# Product data sheet Characteristics

# ZB5AG710 selector switch head Ø22 3-position spring return Ronis 458A



## Main

Main	
Commercial Status	Commercialised
Range of product	Harmony XB5
Product or component type	Head for key selector switch
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	Spring return to centre
Operator profile	Black key switch
Operator position infor- mation	3 positions +/- 45°
Type of keylock	Ronis 458A
Key withdrawal position	Center

## Complementary

complementary	
CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	72 mm
Product weight	0.057 kg
Mechanical durability	1000000 cycles
Station name	XALK 25 cut-outs XALD 15 cut-outs
Electrical composition code	SR1 for <= 3 contacts using single blocks in rear mounting SF1 for <= 3 contacts using single blocks in front mounting C3 for <= 6 contacts using single blocks in front mounting C11 for <= 3 contacts using single blocks in front mounting C8 for <= 4 contacts using single and double blocks in front mounting C7 for <= 4 contacts using single blocks in front mounting C6 for <= 5 contacts using single and double blocks in front mounting C4 for <= 6 contacts using single and double blocks in front mounting

#### Environment

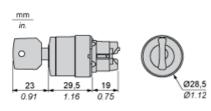
Protective treatment	TH	
Ambient air temperature for storage	-4070 °C	
Ambient air temperature for operation	-2570 °C	
Class of protection against electric shock	Class II conforming to IEC 60536	
IP degree of protection	IP69K conforming to IEC 60529	
NEMA degree of protection	NEMA 4X NEMA 13	
Resistance 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 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 60068-2-27 30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27

Product data sheet Dimensions Drawings ZB5AG710

Dimensions

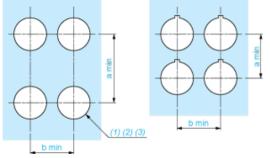




# Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

**ZB5AG710** 

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



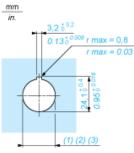
Diameter on finished panel or support (1)

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**

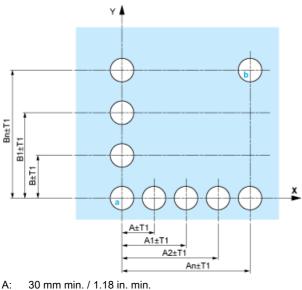


(1) Diameter on finished panel or support

- 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.  $_{0}^{+0.016}$ )

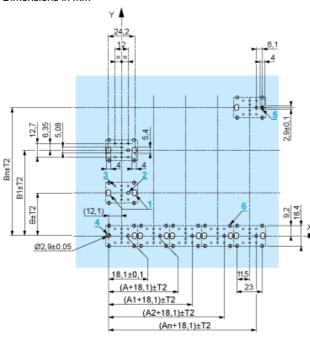
Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

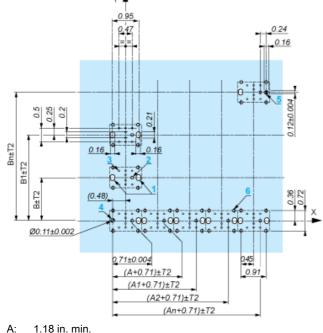


B: 40 mm min. / 1.57 in. min.

## 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.

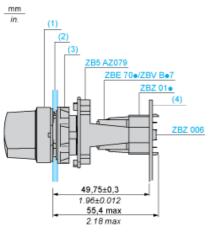
#### General Tolerances of the Panel and Printed Circuit Board

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•

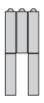
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 38 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the 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•.

## Electrical Composition Corresponding to Code C4

**ZB5AG710** 

Electrical Composition Corresponding to Code C5



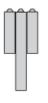
Electrical Composition Corresponding to Code C6



Electrical Composition Corresponding to Code C7



Electrical Composition Corresponding to Code C8



Electrical Composition Corresponding to Code C3



## 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°

315°					
Push	Position	Тор			
Bottom			$\bigtriangleup$		
Location	·	Left	Centre	Right	
State		1	1	0	
Contacts	N/O		closed	closed	open
N/C		open	open	closed	



## Position 0°

# 0°

Push	Position Top				
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	$\bigtriangleup$				
Location		Left	Centre	Right	
State		0	1	1	
Contacts	N/O	~	open	closed	closed
N/C		closed	open	open	