

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.

※Safety considerations are categorized as follows.

⚠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.

※The symbols used on the product and instruction manual represent the following

⚠ symbol represents caution due to special circumstances in which hazards may occur.

⚠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.

Failure to follow this instruction may result in electric shock or fire.

⚠Caution

1. **Use the unit within the rated specifications.** Failure to follow this instruction may result in fire or product damage.

2. **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.

3. **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.

4. **Keep metal chip, dust, and wire residue from flowing into the unit.** Failure to follow this instruction may result in fire or product damage.

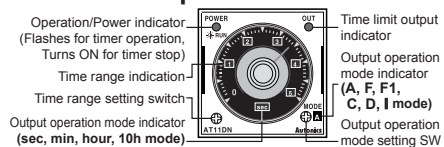
Failure to follow this instruction may result in fire or product damage.

■ 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
	Item	AT	Analog Timer

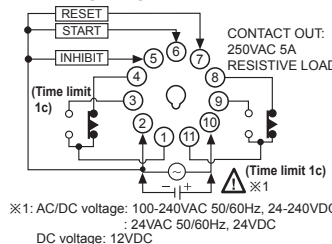
※Sockets (PG-11, PS-11(N)) are sold separately.

■ Unit Description



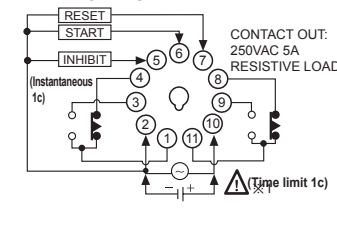
■ Connections

• AT11DN SERIES



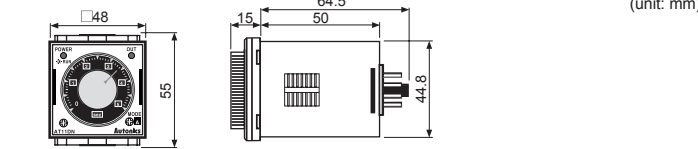
※1: AC/DC voltage: 100-240VAC 50/60Hz, 24-240VDC
: 24VAC 50/60Hz, 24VDC
DC voltage: 12VDC

• AT11EN SERIES



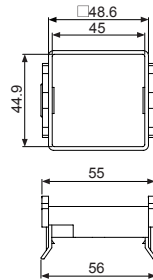
※The above specifications are subject to change and some models may be discontinued without notice.
※Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

■ Dimensions

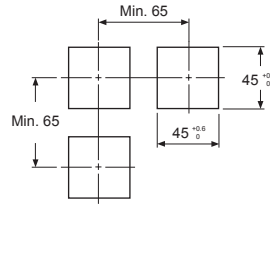


(unit: mm)

• Bracket

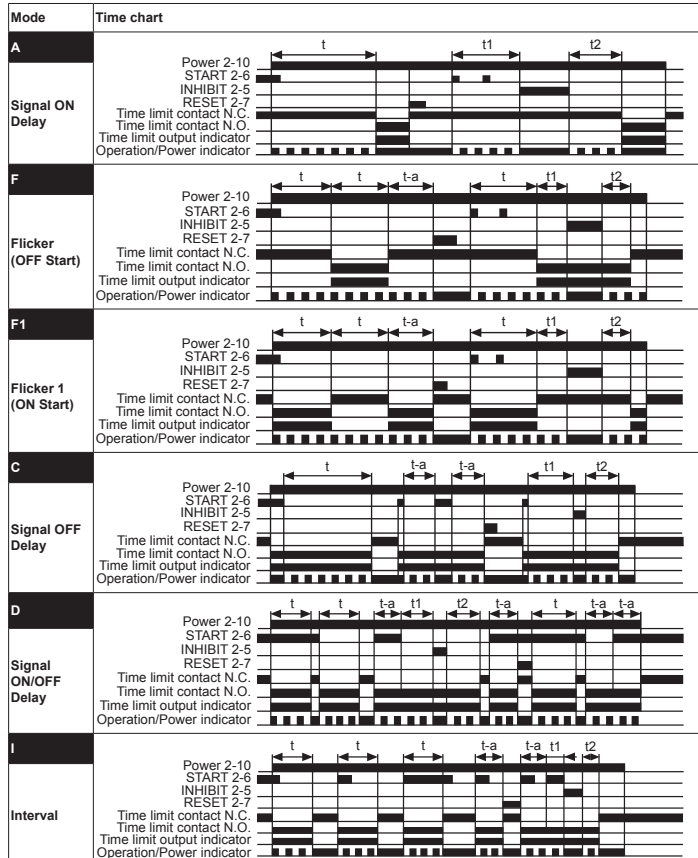


• Panel cut-out



■ 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 timer 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: Min. 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 resistive load
Repeat error	Relay	Min. 10,000,000 operations
Setting error	life cycle	Min. 100,000 operations (250VAC 5A resistive load)
Voltage error	Repeat error	Max. ±0.2% ±10ms
Temperature error	Setting error	Max. ±5% ±50ms
Insulation resistance	Voltage error	Max. ±0.5%
Dielectric strength	Temperature error	Max. ±2%
Environment	Insulation resistance	100MΩ (at 500VDC megger)
Approval	Dielectric strength	2,000VAC 50/60Hz for 1 minute
Accessory	Environment	Ambient temp. -10 to 55°C, Storage: -25 to 65°C Ambient humid. 35 to 85%RH, Storage: 35 to 85%RH
Weight*2	Approval	CE, UL
	Accessory	Bracket

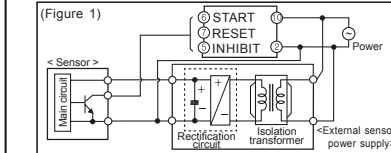
※1: Refer to time specifications for control time setting range by model.

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

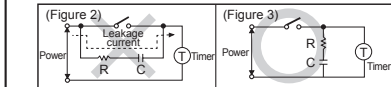
※Environment resistance is rated at no freezing or condensation.

■ 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.
 - ⓐIndoors (in the environment condition rated in 'Specifications')
 - ⓑAltitude max. 2,000m
 - ⓒPollution degree 2
 - ⓓInstallation 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, Co₂, 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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