



Main

Range of product	Harmony XB5
Product or component type	Head for key selector switch
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	To centre spring return
Operator profile	Black key switch
Operator position information	3 positions +/- 45°
Type of keylock	Ronis 421E
Key withdrawal position	Center

Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	72 mm
Net weight	0.057 kg
Mechanical durability	1000000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
Electrical composition code	C4 for <6 contacts using single and double blocks in front mounting C5 for <5 contacts using single blocks in front mounting C6 for <5 contacts using single and double blocks in front mounting C7 for <4 contacts using single blocks in front mounting C8 for <4 contacts using single and double blocks in front mounting C11 for <3 contacts using single blocks in front mounting

C3 for <6 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
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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	IK06 conforming to IEC 50102
Standards	UL 508 EN/IEC 60947-5-4 EN/IEC 60947-1 JIS C8201-5-1 EN/IEC 60947-5-1 CSA C22.2 No 14 JIS C8201-1
Product certifications	BV DNV GL LROS (Lloyds register of shipping) UL listed RINA CSA
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

Packing Units

Package 1 Weight	0.050 kg
Package 1 Height	0.880 dm
Package 1 width	0.340 dm
Package 1 Length	0.540 dm

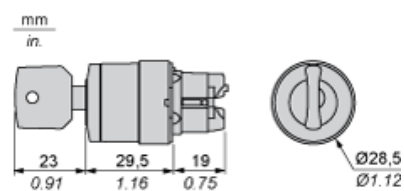
Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
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

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) $\varnothing 22.5$ 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.

Technical drawing of a multi-hole plate (Figure 1). The drawing shows a rectangular plate with a central horizontal row of holes and two vertical columns of holes on either side. The central row has n holes, and the vertical columns have m holes each. The plate is defined by a blue shaded area.

Key dimensions and labels:

- Overall Dimensions:**
 - Width: $B \pm T/2$
 - Height: $B \pm T/2$
- Central Row Dimensions:**
 - Distance from center to first hole: 0.11 ± 0.002
 - Distance between holes: 0.71 ± 0.004
 - Distance from last hole to center: 0.71 ± 0.004
- Vertical Columns Dimensions:**
 - Distance from center to first hole: 0.16
 - Distance between holes: 0.21
 - Distance from last hole to center: 0.16
- Other Dimensions:**
 - Distance from top edge to first hole: 0.5
 - Distance from first hole to center: 0.25
 - Distance from center to last hole: 0.2
 - Distance from last hole to bottom edge: 0.2
 - Distance from center to right edge: 0.95
 - Distance from center to left edge: 0.95
 - Distance from center to right edge of plate: 0.91
 - Distance from center to left edge of plate: 0.91
 - Distance from center to right edge of plate: 0.36
 - Distance from center to left edge of plate: 0.36
 - Distance from center to right edge of plate: 0.72
 - Distance from center to left edge of plate: 0.72
 - Distance from center to right edge of plate: 0.24
 - Distance from center to left edge of plate: 0.16
 - Distance from center to right edge of plate: 0.12 ± 0.004
 - Distance from center to left edge of plate: 0.12 ± 0.004
- Labels:**
 - 1, 2, 3, 4, 5, 6: Labels pointing to specific holes or features.
 - 7: Label pointing to the central row of holes.
 - 8: Label pointing to the vertical columns of holes.
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 - 100: Label pointing to the vertical columns of holes.

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 $\pm$ 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 ZBZ 006 assembly. The drawing shows a side view of the assembly with various components labeled. The dimensions are as follows:

- Overall length: 49.75 ± 0.3
- Distance from the front face to the start of the last thread: 1.96 ± 0.012
- Distance from the front face to the end of the last thread: 55.4 max
- Distance from the front face to the end of the last thread (alternative dimension): 2.18 max

Component labels and callouts:

- (1) Blue line indicating the front face.
- (2) Blue line indicating the start of the last thread.
- (3) Blue line indicating the end of the last thread.
- ZB5 AZ079
- ZBE 70●/ZBV B●7
- ZBZ 01●
- ZBZ 006

Scale: $\frac{\text{mm}}{\text{in.}}$

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Mounting of Adapter (Socket) ZBZ01•

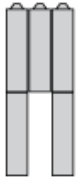
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole $\varnothing$ 2.4 mm $\pm$ 0.05 / 0.09 in. $\pm$ 0.002 for centring adapter ZBZ01•
- 3 8 $\times$ $\varnothing$ 1.2 mm / 0.05 in. holes
- 4 1 hole $\varnothing$ 2.9 mm $\pm$ 0.05 / 0.11 in. $\pm$ 0.002, for aligning the printed circuit board (with 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 C4



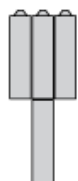
Electrical Composition Corresponding to Code C5



Electrical Composition Corresponding to Code C6



Electrical Composition Corresponding to Code C7



Electrical Composition Corresponding to Code C8



Electrical Composition Corresponding to Code C3



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



Legend

Single contact



Double contact



Light block



Possible location



Sequence of Contacts Fitted to 3-position Selector Switch Body

Position 315°



Push	Position	Top			
		Bottom			
	Location		Left	Centre	Right
	State		1	1	0
Contacts	N/O		closed	closed	open
	N/C		open	open	closed

Position 0°



Push	Position	Top			
		Bottom			
	Location		Left	Centre	Right
	State		0	0	0
Contacts	N/O		open	open	open
	N/C		closed	closed	closed

Position 45°



Push	Position	Top			
		Bottom			
	Location		Left	Centre	Right
	State		0	1	1
Contacts	N/O		open	closed	closed
	N/C		closed	open	open