



(!) Discontinued

## Main

Range of product	Harmony XB4
Product or component type	Head for selector switch
Device short name	ZB4
Bezel material	Black metal
Mounting diameter	22 mm
Sale per indivisible quantity	1
Head type	Standard
Shape of signaling unit head	Round
Type of operator	stay put
Operator profile	Black knurled knob
Operator position information	3 positions +/- 45°

## 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
Device presentation	Basic element

## Environment

Protective treatment	TC
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-40...70 °C
Electrical shock protection class	Class I conforming to IEC 60536
IP degree of protection	IP69K IP67 conforming to IEC 60529 IP69
NEMA degree of protection	NEMA 13 NEMA 4X
IK degree of protection	IK06 conforming to IEC 50102
Standards	EN/IEC 60947-5-1 UL 508 EN/IEC 60947-1 CSA C22.2 No 14 EN/IEC 60947-5-4 JIS C8201-5-1 EN/IEC 60947-5-5 JIS C8201-1
Product certifications	GL DNV LROS (Lloyds register of shipping) CSA RINA UL listed BV
Vibration resistance	5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6
Shock resistance	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

Package 1 Weight	0.044 kg
Package 1 Height	0.560 dm
Package 1 width	0.340 dm
Package 1 Length	0.540 dm

## Offer Sustainability

Sustainable offer status	Green Premium product
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
RoHS exemption information	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>

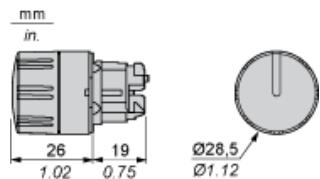
## Contractual warranty

Warranty	18 months
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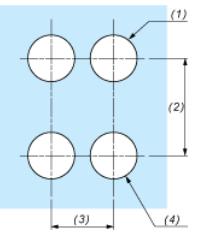
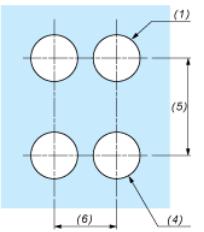
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Dimensions

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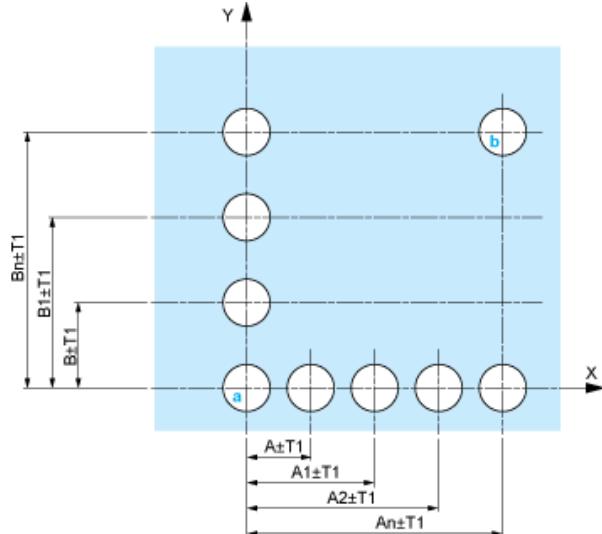


Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

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>) (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

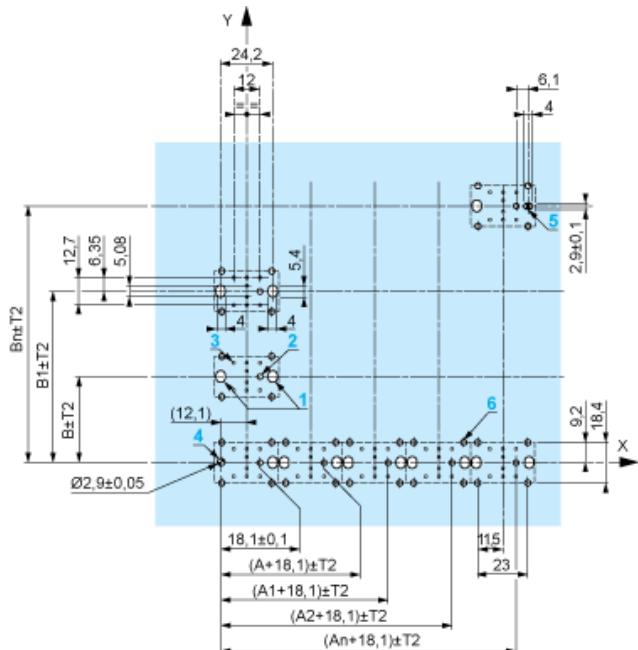
Panel Cut-outs (Viewed from Installer's Side)



