Product datasheet

Specifications



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

ZB5AD2

Main

Range of product	Harmony XALF Harmony XB5
Product or component type	Head for selector switch
Device short name	ZB5
Bezel material	Dark grey plastic
Mounting diameter	22 mm
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	stay put
Operator profile	Black standard handle
Operator position information	2 positions 90°

Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	46 mm
Net weight	0.017 kg
Mechanical durability	1000000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
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 C15 for <1 contacts using single blocks in front mounting SF1 for <3 contacts using single blocks in front mounting SR1 for <3 contacts using single blocks in rear mounting
Device presentation	Basic element

Environment

Protective treatment	TH
Ambient air temperature for storage	-40…70 °C
Ambient air temperature for operation	-40…70 °C

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP67 conforming to IEC 60529 IP69 conforming to IEC 60529 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
IK degree of protection	IK06 conforming to IEC 50102
Standards	JIS C8201-5-1 CSA C22.2 No 14 UL 508 IEC 60947-1 IEC 60947-5-4 IEC 60947-5-1 JIS C8201-1
Product certifications	GL CSA BV DNV LROS (Lloyds register of shipping) UL listed
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

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.700 cm
Package 1 Width	5.400 cm
Package 1 Length	6.000 cm
Package 1 Weight	24.000 g
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Height	5.000 cm
Package 2 Width	3.400 cm
Package 2 Length	26.500 cm
Package 2 Weight	121.000 g
Unit Type of Package 3	S03
Number of Units in Package 3	200
Package 3 Height	30.000 cm
Package 3 Width	30.000 cm
Package 3 Length	40.000 cm
Package 3 Weight	5.304 kg

Contractual warranty

Warranty	18 months

Sustainability

Green Premium^{TM} label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

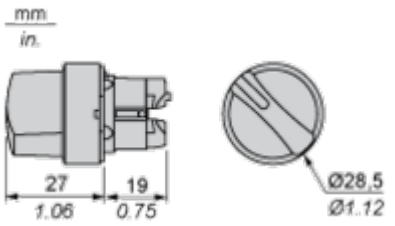
Well-being performance

Reach Free Of Svhc	
Toxic Heavy Metal Free	
Mercury Free	
Rohs Exemption Information	Yes

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
China Rohs Regulation	China RoHS declaration

Dimensions Drawings

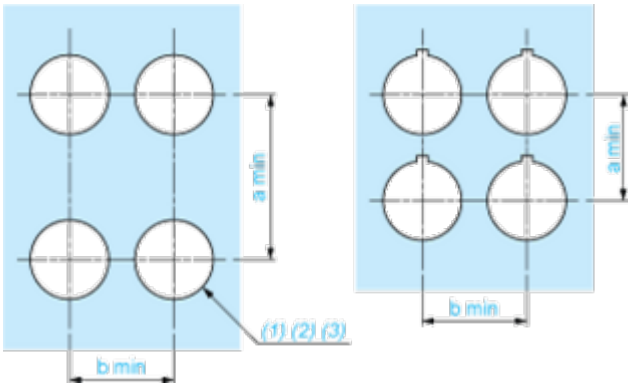
Dimensions



Mounting and Clearance

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

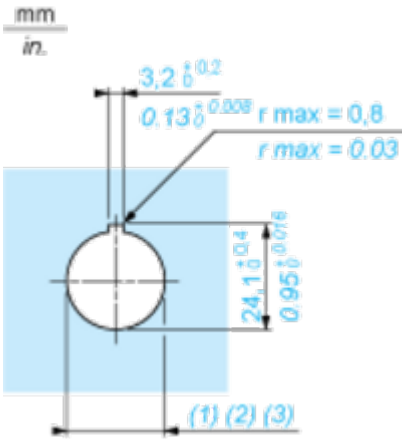
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



(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 (Ø22.3 $_{0}^{+0.4}$) / Ø0.89 in. recommended (Ø0.88 in. $_{0}^{+0.016}$)

