B-2413 (1)

INSTRUCTION SHEET
Original Instructions
XA1E/XW1E Series

Confirm that the delivered product is what you have ordered.

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.
- In this instruction sheet, safety precautions are categorized in order of importance from Warning and Caution:

⚠ WARNING

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

⚠ CAUTION

Caution notices are used where inattention might cause personal injury or damage to equipment.

⚠ WARNING

- 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.

1 Part No. configuration

- XA series

XA1E- L V 3 S G 02 Q 4 T WR

- Function: B: Non-illuminated, L: Illuminated
- Body color: Blank: Black, G: Green
- Contact: 11: 1NO1NC (Non-illuminated only), 12: 1NO2NC (Non-illuminated only), 01: 1NC, 02: 2NC
- Degree of Protection: Blank: IP65, IP67, IP69K, K: IP40
- Button color: R: Red (Non-illuminated/illuminated), RH: Bright red (Non-illuminated), WR: White (Illuminated)*, N: Gray (Non-illuminated), Y: Yellow (Non-illuminated)
- Terminal style: Blank: Solder terminal, T: Solder/tab terminal #110
- Illuminated unit: Blank: Non-illuminated unit, 4: LED 24V
- Lamp voltage: Blank: Non-illuminated, Q: Full voltage

* Illumination color is red.

- XW series

XW1E- L V 3 S G 02 Q 4 T WR

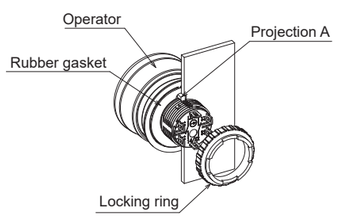
- Function: B: Non-illuminated, L: Illuminated
- Body color: G: Green
- Contact: 11: 1NO1NC (Non-illuminated only), 12: 1NO2NC (Non-illuminated only), 01: 1NC, 02: 2NC
- Button color: R: Red (Non-illuminated/illuminated), RH: Bright red (Non-illuminated), WR: White (Illuminated)*
- Terminal style: Blank: Solder terminal, T: Solder/tab terminal #110
- Illuminated unit: Blank: No illuminated unit, 4: LED 24V
- Lamp voltage: Blank: Non-illuminated, Q: Full voltage

* Illumination color is red.

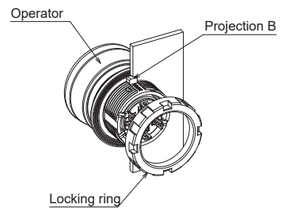
2 Panel mounting

- 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.



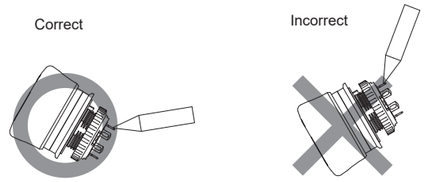
- XW series
  Panel mounting
  Remove the locking ring from the operator and insert the operator from panel front into the panel hole.
  IInstall the locking ring with the recommended tightening torque by aligning the projection B of the operator with the panel hole groove. Using the locking ring wrench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



* The XW series do not use the rubber gasket.

3 Instructions

Wiring (Notes for solder terminal)
1. Applicable wire size is 1.25 mm² maximum.
2. 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.
3. Use a non-corrosive rosin-based flux. To prevent the flux from entering the switch while soldering, face the terminals downward.



4. Because the terminal spacing is narrow, use protective tubes or heat shrinkable tubes to avoid burning the wire sheath or short circuit.
5. 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)
1. Use quick connect of #110 and 0.5mm tab thickness.
2. To prevent short-circuit between different poles, use protective tubes or heat shrink tubes.
3. Apply force on the terminals in the vertical direction to the panel only, otherwise the terminals will be damaged.

Contact chatter/bounce
Contact chatter/bounce may occur when the main contact (NC contact) is reset by pulling or turning or when the monitor contact (NO contact) is pressed.
Take countermeasures to prevent chatter/bounce. (Reference value: 20ms)
Also, do not apply external shock to the switch as chatter may occur.

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.

⚠ CAUTION
- 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.

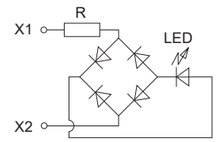
(1) Where this product is exposed to high-pressure water. (where exceeding specifications equivalent to JIS C 0920 protection classes IPX5, IPX7, and IPX9K)
(2) Where dust. (locations exceeding the specifications equivalent to JIS C 0920 protection class IP6X)
(3) Where safety and reliability may be impaired by corrosive, volatile, flammable or chemicals gasses, etc.
(4) Where strong magnetic fields or strong electric fields are generated.
(5) Where flammable substances are generated or exist.
(6) 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.)
(7) Where ozone, radiation, or ultraviolet rays may impair safety or reliability.

4 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 voltage	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

5 LED illumination ratings

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



6 Performance specifications

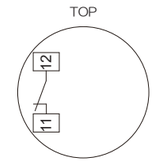
Applicable standards		IEC60947-1, EN60947-1, JIS C 8201-1, IEC60947-5-1, EN60947-5-1, JIS C 8201-5-1, IEC60947-5-5 (Note1), EN60947-5-5 (Note1), JIS C 8201-5-5 (Note1), UL991 (Note1), NFPA79 (Note1), ISO 13850 (Note2), UL508, CSA C 22.2 No.14, GB/T14048.5
Standard operating conditions	Operating temperature	Non-illuminated: -25 to +70°C Illuminated: -25 to +55°C
	Operating humidity	30 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 (initial value)
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 250,000 operations minimum（24V DC 0.1A）
LED life (Note3)		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: 150mm/s² Damage limits: 1,000m/s²
Vibration resistance		Operating extremes: 10 to 500Hz, amplitude 0.35mm, acceleration 50m/s² Damage limits: 10 to 500Hz, amplitude 0.35mm, acceleration 50m/s²
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) Illuminated 1NC, 2NC: 0.8 to 3.7mm (insulator panel), 0.8 to 3.0mm (conductor panel)
	XW series	0.8 to 3.7mm
Connectable wire		1.25mm² 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 a 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.

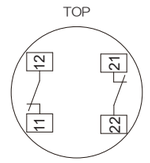
7 Terminal arrangement (Bottom view)

Non-illuminated

- 1NC contact

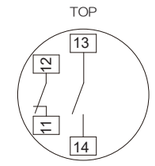


- 2NC contact

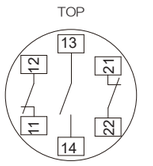


1NC: Terminals on right
2NC: Terminals on left

- 1NO1NC contact



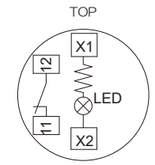
- 1NO2NC contact



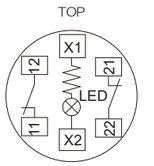
1NC: Terminals on right
2NC: Terminals on left

Illuminated

- 1NC contact



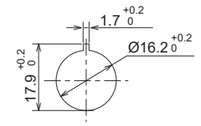
- 2NC contact



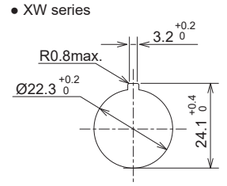
1NC: Terminals on right
2NC: Terminals on left

8 Mounting hole layout

- XA series



- XW series



9 Precaution for disposal

- Dispose of this product as an industrial waste.

IDEC CORPORATION https://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

2024.02