



### Main

|                                 |                                  |
|---------------------------------|----------------------------------|
| Range of product                | Harmony XALF<br>Harmony XB5      |
| Product or component type       | Head for illuminated push-button |
| Device short name               | ZB5                              |
| Product compatibility           | Integral LED                     |
| Bezel material                  | Dark grey plastic                |
| Mounting diameter               | 0.87 in (22 mm)                  |
| Sale per indivisible quantity   | 1                                |
| Head type                       | Standard                         |
| Shape of signaling unit head    | Round                            |
| Type of operator                | Spring return                    |
| Operator profile                | Orange flush unmarked            |
| Operator additional information | For insertion of legend          |

### Complementary

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD overall width                  | 1.14 in (29 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall height                 | 1.14 in (29 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall depth                  | 1.18 in (30 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Product weight                     | 0.04 lb(US) (0.018 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Resistance to high pressure washer | 1015.26 psi (7000000 Pa) at 131 °F (55 °C), distance: 0.1 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mechanical durability              | 10000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Station name                       | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Electrical composition code        | C4 6 contacts using single and double blocks in front mounting<br>C3 6 contacts using single blocks in front mounting<br>M1 for 6 contacts using single blocks in front mounting with integral LED<br>M2 for 6 contacts using single and double 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>C14 2 contacts using single blocks in front mounting<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>SF2 2 contacts using single blocks in front mounting<br>SR2 2 contacts using single blocks in rear mounting |

### Environment

|                                       |                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| protective treatment                  | TC                                                                                                              |
| ambient air temperature for storage   | -40...158 °F (-40...70 °C)                                                                                      |
| ambient air temperature for operation | -40...158 °F (-40...70 °C)                                                                                      |
| overvoltage category                  | Class II 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               | IK03 conforming to EN 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>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) half sine wave acceleration conforming to IEC 60068-2-27<br>50 gn (duration = 11 ms) half sine wave acceleration conforming to IEC 60068-2-27 |

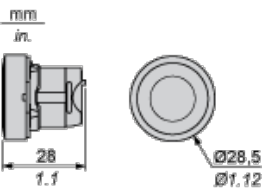
### Offer Sustainability

|                                                                                                                            |                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| WARNING: This product can expose you to chemicals including:                                                               | WARNING: This product can expose you to chemicals including:                                                               |
| Nickel compounds, which is known to the State of California to cause cancer, and                                           | Nickel compounds, which is known to the State of California to cause cancer, and                                           |
| Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. | Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. |
| For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>                              | For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>                              |

### Contractual warranty

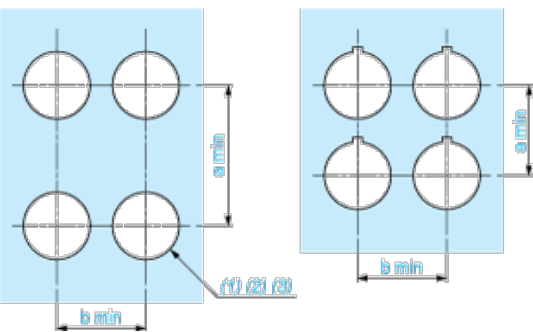
|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

### Dimensions



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

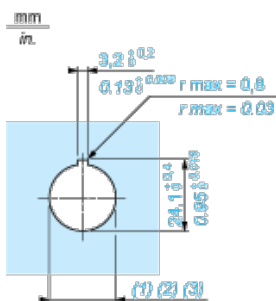
#### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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 (Ø22.3  $^{+0.4}_0$ ) / Ø0.89 in. recommended (Ø0.88 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     |

