

# Product data sheet

## Characteristics

### ZB4BG77

Head for key selector switch, Harmony XB4,  
Ø22 mm 3 position spring return 455



#### Main

|                               |                              |
|-------------------------------|------------------------------|
| Range of product              | Harmony XB4                  |
| Product or component type     | Head for key selector switch |
| Device short name             | ZB4                          |
| Bezel material                | Black metal                  |
| Mounting diameter             | 22 mm                        |
| Head type                     | Standard                     |
| Sale per indivisible quantity | 1                            |
| Shape of signaling unit head  | Round                        |
| Return                        | To centre                    |
| Operator profile              | Black key switch             |
| Type of operator              | Spring return                |
| Operator position information | 3 positions +/- 45°          |
| Type of keylock               | Ronis 455                    |
| Key withdrawal position       | Center                       |

#### Complementary

|                                    |  |
|------------------------------------|--|
| CAD overall width                  | 29 mm  |
| CAD overall height                 | 29 mm  |
| CAD overall depth                  | 72 mm  |
| Net weight                         | 0.098 kg   |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance : 0.1 m  |
| Mechanical durability              | 1000000 cycles   |
| Electrical composition code        | C3 for <6 contacts using single blocks in front mounting<br>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 |
| 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<br>IP69<br>IP69K |
| NEMA degree of protection             | NEMA 13<br>NEMA 4X                                    |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                        |  |
|------------------------|--|
| Standards              | EN/IEC 60947-5-1<br>CSA C22.2 No 14<br>EN/IEC 60947-5-5<br>UL 508<br>EN/IEC 60947-5-4<br>EN/IEC 60947-1<br>GB 14048.5  |
| Product certifications | LROS (Lloyds register of shipping)<br>CSA<br>BV<br>DNV<br>UL listed<br>GL<br>RINA  |
| 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 | 0.069 kg |
| Package 1 Height | 0.880 dm |
| Package 1 width  | 0.340 dm |
| Package 1 Length | 0.540 dm |

## Offer Sustainability

|                            |  |
|----------------------------|--|
| Sustainable offer status   | Green Premium product  |
| REACH Regulation           | <input checked="" type="checkbox"/> <a href="#">REACH Declaration</a>  |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <input checked="" type="checkbox"/> <a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes  |
| RoHS exemption information | <input checked="" type="checkbox"/> <a href="#">Yes</a>  |
| China RoHS Regulation      | <input checked="" type="checkbox"/> <a href="#">China RoHS Declaration</a>   |
| Environmental Disclosure   | <input checked="" type="checkbox"/> <a href="#">Product Environmental Profile</a>  |
| Circularity Profile        | <input checked="" type="checkbox"/> <a href="#">End Of Life Information</a>  |

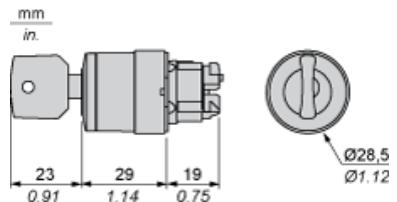
## Contractual warranty

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

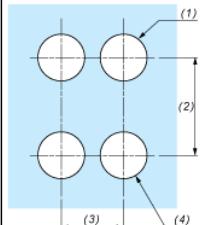
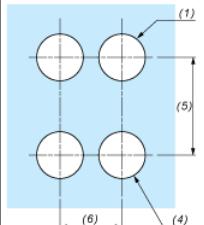
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Dimensions

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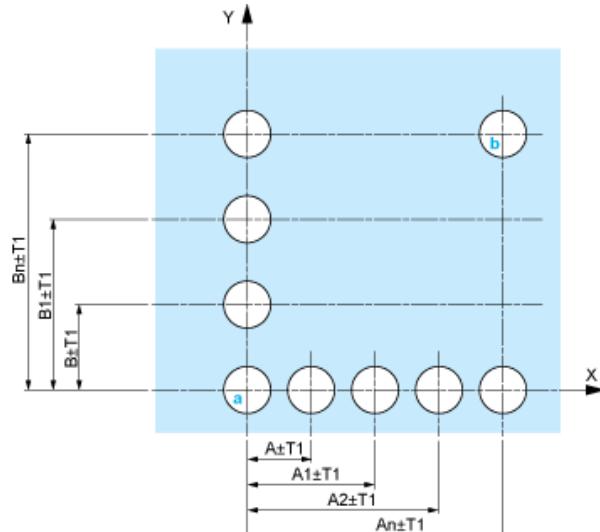
Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

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

(1) Diameter on finished panel or support  
 (2) 40 mm min. / 1.57 in. min.  
 (3) 30 mm min. / 1.18 in. min.  
 (4) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm  $^{+0.4}$  / 0.88 in.  $^{+0.016}$ )  
 (5) 45 mm min. / 1.78 in. min.  
 (6) 32 mm min. / 1.26 in. min.

