

Product data sheet

Specifications



Head for non illuminated push button, Harmony XB5, red recessed, 22mm, spring return, unmarked

ZB5AA46

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 recessed, unmarked

Operator additional information High guard

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Complementary

CAD overall width 29 mm

CAD overall height 29 mm

CAD overall depth 31 mm

Net weight 0.02 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	EN/IEC 60947-5-1 CSA C22.2 No 14 EN/IEC 60947-5-4 JIS C8201-5-1 UL 508 EN/IEC 60947-1 JIS C8201-1
Product certifications	BV LROS (Lloyds register of shipping) CSA DNV GL UL listed
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 Height	5.33 cm
Package 1 Width	3.56 cm
Package 1 Length	4.57 cm
Package 1 Weight	0.02 kg
Unit Type of Package 2	S02
Number of Units in Package 2	100
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	2.155 kg
Unit Type of Package 3	S03
Number of Units in Package 3	200
Package 3 Height	30 cm
Package 3 Width	30 cm
Package 3 Length	40 cm
Package 3 Weight	4.113 kg

Offer Sustainability

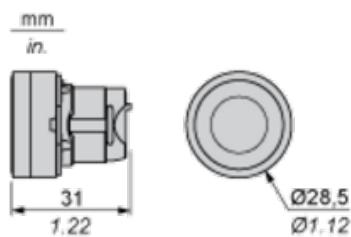
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration

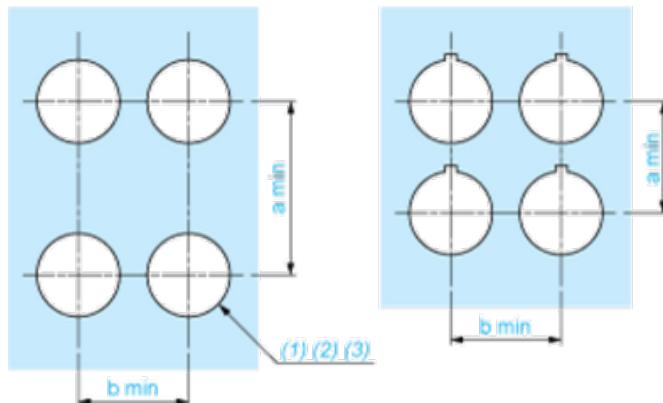
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
California proposition 65	WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Contractual warranty

Warranty	18 months
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Dimensions



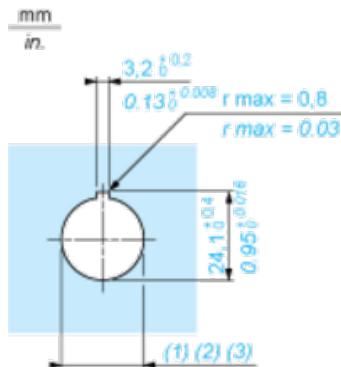
Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)**Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board**

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

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

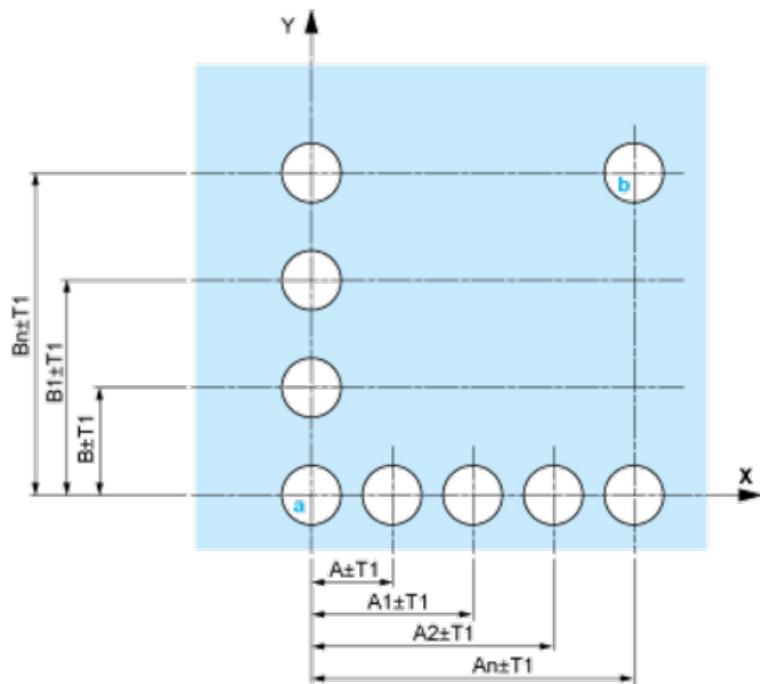
(1) Diameter on finished panel or support

