

Autonics

STAR-DELTA TIMER

AT8SDN

INSTRUCTION MANUAL



Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

■ Safety Considerations

※Please keep these instructions and review them before using this unit.

※Please observe the cautions that follow;

Warning Serious injury may result if instructions are not followed.

Caution Product may be damaged, or injury may result if instructions are not followed.

※The following is an explanation of the symbols used in the operation manual.

Caution: Injury or danger may occur under special conditions.

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

AT	8	SDN	
			Operation
			SDN Star-Delta
			Plug Type
			8 8 Pin
			Item
			AT Analog Timer
※8 Pin socket(PG-08, PS-08) : Sold separately			

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

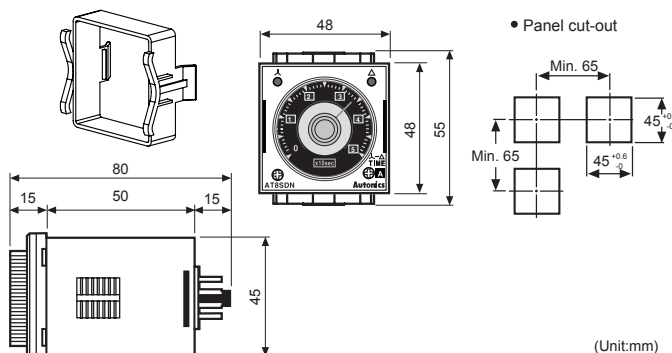
※Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

■ Specifications

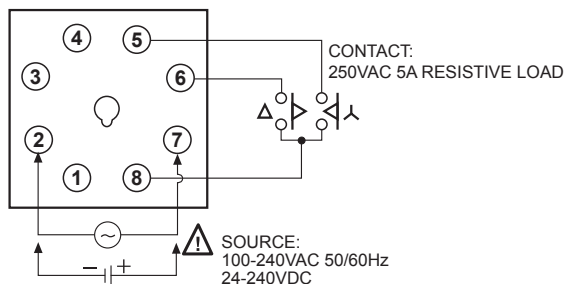
Model			AT8SDN
Function			Star-Delta
Control time setting range			0.5 sec ~ 100 sec
Power supply			100-240VAC~ 50/60Hz, 24-240VDC= (Universal)
Allowable voltage range			90 ~ 110% of rated voltage
Power consumption			100-240VAC~ : 3.2VA, 24-240VDC= : 1.5W
Return time			Max. 100ms
Control output	Contact	Type	Contact : SPST(1a), Contact : SPST(1a)
		Capacity	250VAC ~ 5A resistive load
Relay life cycle	Mechanical		Min.10,000,000 times
	Electrical		Min. 100,000 times(250VAC 5A resistive load)
Repeat error			Max. ±0.2% ±10ms
Setting error			Max. ±5% ±50ms
Voltage error			Max. ±0.5%
Temperature error			Max. ±2%
Switching time error			Max. ±25%
Insulation resistance			100MΩ(at 500VDC megger)
Dielectric strength			2000VAC 50/60Hz for 1 minute
Noise strength			Square-wave noise by noise simulator, apply ±2kV in power input terminals
Vibration	Destruction		0.75mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 1 hours
	Malfunction		0.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Destruction		300m/s²(Approx. 30G) 3 times at X, Y, Z direction
	Malfunction		100m/s²(Approx. 10G) 3 times at X, Y, Z direction
Environment	Ambient temperature		-10 ~ 55°C, Storage temperature: -25 ~ 65°C
	Ambient humidity		35 ~ 85%RH, Storage humidity: 35 ~ 85%RH
Approval			CE c UL US
Unit weight			Approx. 90g

※Environment resistance is rated at no freezing or condensation.

■ Dimensions



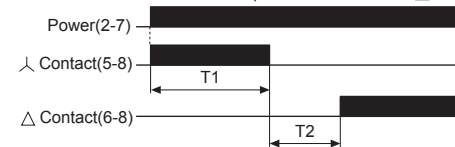
■ Connections



■ Operation and Time Specification

• Operation

When power is supplied, the contact will be ON as soon as power is supplied, and the contact will be OFF when T1 setting time is up then the contact will be ON after T2 switching time is up.
When power is cut off, the contact will be OFF when the status of the contact is ON.



T1 : Setting time(contact operation)

T2 : Switching time(contact and contact are OFF when power is ON.)

• Time specification

• T1(Setting time)

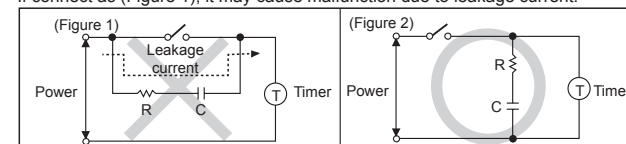
Time range	Time unit	Time setting range
0.5	×10 sec	0.5 ~ 5 sec
1.0		1 ~ 10 sec
5		5 ~ 50 sec
10		10 ~ 100 sec

• T2(Switching time)

Display	A	F	F1	C	D	I	[Unit: sec]
T2(Switching time)	0.05	0.1	0.2	0.3	0.4	0.5	

■ Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, It may cause unexpected accidents.
- 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(T1), Y-Δ switching time or etc. after turning off the power of the timer.
- This product 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, 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

Autonics Corporation

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