

Product data sheet

Specifications



Harmony, 22mm Push Button, selector switch operating head, 3 position, spring return, black, unmarked

ZB4BD5

Product availability: Stock - Normally stocked in distribution facility

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	0.9 in (22.5 mm)
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	To centre spring return
Operator profile	Black standard handle
Operator position information	3 positions +/- 45°
Cap/operator or lens colour	Black

Complementary

CAD overall width	1.1 in (29 mm)
CAD overall height	1.1 in (29 mm)
CAD overall depth	1.7 in (44 mm)
Net Weight	0.09 lb(US) (0.04 kg)
Resistance to high pressure washer	1015.3 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
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)

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

Overvoltage category	Class I conforming to IEC 60536
IP degree of protection	IP67 IEC 60529 IP69 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK06 conforming to IEC 50102
Standards	IEC 60947-5-5 IEC 60947-1 IEC 60947-5-4 CSA C22.2 No 14 IEC 60947-5-1 JIS C8201-5-1 UL 508 JIS C8201-1
Product Certifications	BV CSA DNV LRROS (Lloyds register of shipping) UL Listed
Vibration resistance	5 gn (f= 2...500 Hz) conforming to 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	US10CS222468
Discount Schedule	0CS2
GTIN	3389110888973
Returnability	Yes
Country of origin	FR

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.38 in (3.500 cm)
Package 1 Width	2.09 in (5.300 cm)
Package 1 Length	2.13 in (5.400 cm)
Package weight(Lbs)	1.552 oz (44.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	250
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	25.342 lb(US) (11.495 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	2000
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	23.62 in (60.000 cm)

Package 3 Length	31.50 in (80.000 cm)
Package 3 Weight	229.731 lb(US) (104.204 kg)

Contractual warranty

Warranty	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

Carbon footprint (kg CO₂ eq, Total Life cycle) **1**

Environmental Disclosure [Product Environmental Profile](#)

Use Better

Materials and Substances

Packaging made with recycled cardboard **No**

Packaging without single use plastic **No**

[EU RoHS Directive](#) **Pro-active compliance (Product out of EU RoHS legal scope)**

REACH Regulation [REACH Declaration](#)

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 [www.P65Warnings.ca.gov](#)**

Use Again

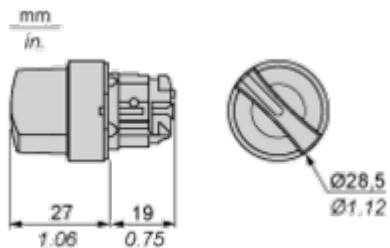
Repack and remanufacture

Circularity Profile [End of Life Information](#)

Take-back **No**

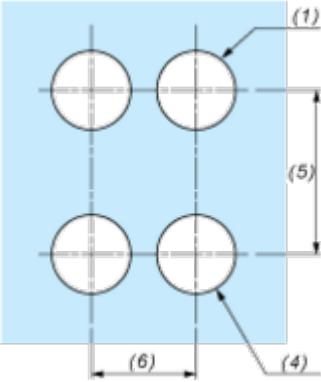
Dimensions Drawings

Dimensions



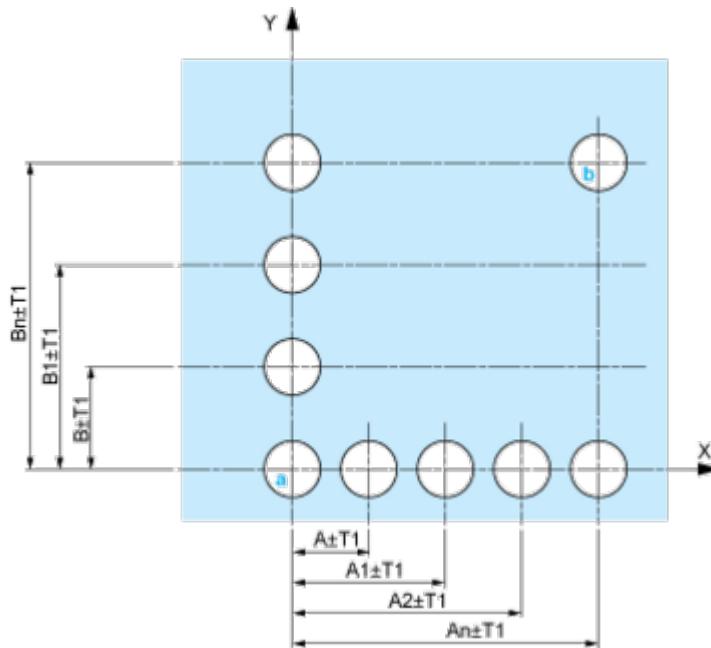
Mounting and Clearance

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 $^{+0.4}$ / 0.88 in. $^{+0.016}$) (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 $^{+0.4}$ / 0.88 in. $^{+0.016}$) (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)

