



## Main

|                               |                                      |
|-------------------------------|--------------------------------------|
| Range of product              | Harmony XB5                          |
| Product or component type     | Head for illuminated selector switch |
| Product compatibility         | Integral LED                         |
| Device short name             | ZB5                                  |
| Bezel material                | Dark grey plastic                    |
| Mounting diameter             | 22 mm                                |
| Head type                     | Standard                             |
| Sale per indivisible quantity | 1                                    |
| Shape of signaling unit head  | Round                                |
| Type of operator              | To centre spring return              |
| Operator profile              | Orange standard handle               |
| Operator position information | 3 positions +/- 45°                  |

## Complementary

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD overall width           | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall height          | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall depth           | 43 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Net weight                  | 0.016 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Mechanical durability       | 1000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Station name                | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electrical composition code | M3 for <4 contacts using single blocks in front mounting with integral LED<br>M6 for <2 contacts using single blocks in front mounting with integral LED and transformer<br>M10 for <2 contacts using single blocks in front mounting with integral LED<br>MF1 for <2 contacts using single blocks in front mounting with integral LED<br>MR1 for <2 contacts using single blocks in rear mounting with integral LED<br>M4 for <4 contacts using single and double blocks in front mounting with integral LED |
| Device presentation         | Basic element                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Environment

|                                       |                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective treatment                  | TH                                                                                                                                                                             |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                                                                    |
| Ambient air temperature for operation | -40...70 °C                                                                                                                                                                    |
| Overvoltage category                  | Class II conforming to IEC 60536                                                                                                                                               |
| IP degree of protection               | IP66 conforming to IEC 60529<br>IP67<br>IP69<br>IP69K                                                                                                                          |
| NEMA degree of protection             | NEMA 13<br>NEMA 4X                                                                                                                                                             |
| Resistance to high pressure washer    | 7000000 Pa at 55 °C, distance : 0.1 m                                                                                                                                          |
| IK degree of protection               | IK06 conforming to IEC 50102                                                                                                                                                   |
| Standards                             | EN/IEC 60947-5-5<br>UL 508<br>EN/IEC 60947-5-1<br>EN/IEC 60947-1<br>JIS C8201-5-1<br>EN/IEC 60947-5-4<br>CSA C22.2 No 14<br>JIS C8201-1                                        |
| Product certifications                | GL<br>CSA<br>LROS (Lloyds register of shipping)<br>RINA<br>BV<br>DNV<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 |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 24 g     |
| Package 1 Height             | 3.3 cm   |
| Package 1 width              | 4.5 cm   |
| Package 1 Length             | 5.2 cm   |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 200      |
| Package 2 Weight             | 5.188 kg |
| Package 2 Height             | 30 cm    |
| Package 2 width              | 30 cm    |
| Package 2 Length             | 40 cm    |

## Offer Sustainability

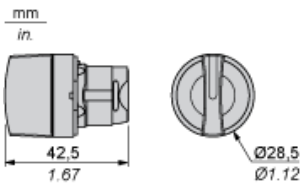
|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                             |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                 |
| REACH free of SVHC         | Yes                                                                                               |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free     | Yes                                                                                               |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                            |

|                          |                                               |
|--------------------------|-----------------------------------------------|
| Environmental Disclosure | <a href="#">Product Environmental Profile</a> |
| Circularity Profile      | <a href="#">End of Life Information</a>       |

**Contractual warranty**

|          |           |
|----------|-----------|
| Warranty | 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



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

| 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     |

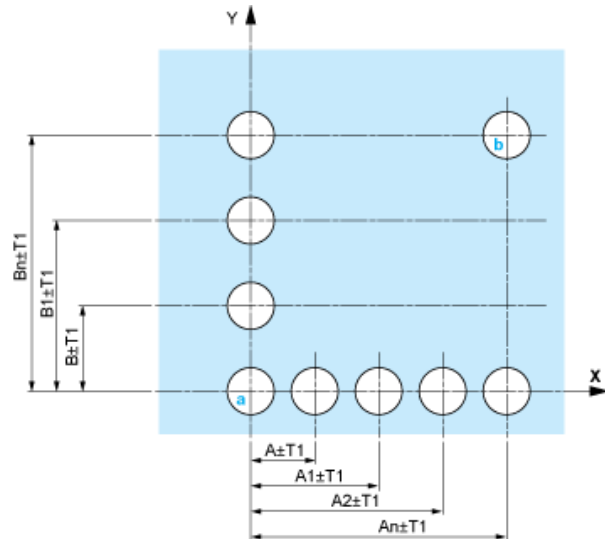
Detail of Lug Recess



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3) Ø22.5 mm recommended ( $\text{Ø}22.3 \text{ }_0^{+0.4}$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in. }_0^{+0.016}$ )

