Product datasheet Characteristics

ZB4BG420



Main

mann	
Range of product	Harmony XB4
Product or component type	Head for key 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
Operator profile	Black key switch
Type of operator	Stay put
Operator position information	2 positions 90°
Type of keylock	Ronis 3131A
Key withdrawal position	In any position

Complementary

Device presentation	Basic element			
	C3 6 contacts using single blocks in front mounting			
	C6 for 5 contacts using single and double blocks in front mounting			
	C4 6 contacts using single and double blocks in front mounting C5 for 5 contacts using single blocks in front mounting			
	C8 for 4 contacts using single and double blocks in front mounting			
	C7 for 4 contacts using single blocks in front mounting			
	C11 for 3 contacts using single blocks in front mounting			
	C15 1 contacts using single blocks in front mounting			
Electrical composition code	C15 1 contacts using single blocks in front mounting			
Mechanical durability	1000000 cycles			
Resistance to high pressure washer	1015.26 psi (7000000 Pa) at 131 °F (55 °C),distance: 0.1 m			
Product weight	0.22 lb(US) (0.098 kg)			
CAD overall depth	2.83 in (72 mm)			
CAD overall height	1.14 in (29 mm)			
CAD overall width	1.14 in (29 mm)			

Environment

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protective treatment	TH	
ambient air temperature for storage	-40158 °F (-4070 °C)	
ambient air temperature for operation	-40158 °F (-4070 °C)	
overvoltage category	Class I conforming to IEC 60536	
IP degree of protection	IP67 IP66 conforming to IEC 60529 IP69K IP69	
NEMA degree of protection	NEMA 13 NEMA 4X	
standards	EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 UL 508 GB 14048.5 CSA C22.2 No 14	
product certifications	BV CSA DNV GL	



	LROS (Lloyds register of shipping) RINA UL listed
vibration resistance	5 gn (f = 2500 Hz) conforming to IEC 60068-2-6
shock resistance	30 gn (duration = 18 ms) half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) half sine wave acceleration conforming to IEC 60068-2-27

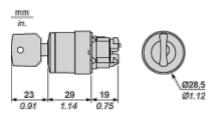
Offer Sustainability

WARNING: This product can expose you to chemicals including:	WARNING: This product can expose you to chemicals including:			
Nickel compounds, which is known to the State of California to cause cancer, and	Nickel compounds, which is known to the State of California to cause cancer, and			
Di-isodecyl phthalate (DIDP), which is known to the StateDi-isodecyl phthalate (DIDP), which is known to the State of California to cause birth of California to cause birth defects or other reproductive defects or other reproductive harm. harm.				
For more information go to www.p65warnings.ca.gov	For more information go to www.p65warnings.ca.gov			

Contractual warranty

	10	
Warranty period	18 months	
4		

Dimensions



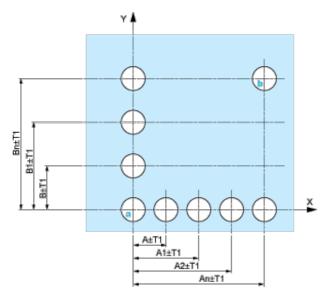
Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

	nnection by Screw Clamp Terminals or Plug-in nnectors or on Printed Circuit Board	Connection by Faston Connectors			
-					
(1)	I) 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 $_{0}^{+0.4}$ / 0.88 in. $_{0}^{+0.016}$)				
(5)	45 mm min. / 1.78 in. min.				
(6)	32 mm min. / 1.26 in. min.				

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

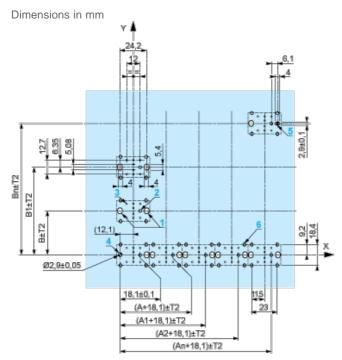
Panel Cut-outs (Viewed from Installer's Side)





- 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)

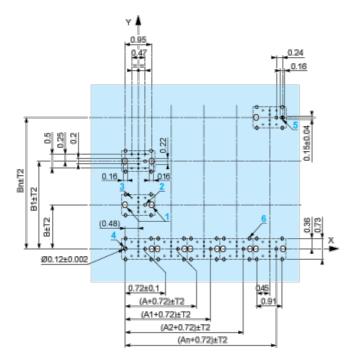


A: 30 mm min.

B: 40 mm min.

Dimensions in in.





A: 1.18 in. min.

B: 1.57 in. min.

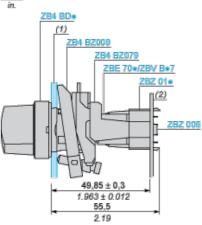
General Tolerances of the Panel and Printed Circuit Board

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 ± 0.1 / 0.88 in. ± 0.004
- 1 Orientation of body/fixing collar ZB4 BZ009: ± 2°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:
 - i every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
 - i 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

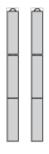
Mounting of Adapter (Socket) ZBZ 01•

- 1 2 elongated holes for ZBZ 006 screw access
- 1 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ 01•
- 1 3 8 × Ø 1.2 mm / 0.05 in. holes
- 1 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)
- 1 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•.

Electrical Composition Corresponding to Code C3



Electrical Composition Corresponding to Code C4



Electrical Composition Corresponding to Code C5



Electrical Composition Corresponding to Code C6

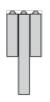


Electrical Composition Corresponding to Code C7



Electrical Composition Corresponding to Code C8





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



Electrical Composition Corresponding to Code C15



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°





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

Position 45°



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

