

Head for illuminated selector switch, Harmony XB5, dark grey plastic, white handle, 22mm, universal LED, 2 positions

ZB5AK1213

Important message: A change in appearance may be noted on the product but does not affect its use in terms of function and safety. This makes it compatible with our Universal LED blocks

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Range of product	Harmony XB5
Product or component type	Head for illuminated selector switch
Product compatibility	Universal LED
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	stay put
Operator profile	White standard handle
Operator position information	2 positions 90°

#### Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	43 mm
Net weight	0.016 kg
Mechanical durability	1000000 cycles
Station name	XALD 15 cut-outs XALK 25 cut-outs
Electrical composition code	M3 for <4 contacts using single blocks in front mounting with integral LED M6 for <2 contacts using single blocks in front mounting with integral LED and transformer M10 for <2 contacts using single blocks in front mounting with integral LED MF1 for <2 contacts using single blocks in front mounting with integral LED MR1 for <2 contacts using single blocks in rear mounting with integral LED M4 for <4 contacts using single and double blocks in front mounting with integral LED
Device presentation	Basic element

#### **Environment**

Protective treatment TH

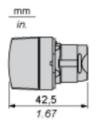
Ambient air temperature for storage	-4070 °C
Ambient air temperature for operation	-4070 °C
Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529 IP67 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
IK degree of protection	IK06 conforming to IEC 50102
Standards	EN/IEC 60947-5-4 JIS C8201-5-1 CSA C22.2 No 14 EN/IEC 60947-5-1 EN/IEC 60947-5-5 UL 508 EN/IEC 60947-1 JIS C8201-1
Product certifications	DNV BV CSA GL LROS (Lloyds register of shipping) 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
Packing Units	
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.4 cm
Package 1 Width	5.6 cm
Package 1 Length	6 cm
Package 1 Weight	23 g
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Height	5.5 cm
Package 2 Width	26.5 cm
Package 2 Length	3.3 cm
Package 2 Weight	117 g
Unit Type of Package 3	S02
Number of Units in Package 3	100
Package 3 Height	15 cm
Package 3 Width	30 cm
Package 3 Length	40 cm
Package 3 Weight	2.648 kg
Offer Sustainability	
Sustainable offer status	Green Premium product

REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
California proposition 65	WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
Contractual warranty	
Warranty	18 months

# **ZB5AK1213**

**Dimensions Drawings** 

#### **Dimensions**

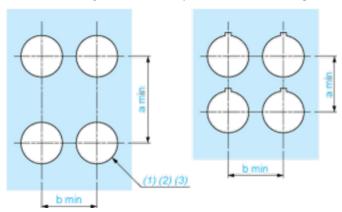




Mounting and Clearance

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

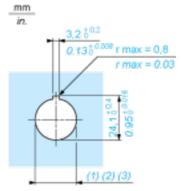
#### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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

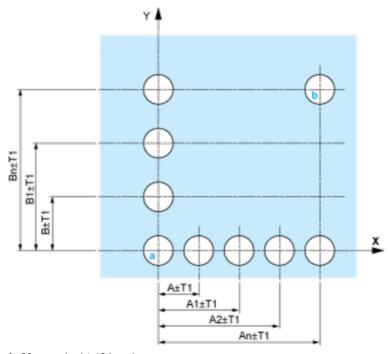
#### **Detail of Lug Recess**



- (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

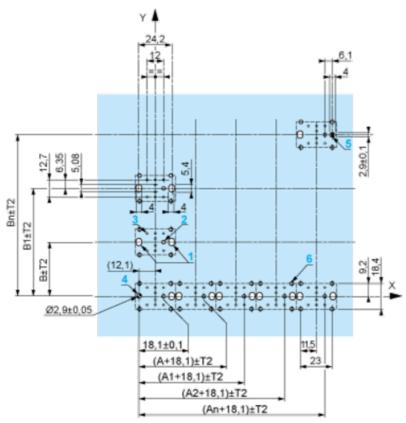
#### Panel Cut-outs (Viewed from Installer's Side)



