

# AT8SDN Series

## DIN W48 × H48mm Star-Delta Timer

### ■ Features

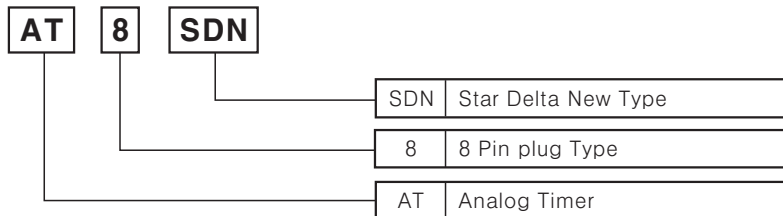
- Realization of wide range of power supply  
: 24–240VAC 50/60Hz / 24–240VDC, 12VDC (Option)
- This is upgraded model from AT8SD series
- Wide range of setting time and switching time
  - T1 (Setting time) : Selectable 5, 10, 50, 100sec.
  - T2 (Switching time) : Selectable 0.05, 0.1, 0.2, 0.3, 0.4, 0.5sec.
- Simple setting time, switching time operation
- Easy to check output status by LED display
- Application : Starting large capacity motors



**⚠ Please read "Caution for your safety" in operation manual before using.**



### ■ Ordering information

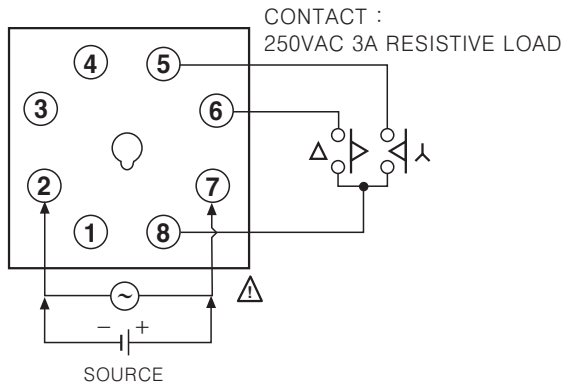


### ■ Specifications

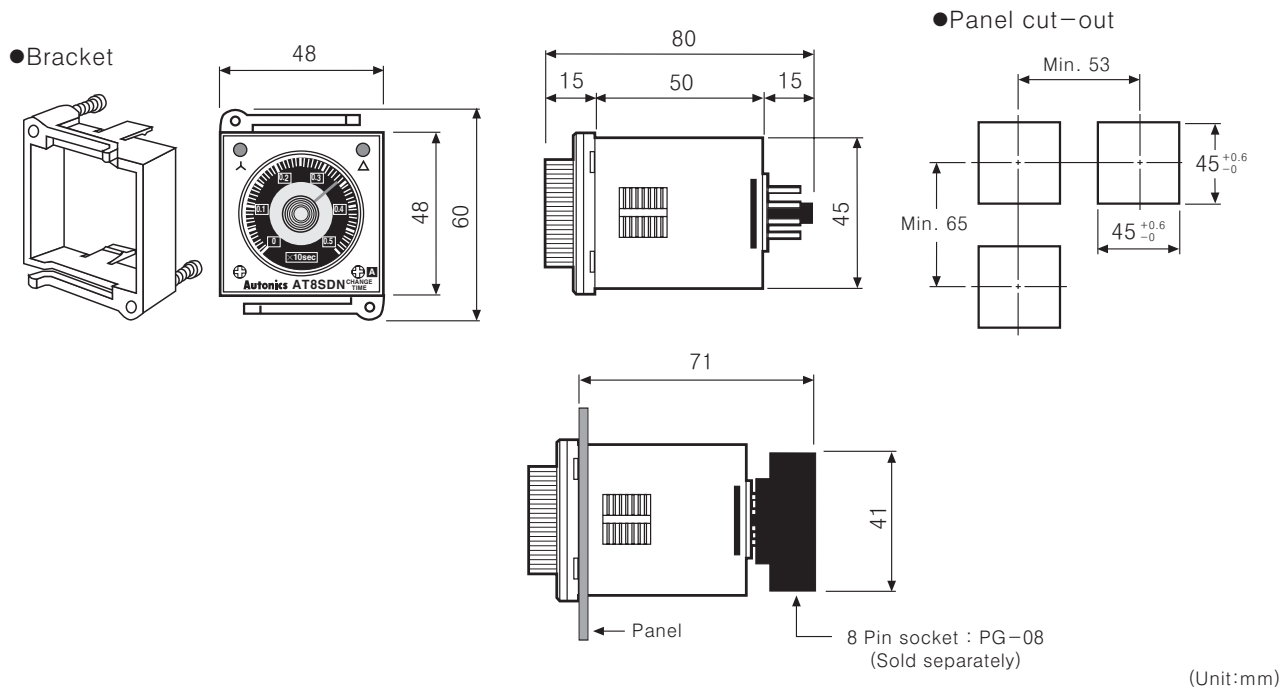
Model		<b>AT8SDN</b>
Function		<b>Star-Delta TIMER</b>
Control time setting range		0.5sec~100sec (Max.)
Power supply		24–240VAC 50/60Hz / 24–240VDC, 12VDC (Option)
Allowable voltage range		90 ~ 110% of rated voltage
Power consumption		Approx. 2.8VA (24–240VAC 60Hz), Approx. 1.3W (24–240VDC), Approx. 0.5W (12VDC)
Reset time		Max. 100ms
Timing operation		Power ON Start type
Control output	Contact type	∧ contact : SPST (1a), Δ contact : SPST (1a)
	Contact capacity	250VAC 3A resistive load
Relay life cycle	Mechanical	Min. 10,000,000 times
	Electrical	Min. 100,000 times (250VAC 3A resistive load)
Repeat error		Max. ±0.3%
∧ Setting error		Max. ±5% ±0.05sec.
Voltage error		Max. ±0.5%
Temperature error		Max. ±2%
Δ Switching time error		±25%
Insulation resistance		100MΩ (at 500VDC mega)
Dielectric strength		2000VAC 50/60Hz for 1 minute
Noise strength		±2kV the square wave noise (pulse width:1μs) by the noise simulator
Vibration	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1 hours
	Malfunction	0.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s <sup>2</sup> (Approx. 30G) in X, Y, Z directions 3 times
	Malfunction	100m/s <sup>2</sup> (Approx. 10G) in X, Y, Z directions 3 times
Ambient temperature		-10 ~ 55°C (at non-freezing status)
Storage temperature		-25 ~ 65°C (at non-freezing status)
Ambient humidity		35 ~ 85%RH
Approval		<b>CE c UL US</b>
Unit weight		Approx. 100g