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

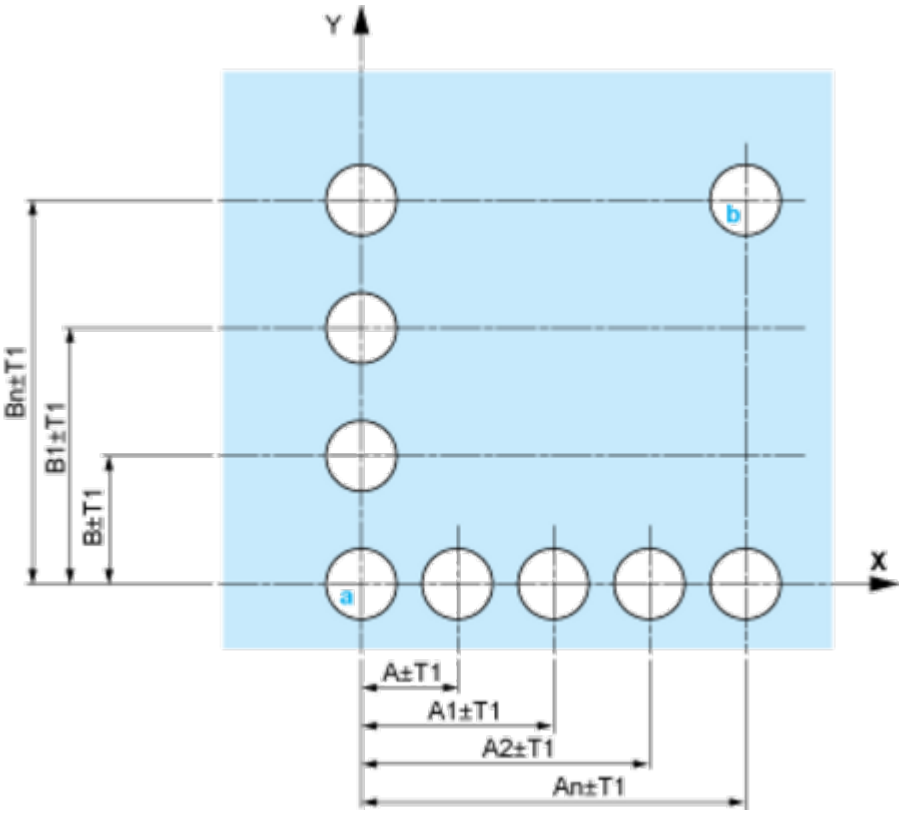
Detail of Lug Recess



(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.
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Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

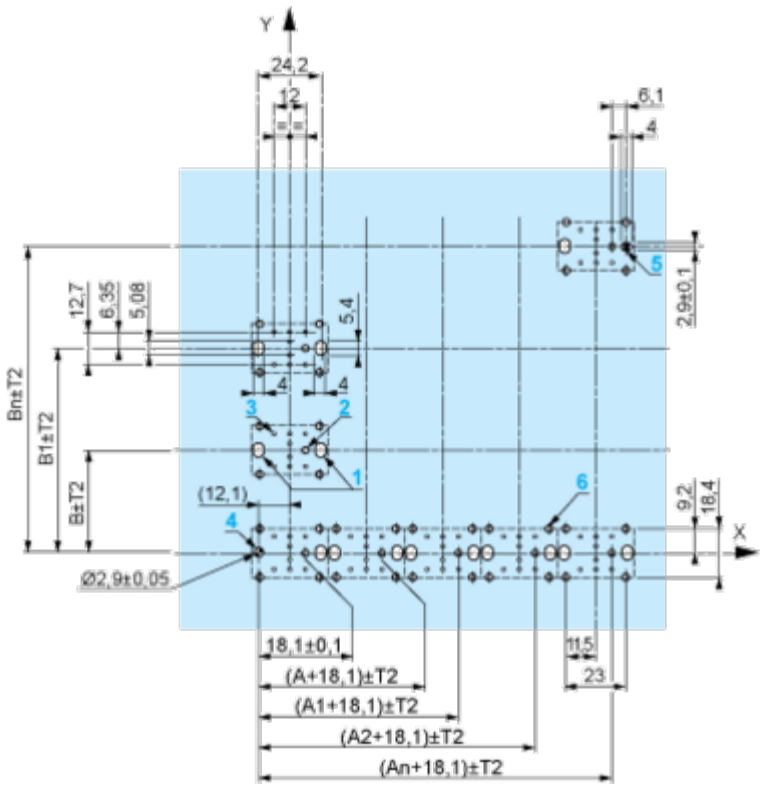
Panel Cut-outs (Viewed from Installer's Side)



