ø16 XA Series Emergency Stop Switches (w/Removable Contact Block)

Compact size - only 27.9 mm deep behind the panel. Reliable "Safe break action."

- The depth behind the panel is only 27.9 mm for 1 to 4 contacts, both on illuminated and non-illuminated.
- IDEC's original "Safe break action" ensures that the contacts open when the contact block is detached from the operator.
- 1 to 4NC main contacts and 1NO monitor contact
- Push-to-lock, Pull or Turn-to-reset operator
- Direct opening action mechanism (IEC 60947-5-5, 5.2, IEC60947-5-1, Annex K)
- Safety lock mechanism (IEC 60947-5-5, 6.2)
- Degree of protection IP65 (IEC 60529)
- Silver with gold contacts.
- Two operator sizes: ø29 and ø40 mm
- Dark red (Munsell 5R4/12) or bright red (Munsell 7.5R4.5/14) colors are available for the operator of non-illuminated emergency stop switches.



Standards and Specifications

Contact Ratings

NC main contacts (black) /NO monitor contact (blue)

Rated Insulation Voltage (Ui)				300V (illuminated part: 60V)		
Rated Thermal Current (Ith)				5A		
Rated Operating Voltage (Ue)				30V	125V	250V
Rated Operating Current	Main Contacts	AC 50/60 Hz	Resistive Load (AC-12)	–	3A	3A
			Inductive Load (AC-15)	–	1.5A	1.5A
		DC	Resistive Load (DC-12)	2A	0.4A	0.2A
			Inductive Load (DC-13)	1A	0.22A	0.1A
	Monitor Contacts	AC 50/60 Hz	Resistive Load (AC-12)	–	1.2A	0.6A
			Inductive Load (AC-14)	–	0.6A	0.3A
		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) (Operating area may vary according to the operating conditions and load types.)
- The rated operating currents are measured at resistive/inductive load types specified in IEC 60947-5-1.

Illumination Ratings

Rated Voltage	Operating Voltage	Rated Current
24V AC/DC	24V AC/DC ±10%	11 mA

Specifications

Applicable Standards	IEC60947-5-1, EN60947-5-1 IEC60947-5-5, EN60947-5-5, JIS C8201-5-1, UL991, NFPA79, UL508, CSA C22.2 No.14, GB14048.5
Operating Temperature	–25 to +60°C (no freezing) Illuminated: –25 to +55°C (no freezing)
Storage Temperature	–45 to +80°C
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	60N
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 (inside LED unit: 2)
Operation Frequency	900 operations/hour
Shock Resistance	Operating extremes: 150 m/s² Damage limits: 1000 m/s²
Vibration Resistance	Operating extremes: 10 to 500 Hz, amplitude 0.35 mm acceleration 50 m/s² Damage limits: 10 to 500 Hz, amplitude 0.35 mm acceleration 50 m/s²
Mechanical Life	250,000 operations minimum
Electrical Life	100,000 operations min 250,000 operations min (24V AC/DC, 100 mA)
Degree of Protection	IP65 (IEC60529)
Short-circuit Protection	250V/10A fuse (Type aM, IEC60269-1/IEC60269-2)
Conditional Short-circuit Current	1000A
Terminal Style	Solder terminal, PC board terminal
Recommended Tightening Torque for Locking Ring	0.88 N·m
Connectable Wire	1.25 mm² maximum (AWG16 maximum)
Soldering Conditions	310 to 350°C, 3 seconds maximum
Weight	ø29 mm: 23g, ø40 mm: 28g

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Pushlock Pull/Turn Reset (Solder Terminal/PC Board Terminal)

Non-illuminated

Shape	NC Main Contact	NO Monitor Contact	Part No.		Operator Color Code
			Solder Terminal	PC Board Terminal	
ø29mm Mushroom 	1NC	—	XA1E-BV301①	XA1E-BV301V①	R: Dark red RH: Bright red
	2NC	—	XA1E-BV302①	XA1E-BV302V①	
	3NC	—	XA1E-BV303①	XA1E-BV303V①	
	4NC	—	XA1E-BV304①	XA1E-BV304V①	
	1NC	1NO	XA1E-BV311①	XA1E-BV311V①	
	2NC	1NO	XA1E-BV312①	XA1E-BV312V①	
	3NC	1NO	XA1E-BV313①	XA1E-BV313V①	
ø40mm Mushroom 	1NC	—	XA1E-BV401①	XA1E-BV401V①	
	2NC	—	XA1E-BV402①	XA1E-BV402V①	
	3NC	—	XA1E-BV403①	XA1E-BV403V①	
	4NC	—	XA1E-BV404①	XA1E-BV404V①	
	1NC	1NO	XA1E-BV411①	XA1E-BV411V①	
	2NC	1NO	XA1E-BV412①	XA1E-BV412V①	
	3NC	1NO	XA1E-BV413①	XA1E-BV413V①	

- Specify a color code in place of ① in the Part No.
- Pushlock pull/turn reset switches are locked when pressed, and reset when pulled or turned clockwise.
- Terminal cover (XA9Z-VL2) is ordered separately.
- For EMO Switches, see D-052.

