

# ZB4BP4

Push button head, metal, projecting, red, Ø22,  
spring return, booted, unmarked



## Main

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Range of product                | Harmony XB4                          |
| Product or component type       | Head for non-illuminated push-button |
| Device short name               | ZB4                                  |
| Product compatibility           | not compatible with legend holder    |
| Bezel material                  | Chromium plated metal                |
| Mounting diameter               | 22 mm                                |
| Sale per indivisible quantity   | 1                                    |
| Head type                       | Standard                             |
| Shape of signaling unit head    | Round                                |
| Type of operator                | spring return                        |
| Operator profile                | Red projecting, unmarked             |
| Operator additional information | Clear boot                           |

## Complementary

|                             |                                                                                                                                                                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD overall width           | 30 mm                                                                                                                                                                                                                                                     |
| CAD overall height          | 30 mm                                                                                                                                                                                                                                                     |
| CAD overall depth           | 35 mm                                                                                                                                                                                                                                                     |
| Mechanical durability       | 10000000 cycles                                                                                                                                                                                                                                           |
| Electrical composition code | C1 for <9 contacts using single blocks in front mounting<br>C2 for <9 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 |
| 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 I conforming to IEC 60536                                                                                                                                                |
| IP degree of protection               | IP66 conforming to IEC 60529<br>IP67                                                                                                                                           |
| NEMA degree of protection             | NEMA 13<br>NEMA 4X                                                                                                                                                             |
| IK degree of protection               | IK06 conforming to IEC 50102                                                                                                                                                   |
| Standards                             | UL 508<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-1<br>EN/IEC 60947-1<br>EN/IEC 60947-5-5<br>JIS C8201-5-1<br>CSA C22.2 No 14<br>JIS C8201-1                                        |
| Product certifications                | RINA<br>BV<br>GL<br>UL listed<br>CSA<br>LROS (Lloyds register of shipping)<br>DNV                                                                                              |
| 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       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 32 g     |
| Package 1 Height             | 3.4 cm   |
| Package 1 width              | 4.5 cm   |
| Package 1 Length             | 5.4 cm   |
| Unit Type of Package 2       | BB1      |
| Number of Units in Package 2 | 5        |
| Package 2 Weight             | 1.16 kg  |
| Package 2 Height             | 3.4 cm   |
| Package 2 width              | 4.5 cm   |
| Package 2 Length             | 26.5 cm  |
| Unit Type of Package 3       | S03      |
| Number of Units in Package 3 | 300      |
| Package 3 Weight             | 10.08 kg |
| Package 3 Height             | 30 cm    |
| Package 3 width              | 30 cm    |
| Package 3 Length             | 40 cm    |

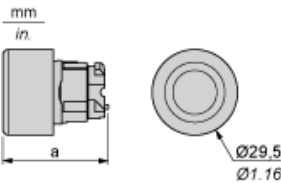
## Offer Sustainability

|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| 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                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                            |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                     |

Contractual warranty

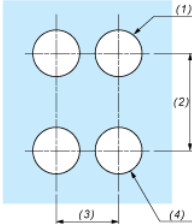
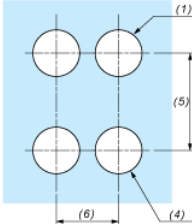
|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions



|          | a in mm | a in in. |
|----------|---------|----------|
| ZB4BP••  | 36.5    | 1.44     |
| ZB4BP•S  | 33      | 1.30     |
| ZB4BP•83 | 32      | 1.26     |
| ZB4BP•   | 35      | 1.38     |

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                                                                                                                                                                                                                                                                                                                                                                                                 | Connection by Faston Connectors                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| <div><div>(1)</div><div>Diameter on finished panel or support</div></div> <div><div>(2)</div><div>40 mm min. / 1.57 in. min.</div></div> <div><div>(3)</div><div>30 mm min. / 1.18 in. min.</div></div> <div><div>(4)</div><div>Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm <math>_{0}^{+0.4}</math> / 0.88 in. <math>_{0}^{+0.016}</math>)</div></div> <div><div>(5)</div><div>45 mm min. / 1.78 in. min.</div></div> <div><div>(6)</div><div>32 mm min. / 1.26 in. min.</div></div> |                                                                                    |

