

# Product data sheet

Specifications



Harmony XB5, Key selector switch head, plastic, black, Ø22, key n°455, 3 positions, spring return

ZB5AG8

## 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	Right to centre spring return
Operator profile	Black key switch
Operator position information	3 positions +/- 45°
Type of keylock	Ronis 455
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

## 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	EN/IEC 60947-1 EN/IEC 60947-5-4 CSA C22.2 No 14 JIS C8201-5-1 UL 508 EN/IEC 60947-5-1 JIS C8201-1
Product certifications	LROS (Lloyds register of shipping) UL listed BV CSA GL DNV
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

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	68.0 g
Package 1 Height	3.5 cm
Package 1 width	5 cm
Package 1 Length	9 cm
Unit Type of Package 2	S02
Number of Units in Package 2	50
Package 2 Weight	3.637 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes

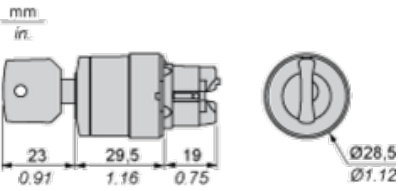
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>California proposition 65</b>	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	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)**

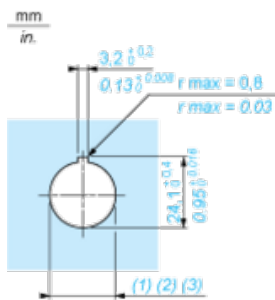
**Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board**



- (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

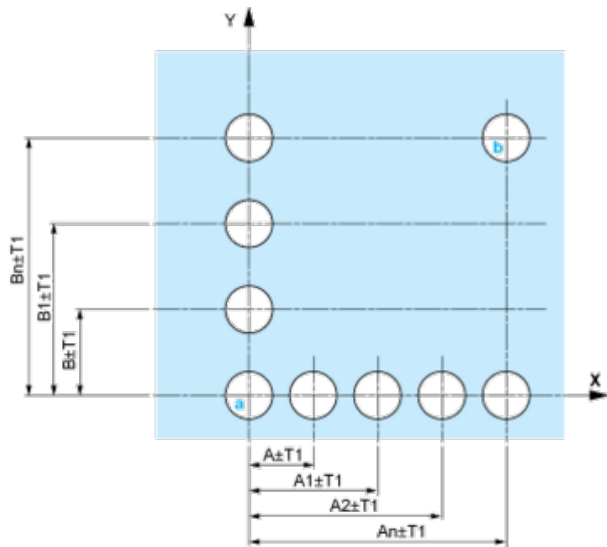
**Detail of Lug Recess**



- (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**

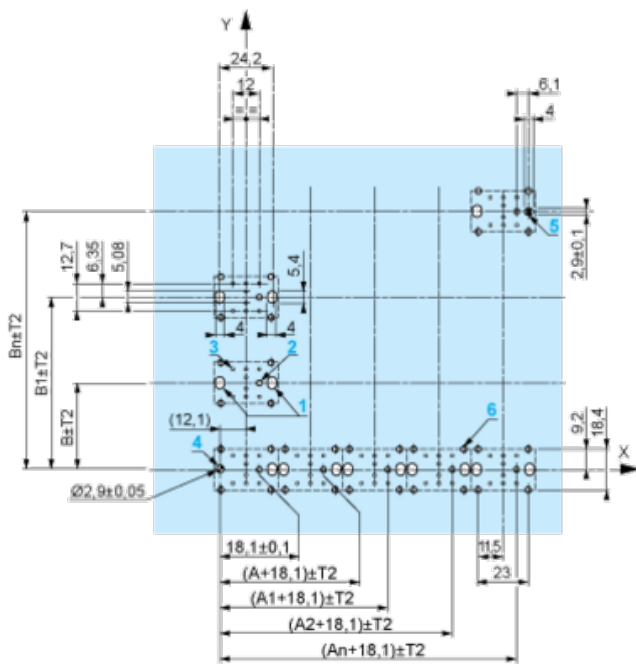
**Panel Cut-outs (Viewed from Installer's Side)**



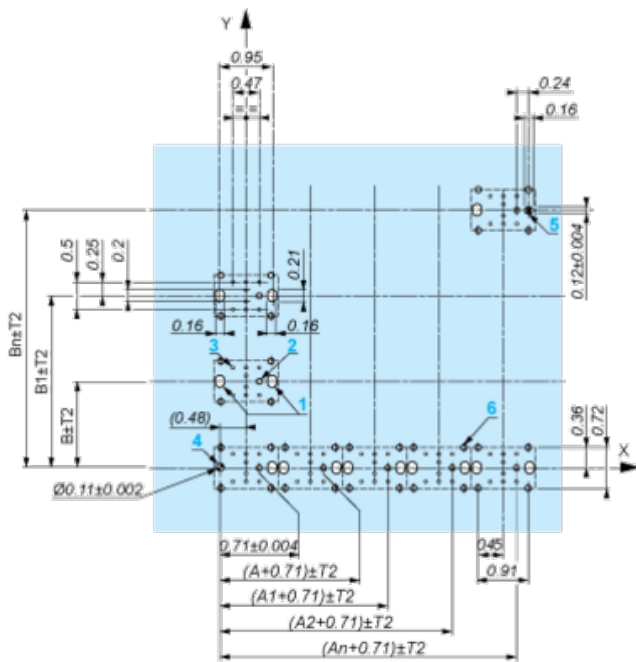
A: 30 mm min. / 1.18 in. min.  
B: 40 mm min. / 1.57 in. min.

**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.

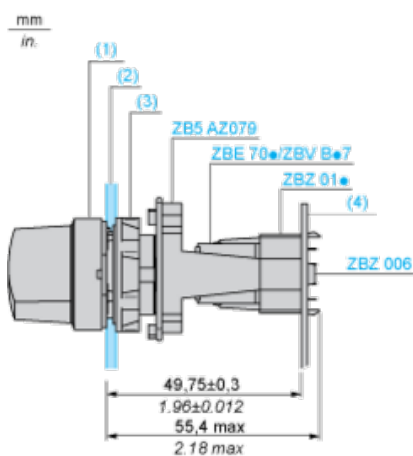
### General Tolerances of the Panel and Printed Circuit Board

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 C4**

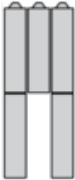
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**Electrical Composition Corresponding to Code C5**

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**Electrical Composition Corresponding to Code C6**

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**Electrical Composition Corresponding to Code C7**

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**Electrical Composition Corresponding to Code C8**

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**Electrical Composition Corresponding to Code C3**

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

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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	Centre	Right
	State		1	1	0
<b>Contacts</b>	N/O		closed	closed	open
	N/C		open	open	closed

**Position 0°**



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

**Position 45°**



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