



## Main

|                                 |                      |
|---------------------------------|----------------------|
| Commercial Status               | Commercialised       |
| Range of product                | Harmony XB5          |
| Product or component type       | Head for pilot light |
| Product compatibility           | BA 9s                |
| Device short name               | ZB5                  |
| Bezel material                  | Plastic              |
| Mounting diameter               | 22 mm                |
| Sale per indivisible quantity   | 1                    |
| Shape of signaling unit head    | Round                |
| Cap/Operator or lens colour     | Red                  |
| Operator additional information | With plain lens      |

## Complementary

|                    |                                            |
|--------------------|--------------------------------------------|
| CAD overall width  | 29 mm                                      |
| CAD overall height | 29 mm                                      |
| CAD overall depth  | 31 mm                                      |
| Product weight     | 0.018 kg                                   |
| Station name       | XALK 2...5 cut-outs<br>XALD 1...5 cut-outs |

## Environment

|                                            |                                                                                                                                                      |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective treatment                       | TH                                                                                                                                                   |
| Ambient air temperature for storage        | -40...70 °C                                                                                                                                          |
| Ambient air temperature for operation      | -25...70 °C                                                                                                                                          |
| Class of protection against electric shock | Class II conforming to IEC 60536                                                                                                                     |
| IP degree of protection                    | IP66 conforming to IEC 60529                                                                                                                         |
| NEMA degree of protection                  | NEMA 4X<br>NEMA 13                                                                                                                                   |
| Resistance to high pressure washer         | 7000000 Pa at 55 °C, distance: 0.1 m                                                                                                                 |
| IK degree of protection                    | IK05 conforming to IEC 50102                                                                                                                         |
| Standards                                  | CSA C22-2 No 14<br>EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-5<br>JIS C 4520<br>UL 508                                |
| Vibration resistance                       | 5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6                                                                                                    |
| Shock resistance                           | 50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27<br>30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27 |

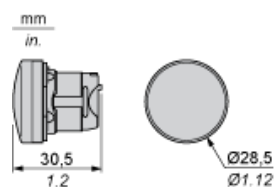
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Dimensions of Heads for Pilot Lights, with Light Source

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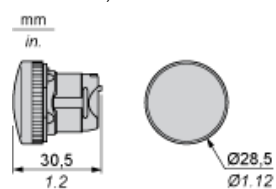
Integral LED

ZB5 AV0•3

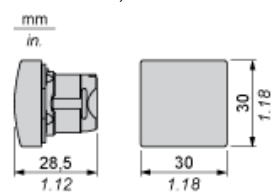


Incandescent, Neon or LED

ZB5 AV0•, ZB5 AV0•S

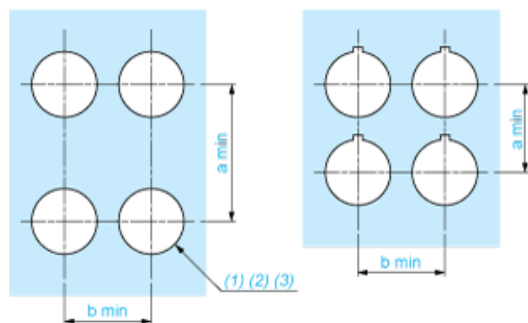


ZB5 CV0•3, ZB5 CH3•3



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

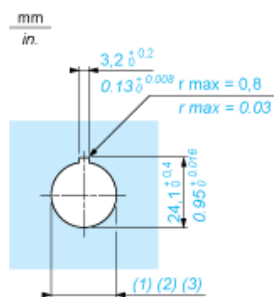
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5 AZ902 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     |

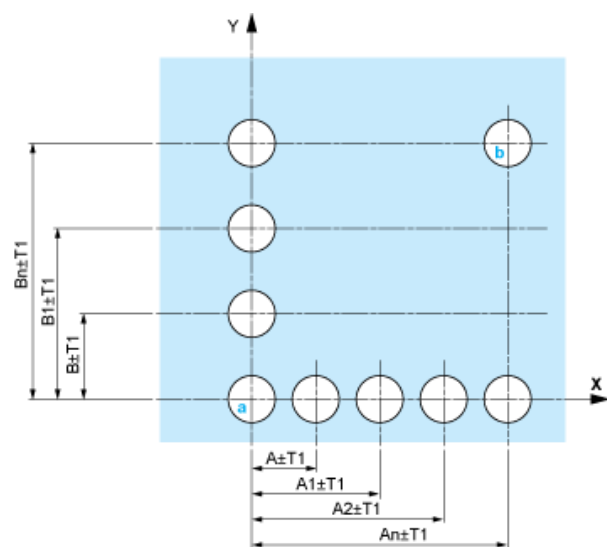
## Detail of Lug Recess



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5 AZ902 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)

