

# INSTRUCTION SHEET

## XA1E/XW1E Series

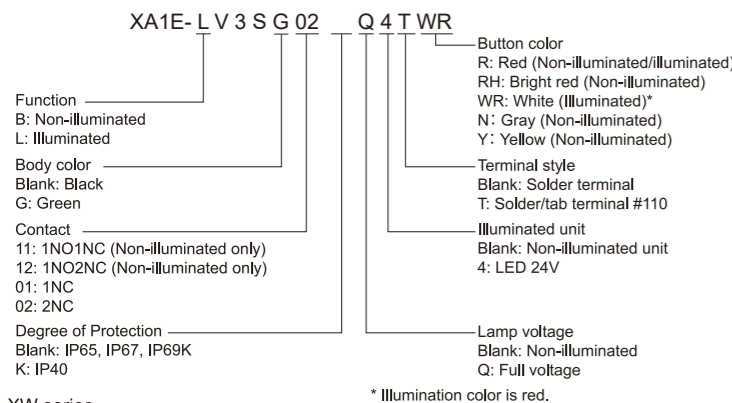
Confirm that the delivered product is what you have ordered.

### 1 Safety Precautions

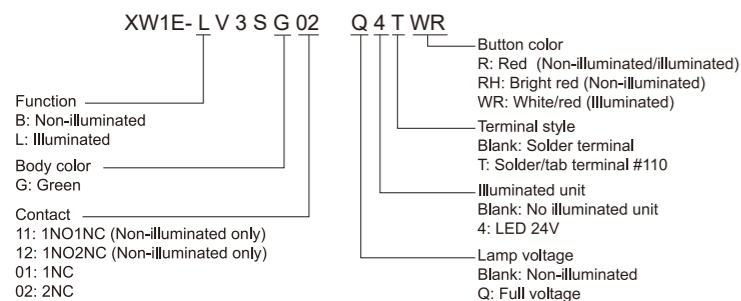
- Be sure to read this instruction sheet and the catalog carefully before performing installation, wiring, or maintenance work. Keep this instruction sheet where it can be accessed by the end user.
- Turn off the power before starting installation, removal, wiring, maintenance, and inspection of the products. Failure to turn power off may cause electrical shock or fire.
- Use wires of the proper size to meet the voltage and current requirements. Incorrect wiring causes overheating, resulting in a possible fire hazard. Provide appropriate protection against electric shock. Failure to turn power off may cause electrical shock or fire.

### 2 Part No. configuration

• XA series



• XW series

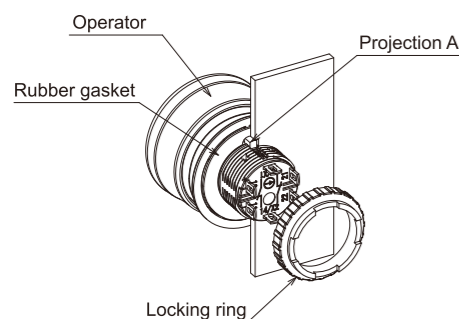


### 3 Panel mounting

- Notes for panel mounting: Do not use pliers. Do not exert excessive force, otherwise the locking ring may be damaged.

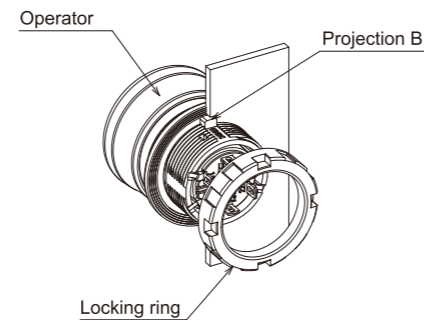
• XA series

**Panel mounting**  
Remove the locking ring from the operator and check that the rubber gasket is in place. Insert the operator from panel front into the panel hole. Install the locking ring with the recommended tightening torque by aligning the projection A of the operator with the panel hole groove. Using the locking ring wrench MT-001, tighten the locking ring to the torque of 0.8 to 0.9N·m.



• XW series

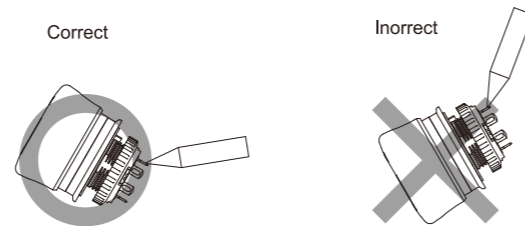
**Panel mounting**  
Remove the locking ring from the operator and insert the operator from panel front into the panel hole. Install the locking ring with the recommended tightening torque by aligning the projection B of the operator with the panel hole groove. Using the locking ring wrench MW9Z-T1, tighten the locking ring to the torque of 1.8 to 2.0N·m.