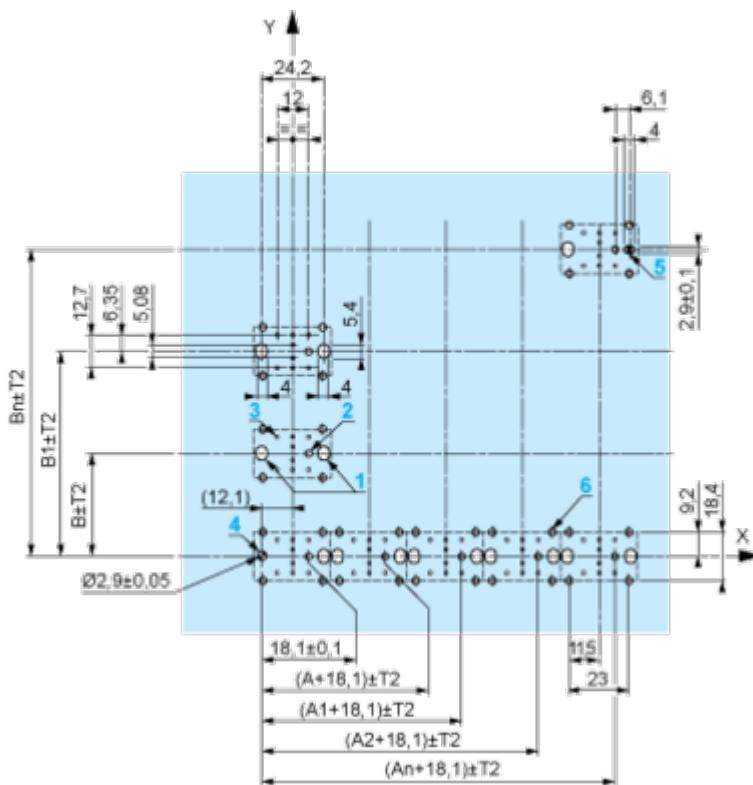


A: 30 mm min. / 1.18 in. min.

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

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

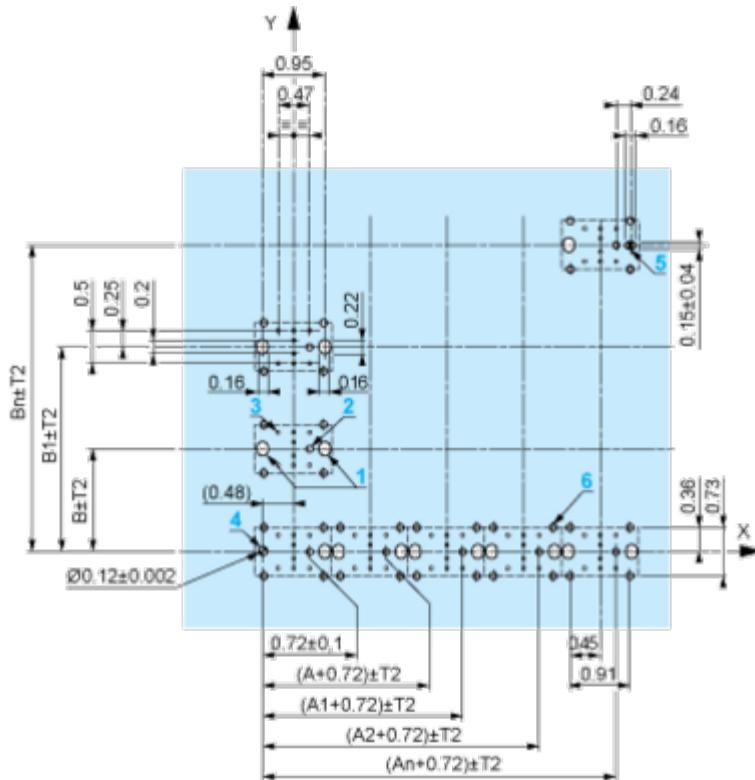
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

