

Star-Delta Timer With Free Power, Compact Size W38×H42mm

■ Features

- Wide power supply range
: 100-240VAC 50/60Hz, 24-240VDC universal
- Wide time setting range and switching time
- T1 (setting time): selectable 0.5 to 100 sec
- T2 (switching time): selectable 0.05, 0.1, 0.2, 0.3, 0.4, 0.5 sec
- Close and DIN rail mounting
with the dedicated socket (PS-M8) width 41mm
- Easy mounting and installation/maintenance
with the dedicated bracket for DIN 48×48mm
- Application: Starting large capacity motors



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



■ Ordering Information

ATS	8	SD	4		
				Power supply	4 100-240VAC 50/60Hz, 24-240VDC universal
				Time operation	SD Star-Delta type
				Number of plug pins	8 8-pin plug type
				Item	ATS Small Analog Timer

※8-pin socket (PG-08, PS-08(N), PS-M8) is sold separately.

■ Specifications

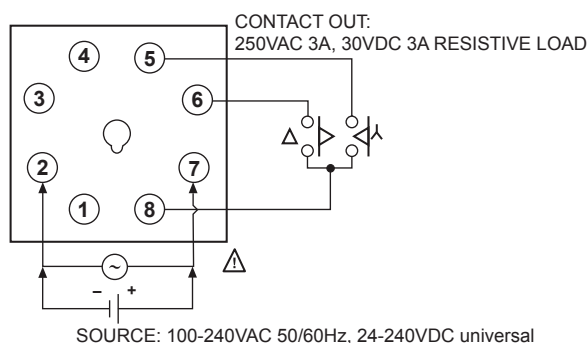
Model		ATS8SD-4
Function		Star-Delta Timer
Control time setting range※1		0.5 to 100sec
Power supply		100-240VAC ~ 50/60Hz, 24-240VDC = universal
Allowable voltage range		90 to 110% of rated voltage
Power consumption		Max. 3VA (100-240VAC ~), Max. 1.5W (24-240VDC =)
Return time		Max. 100ms
Timing operation		Power ON Start
Control output	Contact type	λ contact: SPST (1a), Δ contact: SPST (1a)
	Contact capacity	250VAC ~ 3A, 30VDC = 3A resistive load
Relay life cycle	Mechanical	Min. 10,000,000 operations
	Electrical	Min. 100,000 operations (250VAC 3A resistive load)
Repeat error		Max. ±0.2% ±10ms
λ setting error		Max. ±5% ±50ms
Voltage error		Max. ±0.5%
Temperature error		Max. ±2%
λ - Δ switching time error		Max. ±25%
Insulation resistance		Over 100MΩ (at 500VDC megger)
Dielectric strength		2,000VAC 50/60Hz for 1 min
Noise immunity		±2kV the square wave noise (pulse width 1μs) by noise simulator
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 min
Shock	Mechanical	300m/s ² (approx. 30G) in each X, Y, Z direction 3 times
	Malfunction	100m/s ² (approx. 10G) in each X, Y, Z direction 3 times
Environment	Ambient temp.	-10 to 55°C, storage: -25 to 65°C
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH
Approval		CE C UL US
Accessory		Bracket
Unit weight		Approx. 72g

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

※Environment resistance is rated at no freezing or condensation.

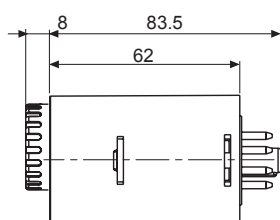
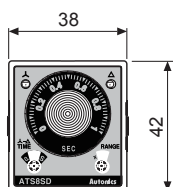
Compact Star-Delta Analog Timer

■ Connections

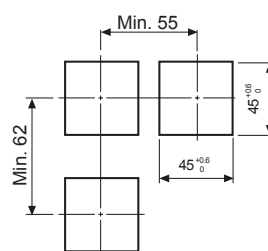


■ Dimensions

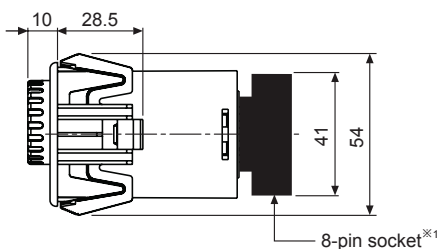
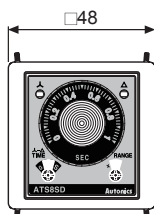
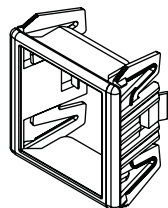
(unit: mm)



