

# Product datasheet

Specifications



## Selector switch head, metal, black, Ø22, 2 positions, stay put

ZB4BD2

### 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	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	29 mm
CAD overall height	29 mm
CAD overall depth	44 mm
Net weight	0.04 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 C4 for <6 contacts using single and double blocks in front mounting C5 for <5 contacts using single blocks in front mounting C6 for <5 contacts using single and double blocks in front mounting C7 for <4 contacts using single blocks in front mounting C8 for <4 contacts using single and double blocks in front mounting C11 for <3 contacts using single blocks in front mounting 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

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

<b>IP degree of protection</b>	IP67 conforming to IEC 60529 IP69 IP69K
<b>NEMA degree of protection</b>	NEMA 13 NEMA 4X
<b>IK degree of protection</b>	IK06 conforming to IEC 50102
<b>Standards</b>	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
<b>Product certifications</b>	CSA DNV BV LRROS (Lloyds register of shipping) UL listed
<b>Vibration resistance</b>	5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6
<b>Shock resistance</b>	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

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	3.500 cm
<b>Package 1 Width</b>	5.400 cm
<b>Package 1 Length</b>	5.400 cm
<b>Package 1 Weight</b>	44.000 g
<b>Unit Type of Package 2</b>	BB1
<b>Number of Units in Package 2</b>	5
<b>Package 2 Height</b>	5.200 cm
<b>Package 2 Width</b>	3.400 cm
<b>Package 2 Length</b>	26.500 cm
<b>Package 2 Weight</b>	224.000 g
<b>Unit Type of Package 3</b>	S03
<b>Number of Units in Package 3</b>	250
<b>Package 3 Height</b>	30.000 cm
<b>Package 3 Width</b>	30.000 cm
<b>Package 3 Length</b>	40.000 cm
<b>Package 3 Weight</b>	11.706 kg

## Contractual warranty

<b>Warranty</b>	18 months
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Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

Total lifecycle Carbon footprint	1
Environmental Disclosure	<a href="#">Product Environmental Profile</a>

## Use Better

### Materials and Substances

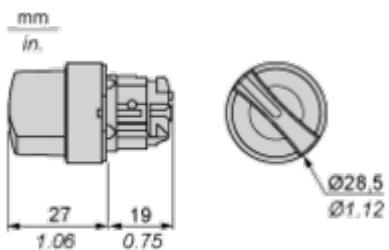
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
<a href="#">EU RoHS Directive</a>	Pro-active compliance (Product out of EU RoHS legal scope)
REACH Regulation	<a href="#">REACH Declaration</a>

## Use Again

### Repack and remanufacture

End of life manual availability	<a href="#">End of Life Information</a>
Take-back	No

## Dimensions Drawings

Dimensions

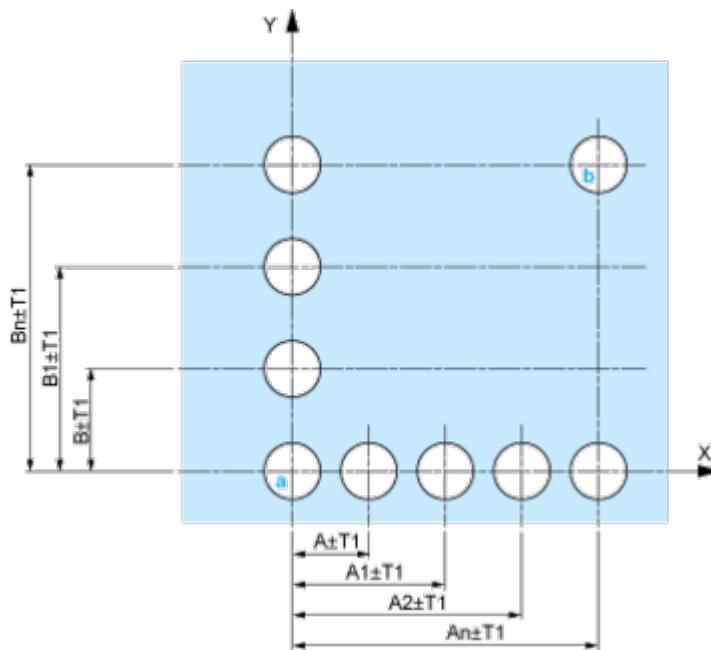
## Mounting and Clearance

**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
 <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>) (5) 45 mm min. / 1.78 in. min. (6) 32 mm min. / 1.26 in. min.</p>	 <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>) (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)

