

### Hlavní parametry

|                                |                                    |
|--------------------------------|------------------------------------|
| Řada výrobků                   | Harmony XB5                        |
| Typ produktu nebo součásti     | Hlava pro přepínač                 |
| Označení přístroje             | ZB5                                |
| Materiál obruby                | Dark grey plastic                  |
| Průměr pro montáž              | 22 mm                              |
| Typ hlavy                      | Standard                           |
| Prodej v nedělitelném množství | 1                                  |
| Tvar hlavice                   | Kruh                               |
| Typ ovládací hlavice           | S návratem z pravé strany na střed |
| Provedení ovládače             | Bílá standardní rukojeť            |
| Informace o polohách ovládače  | 3 pozice +/- 45°                   |

### Doplňek

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD celková šířka    | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CAD celková výška    | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CAD celková hloubka  | 46 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Hmotnost přístroje   | 0,017 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Mechanická životnost | 1000000 cykly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Označení skříně      | XALD 1...5 výřezů<br>XALK 2...5 výřezů                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Označení el. složení | C11 pro 3 kontakty použitím jednoduchý bloky v čelní montáž<br>SF1 pro 3 kontakty použitím jednoduchý bloky v čelní montáž<br>C7 pro 4 kontakty použitím jednoduchý bloky v čelní montáž<br>C8 pro 4 kontakty použitím jednoduchý a dvojité bloky v čelní montáž<br>SR1 pro 3 kontakty použitím jednoduchý bloky v montáž na desku ve dně skříně<br>C4 pro 6 kontakty použitím jednoduchý a dvojité bloky v čelní montáž<br>C5 pro 5 kontakty použitím jednoduchý bloky v čelní montáž<br>C6 pro 5 kontakty použitím jednoduchý a dvojité bloky v čelní montáž<br>C3 pro 6 kontakty použitím jednoduchý bloky v čelní montáž |

### Životní prostředí

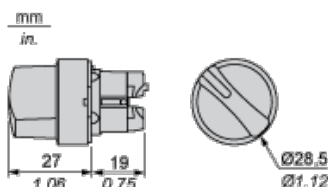
|                                     |                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------|
| stupeň ochrany                      | TH                                                                                                |
| teplota okolí pro uskladnění        | -40...70 °C                                                                                       |
| teplota okolního vzduchu pro provoz | -40...70 °C                                                                                       |
| kategorie přepětí                   | Třída II podle IEC 60536                                                                          |
| stupeň krytí IP                     | IP67 podle IEC 60529<br>IP69K<br>IP69 podle IEC 60529                                             |
| stupeň krytí NEMA                   | NEMA 13<br>NEMA 4X                                                                                |
| odolnost proti vysokému tlaku mytí  | 7000000 Pa při 55 °C, vzdálenost: 0,1 m                                                           |
| stupeň ochrany IK                   | IK06 podle IEC 50102                                                                              |
| standarty                           | EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>EN/IEC 60947-5-4<br>JIS C 4520<br>UL 508<br>CSA C22.2 č. 14 |
| certifikace výrobku                 | BV<br>CSA<br>DNV<br>GL<br>LROS (Lloyds register of shipping)<br>RINA<br>UL listed                 |

|                         |                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| odolnost proti vibracím | 5 gn (f = 2...500 Hz) podle IEC 60068-2-6                                                                                                                                |
| odolnost proti otřesům  | 30 gn (doba trvání = 18 ms) pro akcelerace polovina sin. vlny podle IEC 60068-2-27<br>50 gn (doba trvání = 11 ms) pro akcelerace polovina sin. vlny podle IEC 60068-2-27 |

## Contractual warranty

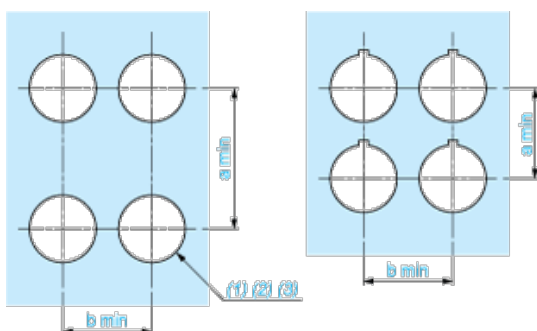
|               |           |
|---------------|-----------|
| Záruční lhůta | 18 měsíců |
|---------------|-----------|

