

# Product data sheet

Specifications



Toggle switch head, Harmony XB5, plastic, black, 22mm, 2 positions, stay put

ZB5AD28

**Product availability:** Stock - Normally stocked in distribution facility

## Main

Range of Product	Harmony XB5
Product or Component Type	Head for selector switch
Device short name	ZB5
Bezel material	Dark grey plastic
Mounting diameter	0.9 in (22 mm)
Sale per indivisible quantity	1
Head type	Standard
Shape of signaling unit head	Round
Type of operator	stay put
Operator profile	Black toggle switch
Operator additional information	Black lever
Operator position information	2 positions 90°

## Complementary

CAD overall width	1.1 in (29 mm)
CAD overall height	1.1 in (29 mm)
CAD overall depth	1.8 in (45 mm)
Product Weight	0.051 lb(US) (0.023 kg)
Mechanical durability	500000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
Electrical composition code	C11 3 single front mounting C12 6 single front mounting C15 1 single front mounting SF1 3 single front mounting SR1 3 single rear mounting C13 6 single and double 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 II 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.

IP degree of protection	IP66 IEC 60529
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	1015.3 psi (7000000 Pa) 131 °F (55 °C) 0.1 m
IK degree of protection	IK06
Standards	IEC 60947-5-1 IEC 60947-5-4 CSA C22.2 No 14 UL 508 IEC 60947-1 JIS C8201-5-1 JIS C8201-1
Product Certifications	DNV UL Listed LROS (Lloyds register of shipping) BV CSA
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	US10CS222467
Discount Schedule	0CS2
GTIN	3389110905014
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	1.77 in (4.500 cm)
Package 1 Length	2.17 in (5.500 cm)
Package weight(Lbs)	0.776 oz (22.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	200
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	10.525 lb(US) (4.774 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	1600
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	31.50 in (80.000 cm)
Package 3 Length	23.62 in (60.000 cm)
Package 3 Weight	101.836 lb(US) (46.192 kg)

## Contractual warranty

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Warranty

18 months



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 **Yes**

Packaging without single use plastic **Yes**

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

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

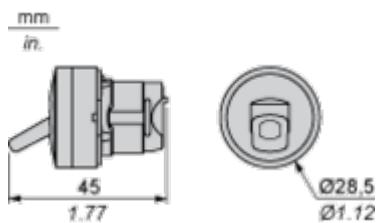
Circularity Profile [End of Life Information](#)

Take-back **No**

## Dimensions Drawings

### Dimensions

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## 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



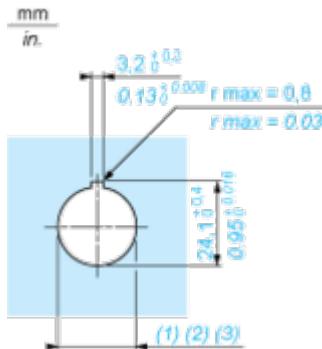
(1) Diameter on finished panel or support

(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.

(3) Ø22.5 mm recommended ( $\varnothing 22.3^{+0.4}_0$ ) / Ø0.89 in. recommended ( $\varnothing 0.88^{+0.016}_0$ )

Connections	a in mm	a in in.	b in mm	b in in.
By screw clamp terminals or plug-in connector	40	1.57	30	1.18
By Faston connectors	45	1.77	32	1.26
On printed circuit board	30	1.18	30	1.18

