

**Autonics**

**SENSOR CONTROLLER  
PA-12**

**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.

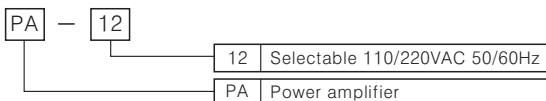
**Warning**

- 1. 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.
- 2. This unit must be mounted on panel.**  
It may give an electric shock.
- 3. Do not connect terminals when it is power on.**  
It may give an electric shock.
- 4. Do not repair or checkup when power on.**  
It may give an electric shock.

**Caution**

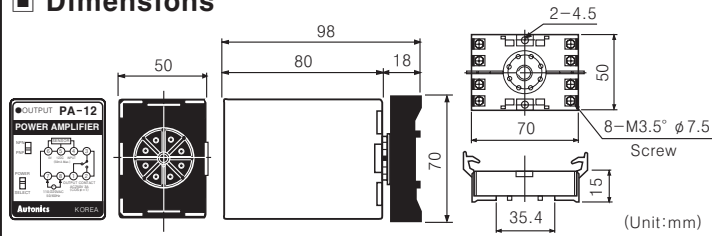
- 1. This unit shall not be used outdoors.**  
It might shorten the life cycle of the product or give an electric shock.
- 2. Please observe specification rating.**  
It might shorten the life cycle of the product and cause a fire.
- 3. Do not use the load beyond rated switching capacity of Relay contact.**  
It may cause insulation failure, contact melt, contact failure, relay broken, fire etc.
- 4. 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.
- 5. 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.
- 6. Do not inflow dust or wire dregs into inside of this unit.**  
It may cause a fire or mechanical trouble.

**Ordering information**



※The above specification are changeable without notice anytime.

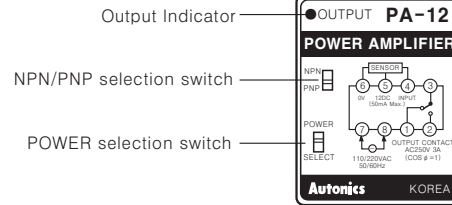
**Dimensions**



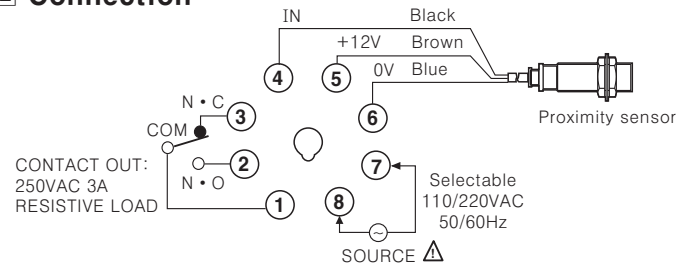
**Specification**

Model	PA-12		
Type	Selectable NPN/PNP		
Power supply	Selectable 110-220VAC 50/60Hz		
Control output	Contact	Composition	SPDT(1a1b)
	Solid-state	Capacity	250VAC 3A resistive load
Power of proximity sensor	12VDC 50mA		
Consumption power	Approx. 4VA		
Input signal	P N P	High level[H] : 7-12VDC, Low level[L] : 0-5VDC	
	N P N	Short-circuit impedance : Max. 1kΩ Residual voltage : Max. 2VDC Open-circuit impedance : Min. 100kΩ	
Input impedance	10kΩ		
Relay life cycle	Mechanical	Min.10,000,000 times	
	Electrical	Min.100,000 times(250VAC 3A resistive load)	
Ambient temperature	-10 to +50°C(Non-freezing condition)		
Ambient humidity	45 to 85%RH		
Weight	Approx. 269g		

**Front panel identification**



**Connection**

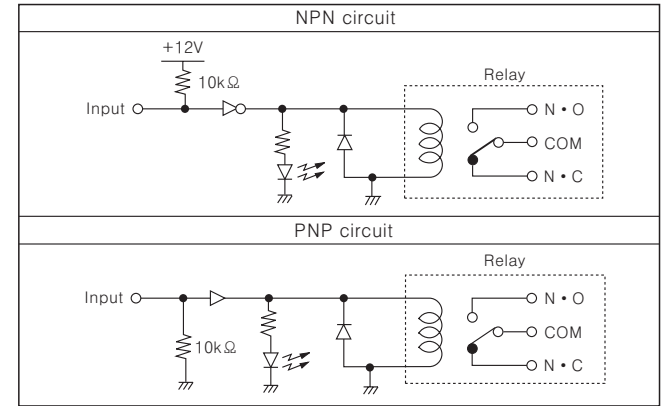


**Operation mode**

	NPN	PNP
Input	H L	H L
Relay output	NO	NO
	NC	NC
Output LED	ON OFF	ON OFF

Symbol	Input type	NPN	PNP
H		Short-circuit	7-12VDC
L		Open	0-5VDC

**Function diagram**



**Caution for using**

1. Input signal line
  - ① Shorten the cable distance between the sensor and this product.
  - ② Please shielded wire for input signal needed to be long.
  - ③ Please wire input signal line separated from power line.
2. When test dielectric voltage and insulation resistance of the control panel with this unit installed.
  - ① Please isolate this unit from the circuit of control panel.
  - ② Please make all terminals of this unit short-circuited.
3. Do not use this unit at below places.
  - ① Place where there are severe vibration or impact.
  - ② Place where strong alkalis or acids are used.
  - ③ Place where there are direct ray of the sun
  - ④ Place where strong magnetic field or electric noise are generated.
4. Installation environment
  - ① It shall be used indoor
  - ② Altitude Max. 2000m
  - ③ Pollution Degree 2
  - ④ Installation Category II

※It may cause malfunction if above instructions are not followed.

**Main products**

- COUNTER
- TIMER
- TEMPERATURE CONTROLLER
- PANEL METER
- TACHOMETER/ LINE SPEED METER/ PULSE METER
- DISPLAY UNIT
- PROXIMITY SENSOR
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- ROTARY ENCODER
- SENSOR CONTROLLER
- POWER CONTROLLER
- STEPPING MOTOR & DRIVER & CONTROLLER

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