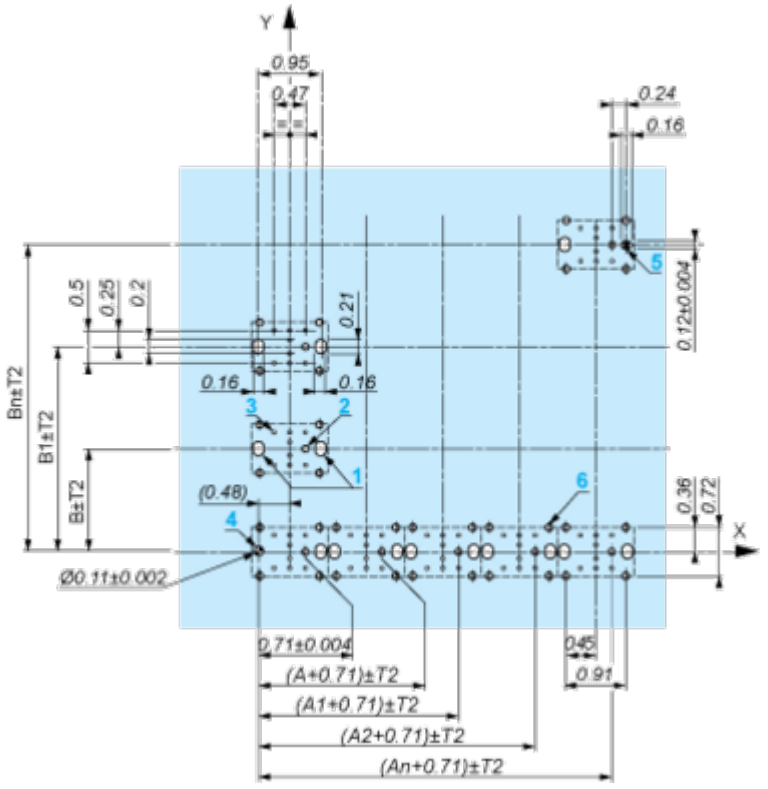
A: 30 mm min. / 1.18 in. min.
B: 40 mm min. / 1.57 in. min.

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.

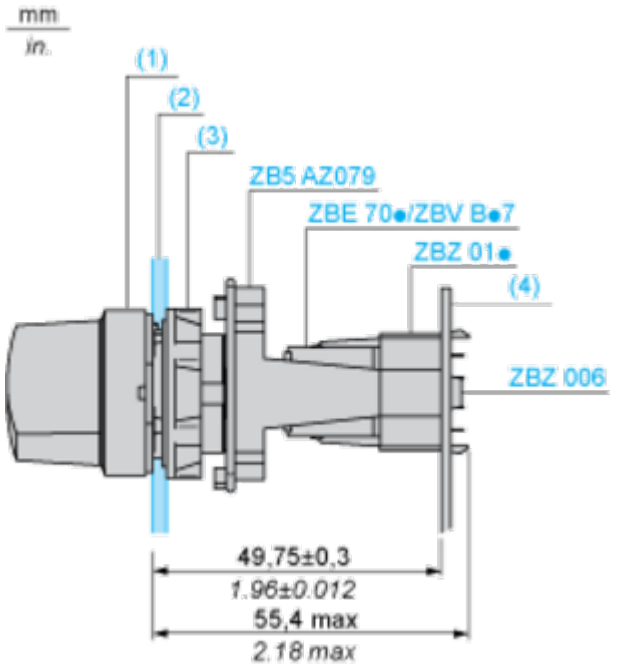
General Tolerances of the Panel and Printed Circuit Board

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 ZB5AZ009: ± 2°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

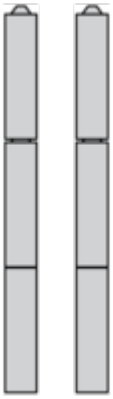
Mounting of Adapter (Socket) ZBZ01•

- **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•

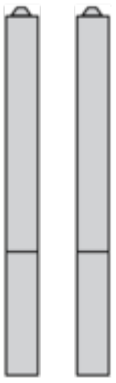
Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ01•.

