

# Product data sheet

Specifications



Selector switch head, Harmony XB5, plastic, black, 22mm, 2 positions, stay put

ZB5AD2

## Main

|                               |                             |
|-------------------------------|-----------------------------|
| Range of product              | Harmony XALF<br>Harmony XB5 |
| Product or component type     | Head for selector switch    |
| 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              | stay put                    |
| 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           | 46 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Net weight                  | 0.017 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mechanical durability       | 1000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Station name                | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Electrical composition code | C3 for <6 contacts using single blocks in front mounting<br>C4 for <6 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<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>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 |
| 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               | IP67 conforming to IEC 60529<br>IP69 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               | IK06 conforming to IEC 50102                                                                                                                                                   |
| Standards                             | JIS C8201-5-1<br>CSA C22.2 No 14<br>UL 508<br>EN/IEC 60947-1<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-1<br>JIS C8201-1                                                            |
| Product certifications                | GL<br>CSA<br>BV<br>DNV<br>LROS (Lloyds register of shipping)<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       | Db               |
| Number of Units in Package 1 | 1                |
| Package 1 Height             | 3.700 cm         |
| Package 1 Width              | 5.400 cm         |
| Package 1 Length             | 6.000 cm         |
| Package 1 Weight             | 24.000 g         |
| Unit Type of Package 2       | Gyári csomagolás |
| Number of Units in Package 2 | 5                |
| Package 2 Height             | 5.000 cm         |
| Package 2 Width              | 3.400 cm         |
| Package 2 Length             | 26.500 cm        |
| Package 2 Weight             | 121.000 g        |
| Unit Type of Package 3       | Doboz            |
| Number of Units in Package 3 | 200              |
| Package 3 Height             | 30.000 cm        |
| Package 3 Width              | 30.000 cm        |
| Package 3 Length             | 40.000 cm        |
| Package 3 Weight             | 5.304 kg         |

### Offer Sustainability

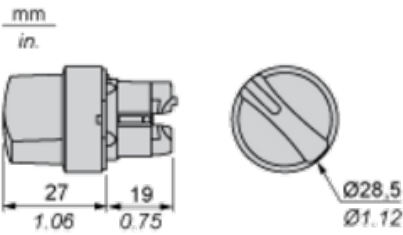
|                          |                                   |
|--------------------------|-----------------------------------|
| Sustainable offer status | Green Premium product             |
| REACH Regulation         | <a href="#">REACH Declaration</a> |

|                            |                                                                                                                                                                                                                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                                                                                                                                                                                                                |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                                         |
| Circularity Profile        | <a href="#">End of Life Information</a>                                                                                                                                                                                                                                               |
| California proposition 65  | WARNING: This product can expose you to chemicals including: 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> |

### 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)  $\varnothing 22.5$  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 ( $\varnothing 0.88 \text{ in. }_0^{+0.016}$ )

