

# ZB4BW31

white flush illuminated pushbutton head Ø22  
spring return for BA9s bulb



## Main

|                                 |                                  |
|---------------------------------|----------------------------------|
| Range of product                | Harmony XB4                      |
| Product or component type       | Head for illuminated push-button |
| Device short name               | ZB4                              |
| Product compatibility           | BA 9s                            |
| Bezel material                  | Chromium plated metal            |
| Head type                       | Standard                         |
| Mounting diameter               | 22 mm                            |
| Sale per indivisible quantity   | 1                                |
| Shape of signaling unit head    | Round                            |
| Type of operator                | Spring return                    |
| Operator profile                | White flush, unmarked            |
| Operator additional information | With plain lens                  |

## Complementary

|                                    |                                                                                                                                                                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAD overall width                  | 29 mm                                                                                                                                                                                                                                        |
| CAD overall height                 | 29 mm                                                                                                                                                                                                                                        |
| CAD overall depth                  | 32 mm                                                                                                                                                                                                                                        |
| Net weight                         | 0.027 kg                                                                                                                                                                                                                                     |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance : 0.1 m                                                                                                                                                                                                        |
| Mechanical durability              | 10000000 cycles                                                                                                                                                                                                                              |
| Electrical composition code        | M7 for <6 contacts using single blocks in front mounting with BA 9s<br>M8 for <6 contacts using single and double blocks in front mounting with BA 9s<br>M9 for <2 contacts using single blocks in front mounting with BA 9s and transformer |
| Device presentation                | Basic sub-assemblies                                                                                                                                                                                                                         |

## Environment

|                                       |                                                                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Protective treatment                  | TH                                                                                                                                      |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                             |
| Ambient air temperature for operation | -40...55 °C                                                                                                                             |
| Overvoltage category                  | Class I 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                                                                                                                      |
| IK degree of protection               | IK06 conforming to EN 50102                                                                                                             |
| Standards                             | CSA C22.2 No 14<br>JIS C8201-5-1<br>UL 508<br>EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>EN/IEC 60947-5-5<br>EN/IEC 60947-5-4<br>JIS C8201-1 |

|                        |                                                                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product certifications | GL<br>UL listed<br>RINA<br>DNV<br>CSA<br>LROS (Lloyds register of shipping)<br>BV                                                                                              |
| 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             | 28 g   |
| Package 1 Height             | 5.6 cm |
| Package 1 width              | 3.4 cm |
| Package 1 Length             | 4.5 cm |
| Unit Type of Package 2       | S01    |
| Number of Units in Package 2 | 50     |
| Package 2 Weight             | 1.6 kg |
| Package 2 Height             | 15 cm  |
| Package 2 width              | 15 cm  |
| Package 2 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) <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>                                                    |
| Circularity Profile        | <a href="#"> End Of Life Information</a>                                                          |

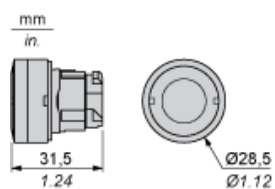
## Contractual warranty

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

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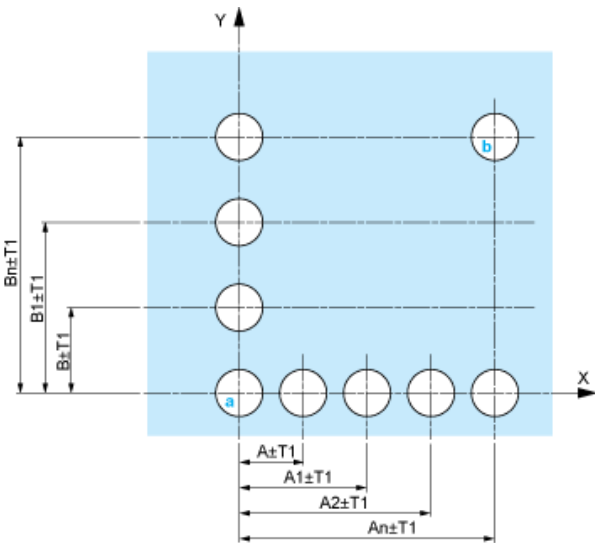


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

| Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board                                                                                                                                                                                                                            | Connection by Faston Connectors |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
|                                                                                                                                                                                                                                                                                                                  |                                 |
| <p>(1) Diameter on finished panel or support<br/>(2) 40 mm min. / 1.57 in. min.<br/>(3) 30 mm min. / 1.18 in. min.<br/>(4) 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>)<br/>(5) 45 mm min. / 1.78 in. min.<br/>(6) 32 mm min. / 1.26 in. min.</p> |                                 |

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:  $T1 + T2 = 0.3 \text{ mm max.}$

## 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:  $\pm 2^\circ 30'$  (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•

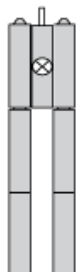
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01•
- 3 8 ×  $\varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- 4 1 hole  $\varnothing 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , 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 Codes M1 and M7

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Electrical Composition Corresponding to Codes M2 and M8

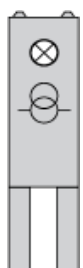
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Electrical Composition Corresponding to Code M9

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Legend

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Single contact



Double contact



Light block



Possible location

