


# Product data sheet

Specifications



## selector switch head ZB5AJ2 sold by 100

ZB5AJ2TQ

 **Discontinued on:** Dec 19, 2019

 **Discontinued**

### Main

|                                 |                          |
|---------------------------------|--------------------------|
| 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                    |
| Sale Per Indivisible Quantity   | 10                       |
| Shape Of Signaling Unit Head    | Round                    |
| Type Of Operator                | stay put                 |
| 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  |
| Mechanical Durability       | 1000000 cycles   |
| Station Name                | XALD 1...5 cut-outs  |
| Electrical Composition Code | C3 for <6 contacts using single blocks in front mounting<br>C4 for <6 contacts using single and double blocks in front mounting<br>C5 for <5 contacts using single blocks in front mounting<br>C6 for <5 contacts using single and double blocks in front mounting<br>C7 for <4 contacts using single blocks in front mounting<br>C8 for <4 contacts using single and double blocks in front mounting<br>C11 for <3 contacts using single blocks in front mounting<br>C15 for <1 contacts using single blocks in front mounting<br>SF1 for <3 contacts using single blocks in front mounting<br>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 |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

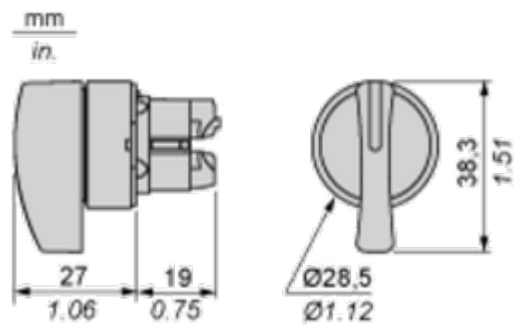
|   |  |
|---|--|
| <b>Ip Degree Of Protection</b>            | IP67 conforming to IEC 60529<br>IP69 conforming to IEC 60529<br>IP69K  |
| <b>Nema Degree Of Protection</b>          | NEMA 13<br>NEMA 4X   |
| <b>Resistance To High Pressure Washer</b> | 7000000 Pa at 55 °C, distance : 0.1 m  |
| <b>Ik Degree Of Protection</b>            | IK06 conforming to IEC 50102   |
| <b>Product Certifications</b>             | DNV<br>LROS (Lloyds register of shipping)<br>CSA<br>BV<br>GL<br>UL listed  |
| <b>Vibration Resistance</b>               | 5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6   |
| <b>Shock Resistance</b>                   | 30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27<br>50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27 |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| <b>Warranty</b> | 18 months |
|-----------------|-----------|

Dimensions Drawings

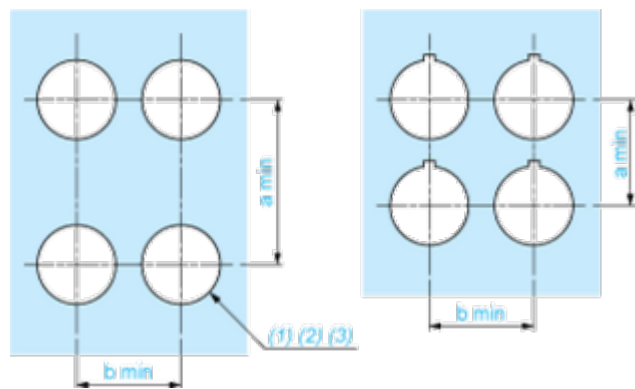
Dimensions



Mounting and Clearance

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

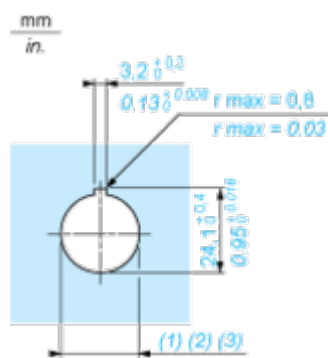
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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 ( $\text{Ø}22.3 \begin{smallmatrix} +0.4 \\ 0 \end{smallmatrix}$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in. } \begin{smallmatrix} +0.016 \\ 0 \end{smallmatrix}$ )

