

# Product datasheet

Specifications



## Head for illuminated selector switch, Harmony XB5, XB4, blue Ø22 mm 3 position stay put

Local distributor code: 409065963 ZB5AK1363

### Main

Range of product	Harmony XB5
Product or component type	Head for illuminated selector switch
Product compatibility	Integral LED
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	Blue standard handle
Operator position information	3 positions +/- 45°

### Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	43 mm
Net weight	0.016 kg
Mechanical durability	1000000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
Electrical composition code	M3 for <4 contacts using single blocks in front mounting with integral LED M6 for <2 contacts using single blocks in front mounting with integral LED and transformer M10 for <2 contacts using single blocks in front mounting with integral LED MF1 for <2 contacts using single blocks in front mounting with integral LED MR1 for <2 contacts using single blocks in rear mounting with integral LED M4 for <4 contacts using single and double blocks in front mounting with integral LED
Device presentation	Basic element

### Environment

Protective treatment	TH
Ambient air temperature for storage	-40...70 °C

<b>Ambient air temperature for operation</b>	-40...70 °C
<b>Overtoltage category</b>	Class II conforming to IEC 60536
<b>IP degree of protection</b>	IP66 conforming to IEC 60529 IP67 IP69 IP69K
<b>NEMA degree of protection</b>	NEMA 13 NEMA 4X
<b>Resistance to high pressure washer</b>	7000000 Pa at 55 °C, distance : 0.1 m
<b>IK degree of protection</b>	IK06 conforming to IEC 50102
<b>Standards</b>	UL 508 EN/IEC 60947-5-5 EN/IEC 60947-5-1 EN/IEC 60947-1 CSA C22.2 No 14 JIS C8201-5-1 EN/IEC 60947-5-4 JIS C8201-1
<b>Product certifications</b>	DNV UL listed LROS (Lloyds register of shipping) BV CSA GL
<b>Vibration resistance</b>	5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6
<b>Shock resistance</b>	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

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	23 g
<b>Package 1 Height</b>	3.5 cm
<b>Package 1 width</b>	4.5 cm
<b>Package 1 Length</b>	5 cm
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	50
<b>Package 2 Weight</b>	1.39 kg
<b>Package 2 Height</b>	15 cm
<b>Package 2 width</b>	30 cm
<b>Package 2 Length</b>	40 cm

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>REACH free of SVHC</b>	Yes
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Toxic heavy metal free</b>	Yes
<b>Mercury free</b>	Yes
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>

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**Environmental Disclosure**      [Product Environmental Profile](#)

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**Circularity Profile**      [End of Life Information](#)

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**Contractual warranty**

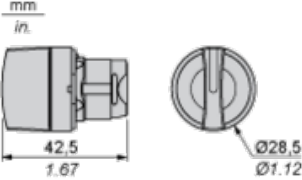
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**Warranty**      18 months

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**Dimensions**

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

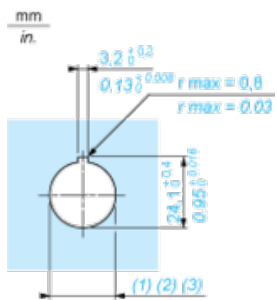
**Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board**



