

## Product data sheet Characteristics

# **ZB5AG112**

Head for key selector switch, Harmony XB5, XB4, Ø22 mm 3 position spring return 421E





#### Main Range

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	Left to centre spring return
Operator profile	Black key switch
Operator position information	3 positions +/- 45°
Type of keylock	Key 421E
Key withdrawal position	Right

#### Complementary

Device presentation	Basic element			
	SR1 for <3 contacts using single blocks in north mounting			
	C3 for <6 contacts using single blocks in front mounting SF1 for <3 contacts using single blocks in front mounting			
	C11 for <3 contacts using single blocks in front mounting			
	C8 for <4 contacts using single and double blocks in front mounting			
	C7 for <4 contacts using single blocks in front mounting			
	C6 for <5 contacts using single and double blocks in front mounting			
	C5 for <5 contacts using single blocks in front mounting			
Electrical composition code	C4 for <6 contacts using single and double blocks in front mounting			
	XALK 25 cut-outs			
Station name	XALD 15 cut-outs			
Mechanical durability	1000000 cycles			
Net weight	0.057 kg			
CAD overall depth	72 mm			
CAD overall height	29 mm			
CAD overall width	29 mm			
"				

#### Environment

Protective treatment	TH			
Ambient air temperature for storage	-4070 °C			
Ambient air temperature for operation	-4070 °C	4070 °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			

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.

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.

It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m			
IK degree of protection	IK06 conforming to IEC 50102			
Standards	CSA C22.2 No 14 EN/IEC 60947-5-1 JIS C8201-5-1 UL 508 EN/IEC 60947-1 EN/IEC 60947-5-4 JIS C8201-1			
Product certifications	GL[RETURN]UL listed[RETURN]LROS (Lloyds register of shipping) [RETURN]CSA[RETURN]DNV[RETURN]BV			
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			

#### 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)		
Mercury free	Yes		
China RoHS Regulation	☑ China RoHS Declaration		
RoHS exemption information	₫Yes		
Environmental Disclosure	Product Environmental Profile		
Circularity Profile	☑ End Of Life Information		

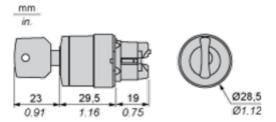
#### Contractual warranty

Warranty	10 months
	18 MONTAS

# Product data sheet Dimensions Drawings

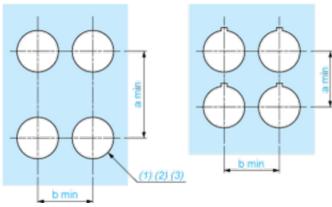
# **ZB5AG112**

#### **Dimensions**



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

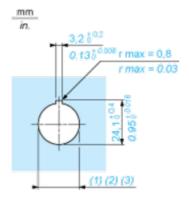
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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  $_0$  <sup>+0.4</sup>) / Ø0.89 in. recommended (Ø0.88 in.  $_0$  <sup>+0.016</sup>)

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

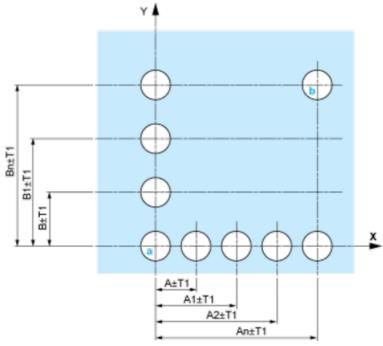
#### **Detail of Lug Recess**



- (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  $_{0}$  <sup>+0.4</sup>) / Ø0.89 in. recommended (Ø0.88 in.  $_{0}$  <sup>+0.016</sup>)

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

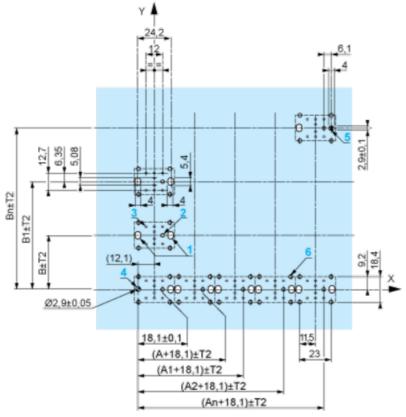


A: 30 mm min. / 1.18 in. min.