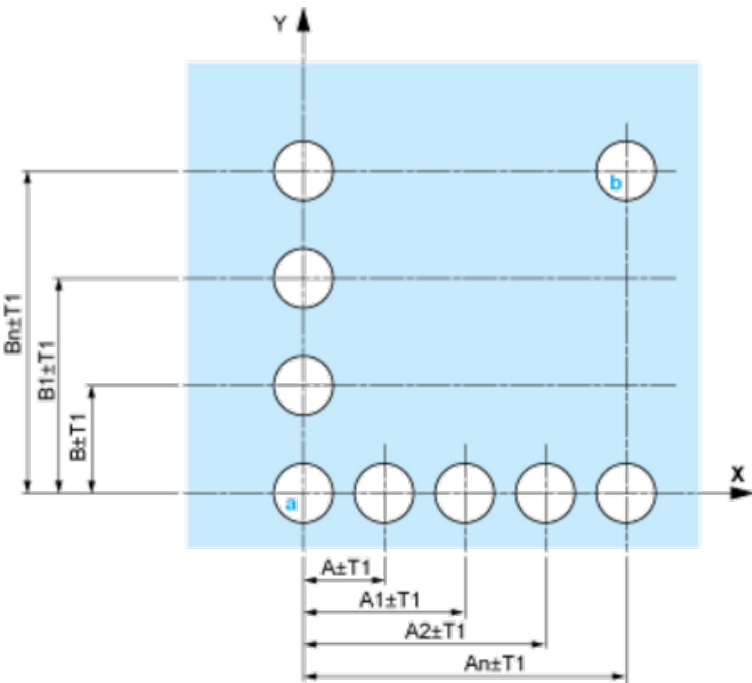
## Product data sheet

### Mounting and Clearance

# ZB5AD2

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

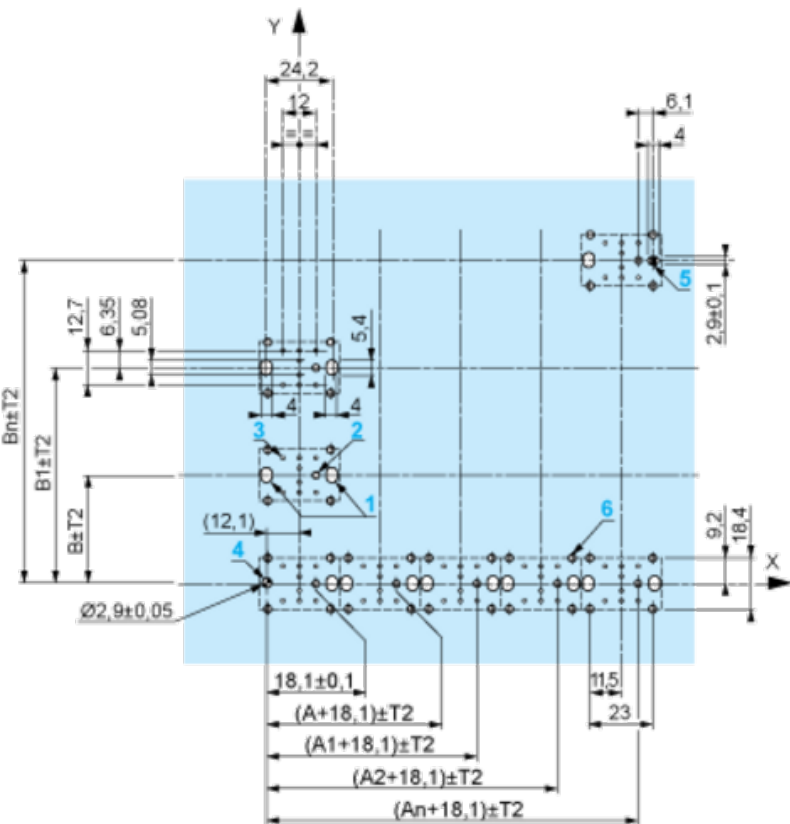
### Panel Cut-outs (Viewed from Installer's Side)



**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.



The cumulative tolerance must not exceed 0.3 mm / 0.012 in.:  $T_1 + T_2 = 0.3 \text{ mm max.}$

- 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**.



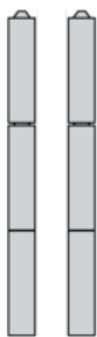
**Mounting of Adapter (Socket) ZBZ01•**

- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 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

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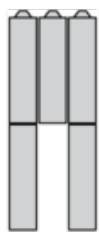


Electrical Composition Corresponding to Code C4



Electrical Composition Corresponding to Code C5

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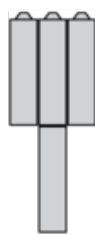
Electrical Composition Corresponding to Code C6

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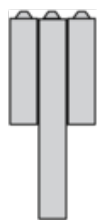
Electrical Composition Corresponding to Code C7

