

# Ø16 XA / Ø22 XW Series

## Emergency stop switches (unibody/illuminated)

The new addition to the XA/XW series features a reverse energy structure with illuminated or 1NO-2NC contact types available. These have a compact and unibody design with a panel depth of 12.6mm.

- Illuminated or 1NO-2NC contact types
- Two reset operations (Pushlock pull or turn reset)
- Reverse energy structure
- Safety lock mechanism (IEC60947-5-5: 6.2)
- Direct opening action mechanism (IEC60947-5-5: 5.2, IEC60947-5-1 annex K.)
- Protection degree IP65, IP67, (IEC60529) and IP69K (ISO20653)
- Indicator and escape structure



• See website for details on approvals and standards.

### Contact ratings

Rated insulation voltage (Ui)		Non-illuminated		250V			
		Illuminated					
Rated current (Ith)		Non-illuminated		5A			
		Illuminated		3A			
Rated operating voltage (Ue)			30V	125V	250V		
Rated operating current (*1)	Main contact	AC 50/60Hz	Resistive load (AC-12)	—	3A	1.5A	
		Inductive load (AC-15)	—	1.5A	1.5A		
		DC	Resistive load (DC-12)	2A	0.4A	0.2A	
	Monitor contact	Inductive load (DC-13)	1A	0.22A	0.1A		
		AC 50/60Hz	Resistive load (AC-12)	—	1.2A	0.6A	
		Inductive load (AC-15)	—	0.6A	0.3A		
DC			Resistive load (DC-12)	2A	0.4A	0.2A	
			Inductive load (DC-13)	1A	0.22A	0.1A	
Contact material			Gold on silver, crossbar contacts				

- Minimum applicable load (reference value) = 5V AC/DC, 1mA (Applicable range may vary with operating conditions and load types.)
- Operational current represents the classification by making and breaking current (IEC 60947-5-1)

\*1) UL recognized ratings: Pilot Duty AC 1.5A / 250V

Pilot Duty DC 1A/30V

Maximum ambient air temperature 60°C

TÜV / CCC certified ratings: AC-15 1.5A / 250V, DC-13 1A / 30V

### Performance Specifications

Type	XA	XW						
Applicable standards	IEC 60947-1, EN 60947-1, JIS C 8201-1 IEC 60947-5-1, EN 60947-5-1, JIS C 8201-5-1, IEC60947-5-5 (*2), EN60947-5-5 (*2), JIS C 8201-5-5 (*2) UL60947-5-5(*2) , UL991(*2), NFPA79 (*2), ISO13850 (*3), UL508, CSA C 22.2 No. 14, GB/T14048.5							
Standard operating conditions	<table border="1"> <tr> <td>Operating temperature</td> <td>Non-illuminated:-25 to +70°C (no freezing) Illuminated: -25 to +55°C (no freezing)</td> </tr> <tr> <td>Operating humidity</td> <td>30 to 85%RH (no condensation)</td> </tr> <tr> <td>Storage temperature</td> <td>Non-illuminated: -45 to +80°C (no freezing) Illuminated: -30 to +70°C (no freezing)</td> </tr> </table>	Operating temperature	Non-illuminated:-25 to +70°C (no freezing) Illuminated: -25 to +55°C (no freezing)	Operating humidity	30 to 85%RH (no condensation)	Storage temperature	Non-illuminated: -45 to +80°C (no freezing) Illuminated: -30 to +70°C (no freezing)	
Operating temperature	Non-illuminated:-25 to +70°C (no freezing) Illuminated: -25 to +55°C (no freezing)							
Operating humidity	30 to 85%RH (no condensation)							
Storage temperature	Non-illuminated: -45 to +80°C (no freezing) Illuminated: -30 to +70°C (no freezing)							
Operating force	Pushlock: 20N Pull reset:12N Turn reset: 0.2N·m							
Minimum force required for direct opening action	50N							
Minimum operator stroke required for direct opening action	3mm							
Maximum operator stroke	4.1mm							
Contact resistance	50mΩ max. (initial value)							
Insulation resistance	100MΩ min. (500V DC megger)							
Oversupply category	II							
Impulse withstand voltage	2.5kV							
Degree of pollution	Panel front:3, Panel back: 2							

\*2) Products other than those with red button specifications are excluded from the button color requirements of the relevant standard. Y (yellow) cannot be used as an emergency stop switch.

\*3) Illuminated white button should be used with red illumination in accordance with ISO13850.

\*4) Not a guaranteed value. The actual life depends on operating environments and conditions.



