

# Product data sheet

## Characteristics

### ZB4BD2

Harmony, 22mm Push Button, selector switch operating head, 2 position, maintained, black, unmarked



#### Main

Range of Product	Harmony XB4
Product or Component Type	Head for selector switch
Device short name	ZB4
Bezel material	Chromium plated metal
Mounting diameter	0.87 in (22 mm)
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Stay put
Operator profile	Black standard handle
Operator position information	2 positions 90°

#### Complementary

CAD overall width	1.14 in (29 mm)
CAD overall height	1.14 in (29 mm)
CAD overall depth	1.73 in (44 mm)
Net Weight	0.09 lb(US) (0.04 kg)
Resistance to high pressure washer	1015.26 psi (7000000 Pa) 131 °F (55 °C) 0.1 m
Mechanical durability	1000000 cycles
Electrical composition code	C3 6 single front mounting C4 6 single and double front mounting C5 5 single front mounting C6 5 single and double front mounting C7 4 single front mounting C8 4 single and double front mounting C11 3 single front mounting C15 1 single front mounting
Device presentation	Basic element

#### Environment

Protective treatment	TH
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Ambient Air Temperature for Operation	-40...158 °F (-40...70 °C)
Overvoltage category	Class I IEC 60536
IP degree of protection	IP67 IEC 60529 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK06 IEC 50102

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Standards	JIS C8201-5-1 IEC 60947-5-1 IEC 60947-5-4 IEC 60947-1 CSA C22.2 No 14 IEC 60947-5-5 UL 508 JIS C8201-1
Product Certifications	BV[RETURN]LROS (Lloyds register of shipping)[RETURN]DNV[RETURN]UL Listed[RETURN]CSA[RETURN]GL
Vibration resistance	5 gn 2...500 Hz)IEC 60068-2-6
Shock resistance	30 gn 18 ms) half sine wave acceleration IEC 60068-2-27 50 gn 11 ms) half sine wave acceleration IEC 60068-2-27

## Ordering and shipping details

Category	22468-PUSHBUTTONS,22MM(METAL) NEW
Discount Schedule	CS2
GTIN	3389110888935
Returnability	Yes
Country of origin	FR

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.38 in (3.500 cm)
Package 1 Width	2.13 in (5.400 cm)
Package 1 Length	2.13 in (5.400 cm)
Package 1 Weight	1.55 oz (44.000 g)
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Height	2.05 in (5.200 cm)
Package 2 Width	1.34 in (3.400 cm)
Package 2 Length	10.43 in (26.500 cm)
Package 2 Weight	7.90 oz (224.000 g)
Unit Type of Package 3	S03
Number of Units in Package 3	250
Package 3 Height	11.81 in (30.000 cm)
Package 3 Width	11.81 in (30.000 cm)
Package 3 Length	15.75 in (40.000 cm)
Package 3 Weight	25.81 lb(US) (11.706 kg)

## Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	 <a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	 <a href="#">China RoHS Declaration</a>
RoHS exemption information	 Yes
Environmental Disclosure	 <a href="#">Product Environmental Profile</a>
Circularity Profile	 <a href="#">End Of Life Information</a>

## Contractual warranty

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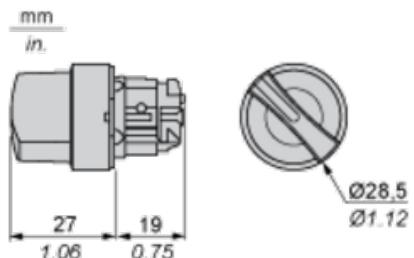
Warranty	18 months
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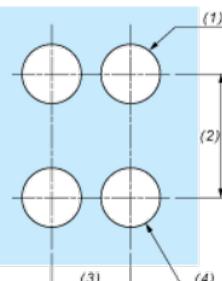
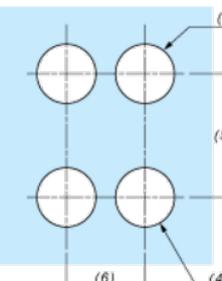
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Dimensions

