# Product datasheet Characteristics

# ZB5AJ4

black selector switch head Ø22 2-position spring return



### Main

Mann	
Range of product	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	Spring return right to left
Operator profile	Black long handle
Operator additional information	Non padlockable
Operator position information	2 positions 90°

# Complementary

CAD overall width	29 mm	
CAD overall height	38 mm	
CAD overall depth	46 mm	
Product weight	0.02 kg	
Mechanical durability	1000000 cycles	
Station name	XALD 15 cut-outs	
	XALK 25 cut-outs	
Electrical composition code	C15 for 1 contacts using single blocks in front mounting	
	C15 for 1 contacts using single blocks in front mounting	
	C11 for 3 contacts using single blocks in front mounting	
	SF1 for 3 contacts using single 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	
	SR1 for 3 contacts using single blocks in rear 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	
	C3 for 6 contacts using single blocks in front mounting	

# Environment

.70 °C .70 °C s II conforming to IEC 60536 conforming to IEC 60529 K e conforming to IEC 60529	
.70 °C is II conforming to IEC 60536 I conforming to IEC 60529 K	
is II conforming to IEC 60536 7 conforming to IEC 60529 K	
conforming to IEC 60529 K	
К	
NEMA 13 NEMA 4X	
7000000 Pa at 55 °C,distance: 0.1 m	
conforming to IEC 50102	
EC 60947-1 EC 60947-5-1 EC 60947-5-4 C 4520 508 C C22.2 No 14	
5	

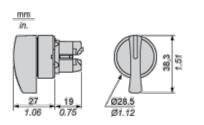


	DNV GL LROS (Lloyds register of shipping) RINA UL listed
vibration resistance	5 gn (f = 2500 Hz) conforming to IEC 60068-2-6
shock resistance	30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2- 27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2- 27

### Contractual warranty

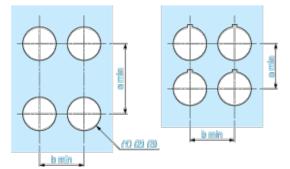
Warranty period	18 months 18 months

### **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

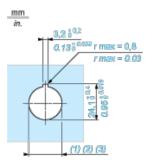


(1) Diameter on finished panel or support

- (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**

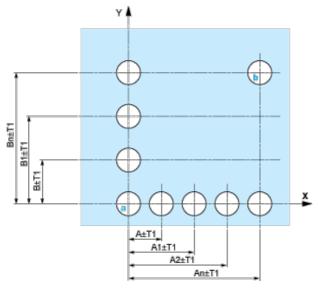


- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.



## Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

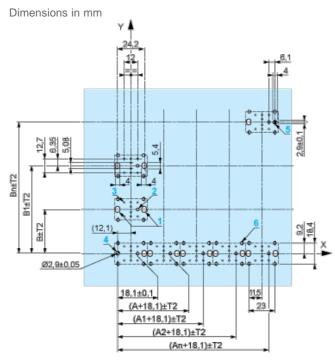




A: 30 mm min. / 1.18 in. min.

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

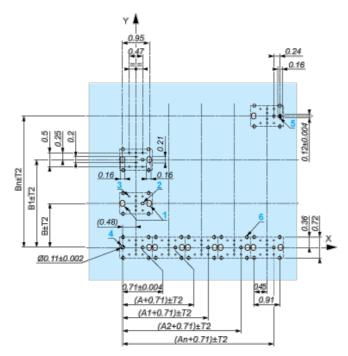
### Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)



- A: 30 mm min.
- **B:** 40 mm min.

Dimensions in in.





A: 1.18 in. min.

B: 1.57 in. min.

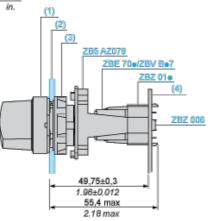
#### General Tolerances of the Panel and Printed Circuit Board

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:
  - i every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - i 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**.  $\frac{mm}{m}$ 



- (1) Head ZB5AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

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

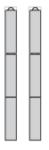
- 1 2 elongated holes for ZBZ006 screw access
- 1 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 1 3 8 × Ø 1.2 mm / 0.05 in. holes
- + 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)



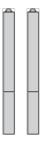
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

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•.

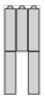
### **Electrical Composition Corresponding to Code C3**



### **Electrical Composition Corresponding to Code C4**



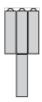
### **Electrical Composition Corresponding to Code C5**



### **Electrical Composition Corresponding to Code C6**

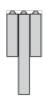


# **Electrical Composition Corresponding to Code C7**



**Electrical Composition Corresponding to Code C8** 





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



# **Electrical Composition Corresponding to Code C15**



1 N/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	$\bigtriangleup$	$\bigtriangleup$	$\bigtriangleup$
	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