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

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

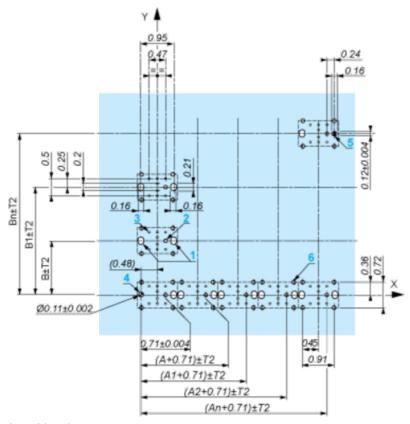
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min. B: 1.57 in. min.

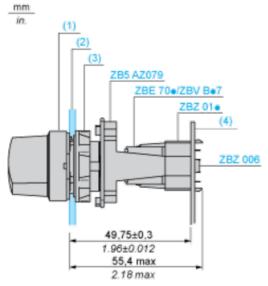
#### General Tolerances of the Panel and Printed Circuit Board

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.



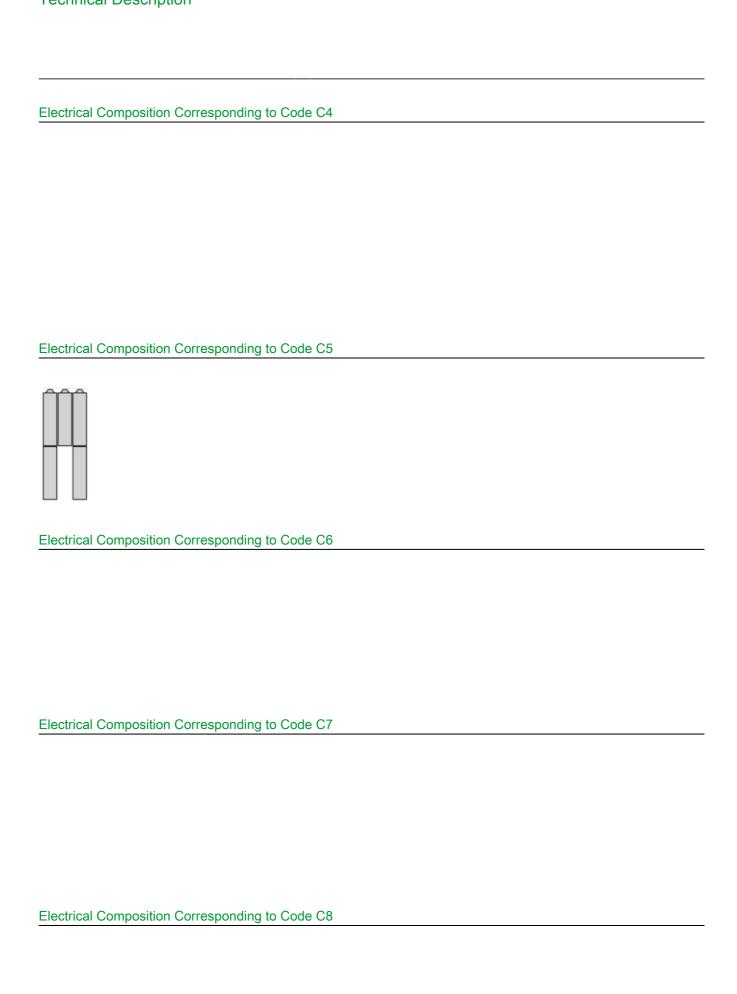
- (1) Head ZB5AD•
- (2) Panel
- (2) Nut

#### 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•
- 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  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 holes for centring adapter ZBZ01•.

# **ZB5AG112**



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	Тор			
Bottom			$\triangle$		
Location		Left	Centre	Right	
State		1	1	0	
Contacts	N/O		closed	closed	open
N/C		open	open	closed	

#### Position 0°



Push	Position	Тор			
Bottom	$\triangle$	$\triangle$	$\triangle$		
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		0	1	1	
Contacts	N/O		open	closed	closed
N/C		closed	open	open	