- (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

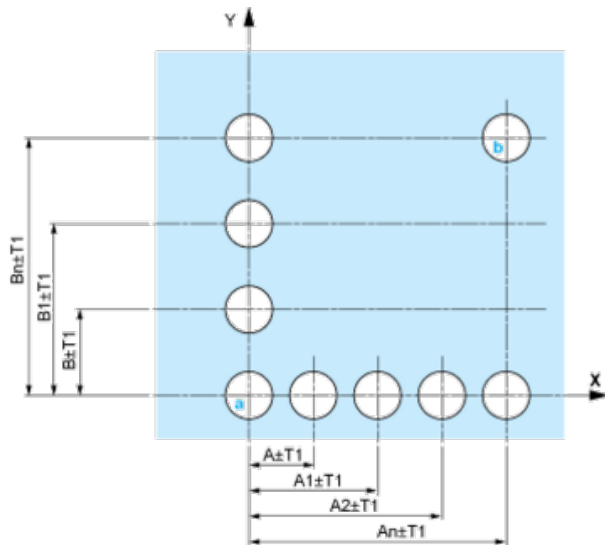
**Detail of Lug Recess**



- (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)**

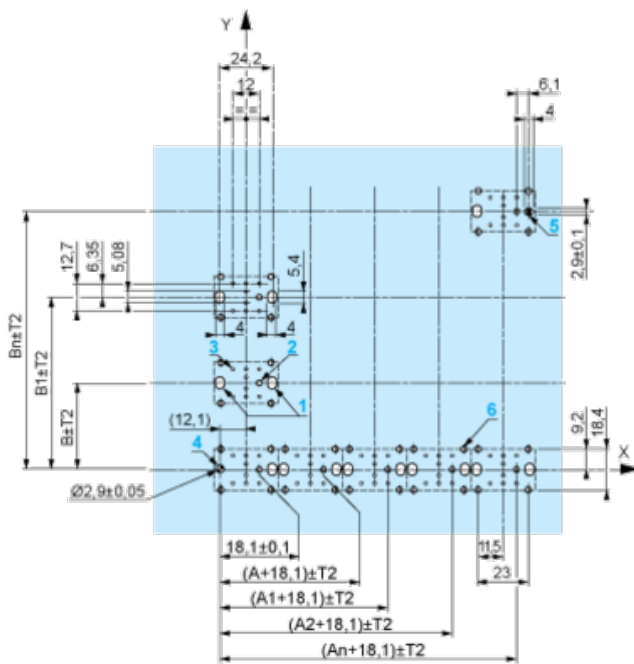


A: 30 mm min. / 1.18 in. min.

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

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

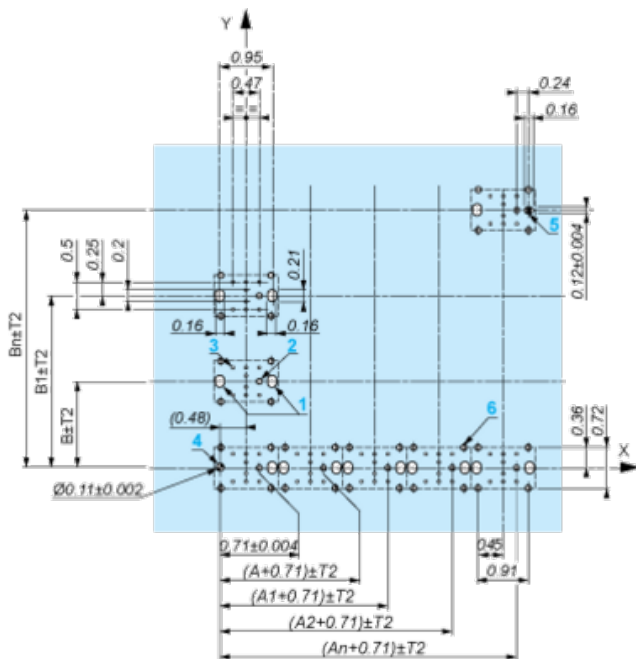
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

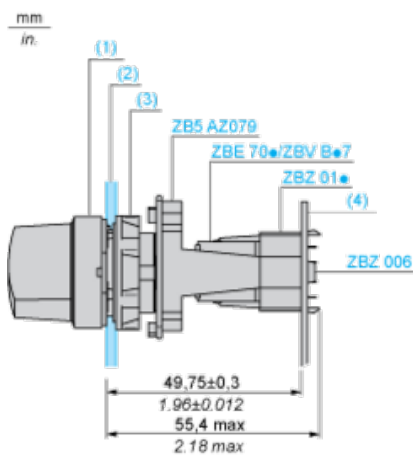
### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.:  $T1 + T2 = 0.3 \text{ mm max.}$

### 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

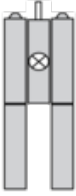
### Mounting of Adapter (Socket) ZBZ01•

- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole  $\varnothing$  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 M3**

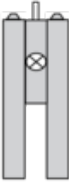
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**Electrical Composition Corresponding to Code M4**

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**Electrical Composition Corresponding to Codes M6 and P2**

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**Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2**

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**Legend**

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Single contact



Double contact



Light block



Possible location



**Sequence of Contacts Fitted to 3-position Selector Switch Body**

**Position 315°**



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

**Position 0°**



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

**Position 45°**



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