# **ZB4BA48**



### Main

Range of product	Harmony XB4
Product or component type	Head for illuminated push-button
Device short name	ZB4
Product compatibility	Integral LED
Bezel material	Chromium plated metal
Head type	Standard
Mounting diameter	0.87 in (22 mm)
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	Spring return
Operator profile	Red flush unmarked
Operator additional information	For insertion of legend

# Complementary

CAD overall width	1.14 in (29 mm)	
CAD overall height	1.14 in (29 mm)	
CAD overall depth	1.18 in (30 mm)	
Product weight	0.06 lb(US) (0.028 kg)	
Resistance to high pressure washer	1015.26 psi (7000000 Pa) at 131 °F (55 °C),distance: 0.1 m	
Mechanical durability	10000000 cycles	
Electrical composition code	C4 6 contacts using single and double blocks in front mounting C3 6 contacts using single blocks in front mounting M1 for 6 contacts using single blocks in front mounting with integral LED M2 for 6 contacts using single and double blocks in front mounting with integral LEI M6 for 2 contacts using single blocks in front mounting with integral LED and transformer M10 for 2 contacts using single blocks in front mounting with integral LED C14 2 contacts using single blocks in front mounting	

# **Environment**

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
IK degree of protection	IK06 conforming to EN 50102
standards	EN/IEC 60947-1 EN/IEC 60947-5-1 EN/IEC 60947-5-4 EN/IEC 60947-5-5 JIS C 4520 UL 508 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	

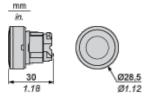
# Offer Sustainability

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.		
For more information go to www.p65warnings.ca.gov	For more information go to www.p65warnings.ca.gov	

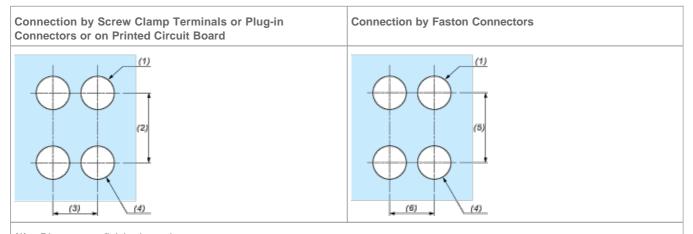
# Contractual warranty

Warranty period	18 months	
-----------------	-----------	--

### **Dimensions**



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

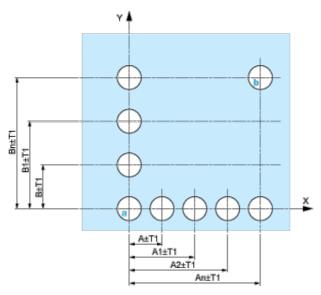


- (1) Diameter on finished panel or support
- (2) 40 mm min. / 1.57 in. min.
- (3) 30 mm min. / 1.18 in. min.
- **(4)** Ø 22.5 mm / 0.89 in. recommended (Ø 22.3 mm  $_0^{+0.4}$  / 0.88 in.  $_0^{+0.016}$ )
- (5) 45 mm min. / 1.78 in. min.
- (6) 32 mm min. / 1.26 in. min.

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

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

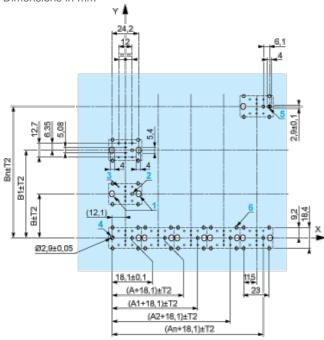




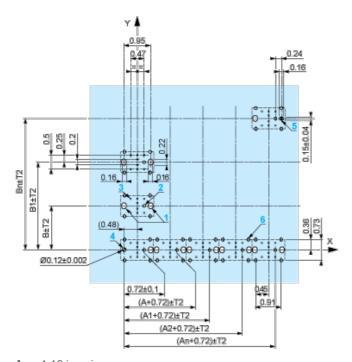
A: 30 mm min. / 1.18 in. min.B: 40 mm min. / 1.57 in. min.

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

Dimensions in mm



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



**A:** 1.18 in. min. **B:** 1.57 in. min.

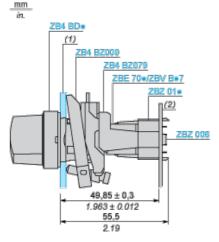
#### **General Tolerances of the Panel and Printed Circuit Board**

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 ± 0.1 / 0.88 in. ± 0.004
- 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:
  - 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

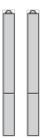
# Mounting of Adapter (Socket) ZBZ 01•

- 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 x Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 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 Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ 01•



# Electrical Composition Corresponding to Code C3

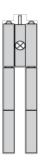
**Electrical Composition Corresponding to Code C4** 



**Electrical Composition Corresponding to Codes C14, SF2 and SR2** 



**Electrical Composition Corresponding to Codes M1 and M7** 



**Electrical Composition Corresponding to Codes M2 and M8** 



**Electrical Composition Corresponding to Codes M6 and P2** 





# **Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2**



# Legend

Single contact



Double contact



Light block



Possible location