## Detail of Lug Recess



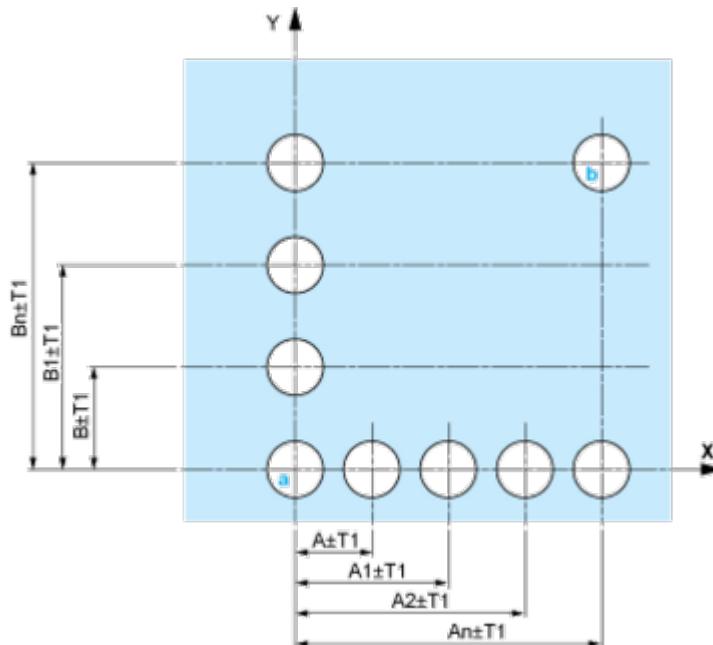
(1) Diameter on finished panel or support

(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.

(3) Ø22.5 mm recommended ( $\varnothing 22.3^{+0.4}_0$ ) / Ø0.89 in. recommended ( $\varnothing 0.88^{+0.016}_0$ )

## Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

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

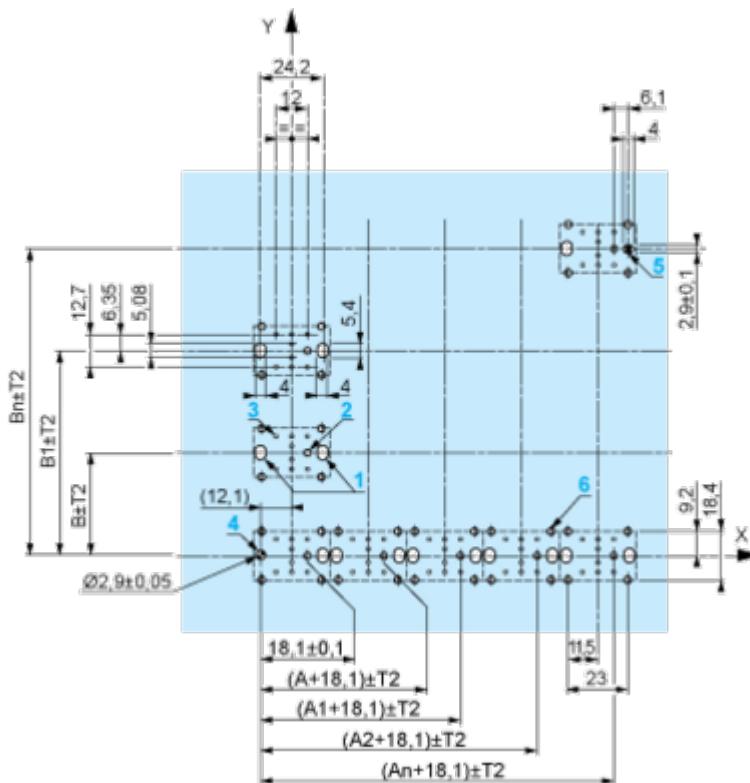


**A:** 30 mm min. / 1.18 in. min.

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

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

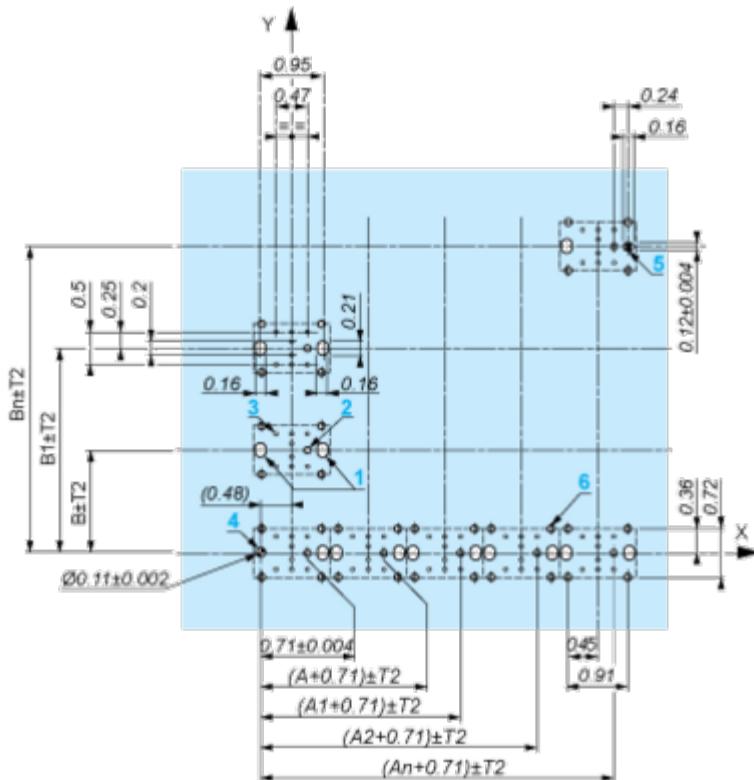
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

B. 40 mm min.



**A:** 1.18 in. min.

B: 1.57 in. min.

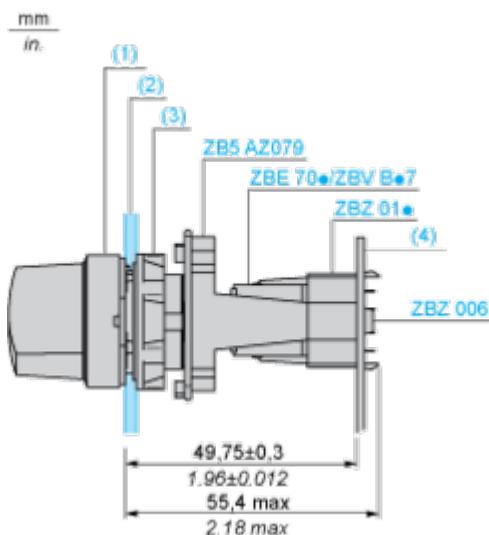
## General Tolerances of the Panel and Printed Circuit Board

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 ZB5AZ009:  $\pm 2^{\circ}$  30' (excluding cut-outs marked **a** and **b**).
- Tightening torque of screws ZBZ006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB5AZ079 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 (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5**.



- (1) Head ZB5AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

**Mounting of Adapter (Socket) ZBZ01•**

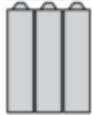
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ01•.

Technical Description

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

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**Electrical Composition Corresponding to Code C15**

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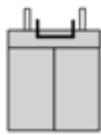
1 N/O



1 N/C

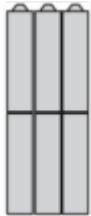


1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C



**Electrical Composition Corresponding to Code C12**

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**Electrical Composition Corresponding to Code C13**

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Legend

Single contact



Double contact



Light block

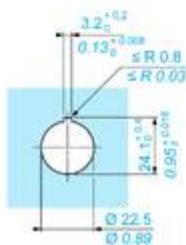
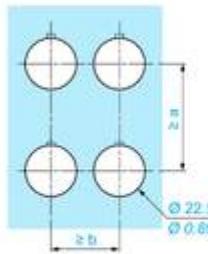
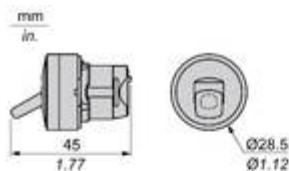


Possible location



## 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

## Offer Marketing Illustration

## Product benefits / Features

## Features

### Harmony XB5



- Quick and easy assembly and disassembly**  

- Excellent mechanical connection with operator head**  

- Various types of connection: screw clamp, connector, Faston connector, spring terminal, or printed circuit board**  

- Large set of accessories to customize your panels**  

- Robustness to withstand harsh environments**  


## Offer Marketing Illustration

## Product benefits / Features

## Technical Benefits

## Harmony XB5

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



Operating temperature from -40°C to 70°C

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



Shock protection level up to IK06

High vibration resistance with shake-proof terminal screws

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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Image of product in real life situation