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

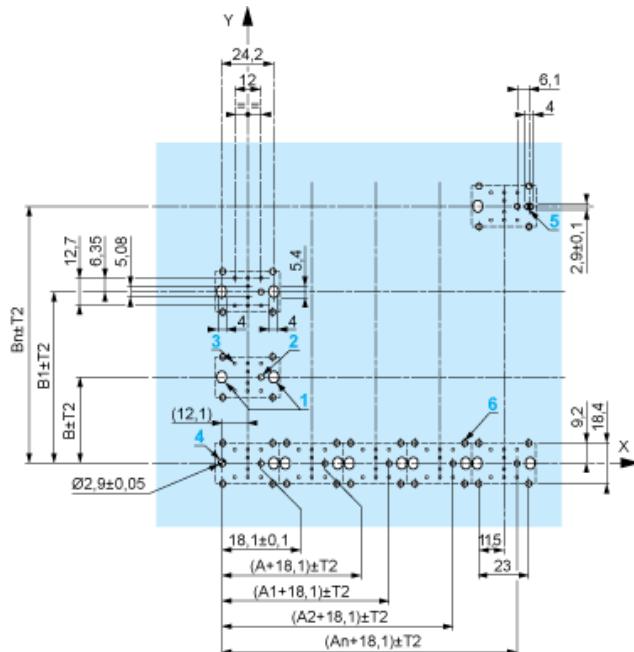


A: 30 mm min. / 1.18 in. min.

B: 40 mm min. / 1.57 in. min.

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

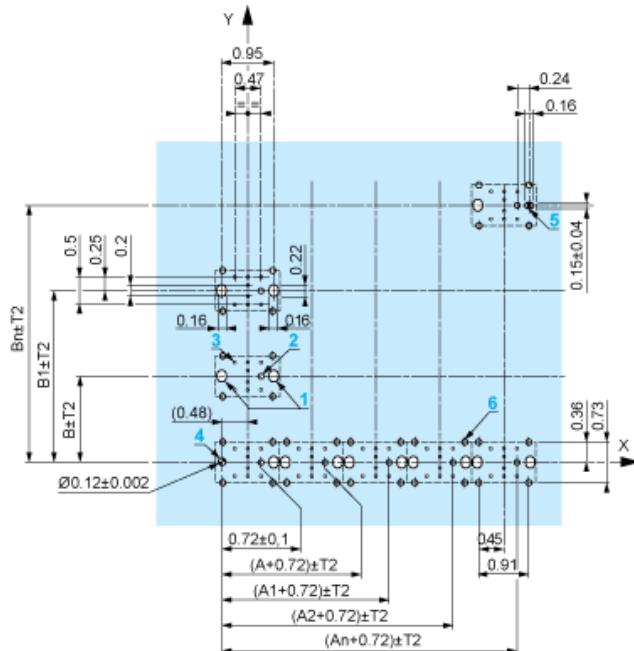
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

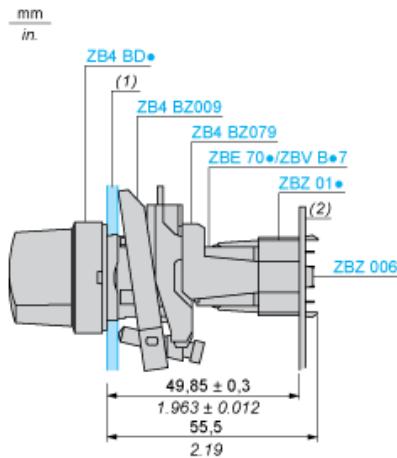
## General Tolerances of the Panel and Printed Circuit Board

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 ZB4 BZ009:  $\pm 2.30^\circ$  (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•

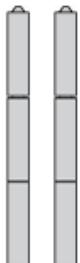
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ 01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ 01•

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ 01•.

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Electrical Composition Corresponding to Code C3

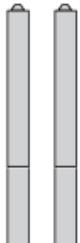
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Electrical Composition Corresponding to Code C4

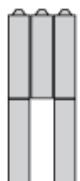
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Electrical Composition Corresponding to Code C5

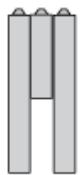
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Electrical Composition Corresponding to Code C6

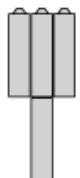
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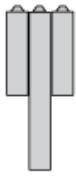
Electrical Composition Corresponding to Code C7

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## Electrical Composition Corresponding to Code C8

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

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

### Position 0°



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

### Position 45°



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