### Illumination rating

Rated voltage	Coil voltage range	Rated current
24V AC/DC	24V AC/DC ±10%	Typ.10mA

Type	XA	XW
Operation frequency	900 operations per hour	
LED life (*4)	60,000 hours (Ta = 25°C, 45%RH) (The total illumination life in which the illuminance maintains a minimum of 50% of the initial value.)	
Shock resistance	Operating extremes: 150m/s <sup>2</sup> Damage limits: 1000m/s <sup>2</sup>	
Vibration resistance	Operating extremes: 10 to 500Hz, amplitude 0.35mm, acceleration 50 m/s <sup>2</sup> Damage limits: 10 to 500Hz, amplitude 0.35mm, acceleration 50m/s <sup>2</sup>	
Durability	Mechanical:250,000 times min. Electrical: 100,000 times min. 250,000 times min. (24V AC/DC, 100mA)	
Degree of Protection (*5)	Panel front: IP65, IP67, IP69K, UL Type 4X	
Impact protection	Equivalent to IK06, 07 *No damages	
Short-circuit protection	250V/10A fuse (Type aM IEC60269-1/IEC60269-2)	
Conditional short-circuit current	100A	
Terminal style	Solder terminal Solder/tab #110 terminal	
Recommended tightening torque of locking ring	0.8 to 0.9N·m	1.8 to 2N·m
Connectable wire	1.25mm <sup>2</sup> max. (AWG16 max.)	
Terminal soldering conditions	310 to 350°C, within 3 seconds	
Weight (approx.)	Approx. 15g	Approx. 17g

\*5) The protective structure is based on the test conditions of IEC60529, ISO20653, and JIS C 0920. This is not guaranteed for all operating environments. The specification values for the protective structure are for products that have been installed.

## Emergency Stop Switches

### ø16 XA pushlock pull or turn reset switch (non-illuminated)

Shape	Part No.	Contact	Terminal style	Button color	Quantity: 1
	XA1E-BV3SG01*	1NC	Solder terminal	Red Bright red	
	XA1E-BV3SG01T*		Solder/tab #110 terminal		
	XA1E-BV3SG02*	2NC	Solder terminal		
	XA1E-BV3SG02T*		Solder/tab #110 terminal		
	XA1E-BV3SG12*	1NO-2NC	Solder terminal		
	XA1E-BV3SG12T*		Solder/tab #110 terminal		

• \*Color code: R (red), RH (bright red)

• Push lock pull or turn reset switches are locked when pressed, and reset when pulled or turned clockwise.

### ø22 XW pushlock pull or turn reset switch (non-illuminated)

Shape	Part No.	Contact	Terminal style	Button color	Quantity: 1
	WX1E-BV3SG01*	1NC	Solder terminal	Red Bright red	
	WX1E-BV3SG01T*		Solder/tab #110 terminal		
	WX1E-BV3SG02*	2NC	Solder terminal		
	WX1E-BV3SG02T*		Solder/tab #110 terminal		
	WX1E-BV3SG12*	1NO-2NC	Solder terminal		
	WX1E-BV3SG12T*		Solder/tab #110 terminal		

• \*Color code: R (red), RH (bright red)

• Pushlock pull or turn reset switches are locked when pressed, and reset when pulled or turned clockwise.

### ø16 XA pushlock pull or turn reset switch (illuminated)

Shape	Part No.	Contact	Terminal style	Button color	Illuminated color	Quantity: 1
	XA1E-LV3SG02Q4R	2NC	Solder terminal	Red	Red	
	XA1E-LV3SG02Q4TR		Solder/tab #110 terminal			
	XA1E-LV3SG02Q4WR	2NC	Solder terminal	White	Red	
	XA1E-LV3SG02Q4TWR		Solder/tab #110 terminal			

### ø22 XW pushlock pull or turn reset switch (illuminated)

Shape	Part No.	Contact	Terminal style	Button color	Illuminated color	Quantity: 1
	WX1E-LV3SG02Q4R	2NC	Solder terminal	Red	Red	
	WX1E-LV3SG02Q4TR		Solder/tab #110 terminal			
	WX1E-LV3SG02Q4WR	2NC	Solder terminal	White	Red	
	WX1E-LV3SG02Q4TWR		Solder/tab #110 terminal			

• When using white button color, make sure to use the switch as an active state when illuminated.

• Pushlock pull or turn reset switches are locked when pressed, and reset when pulled or turned clockwise.

## Accessories

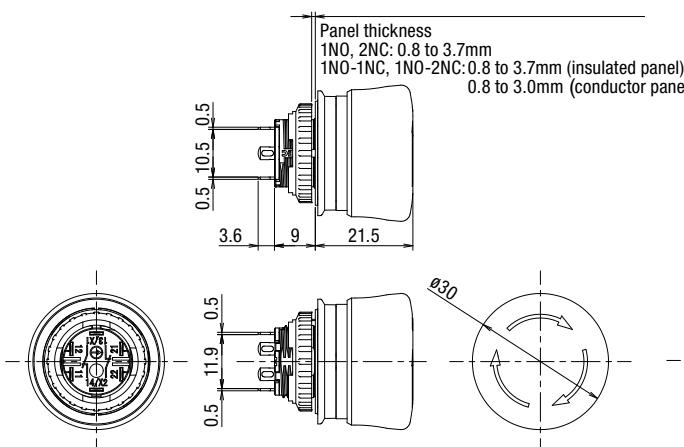
Name / Shape	Part No.	Specification	Ordering No.	Quantity	Remarks
Locking ring wrench	MT-001	Metal (brass, nickel plated)	MT-001	1	For XA series. Used to tighten the locking ring when mounting the unit to the panel.
Locking ring	XA9Z-LNW	Polyamide resin (White)	XA9Z-LNW	1 (10 pcs)	For XA series
Locking ring wrench	MW9Z-T1	Metal (Brass)	MW9Z-T1	1	For XW series. Used to tighten the locking ring when mounting the unit to the panel.
Locking ring	XW9Z-LNW	Polyamide resin (White)	XW9Z-LNWPN	1 (5 pcs)	For XW series

