

# Product datasheet

Specifications



Head for key selector switch,  
Harmony XB5, Ø22 mm 3 position  
spring return Dom 8D1

ZB5AG06D

⚠ Discontinued on: 1 Jul 2020

⚠ Discontinued

## Main

|                               |                              |
|-------------------------------|------------------------------|
| Range Of Product              | Harmony XB5                  |
| Product Or Component Type     | Head for key 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              | Left to centre spring return |
| Operator Profile              | Black key switch             |
| Operator Position Information | 3 positions +/- 45°          |
| Type Of Keylock               | Dom 8D1                      |
| Key Withdrawal Position       | Center                       |

## Complementary

|                             |   |
|-----------------------------|---|
| Cad Overall Width           | 29 mm   |
| Cad Overall Height          | 29 mm   |
| Cad Overall Depth           | 72 mm   |
| Net Weight                  | 0.057 kg  |
| Mechanical Durability       | 1000000 cycles  |
| Station Name                | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs  |
| Electrical Composition Code | 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>C3 for <6 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 |
|----------------------|----|

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                                       |  |
|---------------------------------------|--|
| 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                             | UL 508<br>EN/IEC 60947-5-4<br>EN/IEC 60947-1<br>CSA C22.2 No 14<br>EN/IEC 60947-5-1<br>JIS C8201-5-1<br>JIS C8201-1  |
| Product Certifications                | LROS (Lloyds register of shipping)<br>BV<br>DNV<br>CSA<br>GL<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 |

## Contractual warranty

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

Sustainability



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Transparency   RoHS/REACH

## Well-being performance

✓

Mercury Free

✓

Rohs Exemption Information

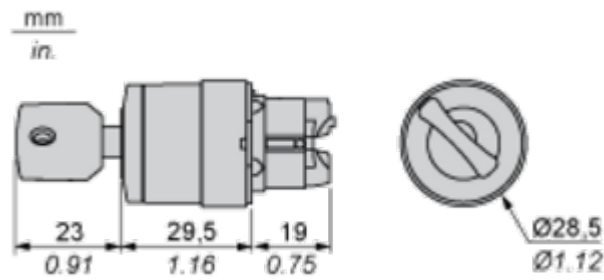
Yes

## Certifications & Standards

|                          |  |
|--------------------------|--|
| Reach Regulation         | <a href="#">REACH Declaration</a>                          |
| Eu Rohs Directive        | Pro-active compliance (Product out of EU RoHS legal scope) |
| 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>                    |

Dimensions Drawings

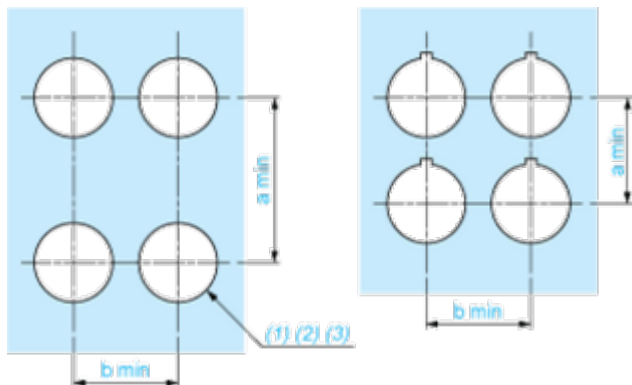
Dimensions



Mounting and Clearance

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

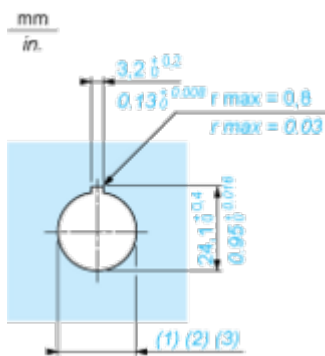
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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 ( $\text{Ø}22.3 \begin{smallmatrix} +0.4 \\ 0 \end{smallmatrix}$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in.} \begin{smallmatrix} +0.016 \\ 0 \end{smallmatrix}$ )

