

# 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 special 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

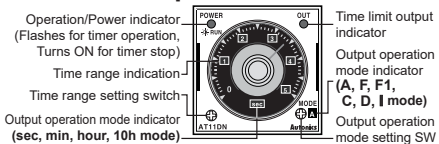
- Use the unit within the rated specifications.** Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.** Failure to follow this instruction may result in fire or electric shock.
- Keep metal chip, dust, and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

### ■ Ordering Information

<b>AT 11 DN</b>	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
	Item	AT	Analog Timer

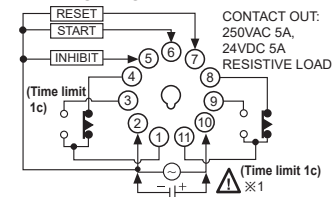
※ 11-pin socket (PG-11, PS-11(N)) is sold separately.

### ■ Unit Description



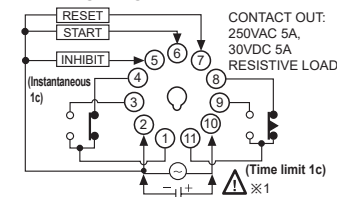
### ■ Connections

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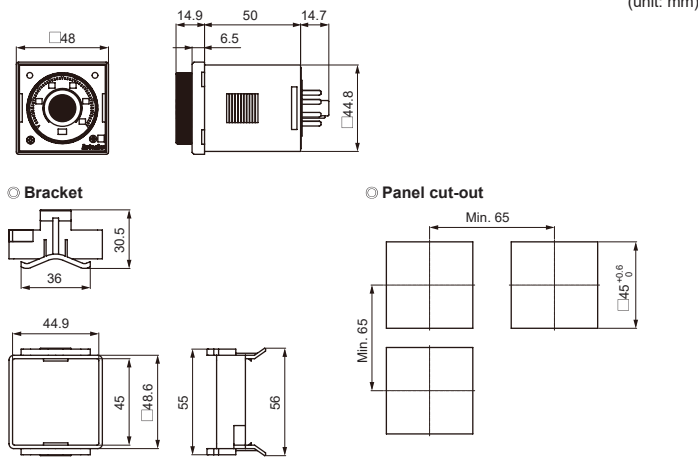
※1: AC/DC voltage: 100-240VAC 50/60Hz, 24-240VDC  
: 24VAC 50/60Hz, 24VDC  
DC voltage: 12VDC

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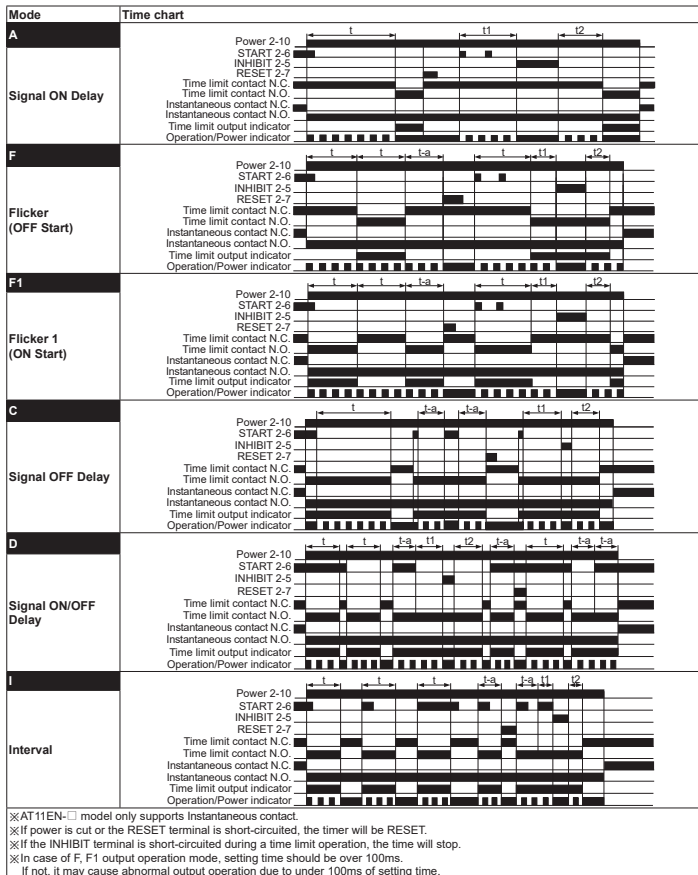
※ The above specifications are subject to change and some models may be discontinued without notice.  
※ Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

### ■ 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.

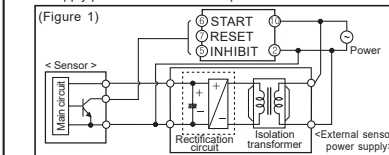
### ■ Specifications

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)
Relay life cycle	Contact capacity	Instantaneous SPDT (1c)+Time limit SPDT (1c)
Repeat error		250VAC~ 5A, 24VDC= 5A resistive load
Setting error		250VAC~ 5A, 30VDC= 5A resistive load
Voltage error		Min. 10,000,000 operations
Temperature error		Min. 100,000 operations (250VAC 5A resistive load)
Insulation resistance		Max. ±0.2%±10ms
Dielectric strength		Max. ±5%±50ms
Environment		Max. ±0.5%
Approval		Max. ±2%
Accessory		100MΩ (at 500VDC megger)
Weight*2		2,000VAC 50/60Hz for 1 minute
		Ambient temp. -10 to 55°C, storage: -25 to 65°C
		Ambient humid. 35 to 85%RH, storage: 35 to 85%RH
		CE, RoHS, US
		Bracket
		Approx. 132.2g (approx. 85g)
		Approx. 134.7g (approx. 87.5g)

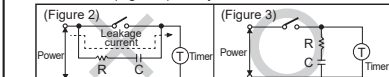
※1: Refer to time specifications for control time setting range by model.  
※2: The weight includes packaging. The weight in parenthesis is for unit only.  
※ Environment resistance is rated at no freezing or condensation.

### ■ 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 in 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.
  - Indoors (in the environment condition rated in 'Specifications')
  - Altitude max. 2,000m
  - Pollution degree 2
  - Installation category II