## Dimensions

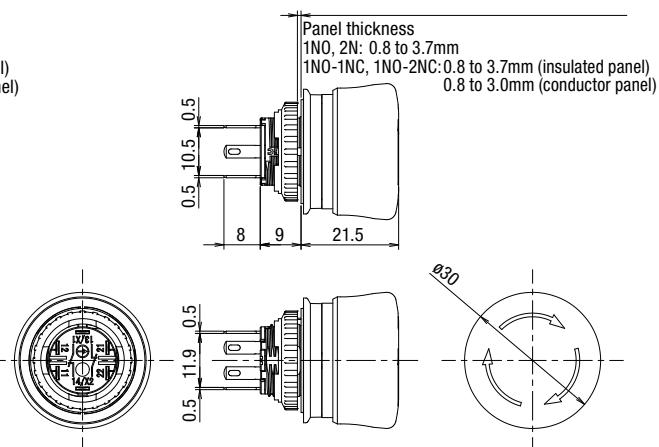
All dimensions in mm.

### ø16 XA pushlock pull or turn reset switch (illuminated or non-illuminated)

#### Solder terminal

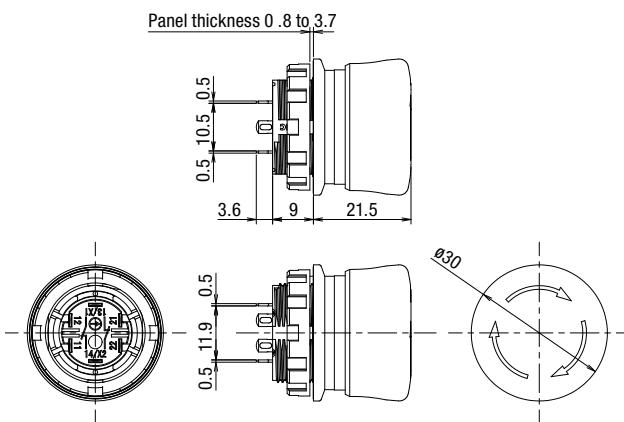


#### Solder/tab #110 terminal

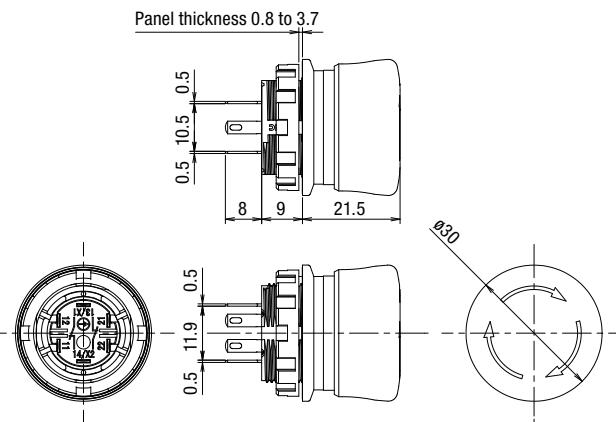


### ø22 XA pushlock pull or turn reset switch (illuminated or non-illuminated)

#### Solder terminal



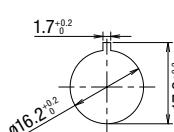
#### Solder/tab #110 terminal



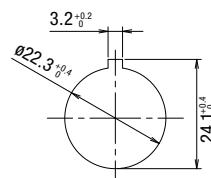
## Panel cut-out

All dimensions in mm.

### ø16 XA pushlock pull or turn reset switch (illuminated or non-illuminated)



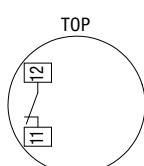
### ø22 XW pushlock pull or turn reset switch (illuminated or non-illuminated)



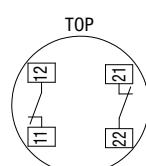
## Terminal arrangement (BOTTOM VIEW)

### Non-illuminated

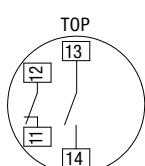
#### 1NC contact



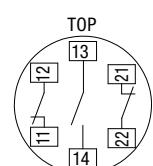
#### 2NC contact



#### 1NO-1NC contact

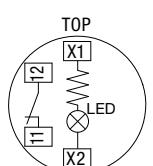


#### 1NO-2NC contact

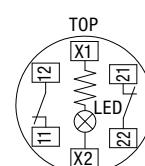


### Illuminated

#### 1NC contact



#### 2NC contact



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

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

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