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Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

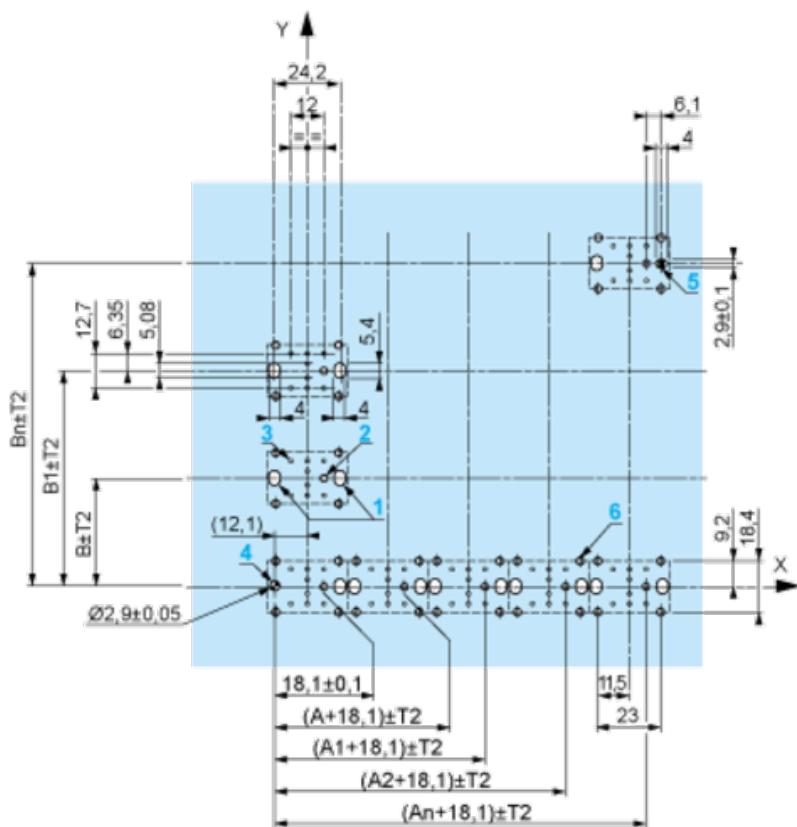


A: 30 mm min. / 1.18 in. min.

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

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

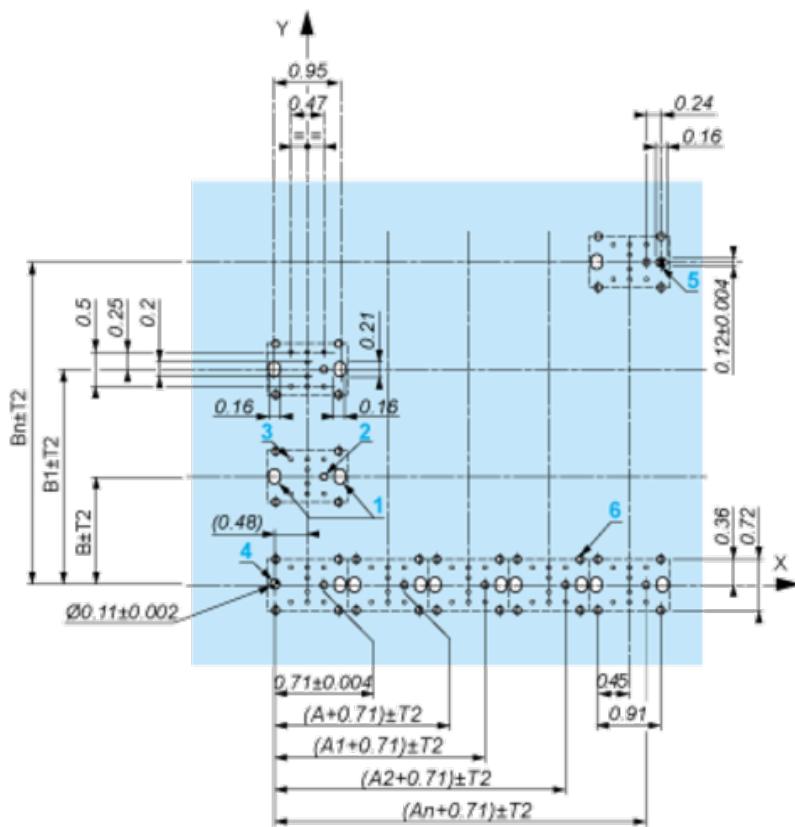
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

