# **Product data sheet**

Specification





Key switch selector head, Harmony XB5, plastic, black, 22mm, key 455, 3 positions, spring return from right to center, withdrawal left and center

ZB5AG05



! Discontinued on: 4/06/2020

## 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	Key 455		
Key Withdrawal Position	Left and center		

# Complementary

Cad Overall Width	29 mm
Cad Overall Height	29 mm
Cad Overall Depth	72 mm
Mechanical Durability	1000000 cycles
Station Name	XALD 15 cut-outs
	XALK 25 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	тн			
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	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 CSA C22.2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-1 JIS C8201-5-1 EN/IEC 60947-5-4 JIS C8201-1			
Product Certifications	BV GL CSA LROS (Lloyds register of shipping) UL listed DNV			
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**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	8.8 cm
Package 1 Width	3.4 cm
Package 1 Length	5.4 cm
Package 1 Weight	50.0 g

# **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

# Well-being performance



Mercury Free



Rohs Exemption Information

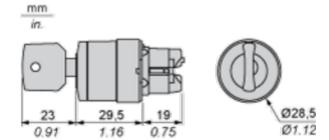
Yes

## **Certifications & Standards**

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information

# **Dimensions Drawings**

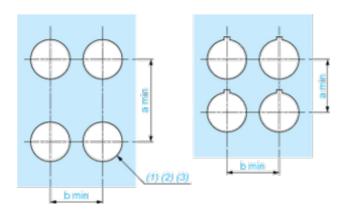
## **Dimensions**



#### Mounting and Clearance

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

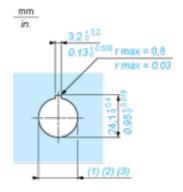
#### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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

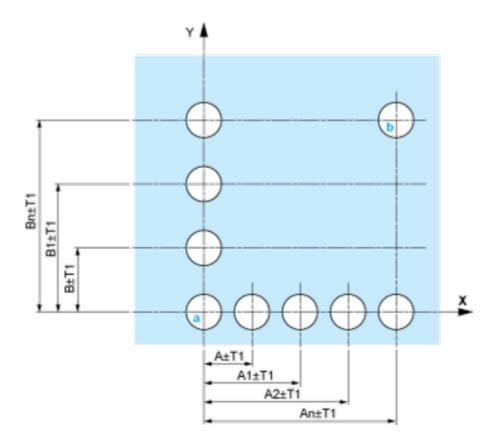
#### **Detail of Lug Recess**



- (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

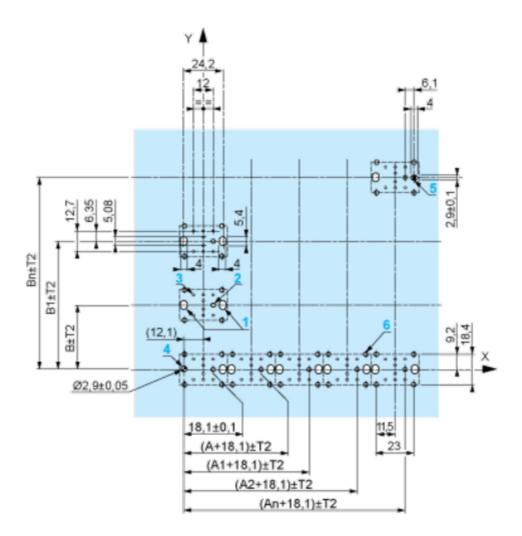
#### Panel Cut-outs (Viewed from Installer's Side)



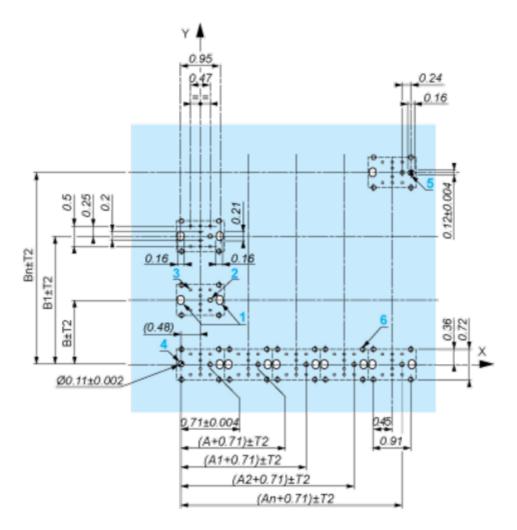
**A:** 30 mm min. / 1.18 in. min. **B:** 40 mm min. / 1.57 in. min.

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.

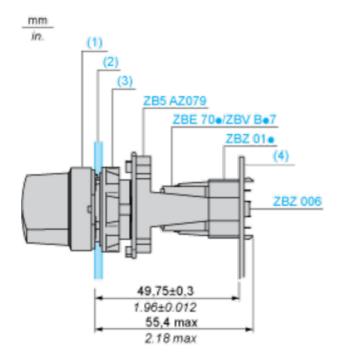
#### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.: T1 + T2 = 0.3 mm max.

#### **Installation Precautions**

- $_{\bullet}\,$  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:
  - $_{\circ}\;$  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
- (4) Printed circuit board

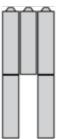
#### Mounting of Adapter (Socket) ZBZ01•

- 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•

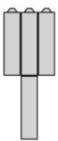
Dimensions An + 18.1 relate to the Ø 2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 holes for centring adapter ZBZ01•.

**Technical Description** 

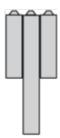


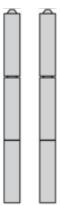






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**Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1** 



## Legend

Single contact



Double contact



Light block



Possible location



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

#### Position 315°



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

### Position 0°



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

Position 45°



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