



Main

Range of product	Harmony XB5 Harmony XB4
Product or component type	Contact block
Device short name	ZBE
Sale per indivisible quantity	5
IP degree of protection	IP20 conforming to IEC 60529
Contacts type and composition	1 NO
Contact operation	Slow-break
Contact block type	Single
Contacts usage	Standard contacts
Connections - terminals	Screw clamp terminals, $\leq 2 \times 1.5 \text{ mm}^2$ with cable end conforming to EN 60947-1 Screw clamp terminals, $\geq 1 \times 0.22 \text{ mm}^2$ without cable end conforming to EN 60947-1

Complementary

Net weight	0.011 kg
Positive opening	Without
Operating travel	2.6 Mm (NO changing electrical state) 4.3 mm (total travel)
Operating force	2.3 N NO changing electrical state
Mechanical durability	10000000 cycles
Tightening torque	0.8...1.2 N.m conforming to EN 60947-1
Shape of screw head	Cross compatible with pozidriv No 1 screwdriver Slotted compatible with flat $\varnothing 4$ mm screwdriver Slotted compatible with flat $\varnothing 5.5$ mm screwdriver
Contacts material	Silver alloy (Ag/Ni)
Short-circuit protection	10 A cartridge fuse type gG conforming to EN/IEC 60947-5-1
[I _{th}] conventional free air thermal current	10 A conforming to EN/IEC 60947-5-1
[U _i] rated insulation voltage	600 V (pollution degree 3) conforming to EN 60947-1
[U _{imp}] rated impulse withstand voltage	6 kV EN 60947-1
[I _e] rated operational current	3 A at 240 V, AC-15, A600 conforming to EN/IEC 60947-5-1 6 A at 120 V, AC-15, A600 conforming to EN/IEC 60947-5-1 0.1 A at 600 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 0.27 A at 250 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 0.55 A at 125 V, DC-13, Q600 conforming to EN/IEC 60947-5-1 1.2 A at 600 V, AC-15, A600 conforming to EN/IEC 60947-5-1
Electrical durability	1000000 Cycles, AC-15, 2 A at 230 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to EN/IEC 60947-5-1 appendix C 1000000 Cycles, AC-15, 3 A at 120 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to EN/IEC 60947-5-1 appendix C 1000000 Cycles, AC-15, 4 A at 24 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to EN/IEC 60947-5-1 appendix C 1000000 Cycles, DC-13, 0.2 A at 110 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to EN/IEC 60947-5-1 appendix C 1000000 cycles, DC-13, 0.5 A at 24 V, operating rate <3600 cyc/h, load factor: 0.5 conforming to EN/IEC 60947-5-1 appendix C
Electrical reliability	$\Lambda < 10\text{exp}(-7)$, 1 mA in clean environment conforming to EN/IEC 60947-5-4 $\Lambda < 10\text{exp}(-8)$, 5 mA in clean environment conforming to EN/IEC 60947-5-4
Mounting of block	Front mounting
Condition of use	Mounting on push-button collar

Electrical composition code	C1 (quantity <= 9) C2 (quantity <= 7) C3 (quantity <= 6) C4 (quantity <= 4) C5 (quantity <= 5) C6 (quantity <= 3) C7 (quantity <= 4) C8 (quantity <= 2) C9 (quantity <= 3) C12 (quantity <= 6) M1 (quantity <= 6) M2 (quantity <= 4) M3 (quantity <= 4) M5 (quantity <= 2) M6 (quantity <= 2) M7 (quantity <= 6) M8 (quantity <= 4) M9 (quantity <= 2) SF1 (quantity <= 3) SF2 (quantity <= 2) MF1 (quantity <= 2) MF2 (quantity <= 2) C10 (quantity <= 2) M4 (quantity <= 2) C13 (quantity <= 1)
Device presentation	Basic element

Environment

Protective treatment	TH
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-40...70 °C
Standards	CSA C22.2 No 14 EN/IEC 60947-5-1 UL 508 EN/IEC 60947-1 JIS C8201-5-1 EN/IEC 60947-5-4 JIS C8201-1
Product certifications	CCC UL DNV GL RINA GOST 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 (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

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

How many contact blocks can fit on the ZB5 or ZB4 operators?

Published date: 22 May 2019

Issue:

What is the maximum number of contact blocks you can stack at the back of an XB4/XB5 operators?

Product Line:

22mm Push Buttons

Environment:

ZB4/ ZB5 Harmony Push Button

Cause:

Determine the maximum number of contact blocks for an application.

Resolution:

9 contacts (3 side by side 3 rows deep) can mount behind standard non-illuminated buttons;

6 behind selector switches, non-illuminated, illuminated push buttons, and non-illuminated push pull and turn to release mushroom buttons;

4 behind illuminated push pull mushroom buttons, illuminated selector switches and non-illuminated trigger action mushroom buttons;

3 behind non-illuminated push on push off buttons, and;

2 behind illuminated push on push off buttons.

The contact blocks enable variable composition of body sub-assemblies and can be stacked to 3 rows, either: 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contact blocks occupy 2 rows).