# Product data sheet
## Characteristics

# ZB5AK1583C0
## Harmony XB5, Illuminated selector switch head, plastic, yellow, Ø22, integral LED, 3 positions, spring return 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 |
| Sale per indivisible quantity | 1 |
| Shape of signaling unit head | Round |
| Type of operator | To centre spring return |
| Operator profile | Yellow 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 | EN/IEC 60947-5-5<br>EN/IEC 60947-1<br>JIS C8201-5-1<br>EN/IEC 60947-5-4<br>UL 508<br>CSA C22.2 No 14<br>EN/IEC 60947-5-1<br>JIS C8201-1 |
| Product certifications | LROS (Lloyds register of shipping)<br>CSA<br>UL listed<br>RINA<br>BV<br>DNV<br>GL |
| 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 |

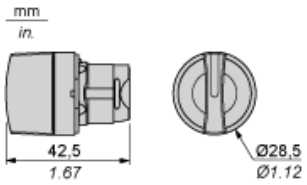
## Packing Units

| | |
|---|---|
| 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

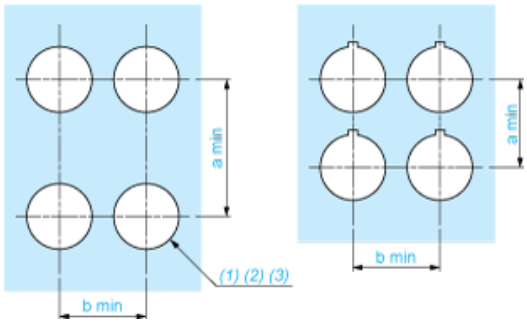
| | |
|---|---|
| REACh Regulation | REACh Declaration |
| REACh free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |

## Dimensions



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

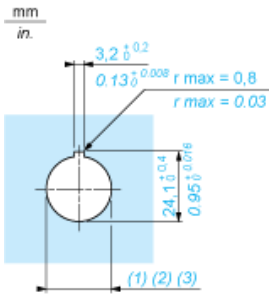
### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board




(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 $_{0}^{+0.4}$) / Ø0.89 in. recommended (Ø0.88 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
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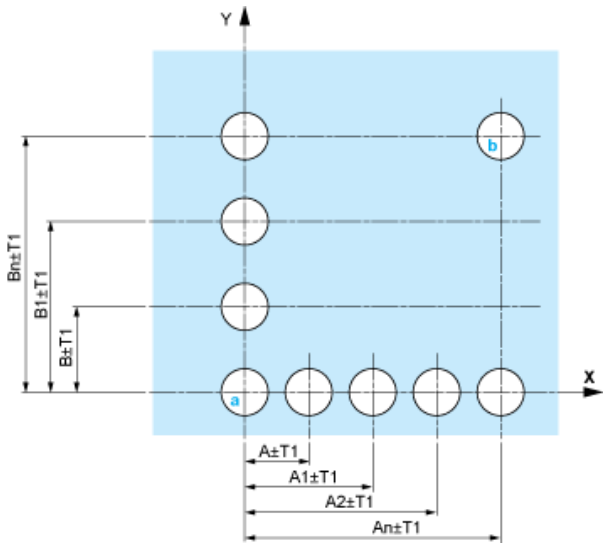
## Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

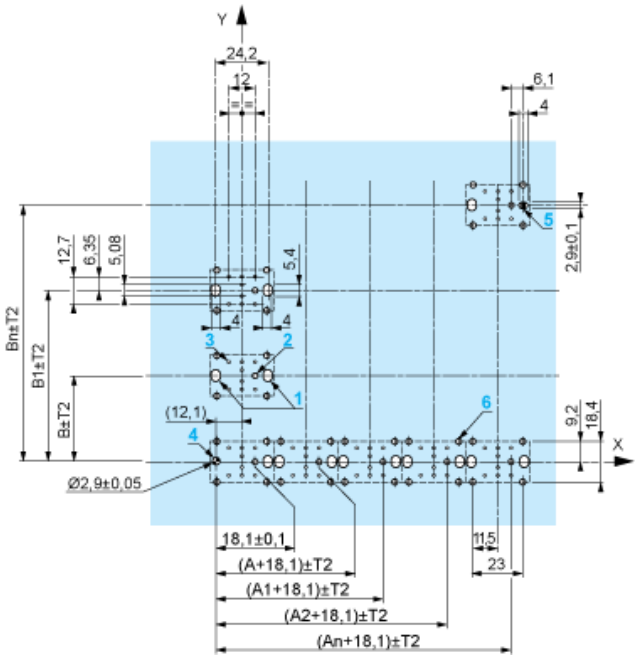
## Panel Cut-outs (Viewed from Installer's Side)




A: 30 mm min. / 1.18 in. min.
B: 40 mm min. / 1.57 in. min.

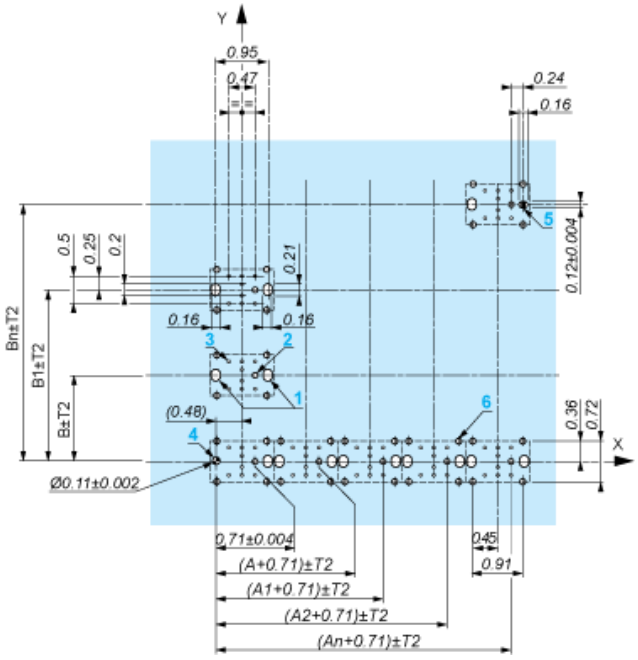
## Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm




A: 30 mm min.
B: 40 mm min.

Dimensions in in.




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

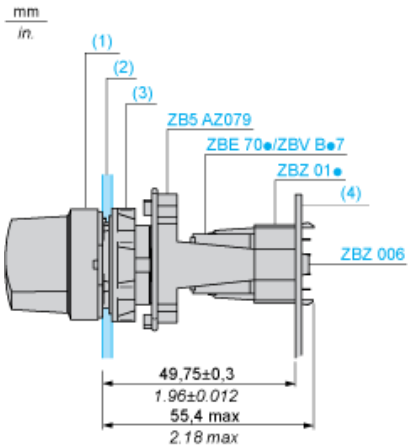
## General Tolerances of the Panel and Printed Circuit Board

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.



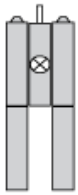

(1) Head ZB5AD•
(2) Panel
(2) Nut
(4) Printed circuit board

## Mounting of Adapter (Socket) ZBZ01•

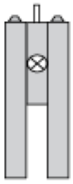
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the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

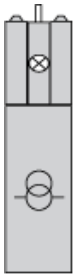
## Electrical Composition Corresponding to Code M3



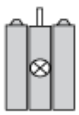
## Electrical Composition Corresponding to Code M4



## 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

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

### 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 | | |