Technical Description

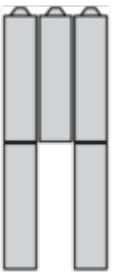
Electrical Composition Corresponding to Code C3



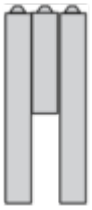
Electrical Composition Corresponding to Code C4



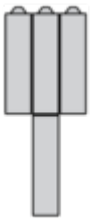
Electrical Composition Corresponding to Code C5



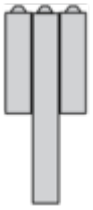
Electrical Composition Corresponding to Code C6



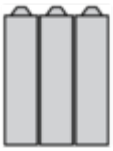
Electrical Composition Corresponding to Code C7



Electrical Composition Corresponding to Code C8



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

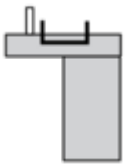


Electrical Composition Corresponding to Code C15

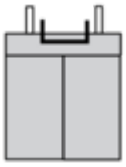
1 N/O



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

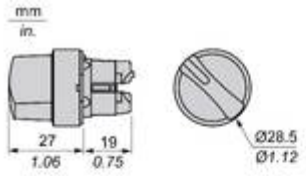
Position 45°

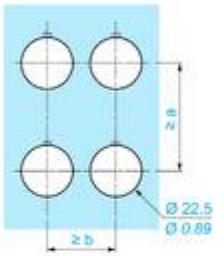


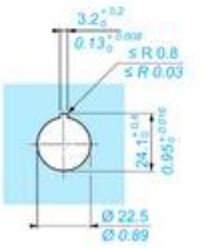
Push	Position	Top			
		Bottom			
	Location		Left	Centre	Right
	State		1	1	1
Contacts	N/O		closed	closed	closed
	N/C		open	open	open

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



Offer Marketing Illustration

Product benefits / Features



Image of product / Alternate images

Alternative









Product datasheet

Specifications



Single contact block with body fixing collar, Harmony XB5, plastic, screw clamp terminal, 2NC

ZB5AZ104

Main

Range of product	Harmony XB5
Product or component type	Complete body/contact assembly
Device short name	ZB5
Fixing collar material	Plastic
Sale per indivisible quantity	1
Head type	Standard
Contacts type and composition	2 NC
Contact operation	Slow-break
Contact block type	Single
Connections - terminals	Screw clamp terminals, <= 2 x 1.5 mm² with cable end conforming to IEC 60947-1 Screw clamp terminals, >= 1 x 0.22 mm² without cable end conforming to IEC 60947-1

Complementary

CAD overall width	30 mm
CAD overall height	42 mm
CAD overall depth	32 mm
Terminals description ISO n°1	(11-12)NC
Device composition	Body Fixing collar
Contacts usage	Standard contacts
Positive opening	With conforming to IEC 60947-5-1 appendix K
Operating travel	1.5 mm (NC changing electrical state) 4.3 mm (total travel)
Mechanical durability	10000000 cycles
Tightening torque	0.8…1.2 N.m conforming to IEC 60947-1
Shape of screw head	Cross compatible with Philips no 1 screwdriver Cross compatible with pozidriv No 1 screwdriver Slotted compatible with flat Ø 4 mm screwdriver Slotted compatible with flat Ø 5.5 mm screwdriver
Contacts material	Silver alloy (Ag/Ni)
Short-circuit protection	10 A cartridge fuse type gG conforming to IEC 60947-5-1
[Ith] conventional free air thermal current	10 A conforming to IEC 60947-5-1
[Ui] rated insulation voltage	600 V (pollution degree 3) conforming to IEC 60947-1

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[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947-1
[Ie] rated operational current	3 A at 240 V, AC-15, A600 conforming to IEC 60947-5-1 6 A at 120 V, AC-15, A600 conforming to IEC 60947-5-1 0.1 A at 600 V, DC-13, Q600 conforming to IEC 60947-5-1 0.27 A at 250 V, DC-13, Q600 conforming to IEC 60947-5-1 0.55 A at 125 V, DC-13, Q600 conforming to IEC 60947-5-1 1.2 A at 600 V, AC-15, A600 conforming to 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 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 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 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 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 IEC 60947-5-1 appendix C
Electrical reliability	Λ < 10exp(-6) at 5 V, 1 mA in clean environment conforming to IEC 60947-5-4 Λ < 10exp(-8) at 17 V, 5 mA in clean environment conforming to IEC 60947-5-4
Device presentation	Basic sub-assemblies

