

# Product data sheet

## Characteristics

# ZB5AK1833C0

Harmony XB5, Illuminated selector switch head, plastic, green, Ø22, integral LED, 3 positions, spring return from right to center, grey bezel



### Main

|                               |                                      |
|-------------------------------|--------------------------------------|
| Range of product              | Harmony XB5                          |
| Product or component type     | Head for illuminated selector switch |
| Product compatibility         | Integral LED                         |
| Device short name             | ZB5                                  |
| Bezel material                | Plastic colour plated grey           |
| Mounting diameter             | 22 mm                                |
| Head type                     | Standard                             |
| Sale per indivisible quantity | 1                                    |
| Shape of signaling unit head  | Round                                |
| Type of operator              | Right to centre spring return        |
| Operator profile              | Green standard handle                |
| Operator position information | 3 positions +/- 45°                  |

### Complementary

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD overall width           | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall height          | 29 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CAD overall depth           | 43 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Net weight                  | 0.016 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Mechanical durability       | 1000000 cycles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Station name                | XALD 1...5 cut-outs<br>XALK 2...5 cut-outs                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electrical composition code | M3 for <4 contacts using single 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>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>M4 for <4 contacts using single and double blocks in front mounting with integral LED |
| 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               | IP66 conforming to IEC 60529<br>IP67  |
| 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>CSA C22.2 No 14<br>EN/IEC 60947-5-5<br>JIS C8201-5-1<br>EN/IEC 60947-5-4<br>EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>JIS C8201-1                                        |
| Product certifications | UL listed<br>GL<br>BV<br>DNV<br>LROS (Lloyds register of shipping)<br>RINA<br>CSA                                                                                              |
| 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

|                  |          |
|------------------|----------|
| Package 1 Weight | 24.000 g |
| Package 1 Height | 4.200 cm |
| Package 1 width  | 3.300 cm |
| Package 1 Length | 5.200 cm |

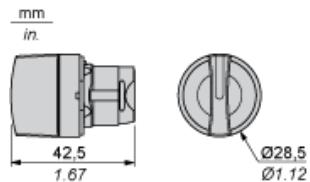
### Offer Sustainability

|                            |                                                                                                                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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)  <a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free     | Yes                                                                                                                                                                                  |
| Mercury free               | Yes                                                                                                                                                                                  |
| RoHS exemption information |  <a href="#">Yes</a>                                                                              |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>                                                           |

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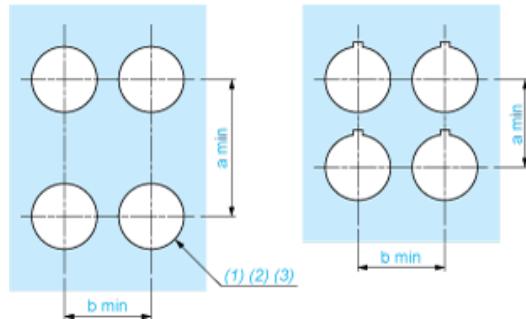
Dimensions

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

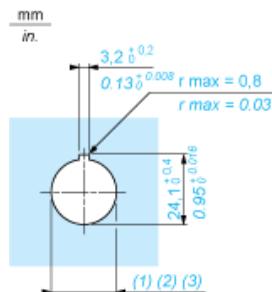
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (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) Ø22.5 mm recommended ( $\varnothing 22.3 \text{ mm}^{+0.4}$ ) / Ø0.89 in. recommended ( $\varnothing 0.88 \text{ in.}^{+0.016}$ )

| 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     |

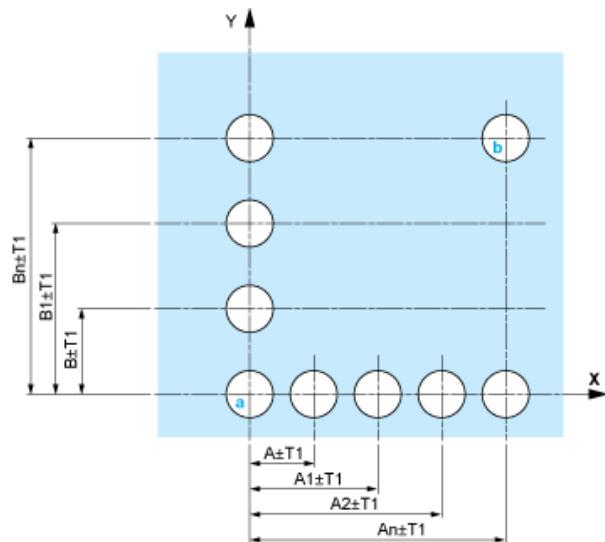
Detail of Lug Recess



- (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 ( $\varnothing 22.3 \text{ mm}^{+0.4}$ ) / Ø0.89 in. recommended ( $\varnothing 0.88 \text{ in.}^{+0.016}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

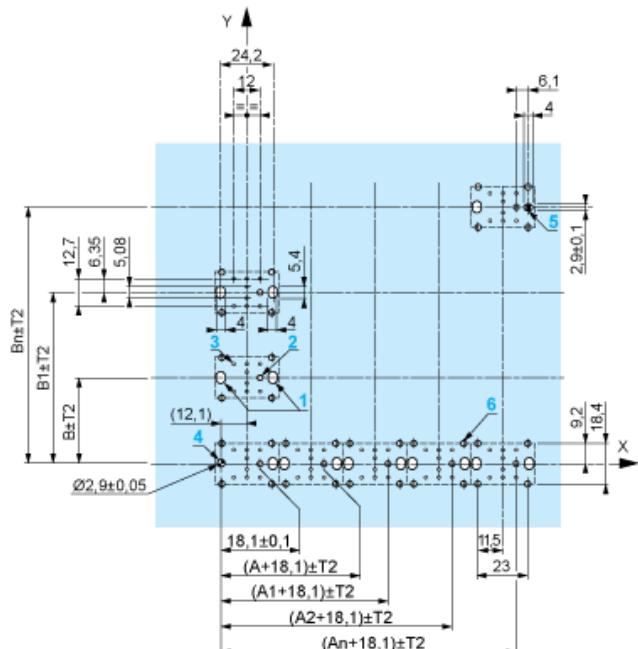


A: 30 mm min. / 1.18 in. min.

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:  $22.4 \text{ mm} \pm 0.1$  /  $0.88 \text{ in.} \pm 0.004$
- 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•

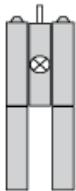
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the 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•.

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Electrical Composition Corresponding to Code M3

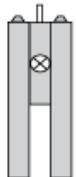
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Electrical Composition Corresponding to Code M4

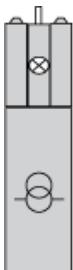
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Electrical Composition Corresponding to Codes M6 and P2

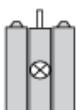
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Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2

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Legend

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Single contact



Double contact



Light block



Possible location



### Sequence of Contacts Fitted to 3-position Selector Switch Body

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Position 315°



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

Position 0°



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

## Position 45°



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