

# Product datasheet

Specifications



## Head for selector switch, 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 |

|                                           |                                                                                                                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Overvoltage category</b>               | Class II conforming to IEC 60536                                                                                                                                               |
| <b>IP degree of protection</b>            | IP67 conforming to IEC 60529<br>IP69 conforming to IEC 60529<br>IP69K                                                                                                          |
| <b>NEMA degree of protection</b>          | NEMA 13<br>NEMA 4X                                                                                                                                                             |
| <b>Resistance to high pressure washer</b> | 7000000 Pa at 55 °C, distance : 0.1 m                                                                                                                                          |
| <b>IK degree of protection</b>            | IK06 conforming to IEC 50102                                                                                                                                                   |
| <b>Standards</b>                          | JIS C8201-5-1<br>CSA C22.2 No 14<br>UL 508<br>IEC 60947-1<br>IEC 60947-5-4<br>IEC 60947-5-1<br>JIS C8201-1                                                                     |
| <b>Product certifications</b>             | DNV<br>CSA<br>BV<br>LROS (Lloyds register of shipping)<br>UL listed                                                                                                            |
| <b>Vibration resistance</b>               | 5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6                                                                                                                               |
| <b>Shock resistance</b>                   | 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

|                                     |           |
|-------------------------------------|-----------|
| <b>Unit Type of Package 1</b>       | PCE       |
| <b>Number of Units in Package 1</b> | 1         |
| <b>Package 1 Height</b>             | 3.700 cm  |
| <b>Package 1 Width</b>              | 5.400 cm  |
| <b>Package 1 Length</b>             | 6.000 cm  |
| <b>Package 1 Weight</b>             | 24.000 g  |
| <b>Unit Type of Package 2</b>       | BB1       |
| <b>Number of Units in Package 2</b> | 5         |
| <b>Package 2 Height</b>             | 5.000 cm  |
| <b>Package 2 Width</b>              | 3.400 cm  |
| <b>Package 2 Length</b>             | 26.500 cm |
| <b>Package 2 Weight</b>             | 121.000 g |
| <b>Unit Type of Package 3</b>       | S03       |
| <b>Number of Units in Package 3</b> | 200       |
| <b>Package 3 Height</b>             | 30.000 cm |
| <b>Package 3 Width</b>              | 30.000 cm |
| <b>Package 3 Length</b>             | 40.000 cm |
| <b>Package 3 Weight</b>             | 5.304 kg  |

## Logistical informations

|                          |    |
|--------------------------|----|
| <b>Country of origin</b> | FR |
|--------------------------|----|

# Contractual warranty

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Warranty

18 months

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

Carbon footprint (kg.eq.CO2 per CR, Total Life cycle) 1

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard No

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

REACH Regulation [REACH Declaration](#)

## Use Again

### Repack and remanufacture

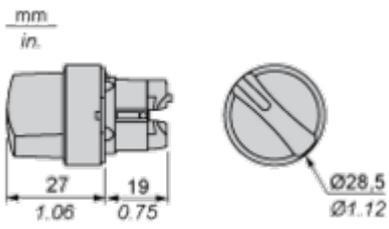
Circularity Profile [End of Life Information](#)

Take-back No

Dimensions Drawings

Dimensions

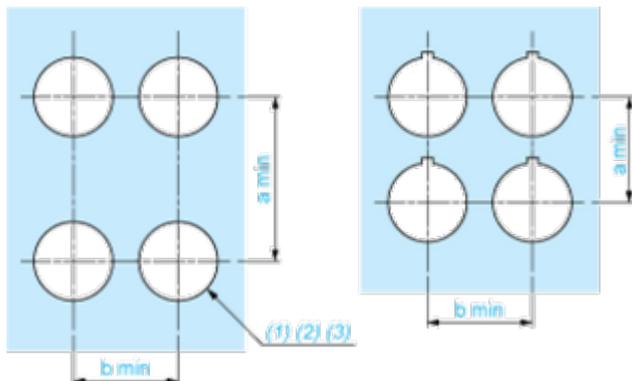
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Mounting and Clearance

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

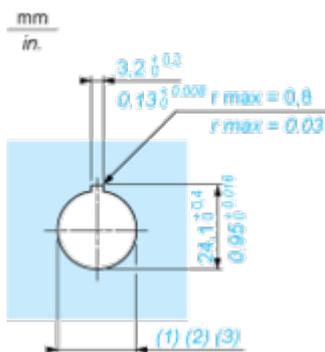
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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     |

