

Main

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|-------------------------------|--------------------------------------|
| Range of product | Harmony XB4 |
| Product or component type | Head for illuminated selector switch |
| Product compatibility | Integral LED |
| Device short name | ZB4 |
| 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 to centre |
| Operator profile | Green standard handle |
| Operator position information | 3 positions +/- 45° |

Complementary

| | |
|------------------------------------|--|
| CAD overall width | 29 mm |
| CAD overall height | 29 mm |
| CAD overall depth | 43 mm |
| Product weight | 0.036 kg |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance: 0.1 m |
| Mechanical durability | 500000 cycles |
| Electrical composition code | M10 for <= 2 contacts using single blocks in front mounting with integral LED M6 for <= 2 contacts using single blocks in front mounting with integral LED and transformer M3 for <= 4 contacts using single blocks in front mounting with integral LED M4 for <= 4 contacts using single and double blocks in front mounting with integral LED |

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 | IP69 IP67 |

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|---------------------------|--|
| | IP66 conforming to IEC 60529 IP69K |
| NEMA degree of protection | NEMA 13 NEMA 4X |
| IK degree of protection | IK06 conforming to IEC 50102 |
| Standards | JIS C 4520 EN/IEC 60947-5-1 EN/IEC 60947-5-5 CSA C22.2 No 14 EN/IEC 60947-5-4 UL 508 EN/IEC 60947-1 |
| Product certifications | DNV BV LROS (Lloyds register of shipping) CSA GL UL listed 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 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27 |

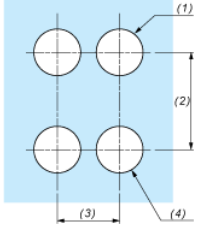
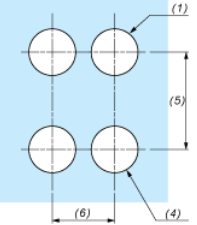
Contractual warranty

| | |
|-----------------|-----------|
| Warranty period | 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 |
|---|--|
|  |  |
| <p>(1) Diameter on finished panel or support (2) 40 mm min. / 1.57 in. min. (3) 30 mm min. / 1.18 in. min. (4) $\text{Ø } 22.5 \text{ mm} / 0.89 \text{ in. recommended } (\text{Ø } 22.3 \text{ mm }_0^{+0.4} / 0.88 \text{ in. }_0^{+0.016})$ (5) 45 mm min. / 1.78 in. min. (6) 32 mm min. / 1.26 in. min.</p> | |

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

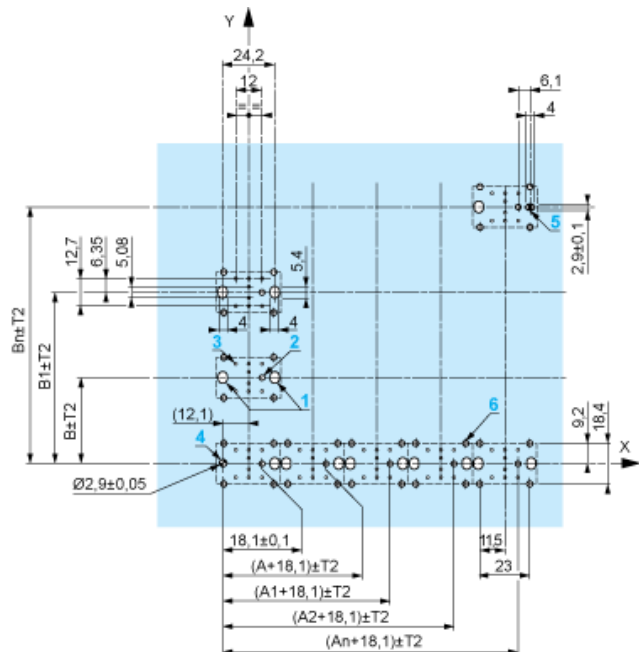
Panel Cut-outs (Viewed from Installer's Side)



- 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 mm \pm 0.05 / 0.09 in. \pm 0.002 for centring adapter ZBZ 01•
- 3 8 \times \varnothing 1.2 mm / 0.05 in. holes
- 4 1 hole \varnothing 2.9 mm \pm 0.05 / 0.11 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 mm / 0.09 in. for clipping in adapter ZBZ 01•

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

Electrical Composition Corresponding to Code M3



Electrical Composition Corresponding to Code M4



Electrical Composition Corresponding to Codes M6 and P2



Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2



Legend

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

Position 0°





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

Position 45°



| | | | | | |
|------|----------|-----|--|--|--|
| Push | Position | Top | | | |
|------|----------|-----|--|--|--|

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