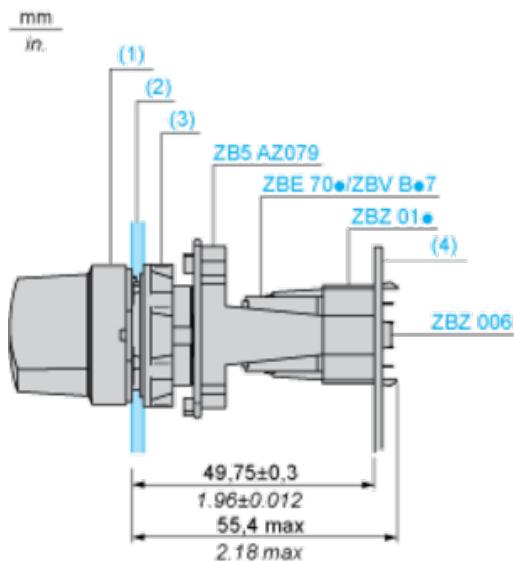
General Tolerances of the Panel and Printed Circuit Board

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: $\pm 2^\circ 30'$ (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•).

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



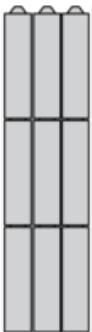
- (1) Head ZB5AD•
 - (2) Panel
 - (2) Nut
 - (4) Printed circuit board

Mounting of Adapter (Socket) ZBZ01•

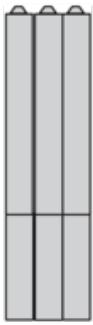
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked **a**)
- 5 1 elongated hole for aligning 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 Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ01•.

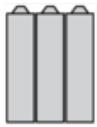
Electrical Composition Corresponding to Code C1



Electrical Composition Corresponding to Code C2

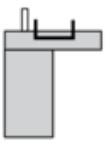


Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1

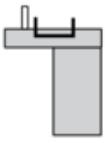


Electrical Composition Corresponding to Code C15

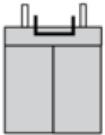
1 N/O



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



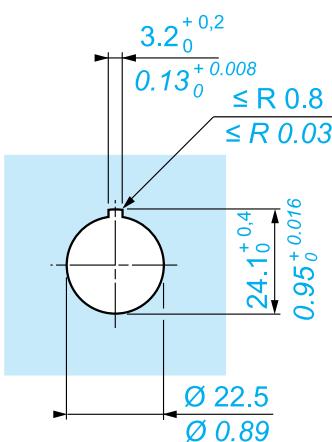
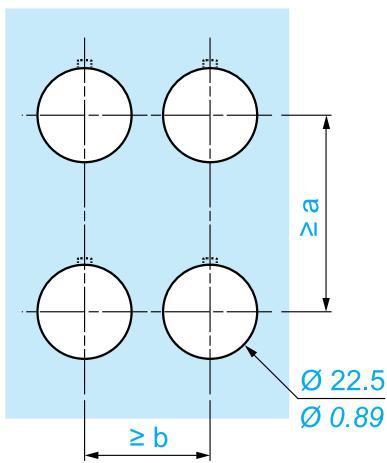
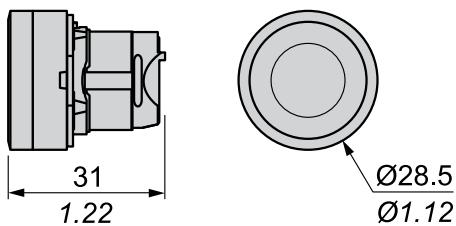
Light block



Possible location



Dimensions

mm
in.

		a (mm) ZBE●●●●●	a (in.) ZBV●●●●●	b (mm) ZBE●●●●●3 ZBV●●●●●3	b (in.) 1.18 1.26
		40	1.57	30	1.18
		a (mm) ZBE●●●●●4 ZBV●●●●●4	a (in.) 1.77	b (mm) ZBE●●●●●5 ZBV●●●●●5	b (in.) 1.26
		40	1.57	30	1.18
		a (mm) ZBE●●●●●5 ZBV●●●●●5	a (in.) 1.97	b (mm) ZBE●●●●●9 ZBV●●●●●9	b (in.) 1.18
		50	1.97	30	1.18
		a (mm) ZBE●●●●●9 ZBV●●●●●9	a (in.) 1.57	b (mm) ZBRT● ZBRV1	b (in.) 1.18
		40	1.57	30	1.18

Recommended replacement(s)