

Autonics Sensor Controller PA-12 SERIES

M A N U A L



Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

Caution for your safety

- ※ Please keep these instructions and review them before using this unit.
- ※ Please observe the cautions that follow;
 - Warning** Serious injury may result if instructions are not followed.
 - Caution** Product may be damaged, or injury may result if instructions are not followed.
- ※ The following is an explanation of the symbols used in the operation manual.
 - ⚠ caution: Injury or danger may occur under special conditions.

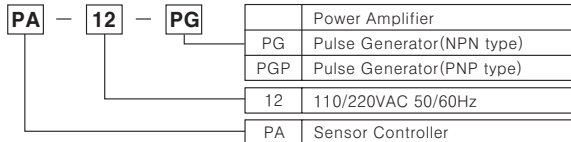
Warning

- In case of using this unit with machineries (Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus entertainment or safety device etc), it requires installing fail-safe device, or contact us for information on type required. It may result in serious damage, fire or human injury.
- This unit must be mounted on panel. It may give an electric shock.
- Do not connect terminals when it is power on. It may give an electric shock.
- Do not repair or checkup when power on. It may give an electric shock.

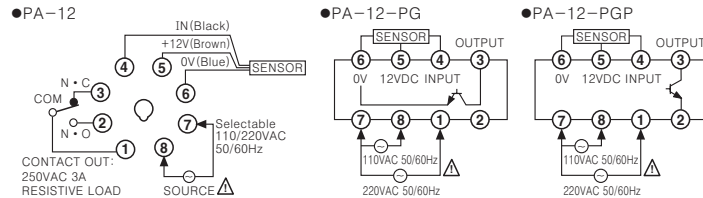
Caution

- This unit shall not be used outdoors. It might shorten the life cycle of the product or give an electric shock.
- Please observe specification rating. It might shorten the life cycle of the product and cause a fire.
- Do not use the load beyond rated switching capacity of Relay contact. It may cause insulation failure, contact melt, contact failure, relay broken, fire etc.
- In cleaning the unit, do not use water or an organic solvents. It might cause an electric shock or fire that will result in damage to this product.
- Do not use this unit at place where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration, impact etc. It may cause explosion.
- Do not inflow dust or wire dregs into inside of this unit. It may cause a fire or mechanical trouble.

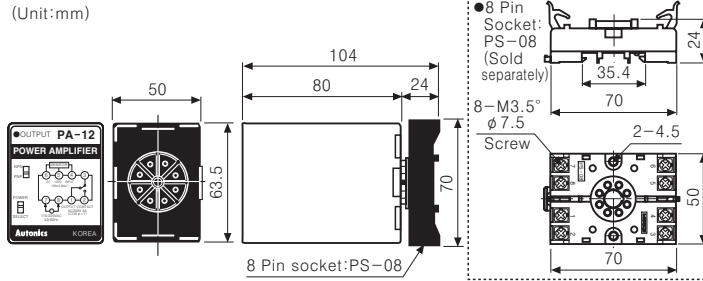
Ordering information



Connection



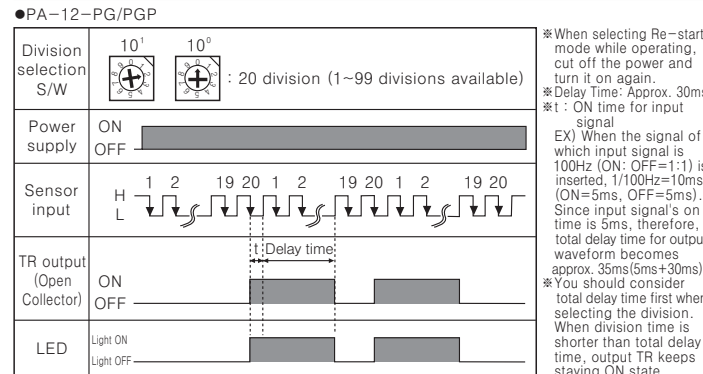
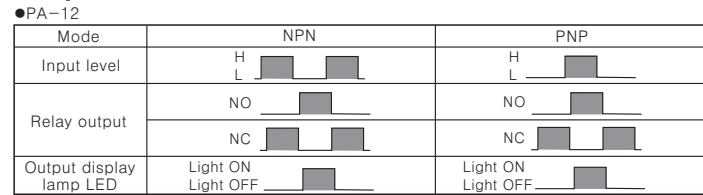
Dimensions



