# Product data sheet Characteristics

# ZB5AD2

Harmony XB5, Selector switch head, plastic, black, 22mm, 2 positions, stay put





### Main

Range of product	Harmony XALF Harmony XB5	
Product or component type	Head for 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	Stay put	
Operator profile	Black standard handle	
Operator position information	2 positions 90°	

#### Complementary

CAD overall width	29 Mm	
CAD overall height	29 Mm	
CAD overall depth	46 Mm	
Net weight	0.017 Kg	
Mechanical durability	1000000 Cycles	
Station name	XALD 15 cut-outs	
	XALK 25 cut-outs	
Electrical composition code	C3 for <6 contacts using single blocks in front mounting	
	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	
	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	-4070 °C	
Ambient air temperature for operation	-4070 °C	
Overvoltage category	Class II conforming to IEC 60536	
IP degree of protection	IP67 conforming to IEC 60529 IP69 conforming to IEC 60529 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	JIS C8201-5-1 CSA C22.2 No 14 UL 508 IEC 60947-1 IEC 60947-5-4 IEC 60947-5-1 JIS C8201-1	
Product certifications	GL[RETURN]CSA[RETURN]BV[RETURN]DNV[RETURN]LROS (Lloyds register of shipping)[RETURN]UL listed	
Vibration resistance	5 gn (f= 2500 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

r doking office	
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.700 Cm
Package 1 Width	5.400 Cm
Package 1 Length	6.000 Cm
Package 1 Weight	24.000 G
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Height	5.000 Cm
Package 2 Width	3.400 Cm
Package 2 Length	26.500 Cm
Package 2 Weight	121.000 G
Unit Type of Package 3	S03
Number of Units in Package 3	200
Package 3 Height	30.000 Cm
Package 3 Width	30.000 Cm
Package 3 Length	40.000 Cm
Package 3 Weight	5.304 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	
Toxic heavy metal free	Yes	
Mercury free	Yes	
China RoHS Regulation	☑ China RoHS Declaration	
RoHS exemption information	₫Yes	



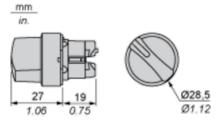
Environmental Disclosure	Product Environmental Profile	
Circularity Profile	End Of Life Information	
Contractual warranty		
Warranty	18 months	



# Product data sheet Dimensions Drawings

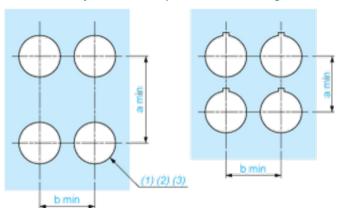
# ZB5AD2

### Dimensions



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

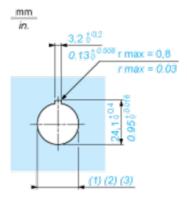
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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 (Ø22.3  $_0^{+0.4}$ ) / Ø0.89 in. recommended (Ø0.88 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

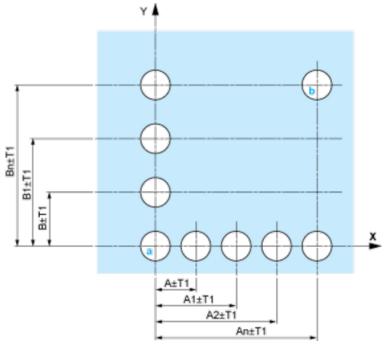
#### **Detail of Lug Recess**



- (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 (Ø22.3  $_0^{+0.4}$ ) / Ø0.89 in. recommended (Ø0.88 in.  $_0^{+0.016}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

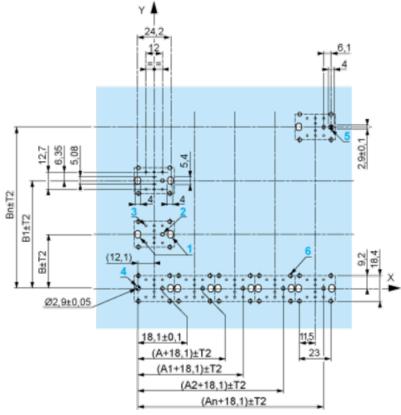
### Panel Cut-outs (Viewed from Installer's Side)



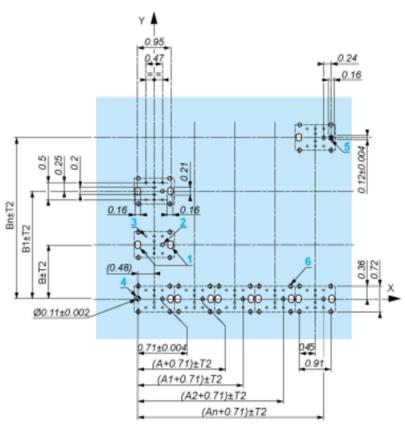
A: 30 mm min. / 1.18 in. min. B: 40 mm min. / 1.57 in. min.

# 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.

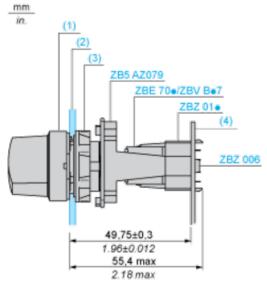
#### General Tolerances of the Panel and Printed Circuit Board

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:
  - $\circ \quad$  every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - o 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

### Mounting of Adapter (Socket) ZBZ01•

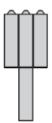
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 38 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the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

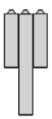


Electrical Composition Corresponding to Code C3
Electrical Composition Corresponding to Code C4
Electrical Composition Corresponding to Code C5
Electrical Composition Corresponding to Code C6

Electrical Composition Corresponding to Code C7



# Electrical Composition Corresponding to Code C8



# Electrical Composition Corresponding to 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



# Sequence of Contacts Fitted to 2-position Selector Switch Body

# Position 315°



Push	Position	Тор			
Bottom		$\triangle$	Δ		
Location		Left	Centre	Right	
State		0	0	0	
Contacts	N/O		open	open	open
N/C		closed	closed	closed	

# Position 45°



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

Product Life Status:	Commercialised	
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