

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 installation/maintenance
with the dedicated bracket for DIN 48×48mm
- Application: Starting large capacity motors



⚠ Please read "Safety Considerations" in the instruction manual before using.



■ Ordering Information

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

SENSORS

CONTROLLERS

MOTION DEVICES

SOFTWARE

(J) Temperature Controllers

(K) SSRs

(L) Power Controllers

(M) Counters

(N) Timers

(O) Digital Panel Meters

(P) Indicators

(Q) Converters

(R) Digital Display Units

(S) Sensor Controllers

(T) Switching Mode Power Supplies

(U) Recorders

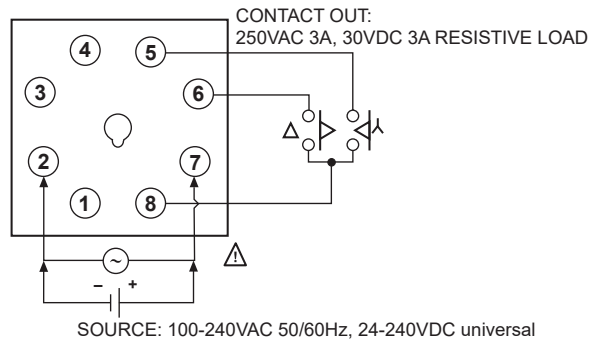
(V) HMIs

(W) Panel PC

(X) Field Network Devices

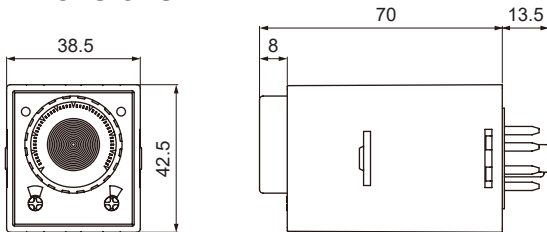
ATS8SD-4

■ Connections

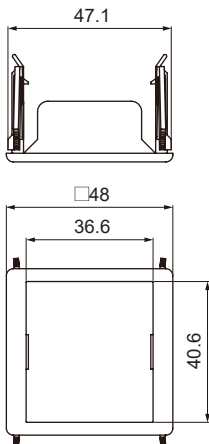


■ Dimensions

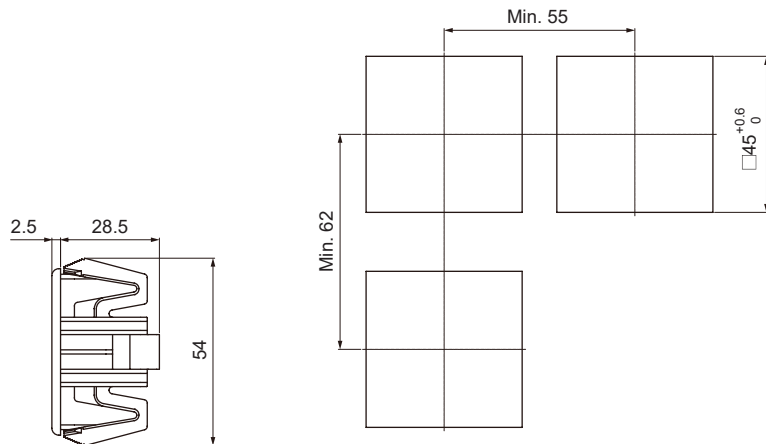
(unit: mm)



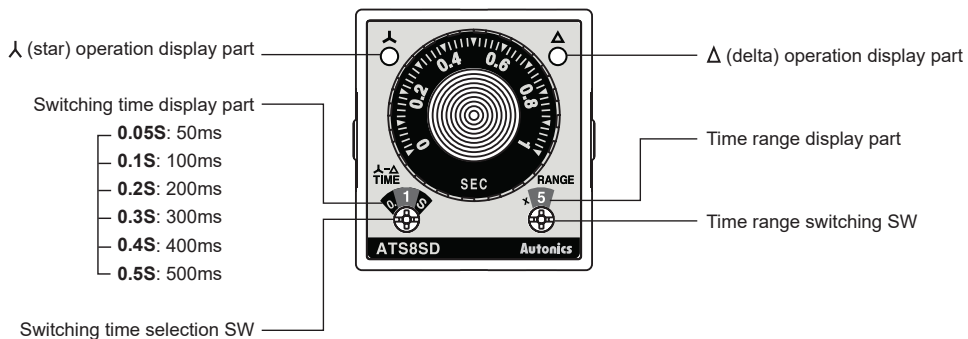
○ Bracket



○ Panel cut-out



■ Unit Description



Compact Star-Delta Analog Timer

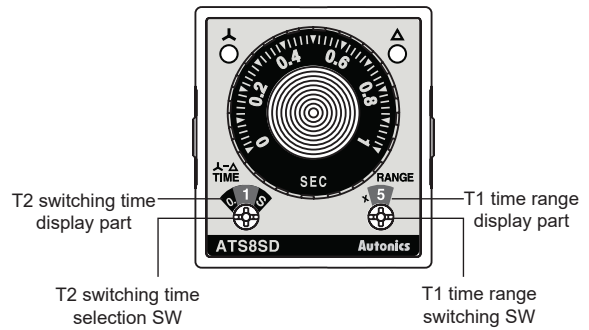
Time Specifications

1. T1 (setting time) time

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

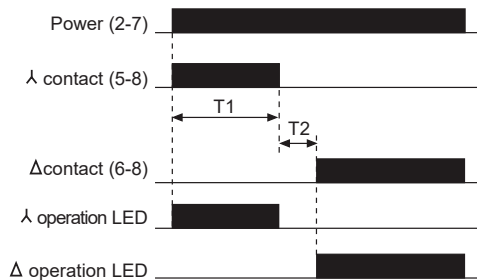
2. T2 (λ - Δ switching time) time (unit: sec)

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.



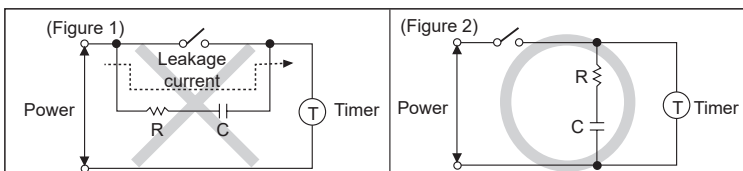
※T1: setting time (λ contact operation time)

※T2: λ - Δ switching time

(λ contact and Δ contact are OFF simultaneously at power ON)

Proper Usage

- Follow instructions in 'Proper Usage'. 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), λ - 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

SENSORS

CONTROLLERS

MOTION DEVICES

SOFTWARE

(J) Temperature Controllers

(K) SSRs

(L) Power Controllers

(M) Counters

(N) Timers

(O) Digital Panel Meters

(P) Indicators

(Q) Converters

(R) Digital Display Units

(S) Sensor Controllers

(T) Switching Mode Power Supplies

(U) Recorders

(V) HMIs

(W) Panel PC

(X) Field Network Devices