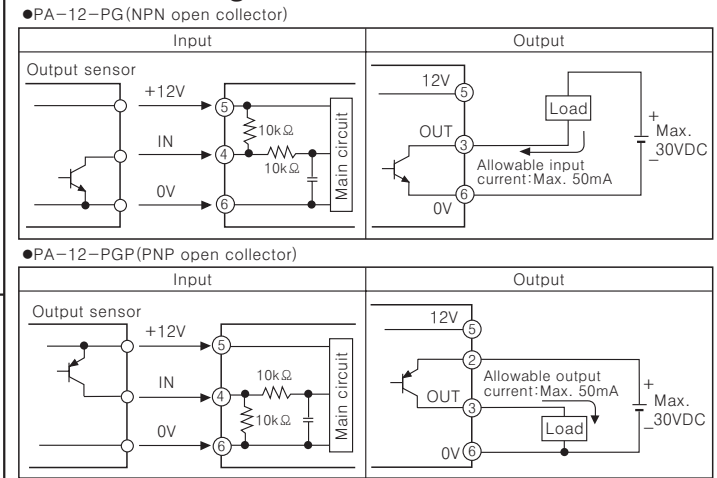
Specification

Model	PA-12	PA-12-PG	PA-12-PGP
Type	Selectable NPN/PNP	NPN Open Collector Only	PNP Open Collector Only
Power supply	Selectable 110-220VAC 50/60Hz	110/220VAC 50/60Hz	110/220VAC 50/60Hz
Power consumption	Approx. 4VA		
Power supply for sensor	12VDC \pm 10% 50mA	12VDC \pm 10% 30mA	12VDC \pm 10% 30mA
(Make sure that total consumption current shall not exceed sensor's power supply capacity when connecting a sensor.)			
Control output	<ul style="list-style-type: none"> Relay Contact Output : (Contact Capacity : 250VAC 3A Resistance Load, Contact Arrangement 1a1b) Life Expectancy \approx Mechanical : Min. 10,000,000 operations Electrical : Min. 100,000 operations 	NPN Open Collector output	PNP Open Collector output
Input signal	<ul style="list-style-type: none"> NPN \approx Short-circuit impedance : Max. 1kΩ Residual voltage : Max. 2VDC Open-circuit impedance : Min. 100kΩ PNP \approx High Level["H"] : 7-12VDC, Low Level["L"] : 0-5VDC 	Allowable Input Voltage : Max. 30VDC, Rated Current : Max. 50mA	
Input resistance	10k Ω		
Response time		30cps, 2kcps (Semi-contact selectable)	
Ambient temperature	-10 to +50 $^{\circ}$ C (Non-freezing condition)		
Ambient humidity	35-85%RH		
Weight	Approx. 269g		

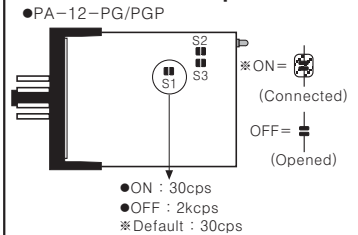
Operation mode



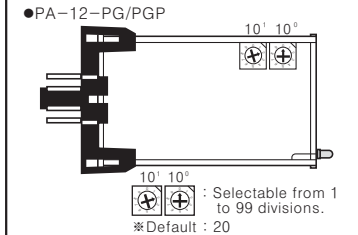
Function diagram



Semi-contact specification



Division selection switch



Caution for using

- Wiring
 - Check your connections first to avoid faulty wiring.
 - Please be cautious not to short-circuit the 12VDC terminal at GND since there is no over-current protective circuit on sensor's power supply.
 - Do not install the unit at place where vapor, dust, corrosive gas or water exists.
 - Input signal line
 - Shorten the cable distance between the sensor and this product.
 - Please shielded wire for input signal needed to be long.
 - Please wire input signal line separated from power line.
 - When test dielectric voltage and insulation resistance of the control panel with this unit installed.
 - Please isolate this unit from the circuit of control panel.
 - Please make all terminals of this unit short-circuited.
 - Do not use this unit at below places.
 - Place where there are severe vibration or impact.
 - Place where strong alkalis or acids are used.
 - Place where there are direct ray of the sun
 - Place where strong magnetic field or electric noise are generated.
 - Installation environment
 - It shall be used indoor
 - Altitude Max. 2000m
 - Pollution Degree 2
 - Installation Category II
- ※ It may cause malfunction if above instructions are not followed.

Major products

- PROXIMITY SENSOR
- AREA SENSOR
- DOOR/DOOR SIDE SENSOR
- ROTARY ENCODER
- SWITCHING POWER SUPPLY
- TEMPERATURE CONTROLLER
- TEMPERATURE/HUMIDITY TRANSDUCER
- POWER CONTROLLER
- TACHOMETER/PULSE(METER) METER
- PANEL METER
- SIGNAL CONVERTER
- TIMER
- GRAPHIC PANEL
- STEPPING MOTOR & DRIVER & MOTION CONTROLLER
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- SENSOR CONTROLLER
- RECORDER
- INDICATOR
- COUNTER
- DISPLAY UNIT

Autonics Corporation
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Satisfiable Partner For Factory Automation

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