

Autonics COUNTER / TIMER FXY SERIES

INSTRUCTION MANUAL



Thank you for choosing our Autonics product.
Please read the following safety considerations before use.

Safety Considerations

- ⚠ Please observe all safety considerations for safe and proper product operation to avoid hazards.
- ⚠ symbol represents caution due to special circumstances in which hazards may occur.
- Warning** Failure to follow these instructions may result in serious injury or death.
- Caution** Failure to follow these instructions may result in personal injury or product damage.

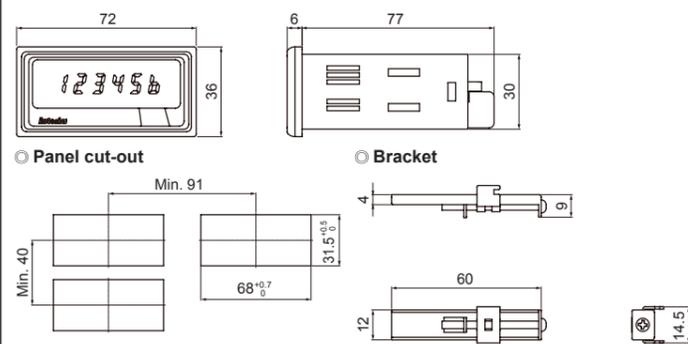
Warning

- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.** (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in fire, personal injury, or economic loss.
- Install on a device panel to use.**
Failure to follow this instruction may result in electric shock or fire.
- Do not connect, repair, or inspect the unit while connected to a power source.**
Failure to follow this instruction may result in electric shock or fire.
- Check 'Connections' before wiring.**
Failure to follow this instruction may result in fire.
- Do not disassemble or modify the unit.**
Failure to follow this instruction may result in electric shock or fire.

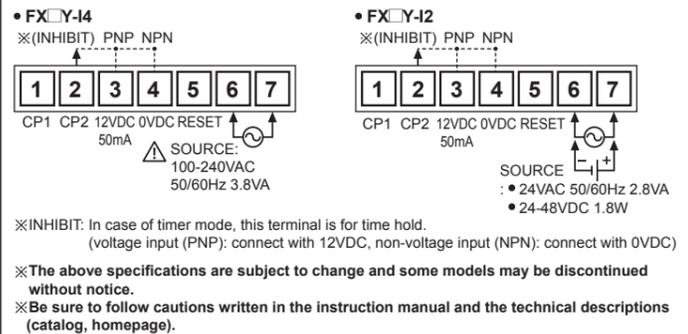
Caution

- When connecting the power/sensor input, use AWG 20(0.50mm²) cable or over, and tighten the terminal screw with a tightening torque of 0.74 to 0.90N·m.**
Failure to follow this instruction may result in fire or malfunction due to contact failure.
- Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in electric shock or fire.
- Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
Failure to follow this instruction may result in fire or explosion.
- Keep metal chip, dust, and wire residue from flowing into the unit.**
Failure to follow this instruction may result in fire or product damage.

Dimensions



Connections



Model

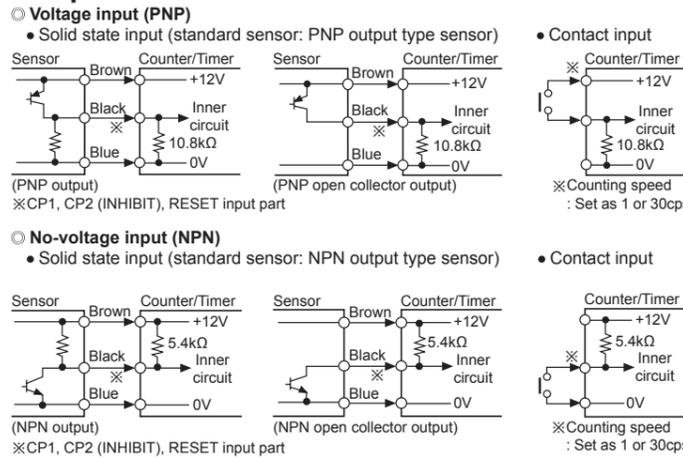
Model	Display digit	Size	Output	Power supply
FX4Y-I2	9999 (4-digit)	DIN W72×H36mm	Indicator	24VAC 50/60Hz, 24-48VDC
FX4Y-I4	9999 (4-digit)			100-240VAC 50/60Hz
FX6Y-I2	999999 (6-digit)	DIN W72×H36mm	Indicator	24VAC 50/60Hz, 24-48VDC
FX6Y-I4	999999 (6-digit)			100-240VAC 50/60Hz