●Panel cut-out



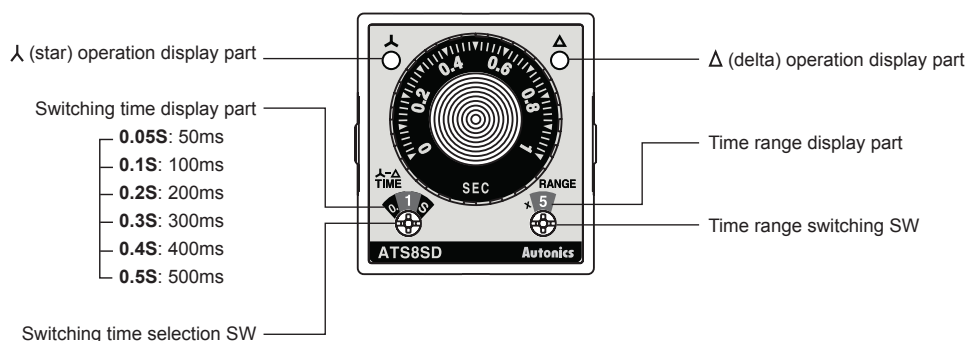
●Bracket



※8-pin socket (PG-08, PS-08(N)) is sold separately.

Refer to the '(G)Connectors/Connector Cables/Sensor Distribution Boxes/Sockets'.

■ Unit Description



(A)	Photoelectric Sensors
(B)	Fiber Optic Sensors
(C)	Door/Area Sensors
(D)	Proximity Sensors
(E)	Pressure Sensors
(F)	Rotary Encoders
(G)	Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets
(H)	Temperature Controllers
(I)	SSRs / Power Controllers
(J)	Counters
(K)	Timers
(L)	Panel Meters
(M)	Tacho / Speed / Pulse Meters
(N)	Display Units
(O)	Sensor Controllers
(P)	Switching Mode Power Supplies
(Q)	Stepper Motors & Drivers & Controllers
(R)	Graphic/ Logic Panels
(S)	Field Network Devices
(T)	Software

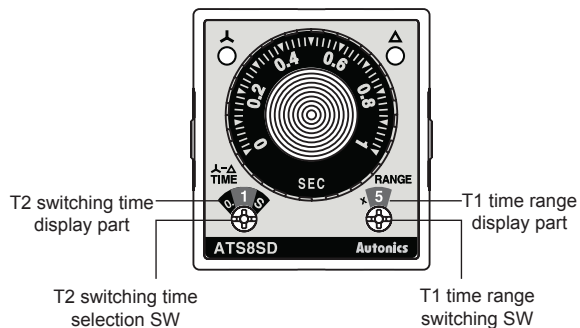
■ Time Specifications

1. T1 (setting time) time

Time range	Time unit	Time setting range
5	SEC	0.5 to 5sec
10		1 to 10sec
50		5 to 50sec
100		10 to 100sec

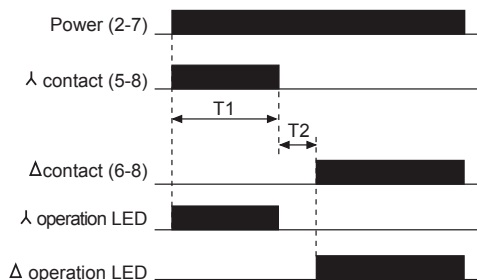
2. T2 (λ - Δ switching time) time (unit: sec)

Switching time display part	0.05S	0.1S	0.2S	0.3S	0.4S	0.5S
T2 (λ - Δ switching time)	0.05	0.1	0.2	0.3	0.4	0.5



■ Operation

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

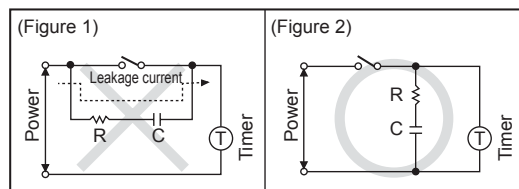


※T1: setting time (λ contact operation time)

※T2: λ - Δ 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.
- When supplying power for a long time, timer life cycle may be shorten due to overheat of inner components of timer.
- When supplied power of timer is DC, be sure that the polarity.
- When supplying the power to the timer, connection shown in (Figure 1) might cause malfunction due to leakage current through R and C. Please connect R and C as shown in (Figure 2) to prevent malfunction.



- Change the setting time (T1), time range or switching time (T2). Otherwise, it might cause malfunction if changing the setting time (T1), time range or switching time (T2) during operation.
- Do not use this unit at below places.
- Place where temperature or humidity is out of the rated specifications.
- Place where there is condensation by temperature changes.
- Place where there is flammable gas or corrosive gas.
- Place where there is dust, oil or severe vibration or impact.
- Place where strong alkalis or acids is used.
- Place where there is direct ray of the sun.
- Place where strong magnetic field or electric noise is generated.