



### Main

|                               |                              |
|-------------------------------|------------------------------|
| Range of product              | Harmony XB4                  |
| Product or component type     | Head for key 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                        |
| Return                        | Right to left                |
| Operator profile              | Black key switch             |
| Operator position information | 2 positions 90°              |
| Type of keylock               | Ronis 421E                   |
| Key withdrawal position       | Left                         |

### Complementary

|                                    |  |
|------------------------------------|--|
| CAD overall width                  | 29 mm  |
| CAD overall height                 | 29 mm  |
| CAD overall depth                  | 72 mm  |
| Product weight                     | 0.098 kg   |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance: 0.1 m   |
| Mechanical durability              | 1000000 cycles   |
| Electrical composition code        | C11 for <= 3 contacts using single blocks in front mounting<br>C15 for 1 contacts using single blocks in front mounting<br>C3 for <= 6 contacts using single blocks in front mounting<br>C4 for <= 6 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>C5 for <= 5 contacts using single blocks in front mounting<br>C6 for <= 5 contacts using single and double blocks in front mounting |

### Environment

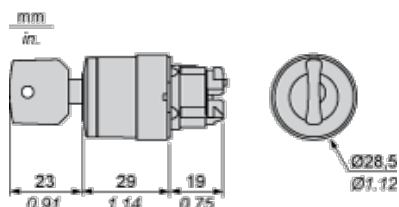
|                                       |   |
|---------------------------------------|---|
| protective treatment                  | TH  |
| ambient air temperature for storage   | -40...70 °C   |
| ambient air temperature for operation | -40...70 °C   |
| overvoltage category                  | Class I conforming to IEC 60536   |
| IP degree of protection               | IP67<br>IP66 conforming to IEC 60529<br>IP69K<br>IP69   |
| NEMA degree of protection             | NEMA 13<br>NEMA 4X  |
| IK degree of protection               | IK06 conforming to IEC 50102  |
| standards                             | EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-5<br>UL 508<br>GB 14048.5<br>CSA C22.2 No 14 |
| 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 (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

|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

### Dimensions

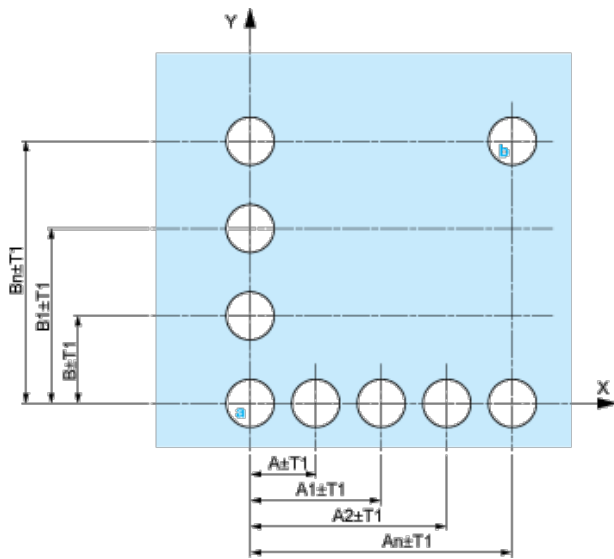


### Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

| Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board   | Connection by Faston Connectors   |
|---|---|
| <p>Diagram showing a 2x2 grid of circular cut-outs. Dimensions are labeled (1) for diameter, (2) for vertical spacing, (3) for horizontal spacing, and (4) for hole diameter.</p>   | <p>Diagram showing a 2x2 grid of circular cut-outs. Dimensions are labeled (1) for diameter, (5) for vertical spacing, (6) for horizontal spacing, and (4) for hole diameter.</p> |
| <p>(1) Diameter on finished panel or support</p> <p>(2) 40 mm min. / 1.57 in. min.</p> <p>(3) 30 mm min. / 1.18 in. min.</p> <p>(4) <math>\varnothing</math> 22.5 mm / 0.89 in. recommended (<math>\varnothing</math> 22.3 mm <math>^{+0.4}_0</math> / 0.88 in. <math>^{+0.016}_0</math>)</p> <p>(5) 45 mm min. / 1.78 in. min.</p> <p>(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:  $\pm 2^\circ 30'$  (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.

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



(1) Panel

(2) Printed circuit board

### Mounting of Adapter (Socket) ZBZ 01\*

- | 1 2 elongated holes for ZBZ 006 screw access
- | 2 1 hole  $\text{\O} 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01\*
- | 3 8  $\times \text{\O} 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- | 4 1 hole  $\text{\O} 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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  $\text{\O} 2.4 \text{ mm} / 0.09 \text{ in.}$  for clipping in adapter ZBZ 01\*

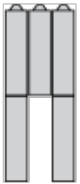
### Electrical Composition Corresponding to Code C3



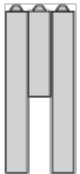
### Electrical Composition Corresponding to Code C4



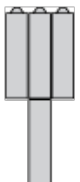
### Electrical Composition Corresponding to Code C5



### Electrical Composition Corresponding to Code C6



### Electrical Composition Corresponding to Code C7



### Electrical Composition Corresponding to Code C8



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



### Electrical Composition Corresponding to Code C15

1 N/O



1 N/C



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



### Legend

Single contact



Double contact



Light block



Possible location



### Sequence of Contacts Fitted to 2-position Selector Switch Body

Position 315°



|                 |          |        |                          |                          |                          |
|-----------------|----------|--------|--------------------------|--------------------------|--------------------------|
| <b>Push</b>     | Position | Top    | <input type="text"/>     |                          |                          |
|                 |          | Bottom | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                 | Location |        | Left                     | Centre                   | Right                    |
|                 | State    |        | 0                        | 0                        | 0                        |
| <b>Contacts</b> | N/O      | open   | open                     | open                     |                          |
|                 | N/C      | closed | closed                   | closed                   |                          |

**Position 45°**



|                 |          |        |                      |        |       |
|-----------------|----------|--------|----------------------|--------|-------|
| <b>Push</b>     | Position | Top    | <input type="text"/> |        |       |
|                 |          | Bottom | <input type="text"/> |        |       |
|                 | Location |        | Left                 | Centre | Right |
|                 | State    |        | 1                    | 1      | 1     |
| <b>Contacts</b> | N/O      | closed | closed               | closed |       |
|                 | N/C      | open   | open                 | open   |       |