

Main

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|-------------------------------|--|
| Range of product | Harmony XB4 |
| Product or component type | Head + mounting base for potentiometer |
| Device short name | ZB4 |
| Bezel material | Chromium plated metal |
| Mounting diameter | 22 mm |
| Product compatibility | For use with Ø 6 mm shaft |
| Sale per indivisible quantity | 1 |
| Shape of signaling unit head | Round |
| Operator profile | Knurled knob, white with |

Complementary

| | |
|------------------------------------|--------------------------------------|
| Product weight | 0.08 kg |
| Resistance to high pressure washer | 7000000 Pa at 55 °C, distance: 0.1 m |

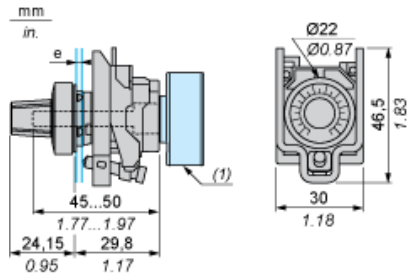
Environment

| | |
|--|--|
| Protective treatment | TH |
| Ambient air temperature for storage | -40...70 °C |
| Ambient air temperature for operation | -25...70 °C |
| Class of protection against electric shock | Class I conforming to IEC 60536 |
| IP degree of protection | IP66 conforming to IEC 60529 |
| NEMA degree of protection | NEMA 13 NEMA 4X |
| IK degree of protection | IK03 conforming to IEC 50102 |
| Standards | CSA C22-2 No 14 EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 JIS C 4520 UL 508 |
| Product certifications | BV CSA DNV GL LROS (Lloyds register of shipping) RINA UL listed |
| Vibration resistance | 5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6 |
| Shock resistance | 30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27 50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27 |
| RoHS EUR status | Compliant |
| RoHS EUR conformity date | 0727 |

Dimensions of Potentiometer and Sticks

Heads and Mounting Base for Potentiometer

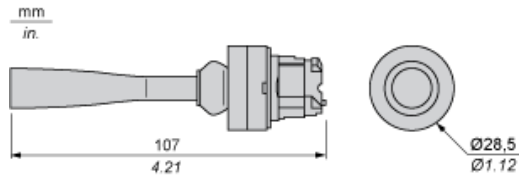
ZB4 BD9•2



e: panel thickness: 1 to 6 mm / 0.04 to 0.24 in.
(1) Potentiometer not included

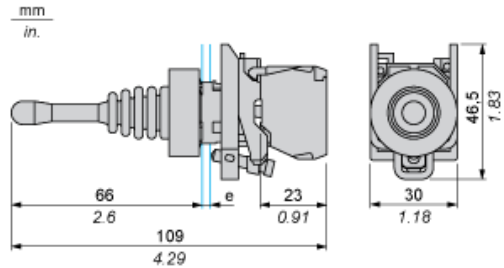
Wobblestick Head

ZB4 BB•



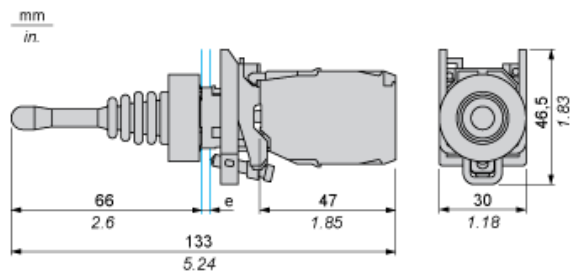
Joystick Controllers

XD4 PA•2



e: panel thickness: 1 to 6 mm / 0.04 to 0.24 in.

XD4 PA•4



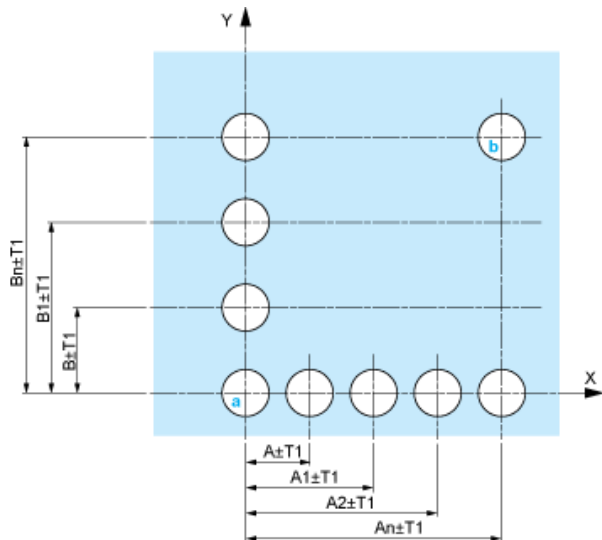
e: panel thickness: 1 to 6 mm / 0.04 to 0.24 in.

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) $\varnothing 22.5 \text{ mm}$ / 0.89 in. recommended ($\varnothing 22.3 \text{ mm}_0^{+0.4}$ / $0.88 \text{ in.}_0^{+0.016}$) (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 $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$ 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•.