



### Main

|                               |                                      |
|-------------------------------|--------------------------------------|
| Range of product              | Harmony XB5                          |
| Product or component type     | Head for non-illuminated push-button |
| Device short name             | ZB5                                  |
| Bezel material                | Plastic                              |
| Mounting diameter             | 22 mm                                |
| Head type                     | Standard                             |
| Sale per indivisible quantity | 1                                    |
| Shape of signaling unit head  | Round                                |
| Type of operator              | Spring return                        |
| Operator profile              | White flush, black MARCHE            |

### Complementary

|                             |   |
|-----------------------------|---|
| CAD overall width           | 29 mm   |
| CAD overall height          | 29 mm   |
| CAD overall depth           | 28 mm   |
| Product weight              | 0.018 kg  |
| Mechanical durability       | 10000000 cycles   |
| Station name                | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs  |
| Electrical composition code | C1 for <= 9 contacts using single blocks in front mounting<br>C2 for <= 9 contacts using single and double blocks in front mounting<br>C11 for <= 3 contacts using single blocks in front mounting<br>C15 for 1 contacts using single blocks in front mounting<br>SF1 for <= 3 contacts using single blocks in front mounting<br>SR1 for <= 3 contacts using single blocks in rear mounting |

### 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               | IP69<br>IP67                     |

|                                    |  |
|------------------------------------|--|
|                                    | IP66 conforming to IEC 60529<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            | IK03 conforming to IEC 50102   |
| Standards                          | 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 No 14  |
| Product certifications             | BV<br>CSA<br>DNV<br>GL<br>LROS (Lloyds register of shipping)<br>RINA<br>UL listed  |
| 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 |
| Vibration resistance               | 5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6  |

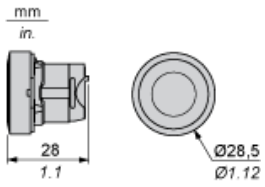
### Contractual warranty

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

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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)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

| 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     |

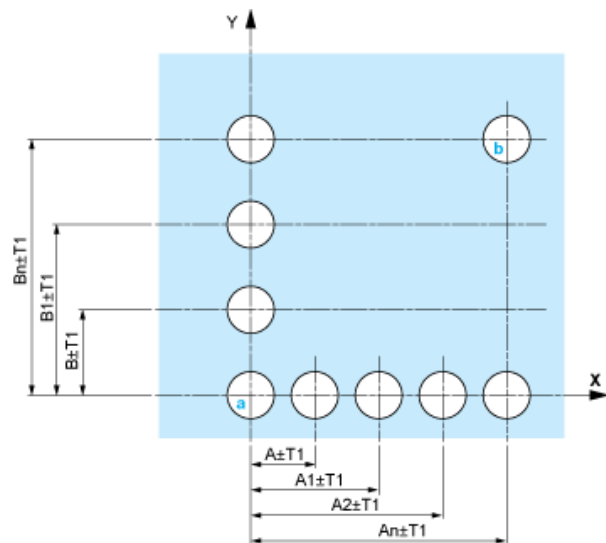
Detail of Lug Recess



- (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)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3 \text{ }_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

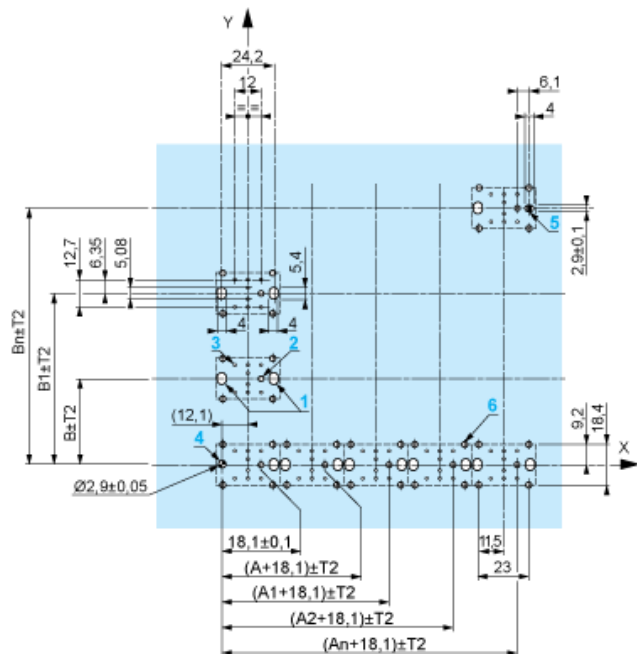
Panel Cut-outs (Viewed from Installer's Side)



- 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 C1

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Electrical Composition Corresponding to Code C2

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

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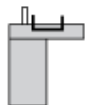


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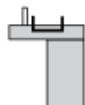
Electrical Composition Corresponding to Code C15

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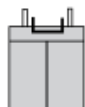
1 N/O



1 N/C



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



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Legend

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Single contact



Double contact



Light block



Possible location