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

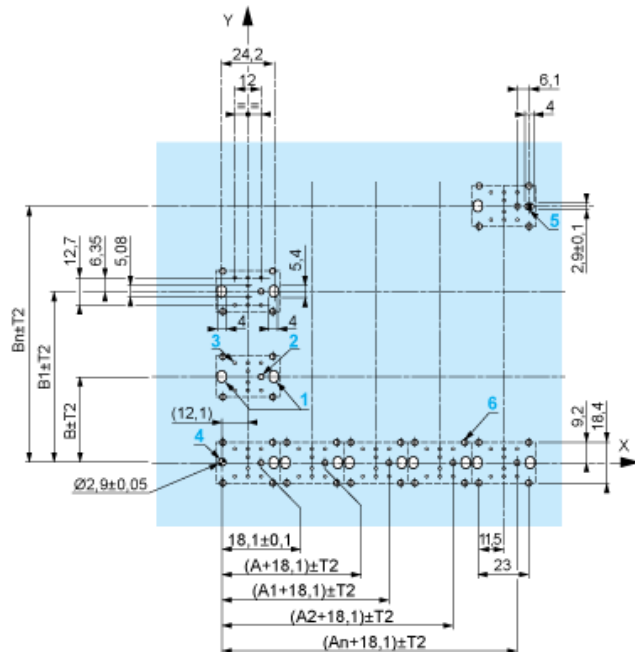
### Panel Cut-outs (Viewed from Installer's Side)



A: 30 mm min. / 1.18 in. min.  
B: 40 mm min. / 1.57 in. min.

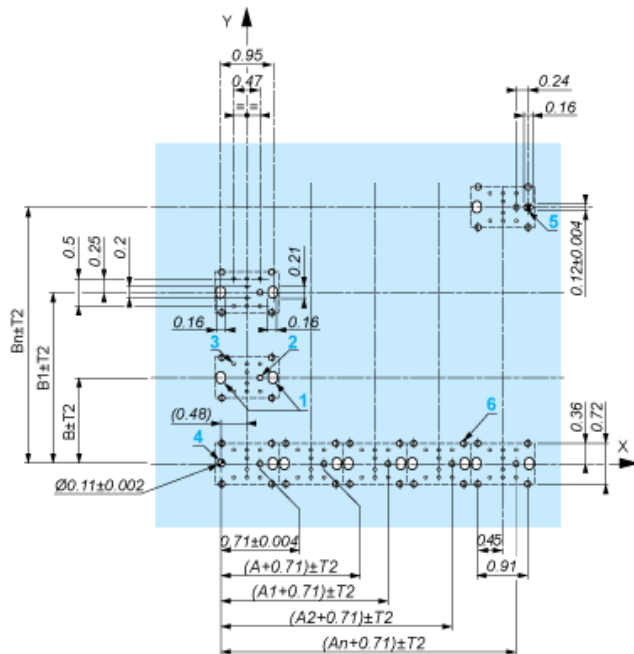
### Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm



A: 30 mm min.  
B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

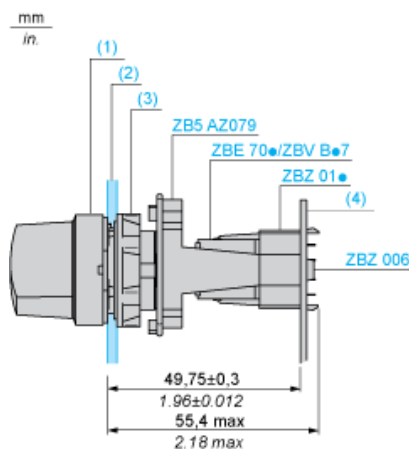
## General Tolerances of the Panel and Printed Circuit Board

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  $\pm$  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•

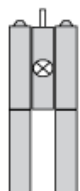
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole  $\varnothing$  2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 for centring adapter ZBZ01•
- 3 8  $\times$   $\varnothing$  1.2 mm / 0.05 in. holes
- 4 1 hole  $\varnothing$  2.9 mm  $\pm$  0.05 / 0.11 in.  $\pm$  0.002, for aligning the printed 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  $\varnothing$  2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the  $\varnothing$  2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 holes for centring adapter ZBZ01•.

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Electrical Composition Corresponding to Code M3

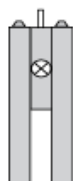
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Electrical Composition Corresponding to Code M4

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Electrical Composition Corresponding to Codes M6 and P2

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Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2



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Legend

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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                                                                              |                                                                                     | Right                                                                               |
|          | State    |        | 1                                                                                 |                                                                                     | 0                                                                                   |
| Contacts | N/O      |        | closed                                                                            |                                                                                     | open                                                                                |
|          | N/C      |        | open                                                                              |                                                                                     | closed                                                                              |

Position 0°



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

Position 45°



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