Specifications

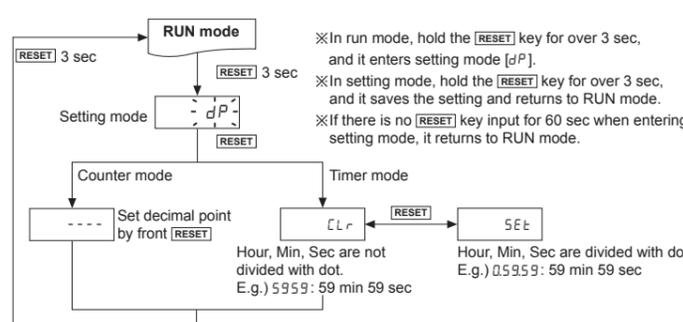
Model	Indicator	FX4Y-I2	FX4Y-I4	FX6Y-I2	FX6Y-I4
Display digit	4-digit	4-digit	4-digit	6-digit	6-digit
Character size (W×H)	8×14mm	8×14mm	8×14mm	4×8mm	4×8mm
Power supply	24VAC~50/60Hz, 24-48VDC=	100-240VAC~50/60Hz	24VAC~50/60Hz, 24-48VDC=	100-240VAC~50/60Hz	100-240VAC~50/60Hz
Permissible voltage range	90 to 110% of rated voltage				
Power consumption	Max. 2.8VA (24VAC~50/60Hz), Max. 1.8W (24-48VDC=)	Max. 3.8VA (240VAC~50/60Hz)	Max. 2.8VA (24VAC~50/60Hz), Max. 1.8W (24-48VDC=)	Max. 3.8VA (240VAC~50/60Hz)	Max. 3.8VA (240VAC~50/60Hz)
Max. counting speed of CP1/CP2	Selectable 1cps/30cps/2kcps/5kcps (DIP switch)				
Return time	Max. 500ms				
Min. signal width	INHIBIT, RESET: approx. 20ms				
Input method	Selectable voltage input (PNP) method or no-voltage input (NPN) method [Voltage input (PNP) method]-input impedance: max. 10.8kΩ, [H]: 5-30VDC=, [L]: 0-2VDC [No-voltage input (NPN) method]-short-circuit impedance: max. 470Ω, short-circuit residual voltage: max. 1VDC, open-circuit impedance: min. 100kΩ				
Repeat/Set/Voltage/Temp. error	Max. ±0.01% ±0.05 sec				
Insulation resistance	Over 100MΩ (at 500VDC megger)				
External power supply	Max. 12VDC= ±10% 50mA				
Memory retention	Approx. 10 years (non-volatile memory)				
Dielectric strength	2,000VAC 50/60Hz for 1 min (between all terminals and case)				
Noise immunity	AC voltage	±2kV the square wave noise (pulse width 1μs) by noise simulator			
	AC/DC voltage	±500V the square wave noise (pulse width 1μs) by noise simulator			
Vibration	Mechanical	0.75mm amplitude at frequency 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour			
	Malfunction	0.5mm amplitude at frequency 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes			
Shock	Mechanical	300m/s ² (approx. 30G) in each X, Y, Z direction for 3 times			
	Malfunction	100m/s ² (approx. 10G) in each X, Y, Z direction for 3 times			
Environment	Ambient temp.	-10 to 55°C, storage: -25 to 65°C			
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH			
Protection structure	IP40 (front part, IEC standard)				
Approval	CE, RoHS				
Weight ^{※1}	Approx. 175g (approx. 120g)				