| 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     |

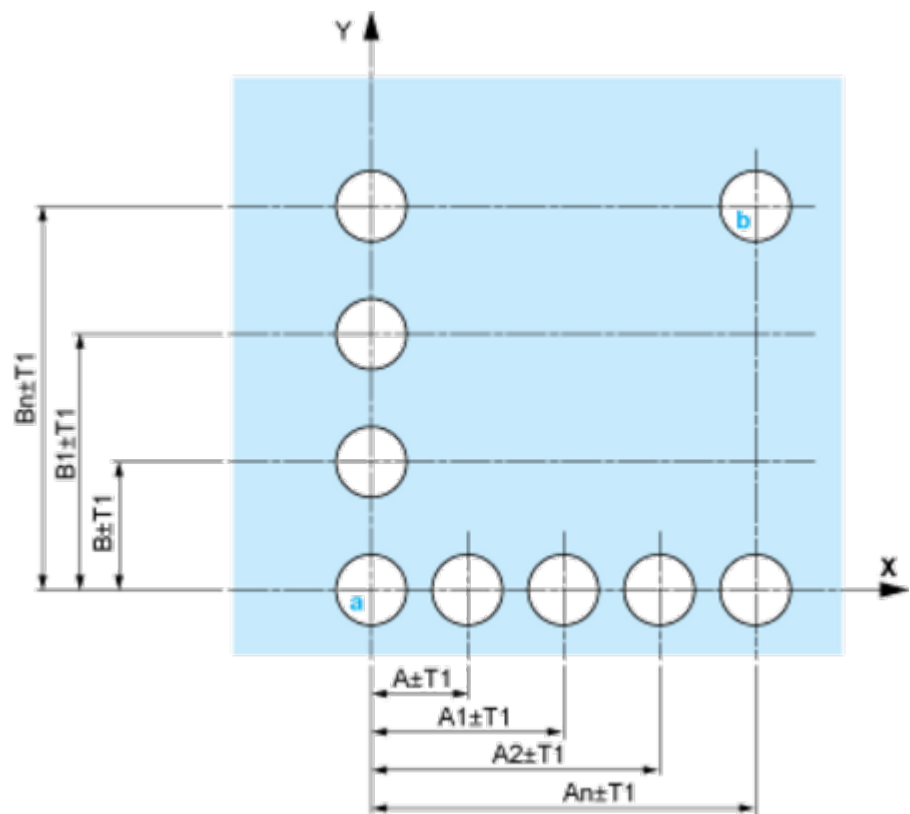
Detail of Lug Recess



- (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 ( $\text{Ø}22.3 \begin{smallmatrix} +0.4 \\ 0 \end{smallmatrix}$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in. } \begin{smallmatrix} +0.016 \\ 0 \end{smallmatrix}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

Panel Cut-outs (Viewed from Installer’s Side)

