

Autonics MULTI FUNCTION TIMER AT8N 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

1. **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.

2. **Install on a device panel to use.**
Failure to follow this instruction may result in electric shock or fire.

3. **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.

4. **Check 'Connections' before wiring.**
Failure to follow this instruction may result in fire.

5. **Do not disassemble or modify the unit.**
Failure to follow this instruction may result in electric shock or fire.

Caution

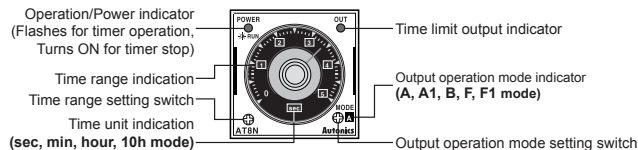
- Use the unit within the rated specifications.
Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.
Failure to follow this instruction may result in electric shock or fire.
- Do not use the unit in the place 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.

Ordering Information

AT	8	N		Power supply	No mark	100-240VAC 50/60Hz, 24-240VDC
					1	12VDC
					2	24VAC 50/60Hz, 24VDC
				Time operation	N	Time limit 2c or Instantaneous 1c + Time limit 1c selectable by output operation mode
				Number of plug pins	8	8-pin plug type
				Item	AT	Analog Timer

※ 8-pin socket (PG-08, PS-08(N)) is sold separately.

Unit Description



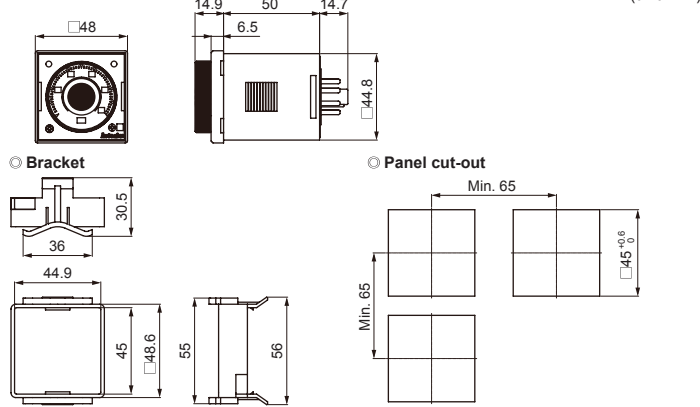
Time Specifications

Time range	Time unit	Time setting range	Time range	Time unit	Time setting range
0.5	sec	0.05 to 0.5 sec	0.5	hour	0.05 to 0.5 hour
1.0		0.1 to 1 sec	1.0		0.1 to 1 hour
5		0.5 to 5 sec	5		0.5 to 5 hour
10	min	1 to 10 sec	10	10h	1 to 10 hour
0.5		0.05 to 0.5 min	0.5		0.5 to 5 hour
1.0		0.1 to 1 min	1.0		1 to 10 hour
5	10	0.5 to 5 min	5	100	5 to 50 hour
10		1 to 10 min	10		10 to 100 hour

※ The above specifications are subject to change and some models may be discontinued without notice.

※ Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

Dimensions



Output Operation Mode

[t: Setting time, t>t-a, Rt: Return time, Rt1>Rt]

Mode	Time chart
A	Power 2-7 Time limit contact N.C. 1-4 (8-5) Time limit contact N.O. 1-3 (8-6) Time limit output indicator Operation/Power indicator
A1	Power 2-7 Time limit contact N.C. 8-5 Time limit contact N.O. 8-6 Instantaneous contact N.C. 1-4 Instantaneous contact N.O. 1-3 Time limit output indicator Operation/Power indicator ※ One-shot output is 0.5sec fixed.
B	Power 2-7 Time limit contact N.C. 8-5 Time limit contact N.O. 8-6 Instantaneous contact N.C. 1-4 Instantaneous contact N.O. 1-3 Time limit output indicator Operation/Power indicator
F	Power 2-7 Time limit contact N.C. 1-4 (8-5) Time limit contact N.O. 1-3 (8-6) Time limit output indicator Operation/Power indicator
F1	Power 2-7 Time limit contact N.C. 8-5 Time limit contact N.O. 8-6 Instantaneous contact N.C. 1-4 Instantaneous contact N.O. 1-3 Time limit output indicator Operation/Power indicator
I	Power 2-7 Time limit contact N.C. 8-5 Time limit contact N.O. 8-6 Instantaneous contact N.C. 1-4 Instantaneous contact N.O. 1-3 Time limit output indicator Operation/Power indicator

※ In case of F, F1 output operation mode, setting time should be over 100ms. If not, it may cause abnormal output operation due to under 100ms of setting time.