Environment

Protective treatment	TH
Ambient air temperature for storage	-40…70 °C
Ambient air temperature for operation	-40…70 °C
IP degree of protection	IP20 conforming to IEC 60529
Standards	IEC 60947-5-4 UL 508 JIS C8201-5-1 IEC 60947-1 IEC 60947-5-1 CSA C22.2 No 14 JIS C8201-1
Product certifications	BV UL CSA DNV LROS (Lloyds register of shipping)
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

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.500 cm
Package 1 Width	3.400 cm
Package 1 Length	5.400 cm
Package 1 Weight	29.000 g
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Height	4.500 cm
Package 2 Width	3.400 cm

Package 2 Length	26.500 cm
Package 2 Weight	146.000 g
Unit Type of Package 3	S03
Number of Units in Package 3	300
Package 3 Height	30.000 cm
Package 3 Width	30.000 cm
Package 3 Length	40.000 cm
Package 3 Weight	9.240 kg

Contractual warranty

Warranty	18 months

Sustainability

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Guide to assess a product's sustainability >



Transparency



RoHS/REACh

Well-being performance

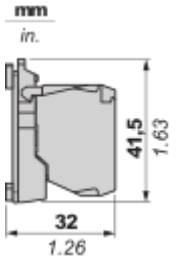
Reach Free Of Svhc	
Toxic Heavy Metal Free	
Mercury Free	
Rohs Exemption Information	Yes

Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

Dimensions Drawings

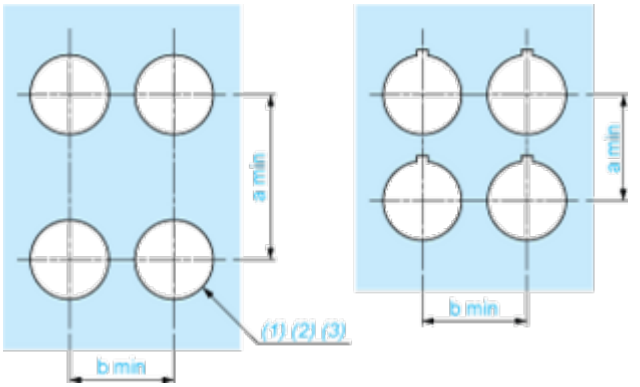
Dimensions



Mounting and Clearance

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

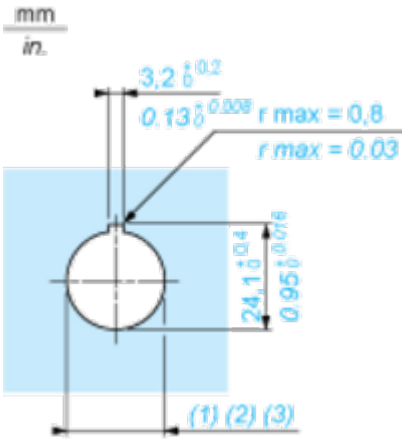
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



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(3) Ø22.5 mm recommended (Ø22.3 $_{0}^{+0.4}$) / Ø0.89 in. recommended (Ø0.88 in. $_{0}^{+0.016}$)

Connections	a in mm	a in in.	b in mm	b in in.
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On printed circuit board	30	1.18	30	1.18

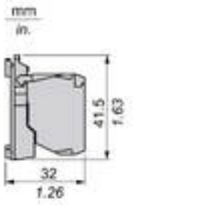
Detail of Lug Recess

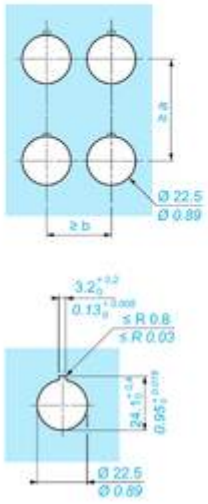


(1) Diameter on finished panel or support
(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
(3) Ø22.5 mm recommended (Ø22.3 $_{0}^{+0.4}$) / Ø0.89 in. recommended (Ø0.88 in. $_{0}^{+0.016}$)

Technical Illustration

Dimensions





		a (mm)	a (in.)	b (mm)	b (in.)
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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



Offer Marketing Illustration

Product benefits / Features



Image of product / Alternate images

Alternative








Schneider Electric
18275
NC
1
2
USTED
4PD7
E-Stop Unit
A600-Q600
ZBE-102