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

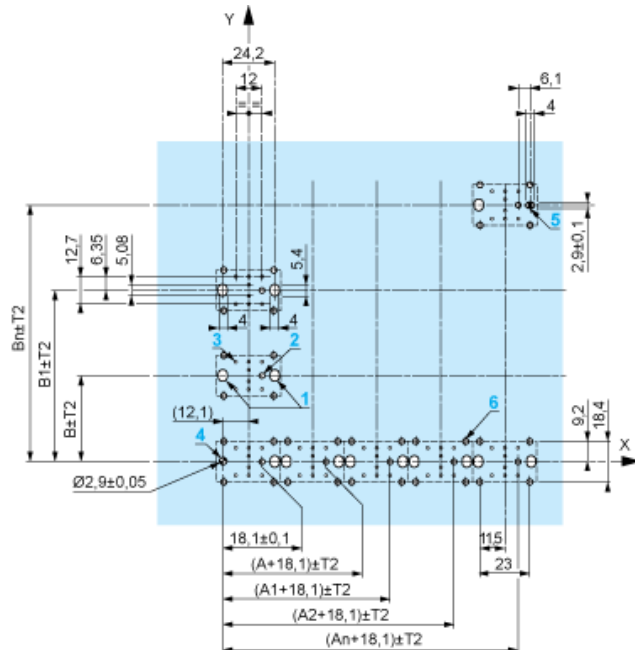
### Panel Cut-outs (Viewed from Installer's Side)



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

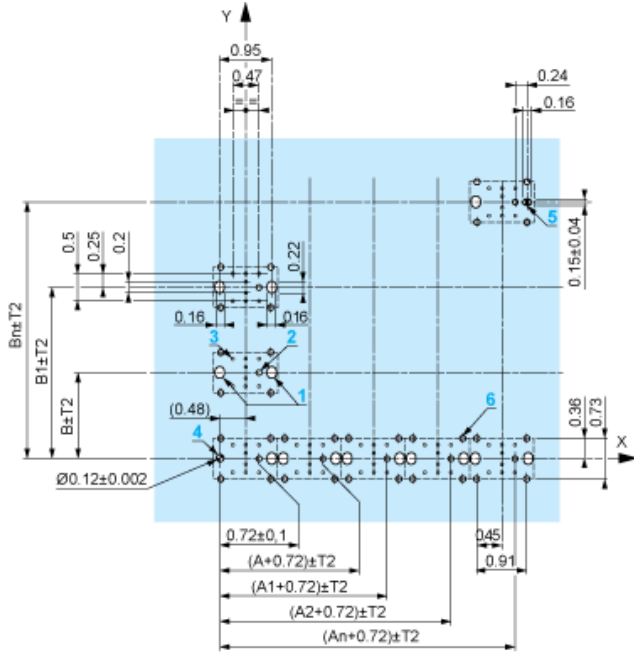
### Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm



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

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

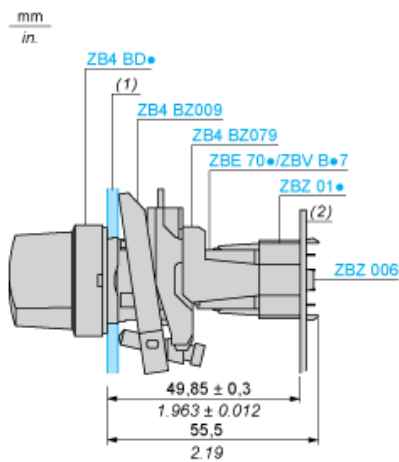
## General Tolerances of the Panel and Printed Circuit Board

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 ZB4 BZ009:  $\pm$  2°30' (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ 006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB4 BZ079 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 (ZB4 BD•, ZB4 BJ•, ZB4 BG•).

The fixing centers marked a and b are diagonally opposed and must align with those marked 4 and 5.



(1) Panel

(2) Printed circuit board

### Mounting of Adapter (Socket) ZBZ 01•

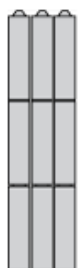
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01•
- 3 8  $\times \varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- 4 1 hole  $\varnothing 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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  $\varnothing 2.4 \text{ mm} / 0.09 \text{ in.}$  for clipping in adapter ZBZ 01•

Dimensions An + 18.1 relate to the  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  holes for centring adapter ZBZ 01•.

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Electrical Composition Corresponding to Code C1

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Electrical Composition Corresponding to Code C2



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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



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Legend

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Single contact



Double contact



Light block



Possible location

