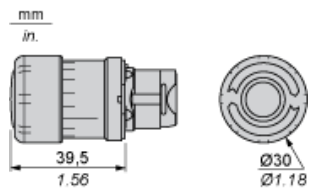
Product certifications	BV CSA DNV GL LROS (Lloyds register of shipping) RINA UL listed
Vibration resistance	5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6
Shock resistance	50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27 30 gn (duration = 18 ms) for half sine wave 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.

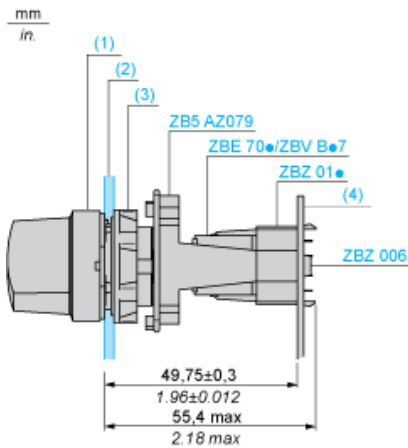
### General Tolerances of the Panel and Printed Circuit Board

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  $\pm$  0.1 / 0.88 in.  $\pm$  0.004
- Orientation of body/fixing collar ZB5AZ009:  $\pm$  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  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm  $\pm$  0.05 / 0.11 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 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 C7

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Electrical Compositions Corresponding to Code C8

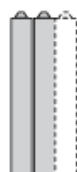
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Electrical Compositions Corresponding to Code C10

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

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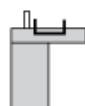


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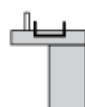
Electrical Composition Corresponding to Code C15

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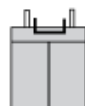
1 N/O



1 N/C



1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C





## Legend

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Single contact



Double contact



Light block



Possible location

