

# ZB4BG1

selector switch head Ø22 3-position spring  
return Ronis 455

## Main

|                               |                              |
|-------------------------------|------------------------------|
| Range of product              | Harmony XB4                  |
| Product or component type     | Head for selector switch     |
| Device short name             | ZB4                          |
| Bezel material                | Chromium plated metal        |
| Mounting diameter             | 22 mm                        |
| Sale per indivisible quantity | 1                            |
| Shape of signaling unit head  | Round                        |
| Type of operator              | Spring return left to centre |
| Operator profile              | Black key switch             |
| Operator position information | 3 positions +/- 45°          |
| Type of keylock               | Ronis 455                    |
| Key withdrawal position       | Right                        |

## Complementary

|                                    |                                      |
|------------------------------------|--------------------------------------|
| CAD overall width                  | 29 mm                                |
| CAD overall height                 | 29 mm                                |
| CAD overall depth                  | 62 mm                                |
| Product weight                     | 0.098 kg                             |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance: 0.1 m |
| Mechanical durability              | 1000000 cycles                       |

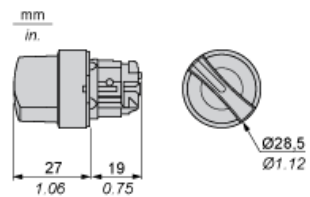
## Environment

|  |  |
|--|--|
| 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 I conforming to IEC 60536  |
| IP degree of protection                    | IP69 K conforming to IEC 60529   |
| NEMA degree of protection                  | NEMA 13<br>NEMA 4X   |
| IK degree of protection                    | IK06 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                                |
| Product certifications                     | BV<br>CSA<br>DNV<br>GL<br>LROS (Lloyds register of shipping)<br>RINA<br>UL listed  |
| Vibration resistance                       | 5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6  |
| Shock resistance                           | 30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27<br>50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27 |
| RoHS EUR status                            | Compliant  |
| RoHS EUR conformity date                   | 0636   |

Dimensions of Heads for Selector Switches

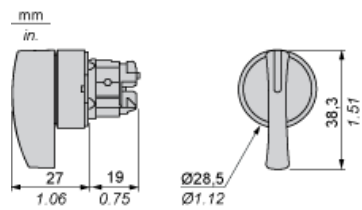
Standard Handle Operator

ZB4 BD•



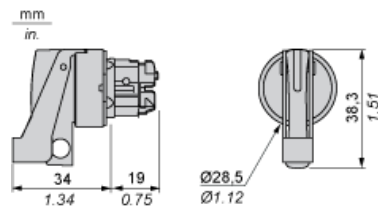
Long Handle Operator

ZB4 BJ•



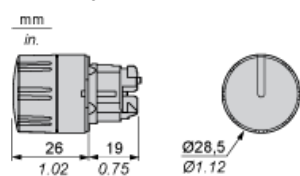
Padlockable Long Handle Operator (6.35 mm (0.25 in.) Shank Max.)

ZB4 BJ•9•



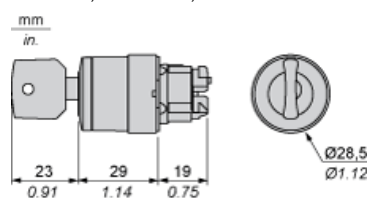
Black Knurled Knob

ZB4 BD•9

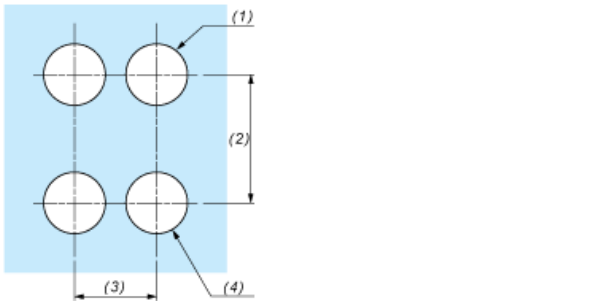
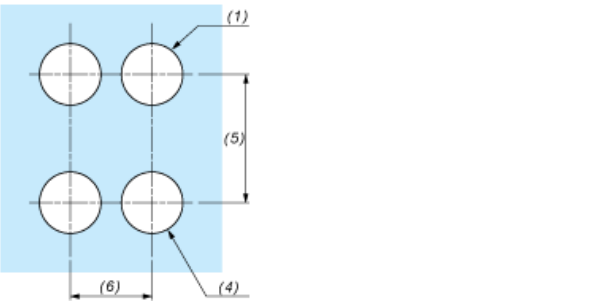


