

DIN size W48 × H48mm Star-Delta Timer

■ Features

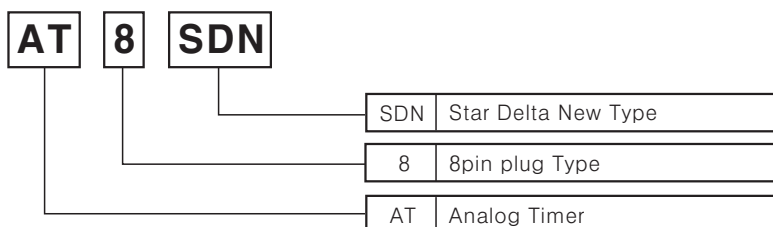
- This is upgraded model from AT8SD series.
- Wide range of setting time and switching time.
 - T1 (Setting time) : Selectable 5, 10, 50, 100sec
 - T2 (Switching time) : Selectable 0.05, 0.1, 0.2, 0.3, 0.4, 0.5sec
- Easy to set the setting time and switching time on front panel.
- LED indicators show status of Start and Delta output.
- Power supply : 100–240VAC 50/60Hz / 24–240VDC
12VDC (Option)
- Application : Starting large capacity motors



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



■ Ordering information



■ Specifications

Model	AT8SDN	
Function	Star-Delta TIMER	
Control time setting range	0.5sec~100sec(Max. time)	
Power supply	100–240VAC 50/60Hz / 24–240VDC , 12VDC (Option)	
Allowable voltage range□	90 ~ 110% of rated voltage□	
Power consumption	Approx. 4VA (240VAC 60Hz), Approx. 1.3W (240VDC), Approx. 0.5W (12VDC)	
Return time□	Max. 100ms	
Control output□	Contact type	⋈ contact : SPST(1a), ⚠ 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%	
⚠ Switching time error	±25%	
Insulation resistance	100MΩ (at 500VDC)	
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 ² (Approx. 30G) in X, Y, Z directions 3 times
	Malfunction	100m/s ² (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		
Weight	Approx. 100g	

(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) Proximity sensor

(J) Photo electric sensor

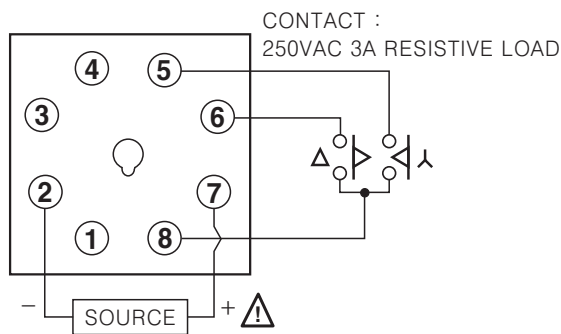
(K) Pressure sensor

(L) Rotary encoder

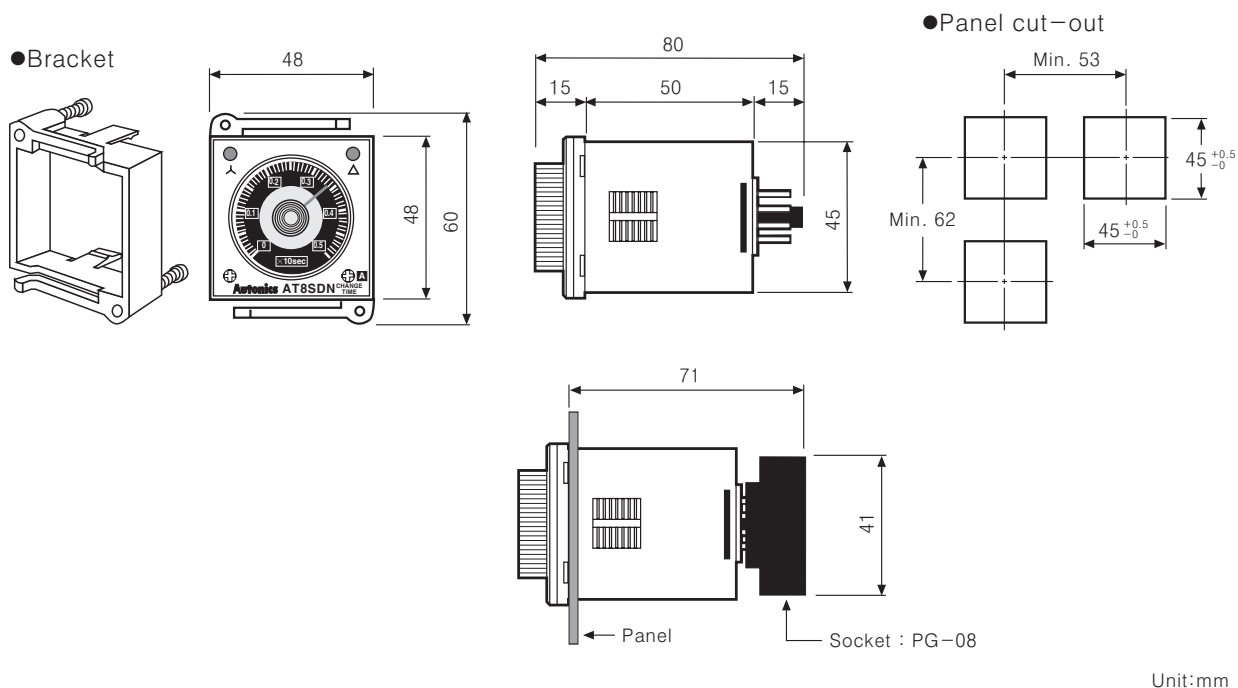
(M) 5-Phase stepping motor & Driver & Controller