### 4 Instructions

**Wiring (Notes for solder terminal)**

- Applicable wire size is 1.25 mm<sup>2</sup> maximum.
- Solder the terminals using a soldering iron at 310 to 350°C for 3 seconds maximum. Do not use flow or dip soldering. (Sn-Ag-Cu type lead-free solder is recommended.) Make sure that the soldering iron touches the terminals only, not plastic parts. Do not apply external force such as bending the terminals or applying tensile force on the wires. Check the operation using the actual load.
- Use a non-corrosive rosin-based flux. To prevent the flux from entering the switch while soldering, face the terminals downward.



- Because the terminal spacing is narrow, use protective tubes or heat shrinkable tubes to avoid burning the wire sheath or short circuit.
- Apply force on the terminals in the vertical direction to the panel only, otherwise the terminals will be damaged.

**Wiring (Notes for solder/tab terminal #110)**

- Use quick connect of #110 and 0.5mm tab thickness.
- To prevent short-circuit between different poles, use protective tubes or heat shrink tubes.
- Apply force on the terminals in the vertical direction to the panel only, otherwise the terminals will be damaged.

**Contact bounce**

When the button is reset by pulling or turning, the NC main contacts will bounce. When pressing the button, the NO monitor contacts will bounce. (reference value: 20ms) When designing a control circuit, take the contact bounce time into consideration.

**LED illuminated switches**

- LED modules and illumination units may vary in illumination colors and illuminance.
- An LED lamp is built into the contact block and cannot be replaced.

**Notes**

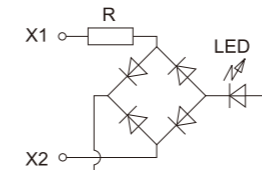
- Do not expose the switch to excessive shock and vibration, otherwise the switch may be deformed or damaged, causing malfunction or operation failure.
- Be sure to observe the operating ambient temperature. Ambient operating temperature is the temperature around the product. Check the ambient temperature when using the product. Conditions exceeding the specifications may cause the internal temperature to rise, resulting in failure.
- Do not disassemble, repair, or modify the power supplies.
- Handle color may vary on the production lot.
- The resin may discolor if left in a high temperature environment.
- Do not install the following environment.
  - Where this product is exposed to high-pressure water. (where exceeding specifications equivalent to JIS C 0920 protection classes IPX5, IPX7, and IPX9K)
  - Where dust. (locations exceeding the specifications equivalent to JIS C 0920 protection class IP6X)
  - Where safety and reliability may be impaired by corrosive, volatile, flammable or chemicals gasses, etc.
  - Where strong magnetic fields or strong electric fields are generated.
  - Where flammable substances are generated or exist.
  - In the freezer, cooler outlets, etc., where there is a risk of condensation or freezing. (When using in the above locations, take measures to prevent condensation or freezing.)
  - Where ozone, radiation, or ultraviolet rays may impair safety or reliability.

### 5 Contact ratings

Rated insulation voltage (Ui)	Non-illuminated	250V				
	Illuminated	250V				
Rated current (Ith)	Non-illuminated	5A				
	Illuminated	3A				
Rated operating voltage (Ue)	Main contact	50/60Hz AC	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
		Inductive load (DC-13)	1A	0.22A	0.1A	
	Monitor contact	50/60Hz AC	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		

### 6 LED illumination ratings

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



### 7 Performance specifications

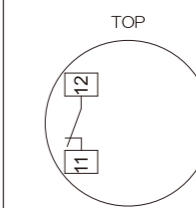
Applicable standards	IEC60947-1, EN60947-1, JIS C 8201-1, IEC60947-5-1, EN60947-5-1, JIS C 8201-5-1, IEC60947-5-5 (Note1), EN60947-5-5 (Note1), JIS C 8201-5-5 (Note1), UL991 (Note1), NFPA79 (Note1), ISO 13850 (Note2), UL508, CSA C 22.2 No.14, GB/T14048.5	
Standard operating conditions	Operating temperature	Non-illuminated: -25 to +70°C Illuminated: -25 to +55°C
	Operating humidity	45 to 85%RH
	Storage temperature	Non-illuminated: -45 to +80°C Illuminated: -30 to +70°C
Minimum force required for direct opening action	60N	
Minimum operator stroke required for direct opening action	4mm	
Maximum operator stroke	4.5mm	
Contact resistance	50mΩ maximum	
Insulation resistance	100MΩ minimum (500V DC megger)	
Overvoltage category	II	
Impulse withstand voltage	2.5kV	
Pollution degree	Panel front: 3 Back of panel: 2	
Operation frequency	900 operations/hour	
Mechanical durability	250,000 operations minimum	
Electrical durability	100,000 operations minimum	
LED life (Note3)	40,000 hours (Ta=25°C, 45%RH) (The total illumination life in which the illuminance maintains a minimum of 70% of the initial value.)	
Shock resistance	Operating extremes: 150mm/s <sup>2</sup> Damage limits: 1,000m/s <sup>2</sup>	
Vibration resistance	Operating extremes: 10 to 500Hz, amplitude 0.35mm, acceleration 50m/s <sup>2</sup> Damage limits: 10 to 500Hz, amplitude 0.35mm, acceleration 50m/s <sup>2</sup>	
Contact block protection (Note4)	Panel front: IP65, IP67, IP69, IPX9K, UL Type4X	
Short-circuit protection	250V/10A fuse (Type aM IEC60269-1/IEC60269-2)	
Conditional short-circuit current	100A	
Recommended tightening torque of locking ring	XA series: 0.8 to 0.9N·m XW series: 1.8 to 2.0N·m	
Panel thickness	XA series	Non-illuminated 1NC, 2NC: 0.8 to 3.7mm 1NC, 2NC: 0.8 to 3.7mm (insulator panel), 0.8 to 3.0mm (conductor panel)
	XW series	Illuminated 1NC, 2NC: 0.8 to 3.7mm (insulator panel), 0.8 to 3.0mm (conductor panel)
Connectable wire	1.25mm <sup>2</sup> maximum (AWG16maximum)	
Soldering conditions	310 to 350°C, 3 seconds maximum	