| 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     |

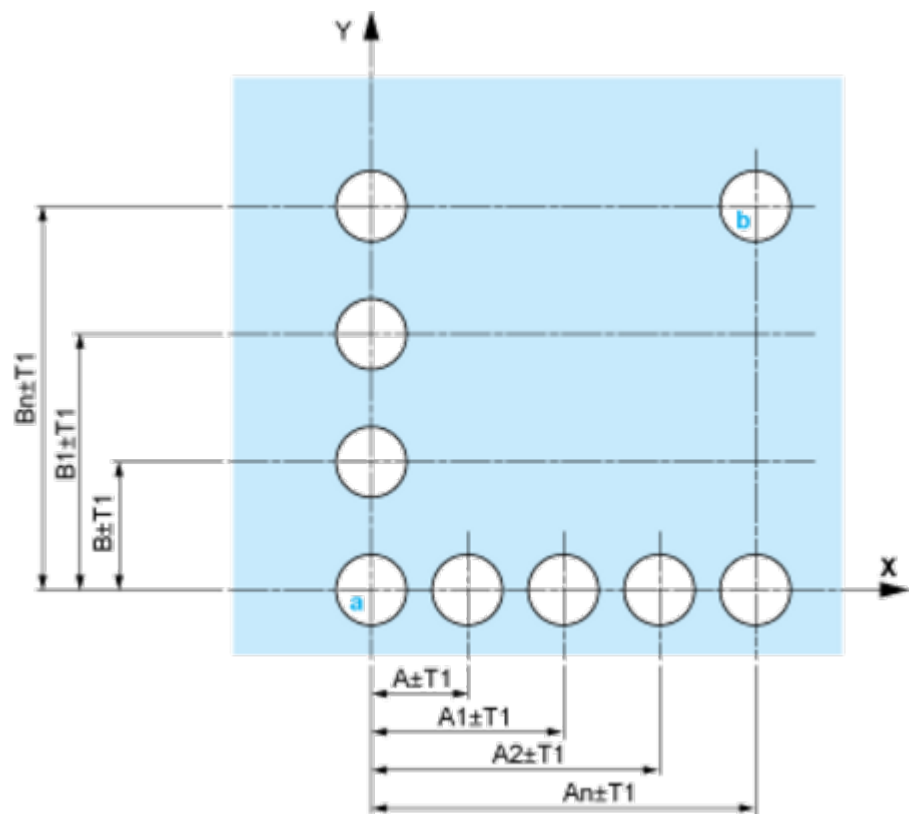
Detail of Lug Recess



- (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 ( $\text{Ø}22.3 \begin{smallmatrix} +0.4 \\ 0 \end{smallmatrix}$ ) / Ø0.89 in. recommended ( $\text{Ø}0.88 \text{ in.} \begin{smallmatrix} +0.016 \\ 0 \end{smallmatrix}$ )

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.

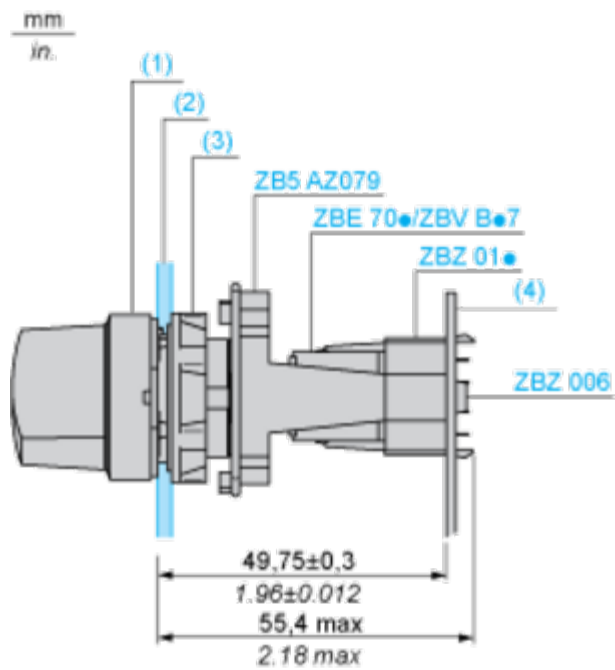
General Tolerances of the Panel and Printed Circuit Board

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  $\pm 0.1$  / 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 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•.

Technical Description

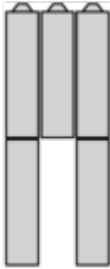
Electrical Composition Corresponding to Code C4

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Electrical Composition Corresponding to Code C5

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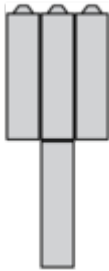
Electrical Composition Corresponding to Code C6

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Electrical Composition Corresponding to Code C7

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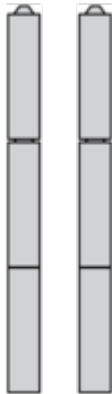
Electrical Composition Corresponding to Code C8

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Electrical Composition Corresponding to Code C3

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



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

Position 0°



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

Position 45°



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