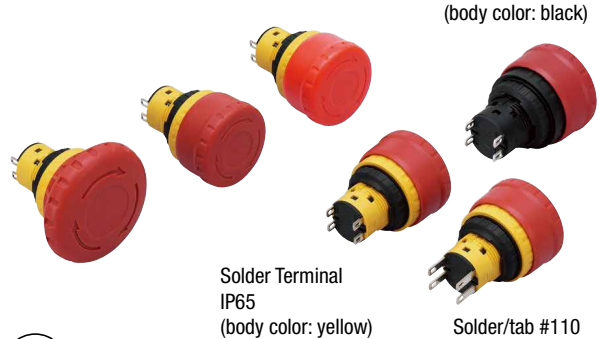
ø16 XA Series Emergency Stop Switches (Unibody)

Small, unibody emergency stop switches suitable for equipment with small mounting space. Requires only ø16mm × 19.5mm for installation.

- ø29mm and ø40mm mushroom operators
- Degree of protection IP65 and IP40 (IEC 60529)
- Dark red (Munsell 5R4/12) and bright red (Munsell 7.5R4.5/14) colors for operators of emergency stop switches.
- Silver with gold contacts.
- Push-to-lock, pull or turn-to-reset operator
- Safety lock mechanism (IEC 60947-5-5, 6.2)
- Direct opening action mechanism (IEC 60947-5-5, 5.2, IEC60947-5-1, Annex K)



APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
X6
XA
XW
XN
SEMI

Standards and Specifications

Contact Ratings

Rated Insulation Voltage (Ui)			250V		
Thermal Current (Ith)			5A		
Rated Operating Voltage (Ue)			30V	125V	250V
Rated Operating Current	AC 50/60Hz	Resistive Load (AC-12)	—	5A	3A
		Inductive Load (AC-15)	—	3A	1.5A
	DC	Resistive Load (DC-12)	2A	0.4A	0.2A
		Inductive Load (DC-13)	1A	0.22A	0.1A

- Minimum applicable load: 5V AC/DC, 1 mA (reference value) (May vary depending on the operating conditions and load.)
- The rated operating currents are measured at resistive/inductive loads as specified in IEC 60947-5-1.

Specifications

Applicable Standards	IEC 60947-5-1, EN 60947-5-1 IEC 60947-5-5, EN 60947-5-5 JIS C8201-5-1, UL508, CSA C22.2 No.14 GB14048.5
Operating Temperature	–25 to +60°C (no freezing)
Storage Temperature	–45 to +80°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)
Operating Force	Push-to-lock: 10.5N Pull to reset: 10N Turn to reset: 0.16 N·m
Minimum Force Required for Direct Opening Action	40N
Minimum Operator Stroke Required for Direct Opening Action	4.0 mm
Maximum Operator Stroke	4.5 mm
Contact Resistance	50 mΩ maximum (initial value)
Insulation Resistance	100 MΩ minimum (500V DC megger)
Overvoltage Category	II
Impulse Withstand Voltage	2.5 kV
Pollution Degree	3
Operating Frequency	900 operations/hour
Shock Resistance	Operating extremes: 150 m/s^2 Damage limits: 1000 m/s^2
Vibration Resistance	Operating extremes: 10 to 500 Hz, amplitude 0.35mm, acceleration 50 m/s^2 Damage limits: 10 to 500 Hz, amplitude 0.35 mm, acceleration 50 m/s^2
Durability	Mechanical: 250,000 Electrical: 100,000 250,000 (24V AC/DC, 100mA)
Degree of Protection	IP65, IP40 (IEC 60529)
Short-circuit Protection	250V/10A fuse (Type aM IEC 60269-1/IEC 60269-2)
Conditional Short-circuit Current	1000A
Terminal Style	Solder terminal, Solder/tab #110 terminal
Recommended Tightening Torque for Locking Ring	0.88 N·m
Applicable Wire Size	1.25 mm^2 maximum (AWG16 maximum)
Terminal Soldering Condition	310 to 350°C, within 3 seconds
Weight (approx.)	ø29mm mushroom: 14g ø40mm mushroom: 17g

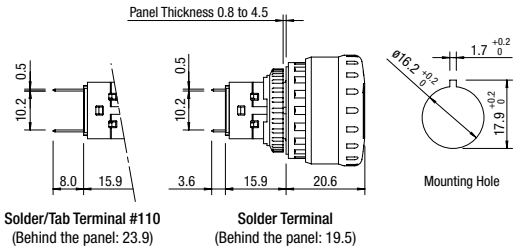
Pushlock Pull/Turn Reset (Solder Terminal)

