

# Product data sheet

Specifications



## selector switch head Ø22 3-position spring return CES TEC10

ZB4BG05TEC10

⚠ Discontinued on: Oct 20, 2020

⚠ Discontinued

### 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                        |
| Return                        | Right to centre              |
| Operator Profile              | Black key switch             |
| Type Of Operator              | Spring return                |
| Operator Position Information | 3 positions +/- 45°          |
| Type Of Keylock               | CES TEC10                    |
| Key Withdrawal Position       | Center                       |

### Complementary

|                                    |  |
|------------------------------------|--|
| Cad Overall Width                  | 29 mm  |
| Cad Overall Height                 | 29 mm  |
| Cad Overall Depth                  | 72 mm  |
| Net Weight                         | 0.17 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 |
|----------------------|----|

Disclaimer: 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

|                                       |  |
|---------------------------------------|--|
| 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   |
| Ik Degree Of Protection               | IK06 with keyhole cover ZBGP conforming to IEC 50102   |
| Standards                             | EN/IEC 60947-5-5<br>CSA C22.2 No 14<br>UL 508<br>EN/IEC 60947-1<br>EN/IEC 60947-5-4<br>GB 14048.5<br>EN/IEC 60947-5-1  |
| Product Certifications                | GL<br>BV<br>LROS (Lloyds register of shipping)<br>UL listed<br>DNV<br>CSA  |
| 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 |

## Contractual warranty

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

## Sustainability

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[Guide to assess a product's sustainability >](#)



Transparency   RoHS/REACH

## Well-being performance

✓ Mercury Free

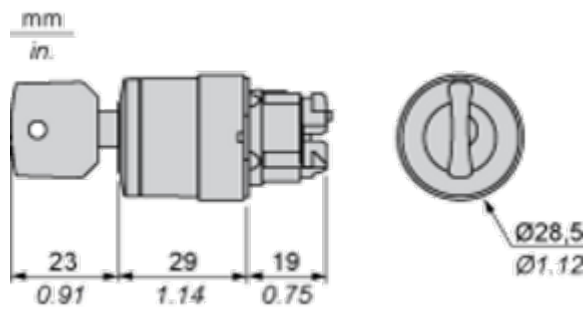
✓ Rohs Exemption Information   [Yes](#)

## Certifications & Standards

|                           |   |
|---------------------------|---|
| Reach Regulation          | <a href="#">REACH Declaration</a>   |
| Eu Rohs Directive         | Pro-active compliance (Product out of EU RoHS legal scope)  |
| 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>   |
| California Proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |

Dimensions Drawings

Dimensions



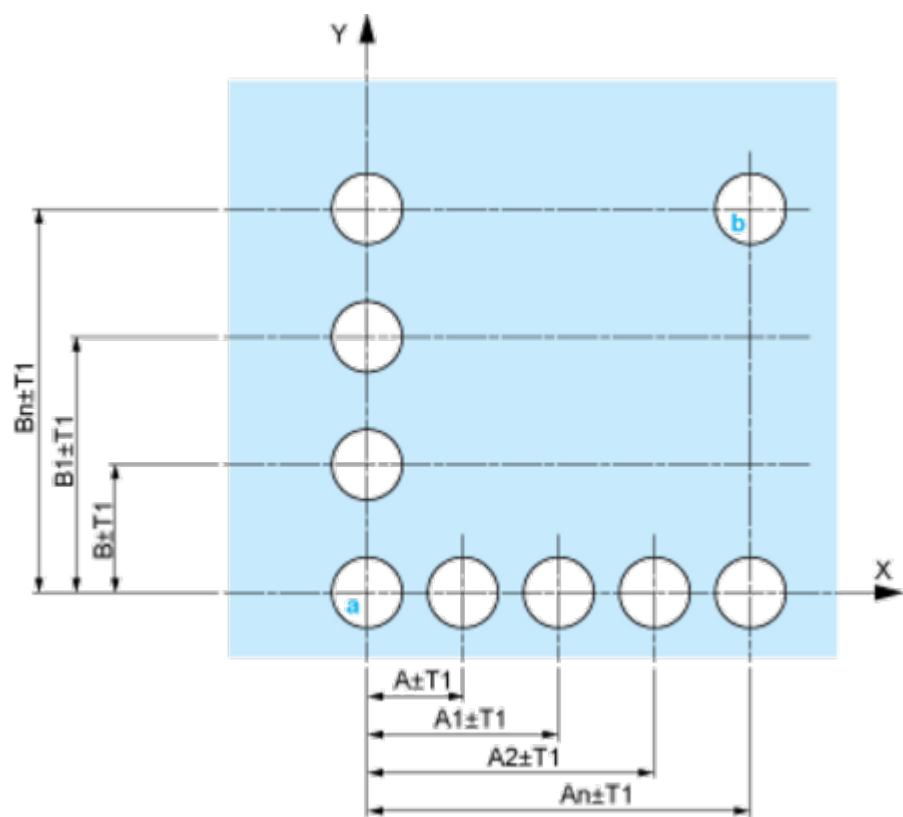
Mounting and Clearance

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

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  $8 \times \varnothing 1.2 \text{ mm} / 0.05 \text{ in.}$  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•.

Technical Description

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



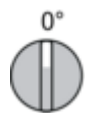
Sequence of Contacts Fitted to 3-position Selector Switch Body

Position 315°



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




Position 0°



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

Position 45°



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