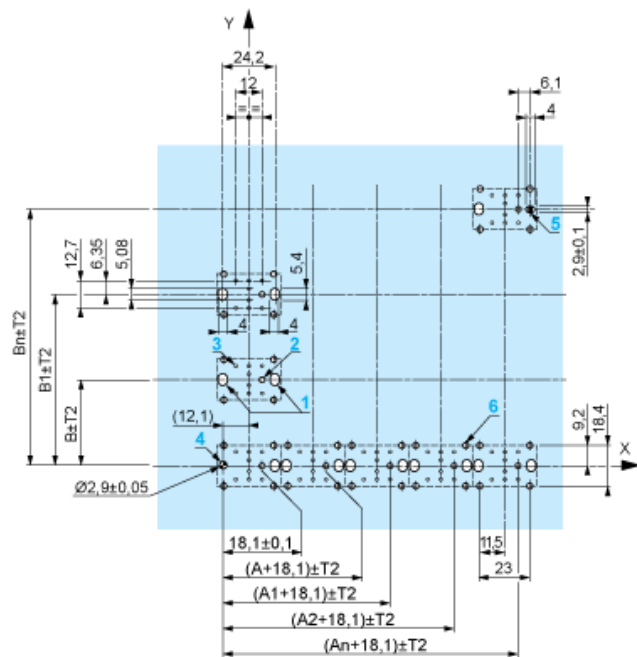


A: 30 mm min. / 1.18 in. min.

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

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

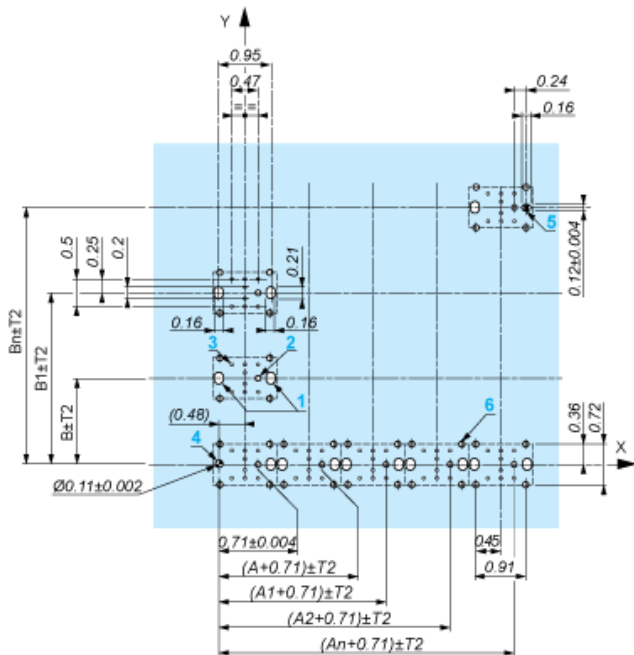
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

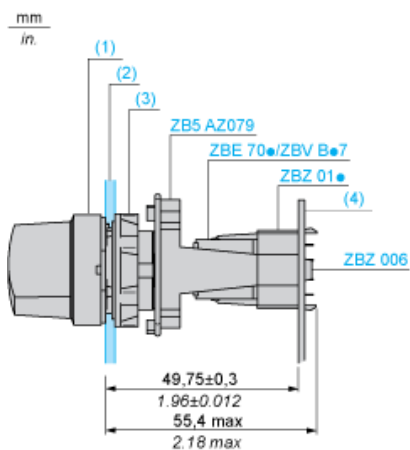
### General Tolerances of the Panel and Printed Circuit Board

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 ± 0.1 / 0.88 in. ± 0.004
- Orientation of body/fixing collar ZB4 BZ009: ± 2°30' (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ 006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB4 BZ079 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 (ZB5 AD\*, ZB5 AJ\*, ZB5 AG\*).

The fixing centers marked a and b are diagonally opposed and must align with those marked 4 and 5.



- (1) Head ZB5 AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

## Mounting of Adapter (Socket) ZBZ 01•

- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01•
- 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 ZBZ 01•

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 ZBZ 01•.