

# 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 fire, personal injury, or economic loss.
- Install on a device panel to use.** Failure to follow this instruction may result in electric shock or fire.
- 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.
- 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 electric shock or fire.

### Caution

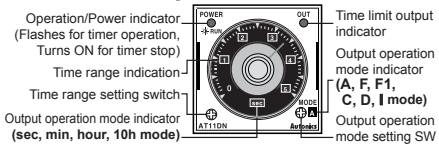
- Use the unit within the rated specifications.** Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.** Failure to follow this instruction may result in electric shock or fire.
- Do not use the unit in the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

<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

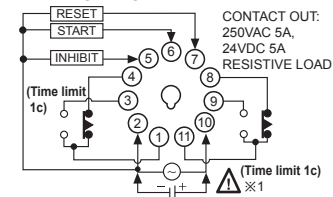
※ 11-pin socket (PG-11, PS-11(N)) is sold separately.

### Unit Description



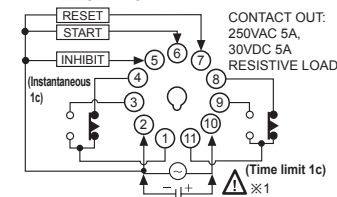
### Connections

#### • AT11DN SERIES



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

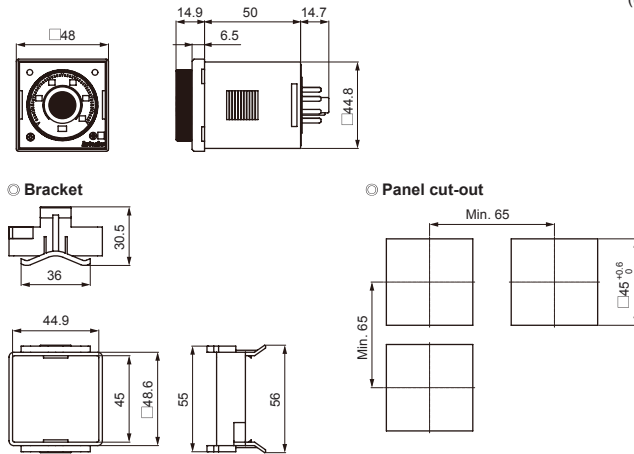
#### • AT11EN SERIES



※ 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).

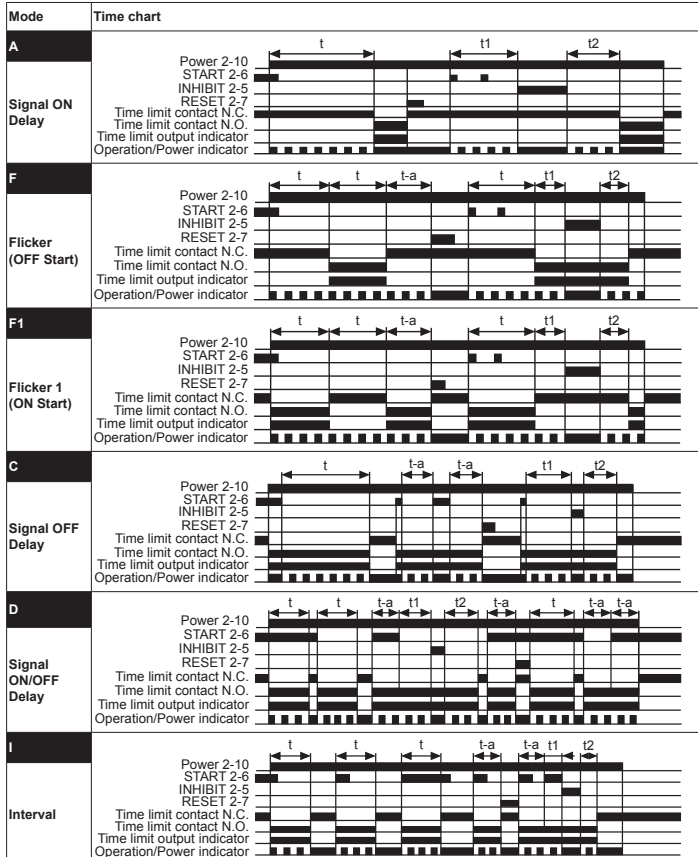
### Dimensions

(unit: mm)



### Output Operation Mode

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



※ 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.

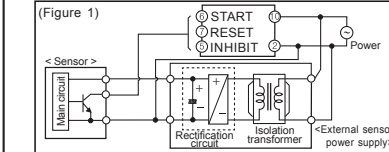
### Specifications

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

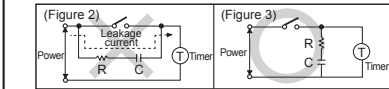
※1: Refer to time specifications for control time setting range by model.  
※2: The weight includes packaging. The weight in parenthesis is for unit only.  
※ Environment resistance is rated at no freezing or condensation.

### 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

### 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<sub>2</sub>, 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

**Autonics Corporation**  
http://www.autonics.com

■ HEADQUARTERS:  
18, Bansong-ro 513beon-gil, Haeundae-gu, Busan, South Korea, 48002  
TEL: 82-51-519-3232  
■ E-mail: sales@autonics.com