# Star-Delta Timer

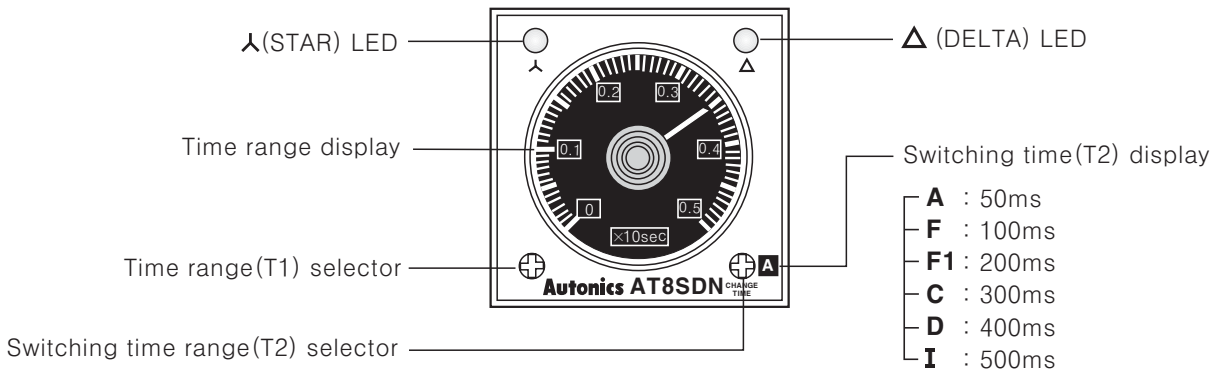
## Connections



## Dimensions



## Front panel identification



(A)  
Counter

(B)  
Timer

(C)  
Temp.  
controller

(D)  
Power  
controller

(E)  
Panel  
meter

(F)  
Tacho/  
Speed/  
Pulse  
meter

(G)  
Display  
unit

(H)  
Sensor  
controller

(I)  
Switching  
power  
supply

(J)  
Proximity  
sensor

(K)  
Photo  
electric  
sensor

(L)  
Pressure  
sensor

(M)  
Rotary  
encoder

(N)  
Stepping  
motor &  
Driver &  
Controller

(O)  
Graphic  
panel

(P)  
Field  
network  
device

(Q)  
Production  
stoppage  
models &  
replacement

# AT8SDN Series

## Time specifications

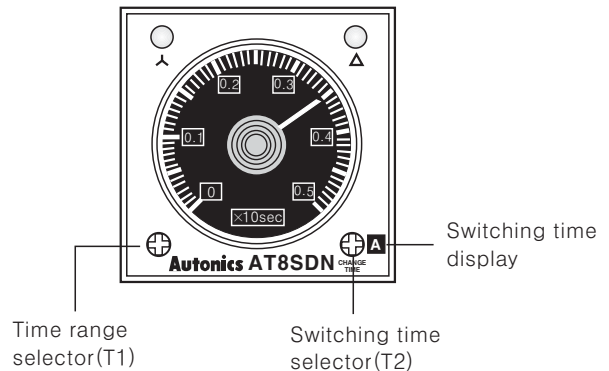
1. T1 (Setting time)

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

2. T2 (Switching time)

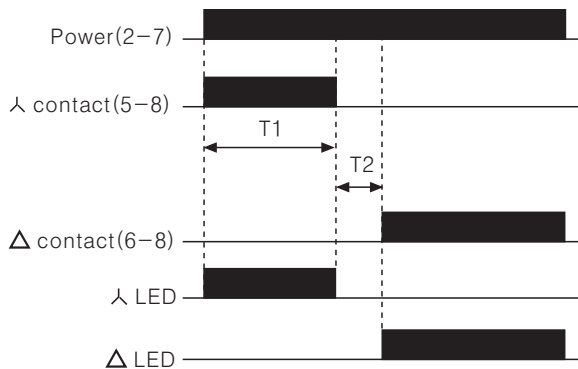
(Unit:ms)

Display	A	F	F1	C	D	I
T2 switching time	50	100	200	300	400	500



## Output operation mode

When power is applied,  $\lambda$  contact will be ON. When reaching to T1 setting time,  $\lambda$  contact will be OFF and  $\Delta$  contact will be ON after switching time of T2 is passed. If the power is OFF,  $\lambda$  contact will be OFF.

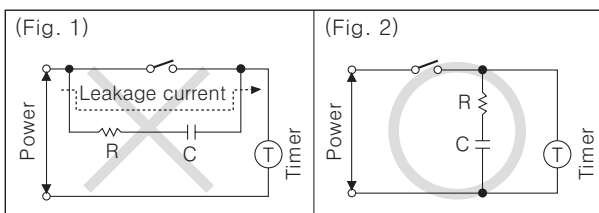


※T1 : Setting time ( $\lambda$  contact operation time)

※T2 : Switching time ( $\lambda$  contact and  $\Delta$  contact are OFF simultaneously at power ON)

## Proper usage

1. Please supply power quickly at once with using switch or relay contact. Otherwise it may cause time error or power reset failure.
2. The product life cycle can be shortened by generation of heat when applying an electric current for long hours.
3. Please be notice polarity when power is DC power type.
4. Please use it like (Fig. 2) in order not to flow leakage current into timer connecting resistance and condenser.



5. Do not change setting time(T1), time range, switching time(T2) while time oprating.

6. Environment

Please avoid the following places:

- Where this product may be damaged by strong impact or vibration.
- Where there are corrosive gas or flammable gas, water, oil and dust.
- Where magnetic and electrical noise occurs.
- Where there are High temperature and humidity beyond rated specification.
- Where there are strong alkalis and acids.
- Where there are direct rays of sun.