## Dimensions



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

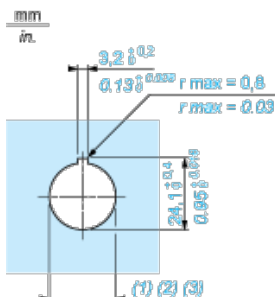
### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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 ( $\text{Ø}22.3^{+0.4}_0$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in. }^{+0.016}_0$ )

| 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 ( $\text{Ø}22.3^{+0.4}_0$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in. }^{+0.016}_0$ )

## Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

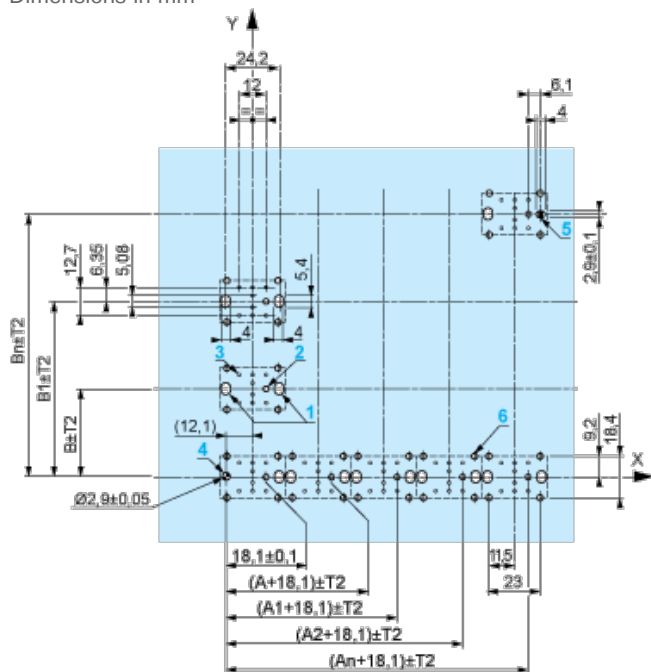


A: 30 mm min. / 1.18 in. min.

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•

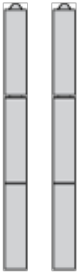
- | 1 2 elongated holes for ZBZ006 screw access
- | 2 1 hole  $\varnothing 2.4 \text{ mm} \pm 0.05$  / 0.09 in.  $\pm 0.002$  for centring adapter ZBZ01•
- | 3  $8 \times \varnothing 1.2 \text{ mm}$  / 0.05 in. holes
- | 4 1 hole  $\varnothing 2.9 \text{ mm} \pm 0.05$  / 0.11 in.  $\pm 0.002$ , for aligning the printed circuit board (with cut-out marked **a**)

┆ 5 1 elongated hole for aligning the printed circuit board (with cut-out marked **b**)

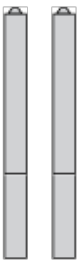
┆ 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ01•.

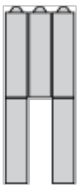
### Electrical Composition Corresponding to Code C3



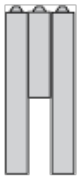
### Electrical Composition Corresponding to Code C4



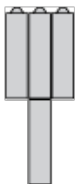
### Electrical Composition Corresponding to Code C5



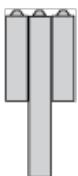
### Electrical Composition Corresponding to Code C6



### Electrical Composition Corresponding to Code C7



### Electrical Composition Corresponding to Code C8

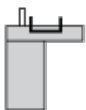


## Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1

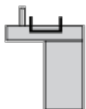


## Electrical Composition Corresponding to Code C15

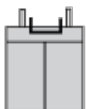
1 N/O



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 3-position Selector Switch Body

Position 315°



|          |          |        |                                                                                   |                                                                                   |        |
|----------|----------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|
| Push     | Position | Top    |   |                                                                                   |        |
|          |          | Bottom |  |  |        |
|          | Location |        | Left                                                                              | Centre                                                                            | Right  |
|          | State    |        | 1                                                                                 | 1                                                                                 | 0      |
| Contacts | N/O      |        | closed                                                                            | closed                                                                            | open   |
|          | N/C      |        | open                                                                              | open                                                                              | closed |

Position 0°



|          |          |        |                                                                                   |                                                                                   |                                                                                   |
|----------|----------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 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    |        | 0                                                                                   | 1                                                                                   | 1      |
| Contacts | N/O      |        | open                                                                                | closed                                                                              | closed |
|          | N/C      |        | closed                                                                              | open                                                                                | open   |