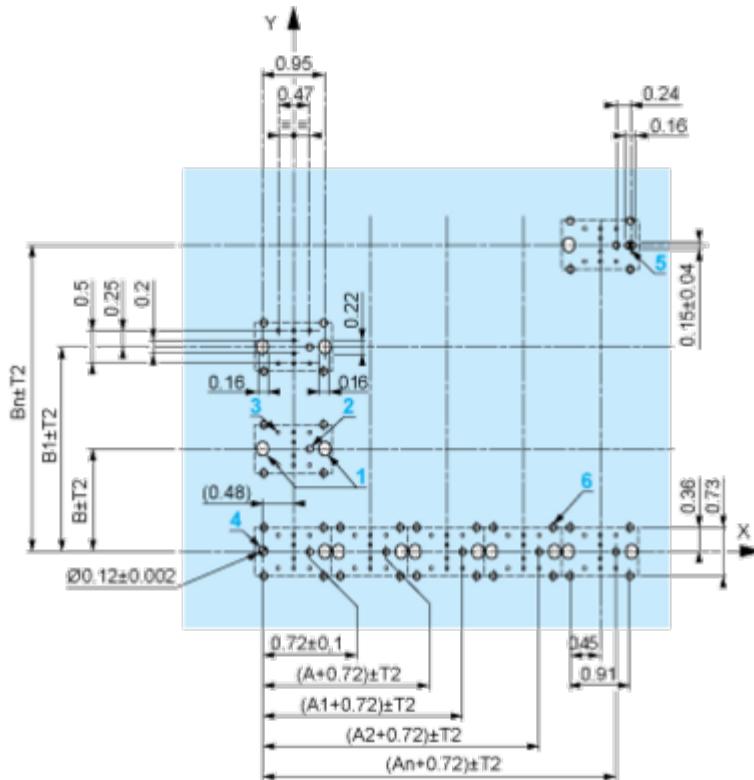
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

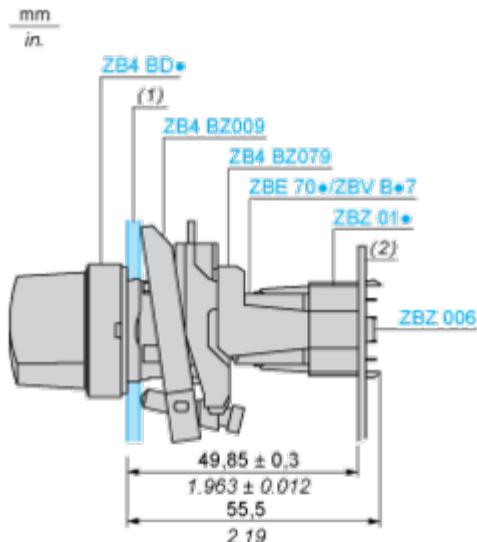
## General Tolerances of the Panel and Printed Circuit Board

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•

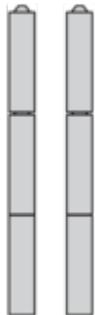
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole  $\varnothing 2.4$  mm  $\pm 0.05$  /  $0.09$  in.  $\pm 0.002$  for centring adapter ZBZ 01•
- 3  $8 \times \varnothing 1.2$  mm /  $0.05$  in. holes
- 4 1 hole  $\varnothing 2.9$  mm  $\pm 0.05$  /  $0.11$  in.  $\pm 0.002$ , for aligning the 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•.

