

Autonics MULTI FUNCTION TIMER

AT11DN/AT11EN 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 personal injury, economic loss 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 explosion or fire.
- Install on a device panel to use.** Failure to follow this instruction may result in fire or electric shock.
- Do not connect, repair, or inspect the unit while connected to a power source.** Failure to follow this instruction may result in fire or electric shock.
- 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 fire or electric shock.

⚠ Caution

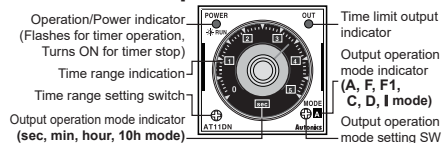
- Use the unit within the rated specifications.** Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.** Failure to follow this instruction may result in fire or electric shock.
- Keep metal chip, dust, and wire residue from flowing into the unit.** Failure to follow this instruction may result in fire or product damage.

■ Ordering Information

AT	11	DN		Power supply	No mark	100-240VAC 50/60Hz, 24-240VDC
					1	12VDC
					2	24VAC 50/60Hz, 24VDC
				Time operation	DN	Time limit 2c
					EN	Instantaneous 1c * Time limit 1c
				Number of plug pins	11	11-pin plug type
					AT	Analog Timer
				Item		

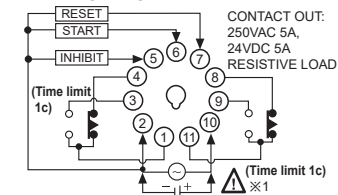
※ 11-pin socket (PG-11, PS-11(N)) is sold separately.

■ Unit Description



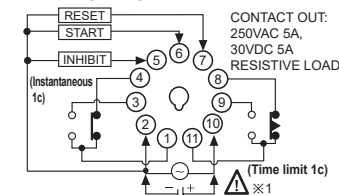
■ Connections

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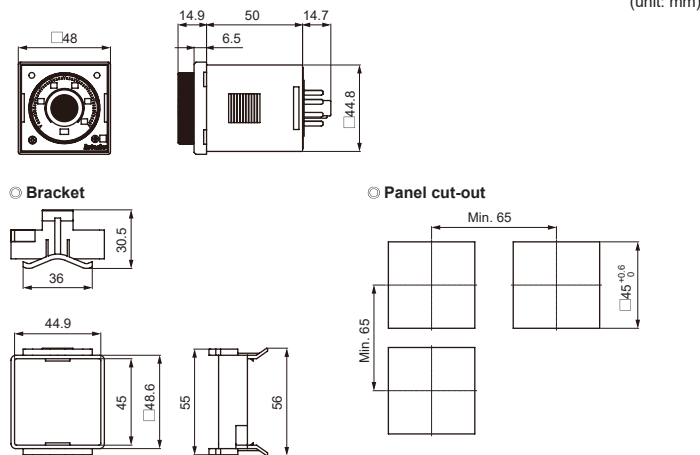
※1: AC/DC voltage: 100-240VAC 50/60Hz, 24-240VDC
: 24VAC 50/60Hz, 24VDC
DC voltage: 12VDC

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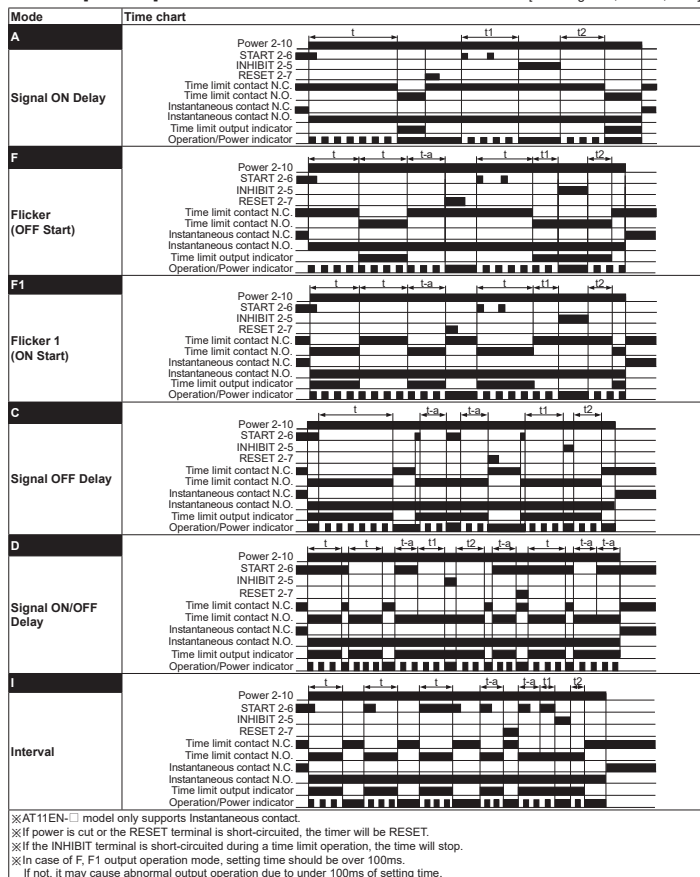
※ The above specifications are subject to change and some models may be discontinued without notice.
※ Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

■ Dimensions



■ Output Operation Mode

[t: Setting time, t=t1+t2, t>t-a]



※ AT11EN-□ model only supports Instantaneous contact.

※ If power is cut or the RESET terminal is short-circuited, the timer will be RESET.

※ If the INHIBIT terminal is short-circuited during a time limit operation, the time will stop.

※ 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	AT11DN-□		AT11EN-□
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. 3.5VA (100-240VAC~) , Max. 1.5W (24-240VDC==) , •Max. 4VA (24VAC~) , Max. 1.5W (24VDC==) , •Max. 1W (12VDC==)		•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	Signal ON Start		
Min. input signal width	START, RESET, INHIBIT: approx. 50ms		
Input	START, RESET, INHIBIT: [No-voltage input] - Short-circuit impedance: max. 1kΩ, Residual voltage: max. 0.5VDC, Open-circuit impedance: max. 100kΩ		
Control output	Contact type	Time limit DPDT (2c)	Instantaneous SPDT (1c)+Time limit SPDT (1c)
	Contact capacity	250VAC~ 5A, 24VDC== 5A resistive load	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 		
Accessory	Bracket		
Weight※2	Approx. 132.2g (approx. 85g)		Approx. 134.7g (approx. 87.5g)

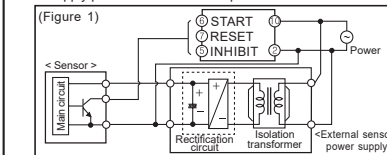
※1: Refer to time specifications for control time setting range by model.

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

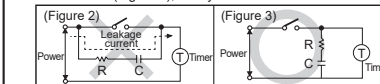
※ Environment resistance is rated at no freezing or condensation.

■ 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 block peripheral current, use isolation transformer which of secondary part is not grounded as (Figure 1) to supply power to the external input device.



- In order to avoid leakage current flowing, connect resistance and condenser as (Figure 3). If connect as (Figure 2), it may cause malfunction due to leakage current.



- Do not connect two or more timers with only one input contact or transistor simultaneously.
- 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