# Product data sheet Characteristics

# ZB5AK1243 red illuminated selector switch head Ø22 2position stay put



# Main

Iviain	
Commercial Status	Commercialised
Range of product	Harmony XB5
Product or component type	Head for illuminated selector switch
Product compatibility	Integral LED
Device short name	ZB5
Bezel material	Plastic
Mounting diameter	22 mm
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Stay put
Operator profile	Red standard handle
Operator position infor- mation	2 positions 90°

#### Complementary

CAD overall width	29 mm		
CAD overall height	29 mm		
CAD overall depth	43 mm		
Product weight	0.016 kg		
Mechanical durability	500000 cycles		
Station name	XALK 25 cut-outs XALD 15 cut-outs		
Electrical composition code	M4 for <= 4 contacts using single and double blocks in front mounting with inte- gral LED MR1 for <= 2 contacts using single blocks in rear mounting with integral LED MF1 for <= 2 contacts using single blocks in front mounting with integral LED M10 for <= 2 contacts using single blocks in front mounting with integral LED M6 for <= 2 contacts using single blocks in front mounting with integral LED M6 for <= 2 contacts using single blocks in front mounting with integral LED M3 for <= 4 contacts using single blocks in front mounting with integral LED		

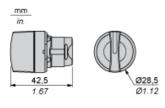
#### Environment

Environment			
Protective treatment	ТН		
Ambient air temperature for storage	-4070 °C		
Ambient air temperature for operation	-2570 °C		
Class of protection against electric shock	Class II conforming to IEC 60536		
IP degree of protection	IP69K conforming to IEC 60529		
NEMA degree of protection	NEMA 4X NEMA 13		
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 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 JIS C 4520 UL 508 CSA C22.2 No 14		



Product certifications	BV		
	CSA		
	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 50 gn for 11 ms half sine wave acceleration conforming to IEC 30 gn for 18 ms half sine wave acceleration conforming to IEC			

Dimensions

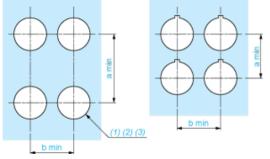




# ZB5AK1243

### 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



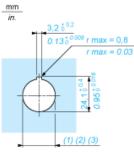
Diameter on finished panel or support (1)

For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.  $\emptyset$ 22.5 mm recommended ( $\emptyset$ 22.3  $_0^{+0.4}$ ) /  $\emptyset$ 0.89 in. recommended ( $\emptyset$ 0.88 in.  $_0^{+0.016}$ ) (2)

(3)

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**



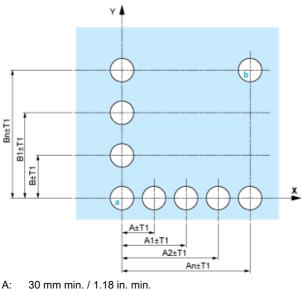
(1) Diameter on finished panel or support

For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended. (2)

(3) Ø22.5 mm recommended (Ø22.3  $_{0}^{+0.4}$ ) / Ø0.89 in. recommended (Ø0.88 in.  $_{0}^{+0.016}$ )

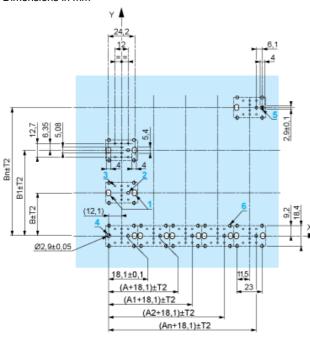
Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

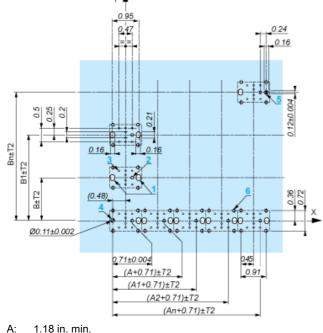


B: 40 mm min. / 1.57 in. min.

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



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



B: 1.57 in. min.

#### B: 1.57 in. min.

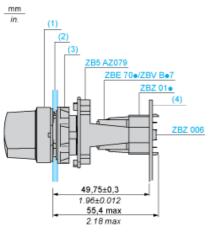
#### General Tolerances of the Panel and Printed Circuit Board

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:
  - 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

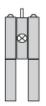
# Mounting of Adapter (Socket) ZBZ01•

- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 38 × 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•.

# ZB5AK1243

Electrical Composition Corresponding to Code M3



# Electrical Composition Corresponding to Code M4



### Electrical Composition Corresponding to Codes M6 and P2



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



# Legend

### Single contact

# Double contact

Light block



# Possible location

# Sequence of Contacts Fitted to 2-position Selector Switch Body

# Position 315°

315°					
Push	Position	Тор		$\otimes$	
Bottom					
Location		Left	Right	]	
State		0	0		
Contacts	N/O	·	open	open	
N/C	·	closed	closed		-

# Position 45°

Push	Position	Тор		$\otimes$	
Bottom					
Location		Left	Right		
State		1	1		
Contacts	N/O	·	closed	closed	



N/C	open	open