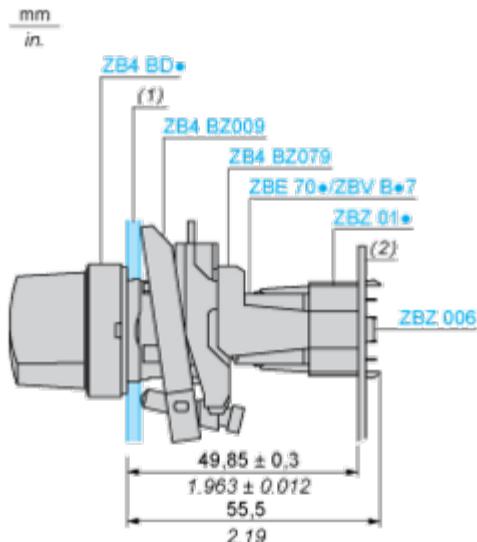
General Tolerances of the Panel and Printed Circuit Board

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

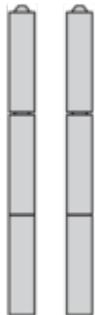
Mounting of Adapter (Socket) ZBZ 01•

- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole $\varnothing 2.4$ mm ± 0.05 / 0.09 in. ± 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 ± 0.05 / 0.11 in. ± 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 ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ 01•.

Technical Description

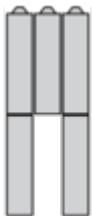
Electrical Composition Corresponding to Code C3



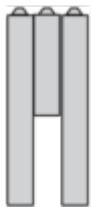
Electrical Composition Corresponding to Code C4



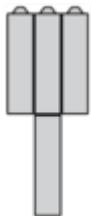
Electrical Composition Corresponding to Code C5



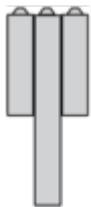
Electrical Composition Corresponding to Code C6



Electrical Composition Corresponding to Code C7



Electrical Composition Corresponding to Code C8



Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1



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

Position 0°



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

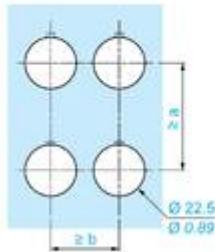
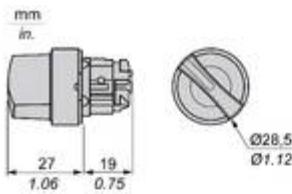
Position 45°



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

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

Offer Marketing Illustration

Product benefits / Features

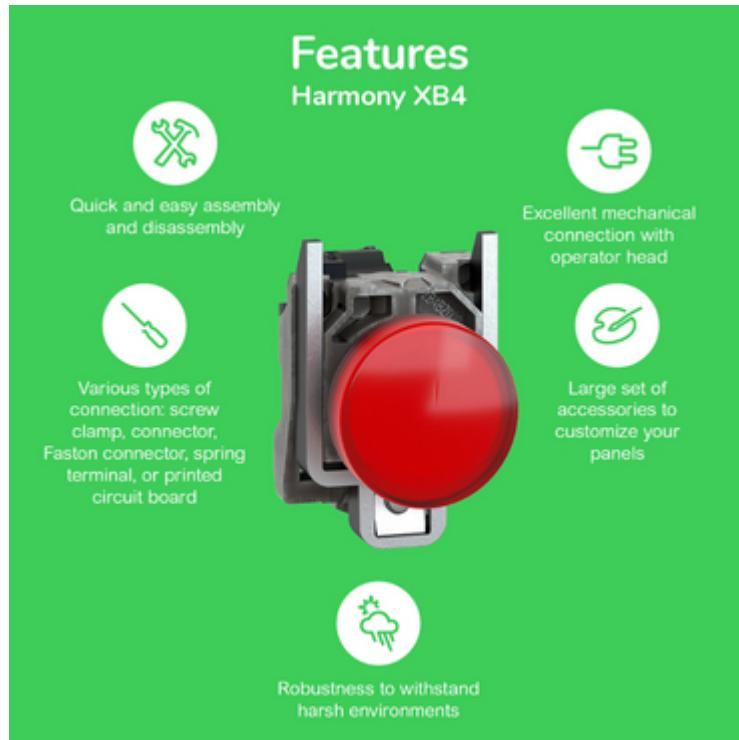


Image of product / Alternate images

Alternative