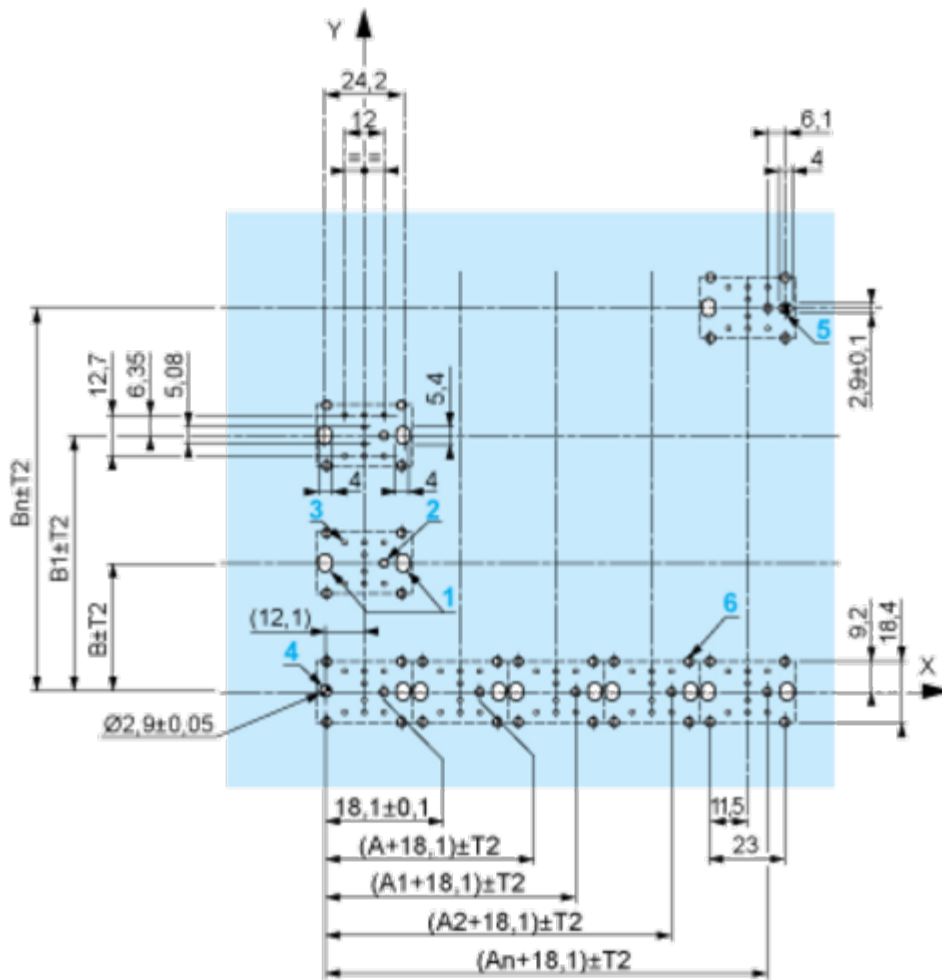


A: 30 mm min. / 1.18 in. min.