Specifications

Model	AT8N-□	
Function	Multi Function Timer	
Control time setting range ^{*1}	0.05 sec to 100 hour	
Power supply	•100-240VAC~ 50/60Hz, 24-240VDC= universal •24VAC~ 50/60Hz, 24VDC= universal • 12VDC=	
Allowable voltage range	90 to 110% of the rated voltage	
Power consumption	•Max. 4.3VA (100-240VAC~), max. 2W (24-240VDC=) •Max. 4.5VA (24VAC~), max. 2W (24VDC=) •Max. 1.5W (12VDC=)	
Return time	Max. 100ms	
Time operation	Power ON Start	
Control output	Contact type	Time limit DPDT (2c) or Instantaneous SPDT (1c)+Time limit SPDT (1c) selectable by output operation mode
	Contact capacity	250VAC~ 5A, 30VDC= 5A resistive load
Relay life cycle	Mechanical	Min. 10,000,000 operations
	Electrical	Min. 100,000 operations (250VAC 5A resistive load)
Repeat error	Max. ±0.2% ±10ms	
Setting error	Max. ±5% ±50ms	
Voltage error	Max. ±0.5%	
Temperature error	Max. ±2%	
Insulation resistance	100MΩ (at 500VDC megger)	
Dielectric strength	2,000VAC 50/60Hz for 1 minute	
Environment	Ambient temp.	-10 to 55°C, storage: -25 to 65°C
	Ambient humid.	35 to 85%RH, storage: 35 to 85%RH
Approval	CE, RU, US	
Accessory	Bracket	
Weight ^{*2}	Approx. 134.12g (approx. 86.71g)	

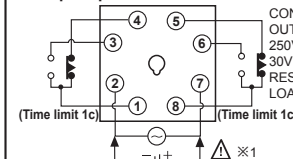
※1: Refer to time specifications for control time setting range by model.

※2: The weight includes packaging. The weight in parenthesis is for unit only.

※ Environment resistance is rated at no freezing or condensation.

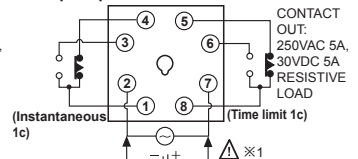
Connections

• When selecting [A], [F] output operation mode



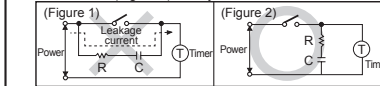
CONTACT OUT: 250VAC 5A, 30VDC 5A RESISTIVE LOAD
※1: AC/DC voltage: 100-240VAC 50/60Hz, 24-240VDC ; 24VAC 50/60Hz, 24VDC
DC voltage: 12VDC

• When selecting [A1], [B], [F1], [I] output operation mode



Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- 12VDC, 24VDC, 24VAC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- When supplying or turning off the power, use a switch or etc. to avoid chattering.
- Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
- In order to avoid leakage current flowing, connect resistance and condenser as (Figure 2). If connect as (Figure 1), it may cause malfunction due to leakage current.



- Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line. Do not use near the equipment which generates strong magnetic force or high frequency noise.
- Change setting time, time range, operation mode or etc. after turning off the power of the timer.
- This unit may be used in the following environments.
 - ①Indoors (in the environment condition rated in 'Specifications')
 - ②Altitude max. 2,000m
 - ③Pollution degree 2
 - ④Installation category II

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
- SSRs/Power Controllers
- Counters
- Timers
- Panel Meters
- Tachometers/Pulse (Rate) Meters
- Display Units
- Sensor Controllers

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