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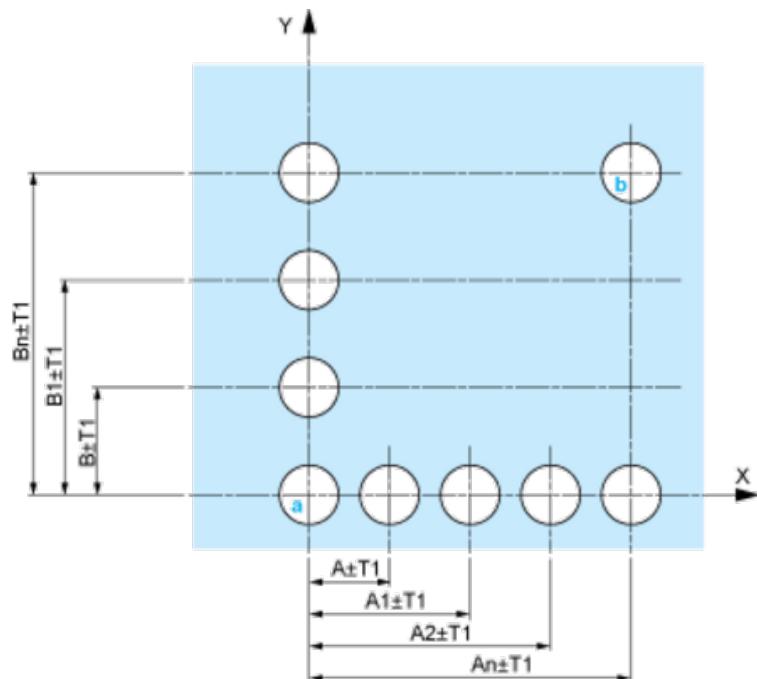


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board	Connection by Faston Connectors
 <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) Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm <math>^{+0.4}</math> / 0.88 in. <math>^{+0.016}</math>)</p>	 <p>(1) Diameter on finished panel or support  (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)

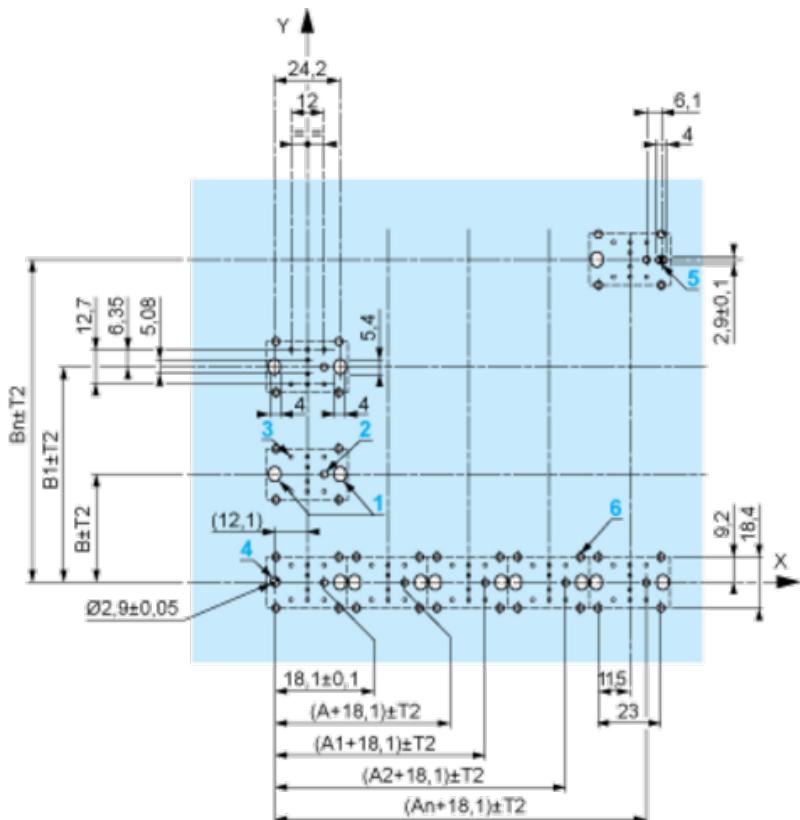


A: 30 mm min. / 1.18 in. min.