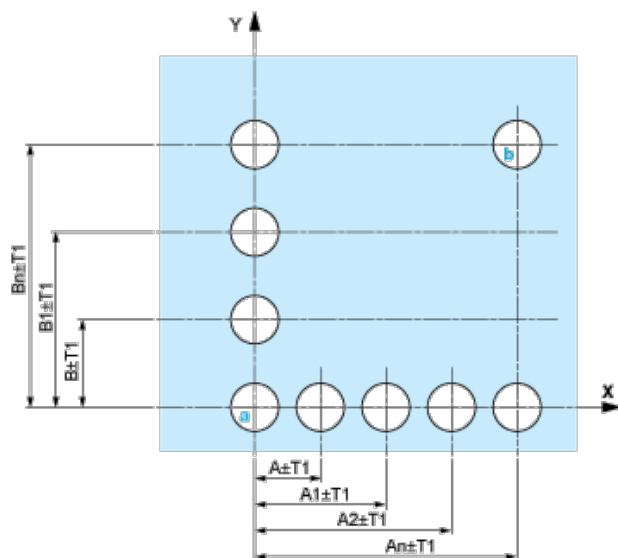
#### Detail of Lug Recess



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

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

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

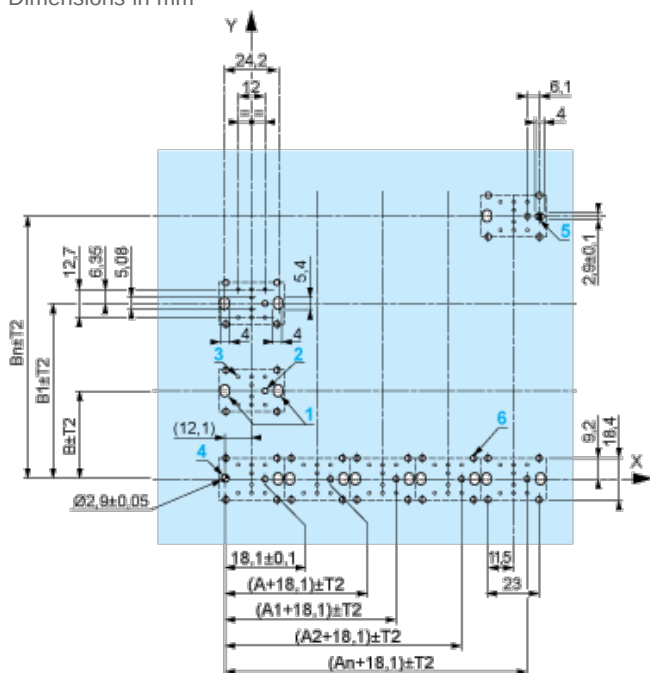


A: 30 mm min. / 1.18 in. min.

B: 40 mm min. / 1.57 in. min.

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

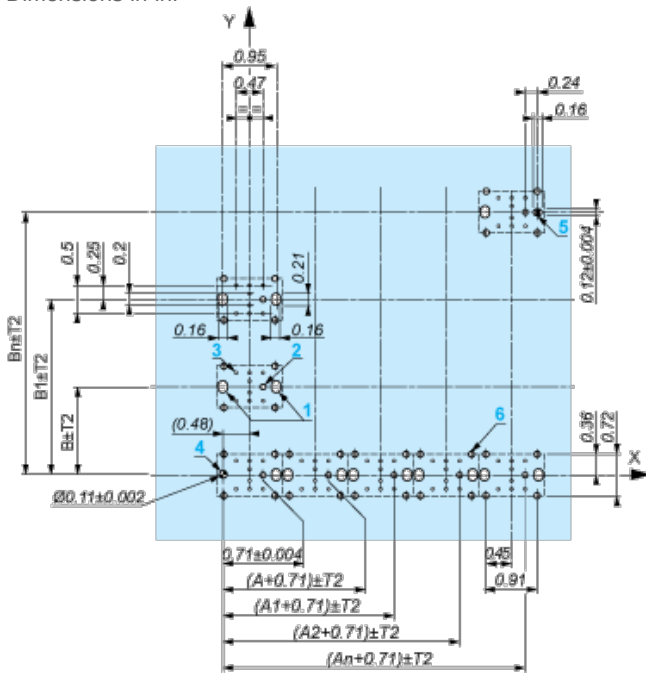
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

**B:** 1.57 in. min.

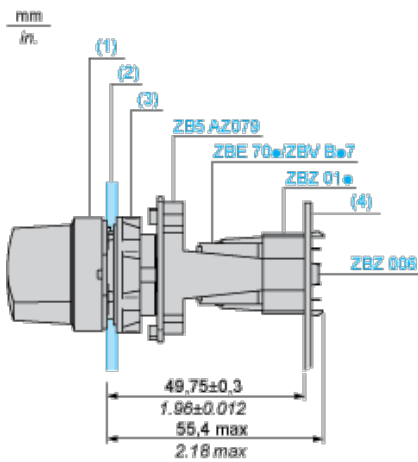
### General Tolerances of the Panel and Printed Circuit Board

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 ± 0.1 / 0.88 in. ± 0.004
- ┆ Orientation of body/fixing collar ZB5AZ009: ± 2°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  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ01•
- | 3  $8 \times \varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- | 4 1 hole  $\varnothing 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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 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•.

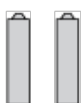
### Electrical Composition Corresponding to Code C3



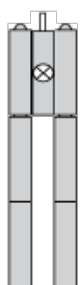
### Electrical Composition Corresponding to Code C4



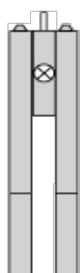
### Electrical Composition Corresponding to Codes C14, SF2 and SR2



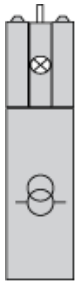
### Electrical Composition Corresponding to Codes M1 and M7



### Electrical Composition Corresponding to Codes M2 and M8



### Electrical Composition Corresponding to Codes M6 and P2



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



**Legend**

Single contact



Double contact



Light block



Possible location



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

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- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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