A: 30 mm min. / 1.18 in. min.  
B: 40 mm min. / 1.57 in. min.

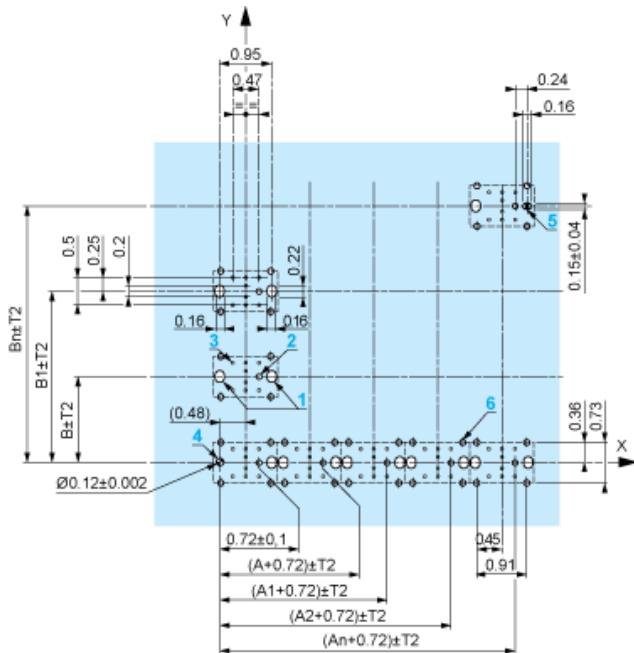
Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm



A: 30 mm min.  
B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.

B: 1.57 in. min.

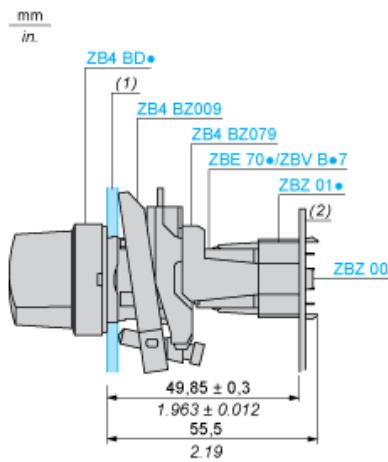
## General Tolerances of the Panel and Printed Circuit Board

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

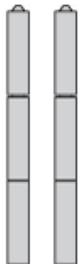
- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ 01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the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

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

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Electrical Composition Corresponding to Code C3

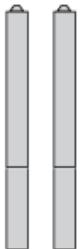
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Electrical Composition Corresponding to Code C4

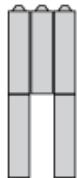
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Electrical Composition Corresponding to Code C5

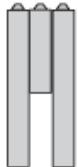
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Electrical Composition Corresponding to Code C6

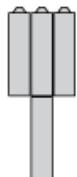
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Electrical Composition Corresponding to Code C7

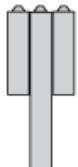
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Electrical Composition Corresponding to Code C8

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

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Legend

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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	Right
	State		1	1	0
Contacts	N/O		closed	closed	open
	N/C		open	open	closed

Position 0°



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

Position 45°



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

ZB4BD397 is replaced by the following product range:



## Harmony XB4

Ø 22 mm modular metal pushbuttons, switches, and pilot lights

The modular range of Ø 22 mm metal control and signaling units combines simplicity of installation, efficiency, modern design, flexibility, and robustness, high level of customization to meet most industrial applications

Reason for Substitution: End of life | Substitution date: 20 November 2020