

Product data sheet

Characteristics

ZB5AL4

Harmony XB5, Push button head, plastic, projecting, red, Ø22, spring return, unmarked



Main

Range of product	Harmony XB5
Product or component type	Head for non-illuminated push-button
Device short name	ZB5
Bezel material	Dark grey plastic
Mounting diameter	22 mm
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Spring return
Operator profile	Red projecting, unmarked

Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	33 mm
Net weight	0.019 kg
Mechanical durability	10000000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
Electrical composition code	C1 for <9 contacts using single blocks in front mounting C2 for <9 contacts using single and double blocks in front mounting C11 for <3 contacts using single blocks in front mounting C15 for <1 contacts using single blocks in front mounting SF1 for <3 contacts using single blocks in front mounting SR1 for <3 contacts using single blocks in rear mounting
Device presentation	Basic element

Environment

Protective treatment	TH
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-40...70 °C
Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529 IP67 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
IK degree of protection	IK03 conforming to IEC 50102

Standards	JIS C8201-5-1 UL 508 EN/IEC 60947-5-1 EN/IEC 60947-1 EN/IEC 60947-5-4 CSA C22.2 No 14 JIS C8201-1
Product certifications	GL UL listed DNV CSA LROS (Lloyds register of shipping) BV
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
Vibration resistance	5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	18.0 g
Package 1 Height	3.4 cm
Package 1 width	4.5 cm
Package 1 Length	5.4 cm
Unit Type of Package 2	P06
Number of Units in Package 2	2400
Package 2 Weight	57.404 kg
Package 2 Height	77.0 cm
Package 2 width	80.0 cm
Package 2 Length	60.0 cm
Unit Type of Package 3	S03
Number of Units in Package 3	300
Package 3 Weight	5.869 kg
Package 3 Height	30.0 cm
Package 3 width	30.0 cm
Package 3 Length	40.0 cm

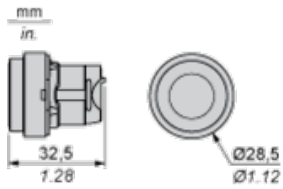
Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information

Contractual warranty

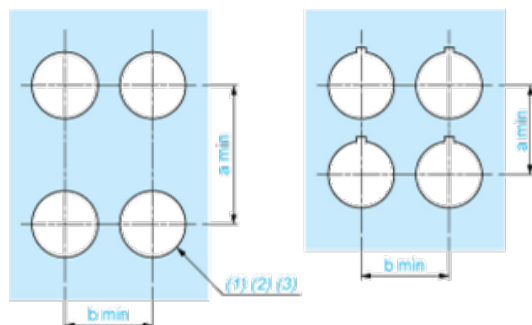
Warranty	18 months
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Dimensions



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

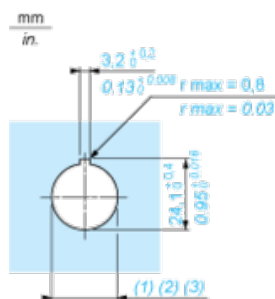
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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) Ø22.5 mm recommended ($\text{Ø}22.3_0^{+0.4}$) / Ø0.89 in. recommended ($\text{Ø}0.88 \text{ in.}_0^{+0.016}$)

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

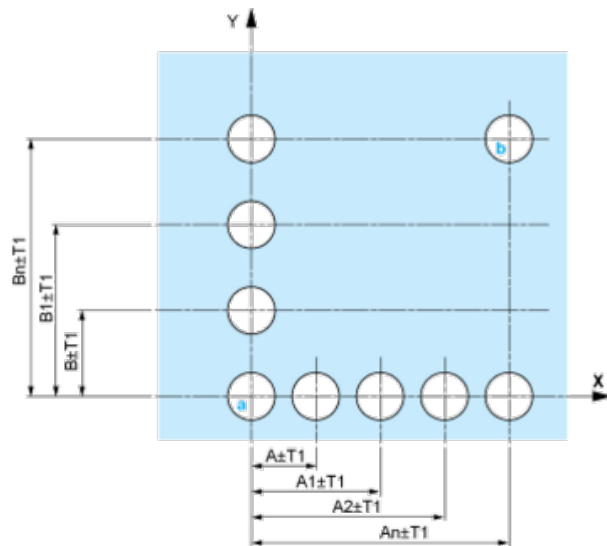
Detail of Lug Recess



- (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) Ø22.5 mm recommended ($\text{Ø}22.3_0^{+0.4}$) / Ø0.89 in. recommended ($\text{Ø}0.88 \text{ in.}_0^{+0.016}$)

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

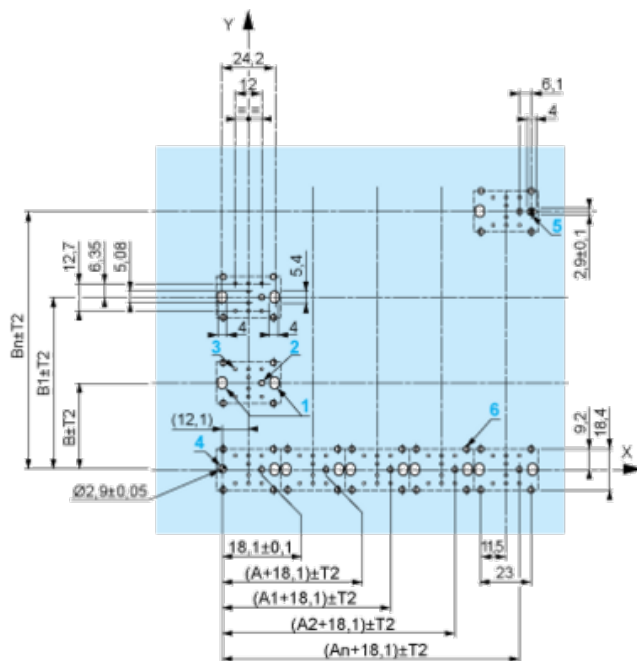


A: 30 mm min. / 1.18 in. min.

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

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

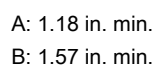
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



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 $\pm$ 0.1 / 0.88 in. $\pm$ 0.004
- Orientation of body/fixing collar ZB5AZ009: $\pm 2^{\circ} 30'$ (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•).

Technical drawing of the ZB5 AZ079 assembly. The drawing shows a cross-section of the assembly with various components labeled. The dimensions are as follows:

- Overall length: 49.75 ± 0.3
- Distance from front face to start of last thread: 1.98 ± 0.012
- Distance from front face to end of last thread: 55.4 max
- Distance from front face to end of last thread (alternative dimension): 2.18 max

Part numbers and labels:

- ZB5 AZ079
- ZBE 70 • ZBV B • 7
- ZBZ 01 •
- ZBZ 006

Dimensions are in mm (inches).

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Mounting of Adapter (Socket) ZBZ01•

- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole $\varnothing$ 2.4 mm $\pm$ 0.05 / 0.09 in. $\pm$ 0.002 for centring adapter ZBZ01•
- 3 8 $\times$ $\varnothing$ 1.2 mm / 0.05 in. holes
- 4 1 hole $\varnothing$ 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 $\varnothing$ 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the $\varnothing$ 2.4 mm $\pm$ 0.05 / 0.09 in. $\pm$ 0.002 holes for centring adapter ZBZ01•.

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