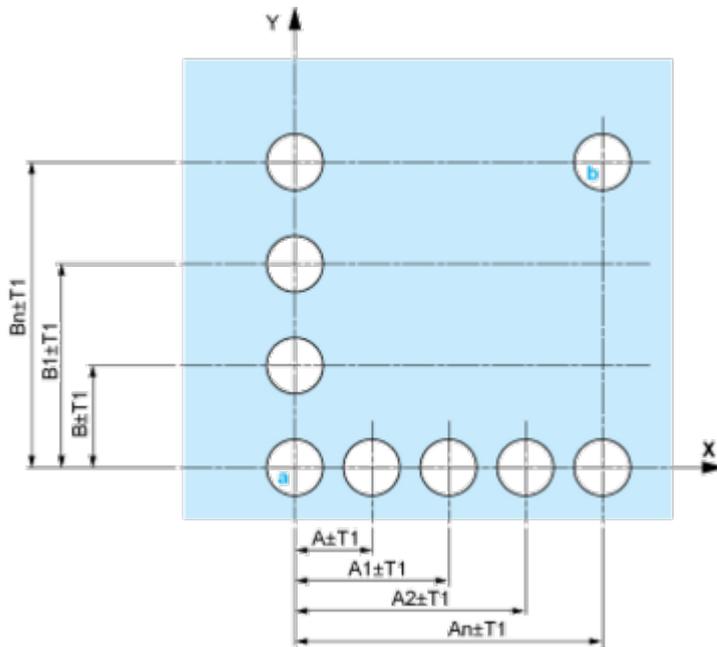
Detail of Lug Recess



- (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)

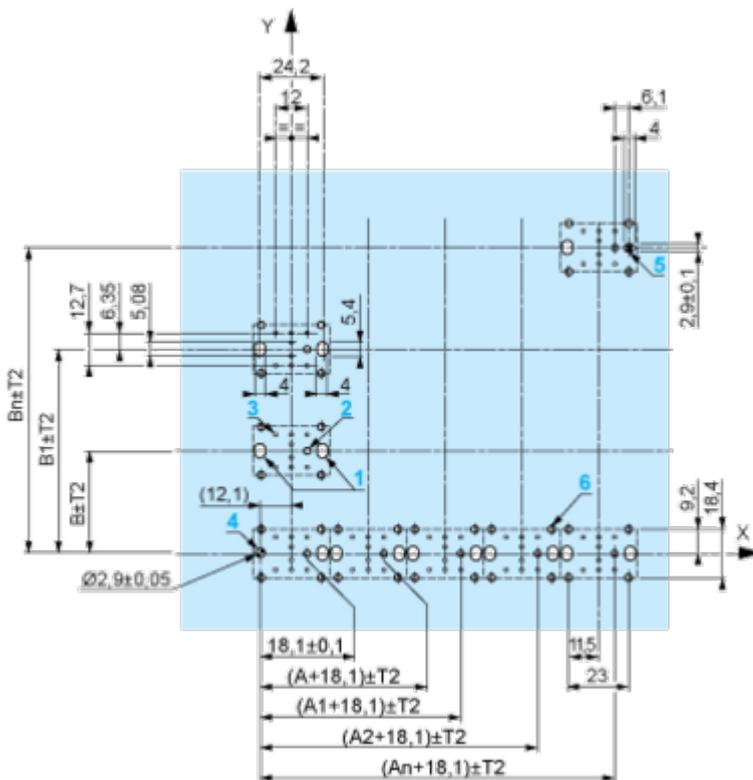


A: 30 mm min. / 1.18 in. min.