Illuminated

Shape	NC Main Contact	NO Monitor Contact	Part No.		Operator Color
			Solder Terminal	PC Board Terminal	
ø29mm Mushroom 	1NC	—	XA1E-LV301Q4R	XA1E-LV301Q4VR	Dark red only
	2NC	—	XA1E-LV302Q4R	XA1E-LV302Q4VR	
	3NC	—	XA1E-LV303Q4R	XA1E-LV303Q4VR	
	4NC	—	XA1E-LV304Q4R	XA1E-LV304Q4VR	
	1NC	1NO	XA1E-LV311Q4R	XA1E-LV311Q4VR	
	2NC	1NO	XA1E-LV312Q4R	XA1E-LV312Q4VR	
	3NC	1NO	XA1E-LV313Q4R	XA1E-LV313Q4VR	
ø40mm Mushroom 	1NC	—	XA1E-LV401Q4R	XA1E-LV401Q4VR	
	2NC	—	XA1E-LV402Q4R	XA1E-LV402Q4VR	
	3NC	—	XA1E-LV403Q4R	XA1E-LV403Q4VR	
	4NC	—	XA1E-LV404Q4R	XA1E-LV404Q4VR	
	1NC	1NO	XA1E-LV411Q4R	XA1E-LV411Q4VR	
	2NC	1NO	XA1E-LV412Q4R	XA1E-LV412Q4VR	
	3NC	1NO	XA1E-LV413Q4R	XA1E-LV413Q4VR	

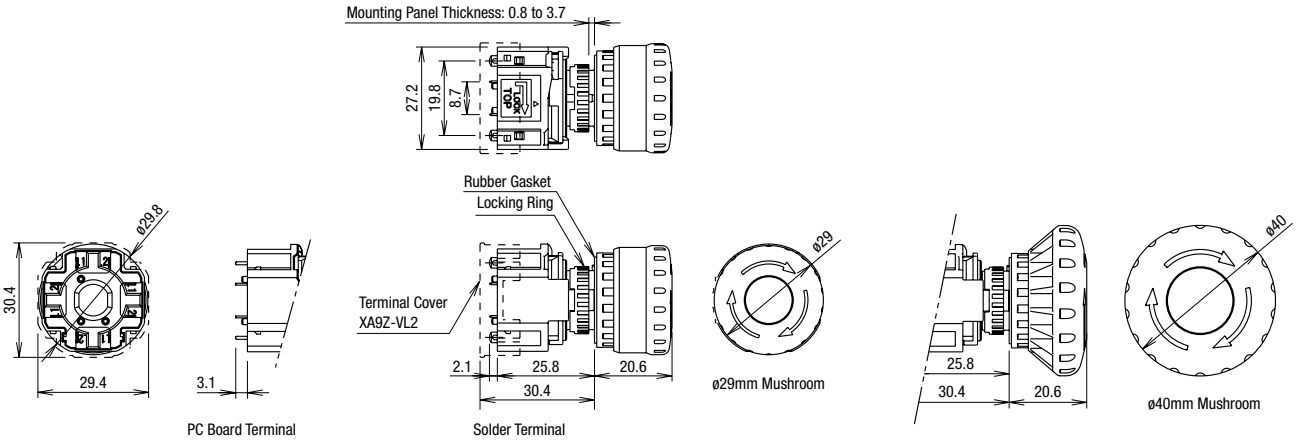
- Pushlock pull/turn reset switches are locked when pressed, and reset when pulled or turned clockwise.
- Terminal cover (XA9Z-VL2) is ordered separately.

