

# Product datasheet

Specifications



## SELECTOR SWITCH WITH 421E KEY

Local distributor code: 237249773    ZB4BG212

### Main

|                               |                              |
|-------------------------------|------------------------------|
| Range of product              | Harmony XB4                  |
| Product or component type     | Head for key selector switch |
| Device short name             | ZB4                          |
| Bezel material                | Chromium plated metal        |
| Mounting diameter             | 22 mm                        |
| Head type                     | Standard                     |
| Sale per indivisible quantity | 1                            |
| Shape of signaling unit head  | Round                        |
| Operator profile              | Black key switch             |
| Type of operator              | Stay put                     |
| Operator position information | 2 positions 90°              |
| Type of keylock               | Ronis 421E                   |
| Key withdrawal position       | Left                         |

### 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<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<br>IP69<br>IP69K                                                                                                                          |
| NEMA degree of protection             | NEMA 13<br>NEMA 4X                                                                                                                                                             |
| Standards                             | EN/IEC 60947-1<br>GB 14048.5<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-5<br>EN/IEC 60947-5-1<br>CSA C22.2 No 14<br>UL 508                                                          |
| Product certifications                | DNV<br>LROS (Lloyds register of shipping)<br>CSA<br>BV<br>UL listed<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

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Weight             | 103.0 g   |
| Package 1 Height             | 3.6 cm    |
| Package 1 width              | 5.5 cm    |
| Package 1 Length             | 9.2 cm    |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 100       |
| Package 2 Weight             | 10.799 kg |
| Package 2 Height             | 30 cm     |
| Package 2 width              | 30 cm     |
| Package 2 Length             | 40 cm     |
| Unit Type of Package 3       | BB1       |
| Number of Units in Package 3 | 5         |
| Package 3 Weight             | 522.0 g   |
| Package 3 Height             | 8.6 cm    |
| Package 3 width              | 26.5 cm   |
| Package 3 Length             | 3.3 cm    |

### Offer Sustainability

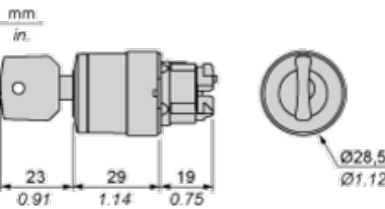
|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status | Green Premium product                                                                             |
| REACH Regulation         | <a href="#">REACH Declaration</a>                                                                 |
| EU RoHS Directive        | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |

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

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                                                                                                                                                                                                                                                                         | Connection by Faston Connectors                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                              |  |
| <div>(1) Diameter on finished panel or support</div> <div>(2) 40 mm min. / 1.57 in. min.</div> <div>(3) 30 mm min. / 1.18 in. min.</div> <div>(4) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm <sup>+0.4</sup><sub>0</sub> / 0.88 in. <sup>+0.016</sup><sub>0</sub>)</div> <div>(5) 45 mm min. / 1.78 in. min.</div> <div>(6) 32 mm min. / 1.26 in. min.</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 ± 0.1 / 0.88 in. ± 0.004
- Orientation of body/fixing collar ZB4 BZ009: ± 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 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•.

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

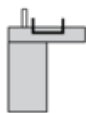
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Electrical Composition Corresponding to Code C15

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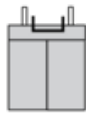
1 N/O



1 N/C



1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C



Legend

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Single contact



Double contact



Light block



Possible location



Sequence of Contacts Fitted to 2-position Selector Switch Body

Position 315°



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

Position 45°



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