Key Switches

ZB4 BG•, ZB4 BG0•, ZB4 BG0•M

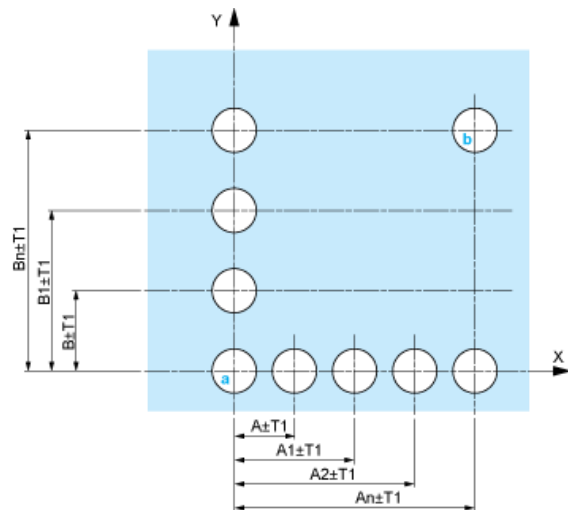


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

| Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board   | Connection by Faston Connectors  |
|---|--|
|    |  |
| <p>(1) Diameter on finished panel or support<br/>                 (2) 40 mm min. / 1.57 in. min.<br/>                 (3) 30 mm min. / 1.18 in. min.<br/>                 (4) <math>\varnothing 22.5 \text{ mm} / 0.89 \text{ in.}</math> recommended (<math>\varnothing 22.3 \text{ mm}_0^{+0.4} / 0.88 \text{ in.}_0^{+0.016}</math>)<br/>                 (5) 45 mm min. / 1.78 in. min.<br/>                 (6) 32 mm min. / 1.26 in. min.</p> |  |

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

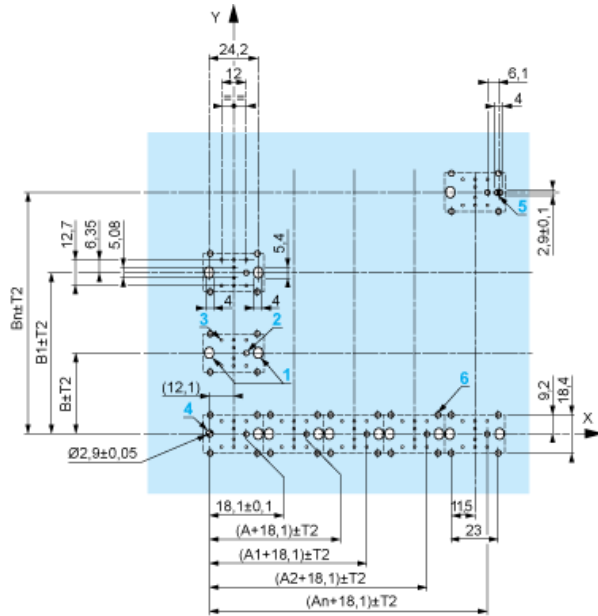
Panel Cut-outs (Viewed from Installer's Side)



- 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)

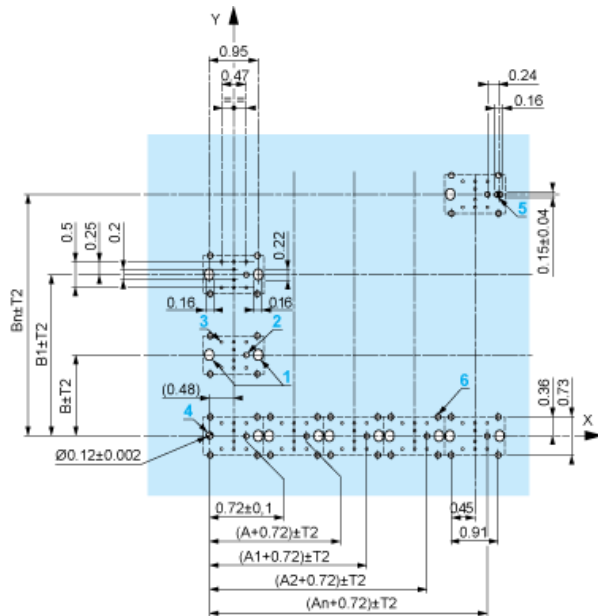
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

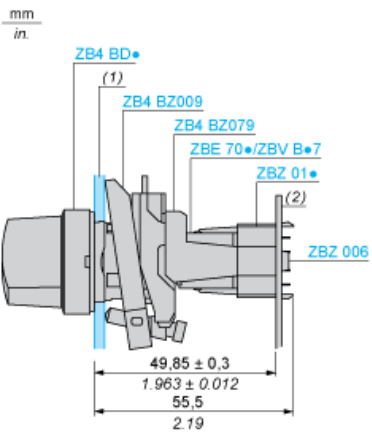
## General Tolerances of the Panel and Printed Circuit Board

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 ZB4 BZ009:  $\pm 2'30''$  (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 (ZB4 BD\*, ZB4 BJ\*, ZB4 BG\*).

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



- (1) Panel  
(2) 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 ×  $\varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  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•.