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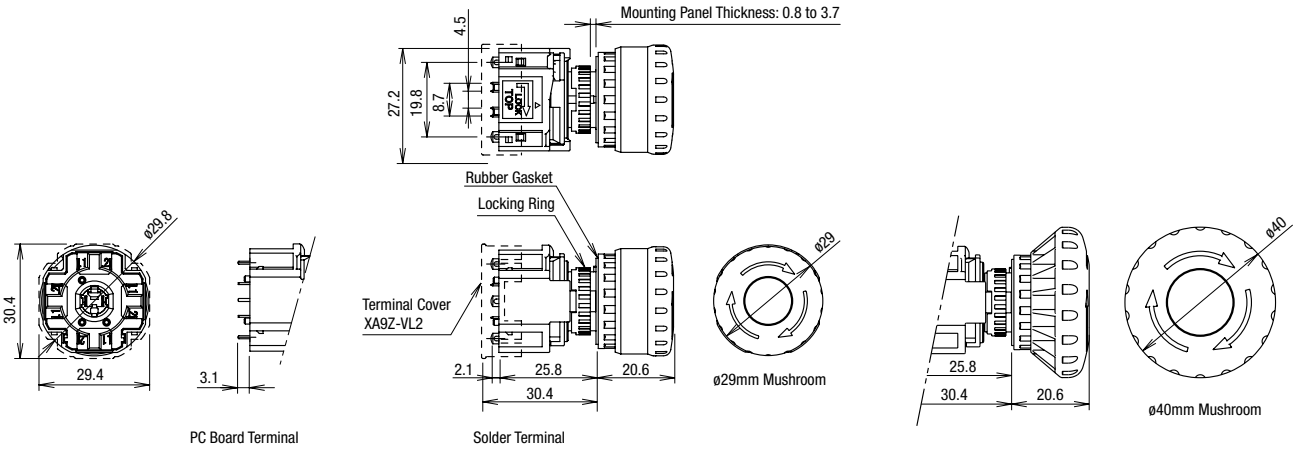
ø16 XA Series Emergency Stop Switches (w/Removable Contact Block)

Dimensions

Non-illuminated

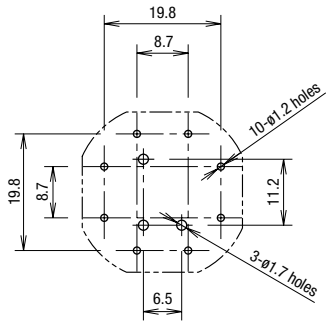


Illuminated

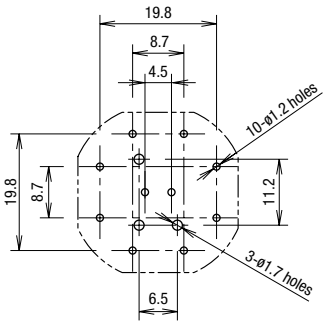


PC Board Layout (Bottom View)

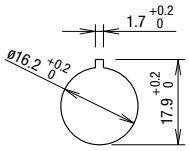
Non-Illuminated



Illuminated

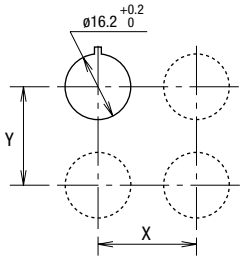


Panel Cut-out



All dimensions in mm.

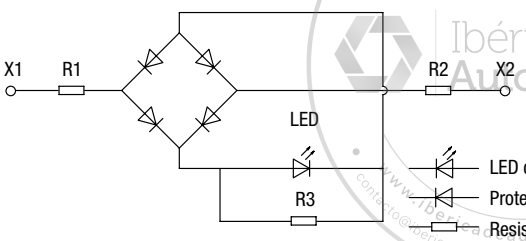
Mounting Hole Layout



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

- The values shown above 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 convenience.

LED Unit Internal Circuit

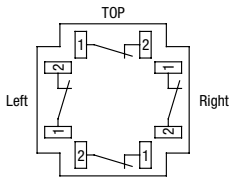


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Terminal Arrangement (Bottom View)

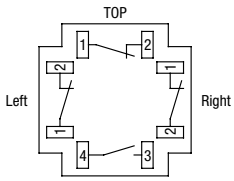
Non-illuminated

NC main contacts (black) only
NC main contacts (black): Terminals 1-2



1NC: Terminals on right
2NC: Terminals on right and left
3NC: Terminals on right, left, and top

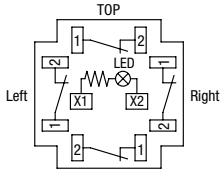
With NO monitor contacts (blue)
NC main contacts (black): Terminals 1-2
NO monitor contacts (blue): Terminals 3-4



1NC: Terminals on top
2NC: Terminals on right and left

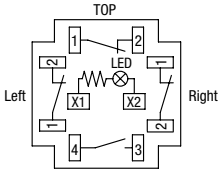
Illuminated

NC main contacts only (black)
NC main contacts(black): Terminals 1-2



1NC: Terminals on right
2NC: Terminals on right and left
3NC: Terminals on right, left, and top

With NO monitor contacts (blue)
NC main contacts (black): Terminals 1-2
NO monitor contacts (blue): Terminals 3-4



1NC: Terminals on top
2NC: Terminals on right and left

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