XA Series

Shape	Contact	Part No. IP40 (contact part: black)	Part No. IP65 (contact part: yellow)	① Operator Color Code
ø29mm Mushroom 	1NC	XA1E-BV3U01K①	XA1E-BV3U01①	R: red RH: bright red
	2NC	XA1E-BV3U02K①	XA1E-BV3U02①	
ø40mm Mushroom 	1NC	XA1E-BV4U01K①	XA1E-BV4U01①	
	2NC	XA1E-BV4U02K①	XA1E-BV4U02①	

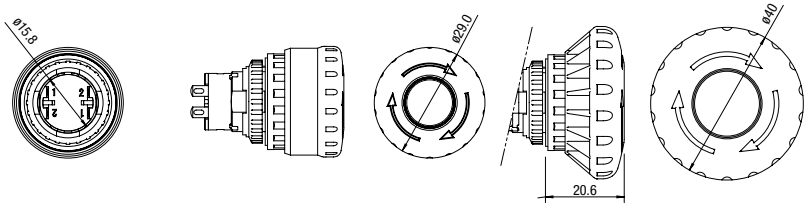
• Solder/tab #110 terminal is also available. Specify "T" before ① in the Ordering No.
XA1E-BV3U02KR → XA1E-BV3U02KTR

Dimensions



Solder/Tab Terminal #110
(Behind the panel: 23.9)

Solder Terminal
(Behind the panel: 19.5)

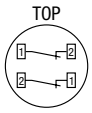


ø29 mm Mushroom

ø40 mm Mushroom

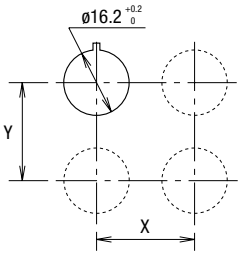
All dimensions in mm.

Terminal Arrangement (Bottom View)



1NC: Termimals on top

Mounting Hole Layout



• The values shown on the left are the minimum dimensions for mounting with other ø16 mm pushbuttons. For other control units of different sizes and styles, determine the values according to the dimensions, operation, and wiring.

	X	Y
ø29mm Mushroom	40 mm minimum	
ø40mm Mushroom	50 mm minimum	

ø16 X6/XA Series Emergency Stop Switches Accessories

Accessories and Replacement Parts (ø16 X6/XA Series Emergency Stop Switches)

Description & Shape	Material	Part No.	Package Quantity	Remarks
Ring Wrench 	Metal (nickel-plated brass)	MT-001	1	• Used to tighten the locking ring when installing the XA emergency stop switch onto a panel.
Locking Ring 	Polyamide	XA9Z-LN	10	• Black
Terminal Cover 	PBT	XA9Z-VL2	2	• White • Used for solder terminals. • Also applicable to the XW series.
LED Unit 	For Solder Terminal	XA9Z-LED2R	1	• Replacement LED unit for illuminated (for XA series only).
	For PC Board Terminal	XA9Z-LED2VR		
LED Unit Removal Tool 	Stainless Steel	MT-101		• Used for removing the LED unit.

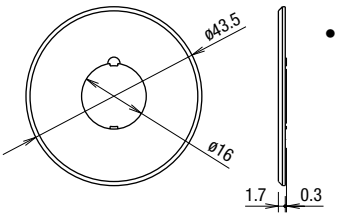
Nameplates (for ø16 X6/XA Emergency Stop Switches)

Package quantity: 1

Description	Legend	Part No.	Material	Plate Color	Legend Color
For ø30mm Operator	(blank)	HAAV-0	Polyamide	Yellow	Black
	EMERGENCY STOP	HAAV-27			
For ø40mm Operator	(blank)	HAAV4-0			
	EMERGENCY STOP	HAAV4-27			

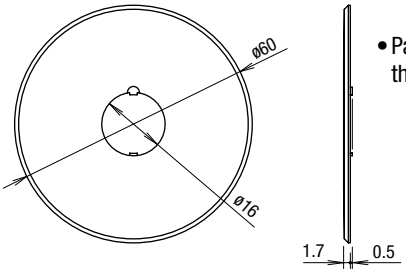
• Cannot be used with a switchguard.

For ø30mm Operator



• Panel thickness when using the nameplate: 0.5 to 2 mm

For ø40mm Operator



• Panel thickness when using the nameplate: 0.5 to 2 mm

All dimensions in mm.