**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)

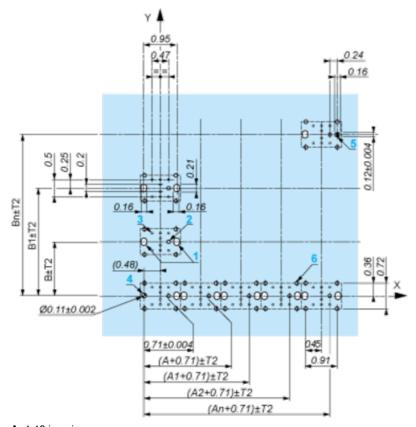
Dimensions in mm



**A:** 30 mm min.

**B**: 40 mm min.

Dimensions in in.



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

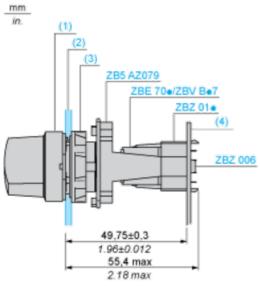
#### General Tolerances of the Panel and Printed Circuit Board

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

#### **Installation Precautions**

- 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).
  - $\circ$   $\;$  with each selector switch head (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked  ${\bf a}$  and  ${\bf b}$  are diagonally opposed and must align with those marked  ${\bf 4}$  and  ${\bf 5}$ .



- (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•
- $3.8 \times \emptyset 1.2 \text{ mm} / 0.05 \text{ in. holes}$
- 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•.

# **ZB5AK1213**

Technical Description

**Electrical Composition Corresponding to Code M3** 



# **ZB5AK1213**

Technical Description

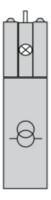
**Electrical Composition Corresponding to Code M4** 



# **ZB5AK1213**

Technical Description

**Electrical Composition Corresponding to Codes M6 and P2** 



# **ZB5AK1213**

Technical Description

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



# **ZB5AK1213**

Technical Description

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Single contact



Double contact



Light block



Possible location



# **ZB5AK1213**

Technical Description

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

#### Position 315°



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

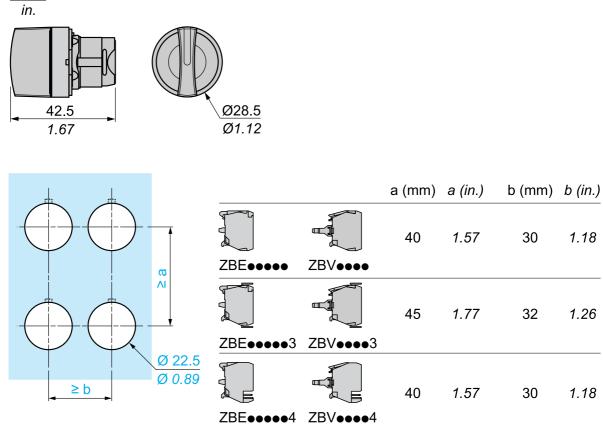
#### Position 45°

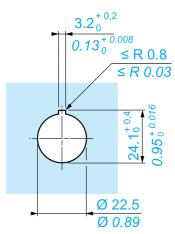


Push	Position	Тор		Π	
		Bottom			
	Location		Left		Right
	State		1	$\otimes$	1
Contacts	N/O		closed		closed
	N/C		open		open

mm

#### **Dimensions**





		40	1.57	30	1.18
ZBE●●●●	ZBV●●●				
		45	1.77	32	1.26
<b>ZBE</b> ●●●●3	ZBV•••3				
		40	1.57	30	1.18
ZBE••••4	ZBV•••4				
		50	1.97	30	1.18
ZBE••••5	ZBV•••5				
		40	1.57	30	1.18
ZBE••••9	ZBV•••9				
		40	1.57	30	1.18
ZBRT●	ZBRV1				

Recommended replacement(s)