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

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

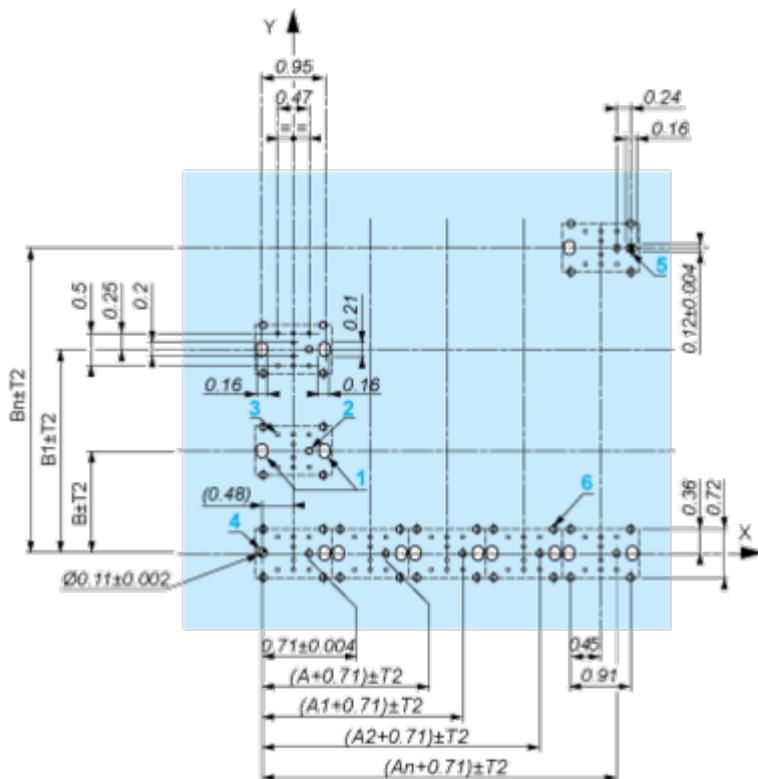
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.  
 B: 1.57 in. min.

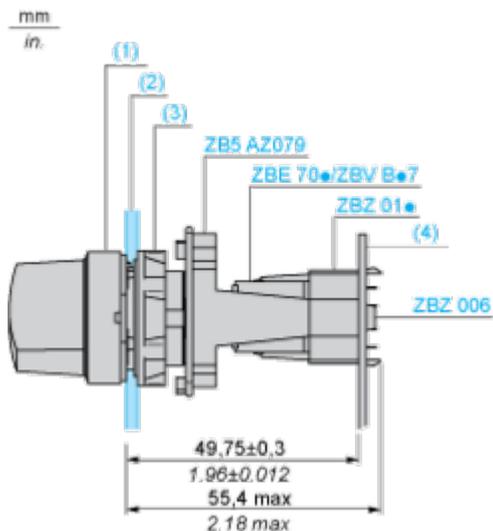
**General Tolerances of the Panel and Printed Circuit Board**

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.: T1 + T2 = 0.3 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 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•.

Technical Description

Electrical Composition Corresponding to Code C3

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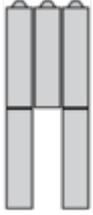
Electrical Composition Corresponding to Code C4

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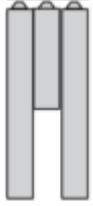
Electrical Composition Corresponding to Code C5

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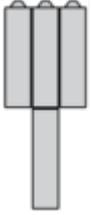
Electrical Composition Corresponding to Code C6

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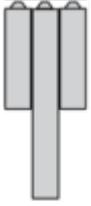
Electrical Composition Corresponding to Code C7

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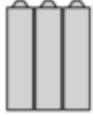


Electrical Composition Corresponding to Code C8

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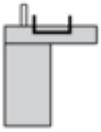
Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1



Electrical Composition Corresponding to Code C15

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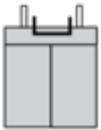
1 N/O



1 N/C



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



**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°



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

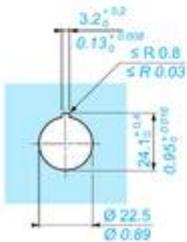
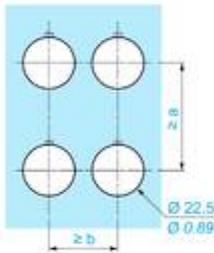
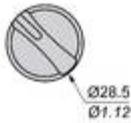
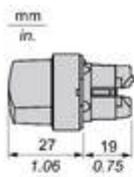
Position 45°



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

Technical Illustration

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     |        |         |        |         |

Offer Marketing Illustration

Product benefits / Features

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### Features Harmony XB5



- 

Quick and easy assembly and disassembly
- 

Excellent mechanical connection with operator head
- 

Various types of connection: screw clamp, connector, Faston connector, spring terminal, or printed circuit board
- 

Large set of accessories to customize your panels
- 

Robustness to withstand harsh environments

Offer Marketing Illustration

Product benefits / Features

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## Technical Benefits

Harmony XB5

Conformity with IEC, UL, CSA, CCC EAC, and JIS standards, as well as CE marking and marine approvals

Up to IP66, 67, 69, 69K, and type 4X protection ratings

High vibration resistance with shake-proof terminal screws



Operating temperature from -40°C to 70°C

Shock protection level up to IK06

Secure switching of inductive or heavy DC loads directly – 100 000 operations at 10A, 24V dc

Image of product / Alternate images

Alternative

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Image of product in real life situation