- Note1: Products other than those with red button specifications are excluded from the button color requirements of the relevant standard.  
Y(yellow) and N(gray) cannot be used as an emergency stop switch by EN standards.  
Note2: WR(White/red illuminated) type should be used with red illumination based on ISO13850.  
Note3: Not a guaranteed value. The actual life depends on operating environments and conditions. The information is subject to change without notice. Ta is the ambient temperature of this product.  
Note4: The protective structure is based on the test conditions of IEC60529, ISO20653, and JIS C 0920. This is not a guarantee of all environments. The specification values for the protective structure are for the product installed.

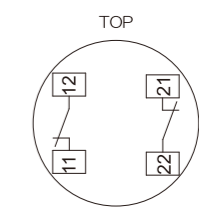
### 8 Terminal arrangement (Bottom view)

**Non-illuminated**

• 1NC contact

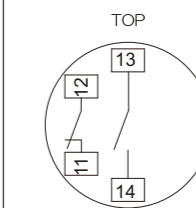


• 2NC contact

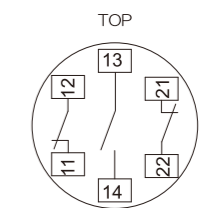


1NC: Terminals on right  
2NC: Terminals on left

• 1NO1NC contact



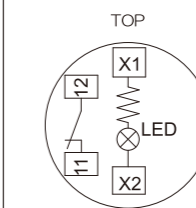
• 1NO2NC contact



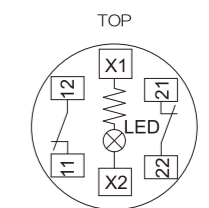
1NC: Terminals on right  
2NC: Terminals on left

**Illuminated**

• 1NC contact



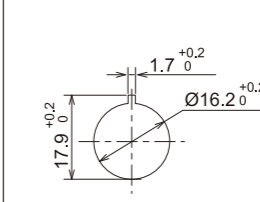
• 2NC contact



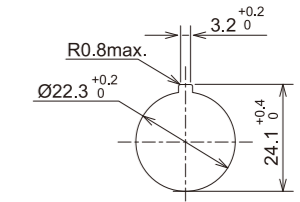
1NC: Terminals on right  
2NC: Terminals on left

### 9 Mounting hole layout

• XA series



• XW series



### 10 Precaution for disposal

- Dispose of this product as an industrial waste.

## IDEC CORPORATION

<http://www.idec.com>

**Manufacturer: IDEC CORPORATION**  
2-6-64 Nishimiyahara, Yodogawa-Ku, Osaka 532-0004, Japan  
**EU Authorized Representative: APEM SAS**  
55, Avenue Edouard Herriot BP1, 82303 Caussade Cedex, France  
**EU DECLARATION OF CONFORMITY**  
We IDEC CORPORATION 2-6-64, Nishimiyahara, Yodogawa-Ku, Osaka 532-0004, Japan declare under our sole responsibility that the product:  
Description: Emergency Stop Switches  
Model No. XA1E/XW1E Series

Applied Union harmonized legislation and references to the relevant harmonization standards used or references the other technical specifications in relation to which conformity is declared.  
Applicable EU Directive: Low Voltage Directive (2014/35/EU)  
Machinery Directive (2006/42/EC)  
RoHS Directive (2011/65/EU)

Applicable Standard(s): EN IEC 63000, EN 60947-5-5

**UK Authorized Representative: APEM COMPONENTS LIMITED**  
Drakes Drive, Long Crendon, Buckinghamshire, HP18 9BA, UK  
Applicable UK Directive: Electrical Equipment (Safety) Regulations 2016 (S.I. 2016/1101), Supply of Machinery (Safety) Regulations 2008 (S.I. 2008/1597), The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (S.I. 2012/3032)

Applicable Standard(s): EN 60947-5-5, EN IEC 63000