

## ZB4BD4

black selector switch head Ø22 2-position spring return



### 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 right to left |
| Operator profile              | Black standard handle       |
| Operator position information | 2 positions 90°             |

### Complementary

|                                    |  |
|------------------------------------|--|
| CAD overall width                  | 29 mm  |
| CAD overall height                 | 29 mm  |
| CAD overall depth                  | 44 mm  |
| Product weight                     | 0.045 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 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>JIS C 4520<br>UL 508<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   |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

shock resistance

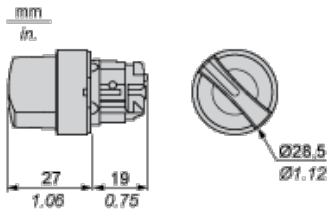
30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27  
50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27

### 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>(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) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm<sub>0</sub><sup>+0.4</sup> / 0.88 in.<sub>0</sub><sup>+0.016</sup>)</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  $\text{\textcircled{O}} 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01•
- | 3 8  $\times \text{\textcircled{O}} 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- | 4 1 hole  $\text{\textcircled{O}} 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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  $\text{\textcircled{O}} 2.4 \text{ mm} / 0.09 \text{ in.}$  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    |   |   |   |
|                 |          | Bottom |  |  |  |
|                 | 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    |   |        |        |
|                 |          | Bottom |  |        |        |
|                 | Location |        | Left  | Centre | Right  |
|                 | State    |        | 1   | 1      | 1      |
| <b>Contacts</b> | N/O      |        | closed  | closed | closed |
|                 | N/C      |        | open  | open   | open   |