AT8SDN

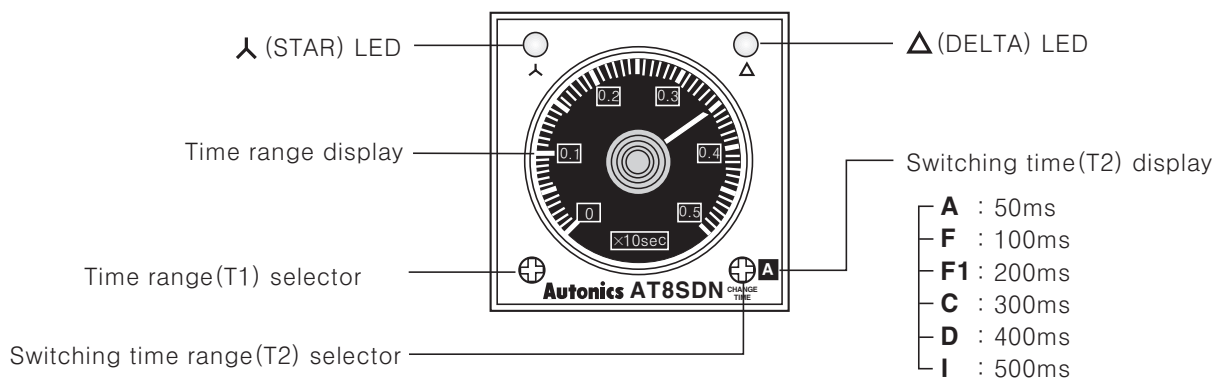
■Connections



■Dimensions



■Front panel identification



Star-Delta Timer

Time specification

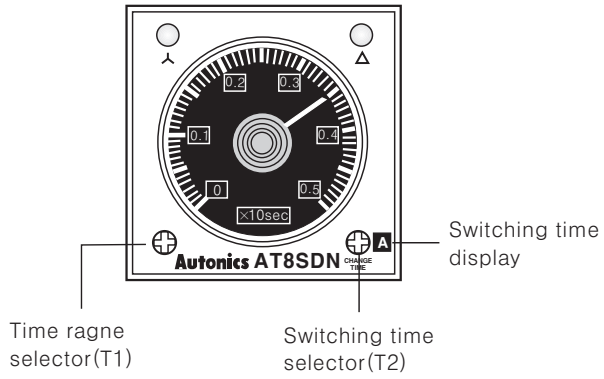
1. T1 (Setting time)

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)

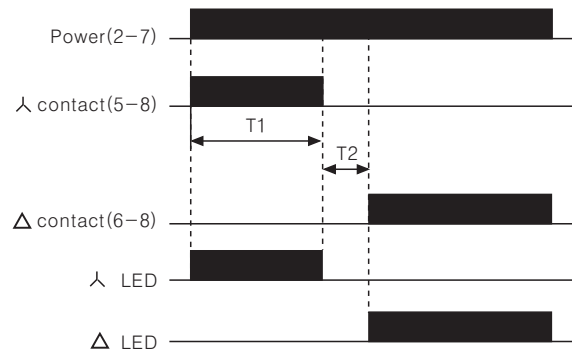
Display	A	F	F1	C	D	I
T2 switching time	50	100	200	300	400	500



- (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) Proximity sensor
- (J) Photo electric sensor
- (K) Pressure sensor
- (L) Rotary encoder
- (M) 5-Phase stepping motor & Driver & Controller

Operation

When power is applied, λ contact will be ON. When reaching to T1 setting time, λ contact will be OFF and after T2 switching time, Δ contact will be ON. If the power is OFF, λ contact will be OFF.



※T1 : Setting time (λ contact operation time)
 ※T2 : Switching time (λ contact and Δ contact are OFF simultaneously at power ON)

Proper usage

- Please supply power quickly at once with using switch or Relay contact. Otherwise it may cause time error or power reset failure.
- Connect power line without concerning polarity for ATN series AC power type. But please aware power connection for DC power type.
- Please use like (Fig. 2) in order not to flow leakage current into Timer.
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- Do not change Timer range, setting time, switching time while time operating. When changing setting, please power off.
- 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.