Technical Description

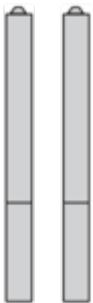
Electrical Composition Corresponding to Code C3

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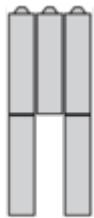
**Electrical Composition Corresponding to Code C4**

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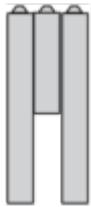
**Electrical Composition Corresponding to Code C5**

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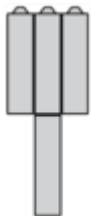
**Electrical Composition Corresponding to Code C6**

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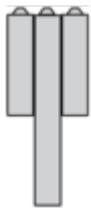
**Electrical Composition Corresponding to Code C7**

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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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**Electrical Composition Corresponding to Code C15**

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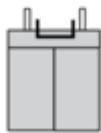
1 N/O



1 N/C



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



## Legend

Single contact



Double contact



Light block



Possible location



Sequence of Contacts Fitted to 2-position Selector Switch Body

## Position 315°



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

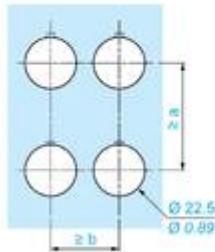
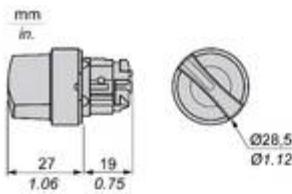
## Position 45°



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

## Technical Illustration

## Dimensions

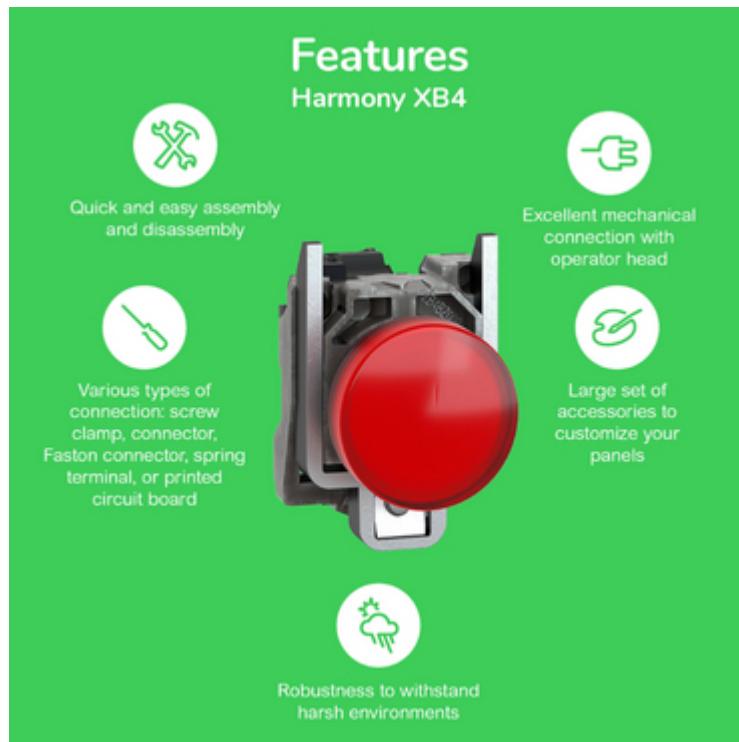


	a (mm)	a (in.)	b (mm)	b (in.)
ZBE***** ZBV*****	40	1.57	30	1.18
ZBE*****3 ZBV*****3	45	1.77	32	1.26
ZBE*****4 ZBV*****4	40	1.57	30	1.18
ZBE*****5 ZBV*****5	50	1.97	30	1.18
ZBE*****9 ZBV*****9	40	1.57	30	1.18
ZBRT* ZBRV1	40	1.57	30	1.18

	a (mm)	a (in.)	b (mm)	b (in.)
ZBE***** ZBV*****	40	1.57	30	1.18
ZBE*****3 ZBV*****3	45	1.77	32	1.26
ZBE*****4 ZBV*****4	40	1.57	30	1.18
ZBE*****5 ZBV*****5	50	1.97	30	1.18
ZBE*****9 ZBV*****9	40	1.57	30	1.18
ZBRT* ZBRV1	40	1.57	30	1.18

## Offer Marketing Illustration

## Product benefits / Features



## Offer Marketing Illustration

## Product benefits / Features

## Technical Benefits

## Harmony XB4

Conformity with IEC, UL, CSA, CCC EAC, and JIS standards, as well as CE marking and marine approvals

Up to IP66, 67, 69, 69K, and type 4X protection ratings

High vibration resistance with shake-proof terminal screws

Operating temperature from -40°C to 70°C

Shock protection level up to IK06

Secure switching of inductive or heavy DC loads directly – 100 000 operations at 10A, 24V dc

Image of product / Alternate images

Alternative

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