※1: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

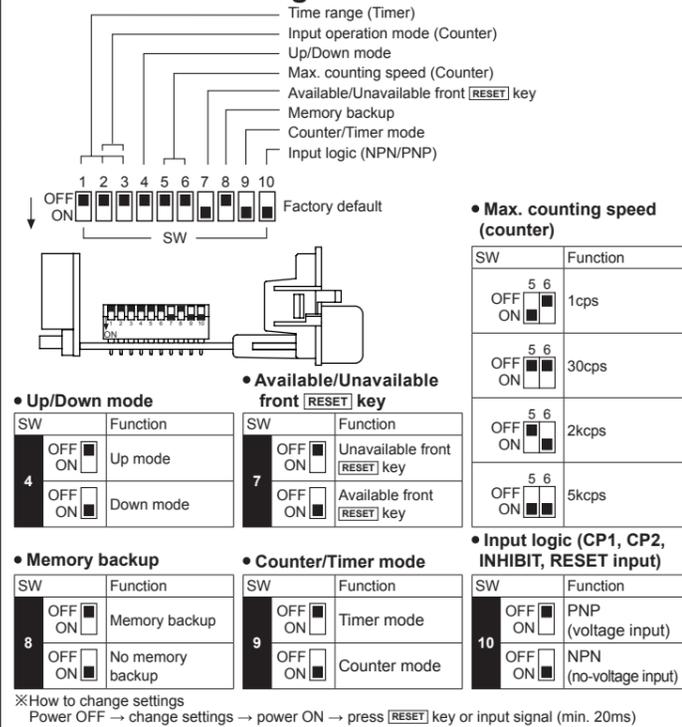
Input Connection



Dot for Decimal Point / Hour. Min. Second



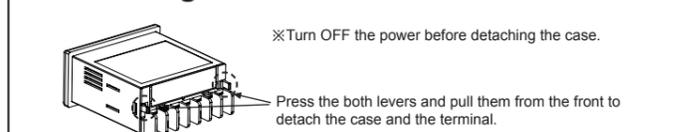
DIP Switch Setting



Input Operation Mode (Counter)



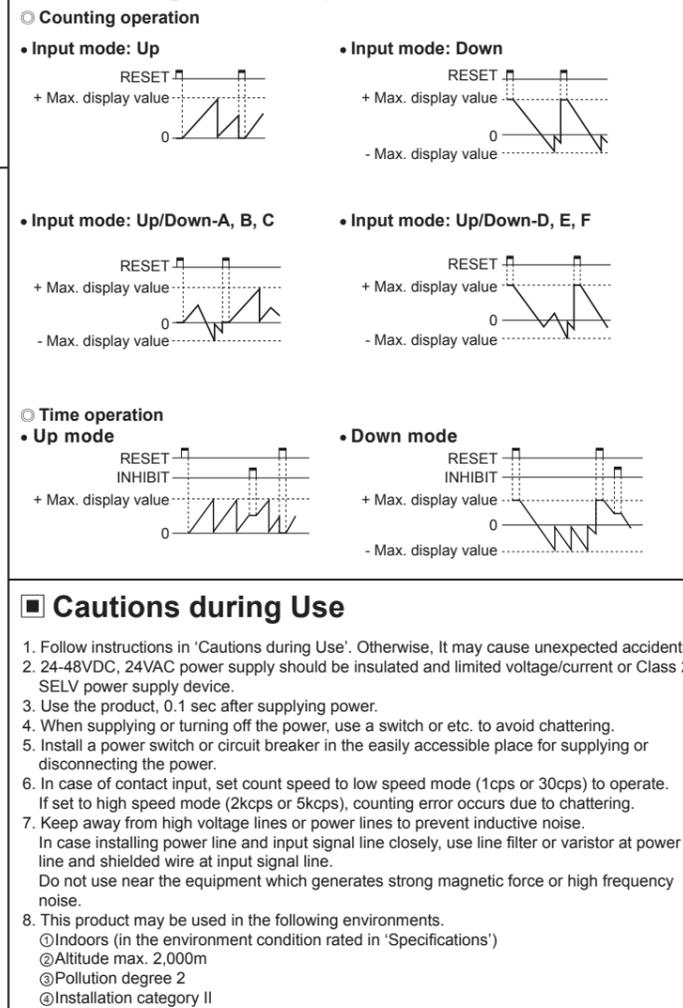
Detaching Case



Time Range (Timer)

SW	4-digit	6-digit	SW	4-digit	6-digit
OFF	99.99sec	99999.9sec	OFF	999.9min	99999.9min
ON	999.9sec	999999sec	ON	99hour 59min	99hour 59min 59sec
OFF	9999sec	99min 59.99sec	OFF	999.9hour	9999hour 59min
ON	99min 59sec	999min 59.9sec	ON	9999hour	99999.9hour

Counting & Time Operation



Major Products

- Photoelectric Sensors
 - Fiber Optic Sensors
 - Door Sensors
 - Door Side Sensors
 - Area Sensors
 - Proximity Sensors
 - Pressure Sensors
 - Rotary Encoders
 - Connector/Sockets
 - Switching Mode Power Supplies
 - Control Switches/Lamps/Buzzers
 - I/O Terminal Blocks & Cables
 - Stepper Motors/Drivers/Motion Controllers
 - Graphic/Logic Panels
 - Field Network Devices
 - Laser Marking System (Fiber, Co., Nd: YAG)
 - Laser Welding/Cutting System
 - Temperature Controllers
 - Temperature/Humidity Transducers
 - SSR/Power Controllers
 - Counters
 - Timers
 - Panel Meters
 - Tachometer/Pulse (Rate) Meters
 - Display Units
 - Sensor Controllers
- Autonics Corporation**
http://www.autonics.com
- ⊗ HEAD QUARTERS:
18, Bongsong-ro 513 beon-gil, Haeundae-gu, Busan, South Korea, 48002
TEL: 82-51-519-3232
E-mail: sales@autonics.com