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

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

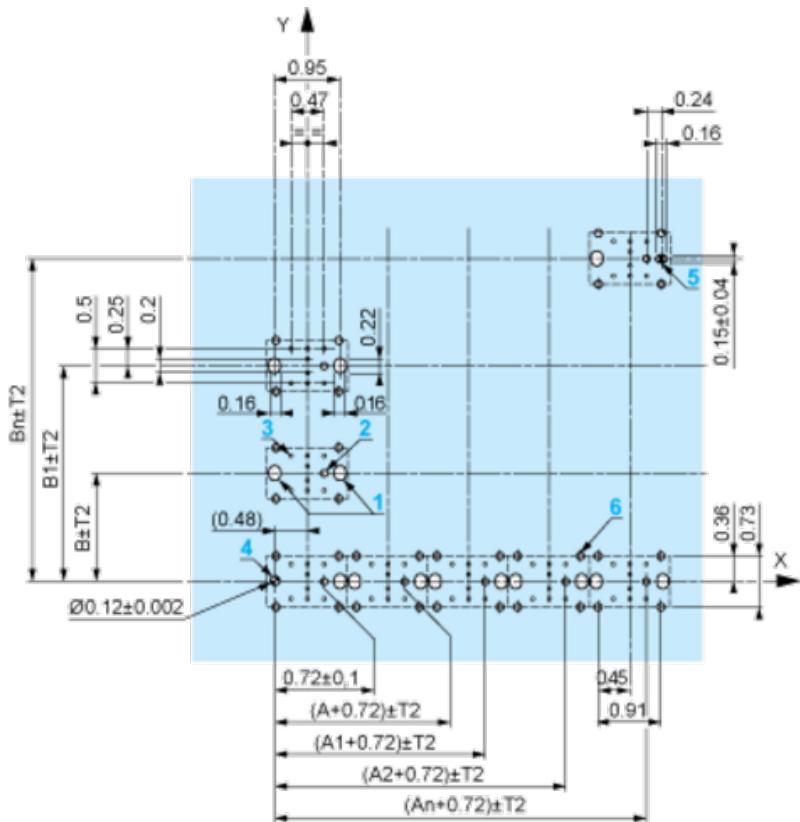
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

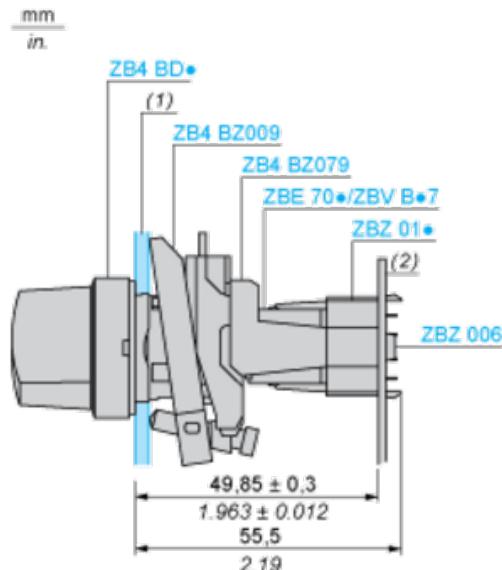
## General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in:  $T1 + T2 = 0.3$  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•

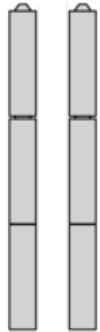
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole Ø 2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 for centring adapter ZBZ 01•
- 3 8  $\times$  Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm  $\pm$  0.05 / 0.11 in.  $\pm$  0.002, for aligning the printed circuit board (with cut-out marked a)
-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

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

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Electrical Composition Corresponding to Code C3

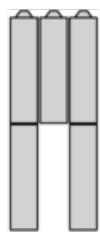
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Electrical Composition Corresponding to Code C4

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Electrical Composition Corresponding to Code 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

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#### Position 315°



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		1	1	1
Contacts	N/O		closed	closed
N/C		open	open	open