

## Product data sheet

### Characteristics

## ZB5AG09K

Head for key selector switch, Harmony XB5, XB4, Ø22 mm 3 position stay put 4 multichips



### 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
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Stay put
Operator profile	Black key switch
Operator position information	3 positions +/- 45°
Type of keylock	Special key
Key withdrawal position	Right

### Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	72 mm
Mechanical durability	1000000 cycles
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

### Environment

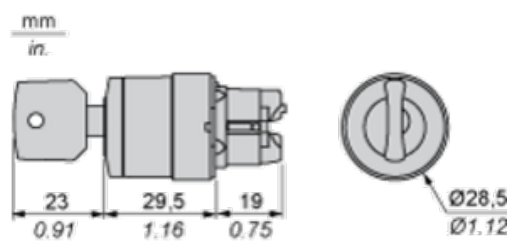
Protective treatment	TH
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-40...70 °C
Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP66 conforming to IEC 60529 IP67 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
IK degree of protection	IK06 conforming to IEC 50102

Standards	UL 508 JIS C8201-5-1 CSA C22.2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-4 EN/IEC 60947-5-1 JIS C8201-1
Product certifications	CSA[RETURN]GL[RETURN]BV[RETURN]LROS (Lloyds register of shipping) [RETURN]UL listed[RETURN]DNV
Vibration resistance	5 gn (f= 2...500 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
<b>Contractual warranty</b>	
Warranty	18 months

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Dimensions

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## 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



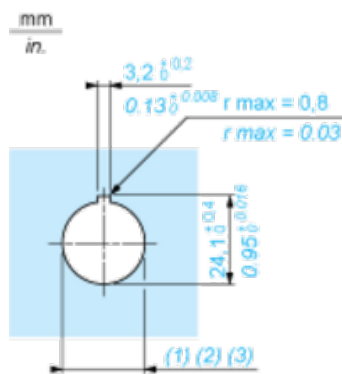
(1) Diameter on finished panel or support

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

(3)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

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)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

### 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.



The cumulative tolerance must not exceed 0.3 mm / 0.012 in.:  $T1 + T2 = 0.3 \text{ mm max.}$

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter: 22.4 mm  $\pm$  0.1 / 0.88 in.  $\pm$  0.004
- Orientation of body/fixing collar ZB5AZ009:  $\pm 2^{\circ}30'$  (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•).

Technical drawing of a ZBZ 006 ball valve assembly. The drawing shows a side view of the valve with various components labeled. Dimensions are provided for the overall length and the distance between the valve body and the actuator. The labels include:

- ZB5 AZ079**: Label for the actuator assembly.
- ZBE 70●/ZBV B●7**: Label for the ball valve body.
- ZBZ 01●**: Label for the ball valve handle.
- ZBZ 006**: Label for the ball valve handle.

Dimensions:

- Overall length:  $49.75 \pm 0.3$
- Distance between valve body and actuator:  $1.96 \pm 0.012$
- Maximum distance between valve body and actuator:  $55.4 \text{ max}$
- Maximum distance between valve body and actuator:  $2.18 \text{ max}$

Scale:  $\frac{\text{mm}}{\text{in.}}$

- (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  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ01•
- 3  $8 \times \varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- 4 1 hole  $\varnothing 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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  $\varnothing 2.4 \text{ mm} / 0.09 \text{ in.}$  for clipping in adapter ZBZ01•

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

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Electrical Composition Corresponding to Code C4

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Electrical Composition Corresponding to Code C5

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Electrical Composition Corresponding to Code C6

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Electrical Composition Corresponding to Code C7

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Electrical Composition Corresponding to Code C8

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## Electrical Composition Corresponding to Code C3

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

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## Legend

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Single contact

Double contact

Light block

Possible location



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

### Position 315°



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

### Position 0°



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

### Position 45°



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