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Electrical Composition Corresponding to Code C8

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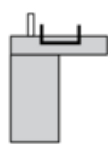
Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1

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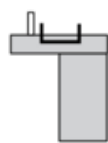


Electrical Composition Corresponding to Code C15

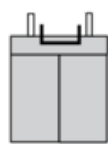
1 N/O



1 N/C



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



Legend

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Single contact



Double contact



Light block



Possible location



Sequence of Contacts Fitted to 2-position Selector Switch Body

Position 315°



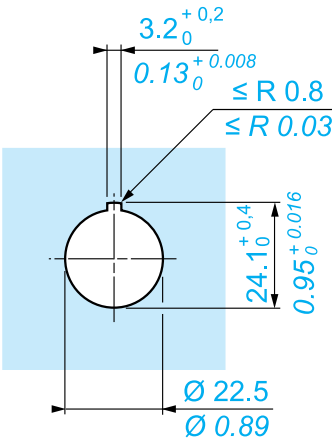
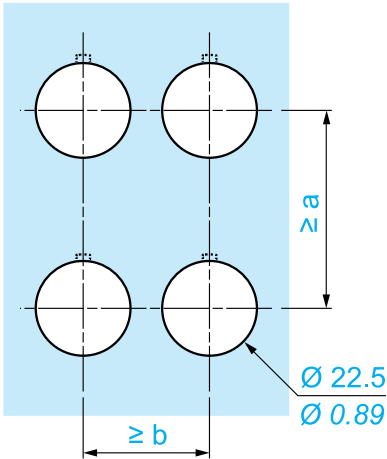
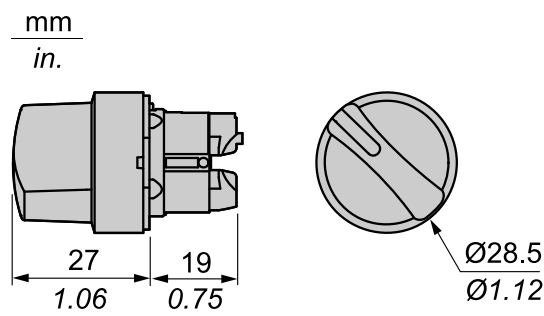
|          |          |        |             |             |             |
|----------|----------|--------|-------------|-------------|-------------|
| Push     | Position | Top    | <div></div> |             |             |
|          |          | Bottom | <div></div> | <div></div> | <div></div> |
|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

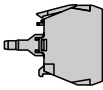
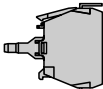
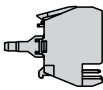
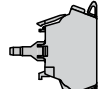
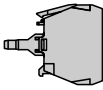
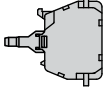
Position 45°



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

Dimensions



|                                                                                     |                                                                                     | a (mm) | a (in.) | b (mm) | b (in.) |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|---------|--------|---------|
|    |    | 40     | 1.57    | 30     | 1.18    |
| ZBE●●●●●                                                                            | ZBV●●●●●                                                                            |        |         |        |         |
|    |    | 45     | 1.77    | 32     | 1.26    |
| ZBE●●●●●3                                                                           | ZBV●●●●●3                                                                           |        |         |        |         |
|  |  | 40     | 1.57    | 30     | 1.18    |
| ZBE●●●●●4                                                                           | ZBV●●●●●4                                                                           |        |         |        |         |
|  |  | 50     | 1.97    | 30     | 1.18    |
| ZBE●●●●●5                                                                           | ZBV●●●●●5                                                                           |        |         |        |         |
|  |  | 40     | 1.57    | 30     | 1.18    |
| ZBE●●●●●9                                                                           | ZBV●●●●●9                                                                           |        |         |        |         |
|  |  | 40     | 1.57    | 30     | 1.18    |
| ZBRT●                                                                               | ZBRV1                                                                               |        |         |        |         |

Recommended replacement(s)