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

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

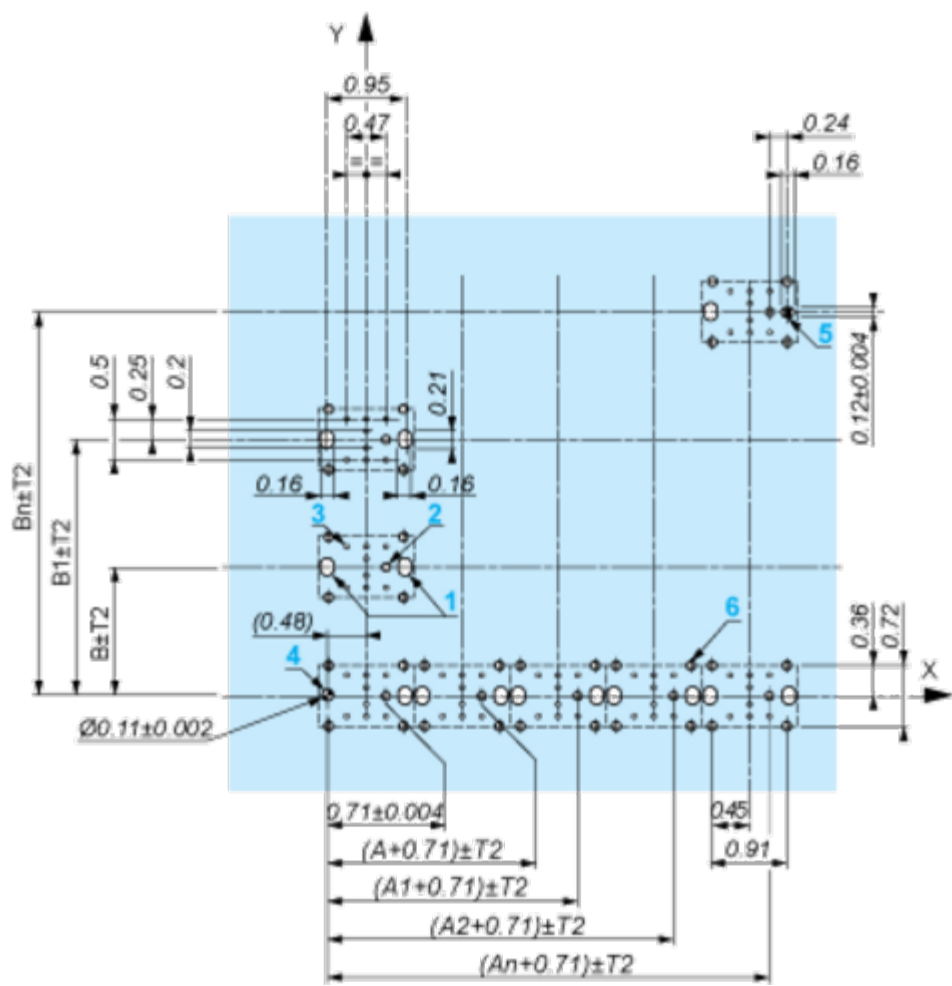
Dimensions in mm



**A:** 30 mm min.

**B:** 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

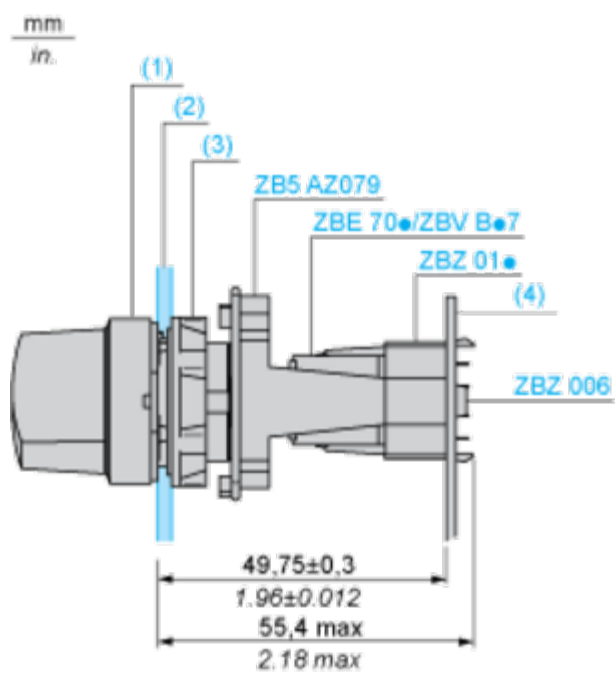
### General Tolerances of the Panel and Printed Circuit Board

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

### Installation Precautions

- 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•).

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  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  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•

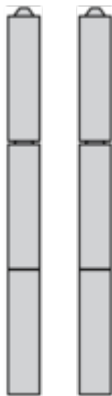
Dimensions An + 18.1 relate to the  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  holes for centring adapter ZBZ01•.



Technical Description

Electrical Composition Corresponding to Code C3

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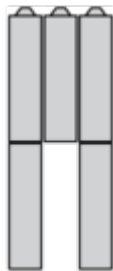
Electrical Composition Corresponding to Code C4

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Electrical Composition Corresponding to Code C5

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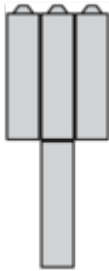
Electrical Composition Corresponding to Code C6

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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 Codes C9, C11, SF1 and SR1

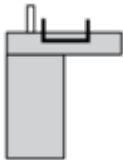
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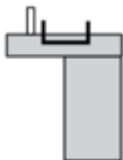
Electrical Composition Corresponding to Code C15

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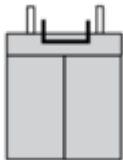
1 N/O



1 N/C



1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C





Legend

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Single contact



Double contact



Light block







Possible location



Sequence of Contacts Fitted to 2-position Selector Switch Body


Position 315°



|          |          |        |   |   |   |
|----------|----------|--------|---|---|---|
| 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    |        | 1   | 1      | 1      |
|          |          |        |   |        |        |
| Contacts | N/O      |        | closed  | closed | closed |
|          | N/C      |        | open  | open   | open   |