CÔNG TY CỔ PHẦN CÔNG NGHỆ HỢP LONG

DIN W48×H48mm Star-Delta timer

■ Features

- Realization of wide range of power supply
  : 100-240VAC 50/60Hz / 24-240VDC universal
- Wide range of setting time and switching time
  - T1(Setting time) : Selectable 0.5 to 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

AE | **8** | **SDN**

Time operation	SDN	Star-Delta type
Number of plug pins	8	8-pin plug type
Item	AT	Analog Timer

※Sockets (PG-08, PS-08, PS-M8) are sold separately.

■ Specifications

Model		**AT8SDN**
Function		**Star-Delta timer**
Control time setting range		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		100-240VAC : 3.2VA, 24-240VDC : 1.5W
Reset time		Max. 100ms
Timing operation		Power ON start type
Control output	Contact type	⅄ contact : SPST(1a), Δ contact : SPST(1a)
	Contact capacity	250VAC 5A resistive load
Relay life cycle	Mechanical	Min. 10,000,000 operations
	Electrical	Min. 100,000 operations(250VAC 5A resistive load)
Repeat error		Max. ±0.2 % ±10ms
⅄Setting error		Max. ±5% ±50ms
Voltage error		Max. ±0.5%
Temperature error		Max. ±2%
⅄-Δ Switching time error		Max. ±25%
Insulation resistance		100MΩ(at 500VDC megger)
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 to 55Hz(for 1 min.) in each of X, Y, Z directions for 1 hours
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s²(approx. 30G) in each of X, Y, Z directions for 3 times
	Malfunction	100m/s²(approx. 10G) in each of X, Y, Z directions for 3 times
Environ -ment	Ambient temperature	-10 to 55℃, storage: -25 to 65℃
	Ambient humidity	35 to 85%RH, storage: 35 to 85%RH
Approval		CE cULus
Accessory		Bracket
Unit weight		Approx. 90g

※Environment resistance is rated at no freezing or condensation.

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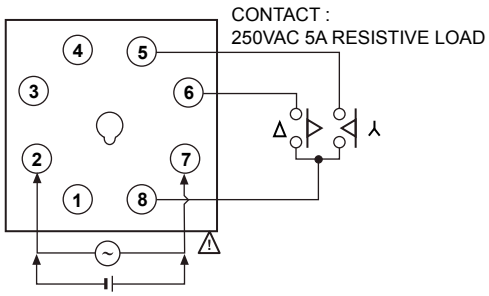
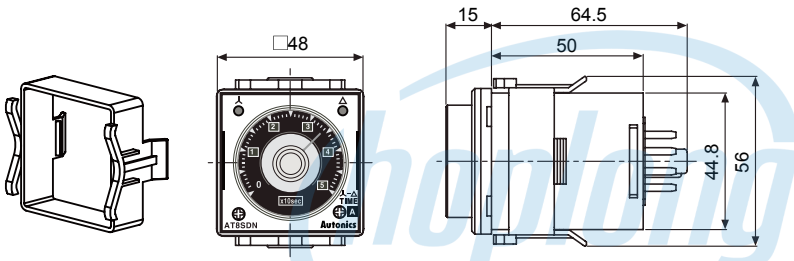
▣ Connections



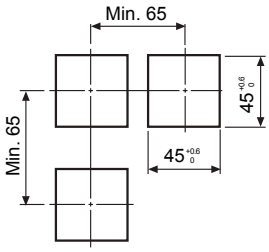
▣ Dimensions

(unit: mm)

● **Bracket**

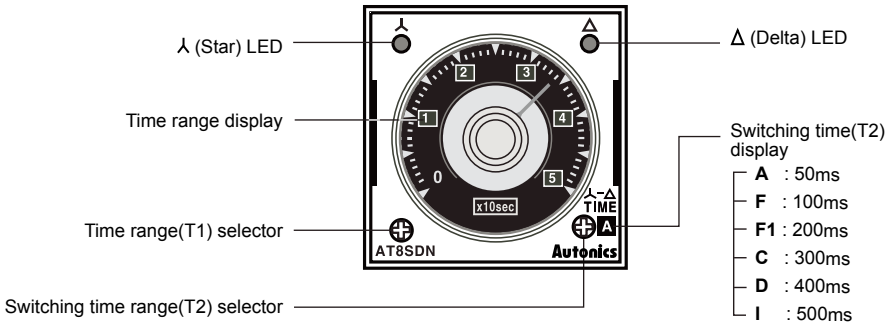


● **Panel cut-out**



8-pin socket : PG-08(sold separately)
※ Refer to the G-15 page.

▣ Parts description



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■ Time specifications

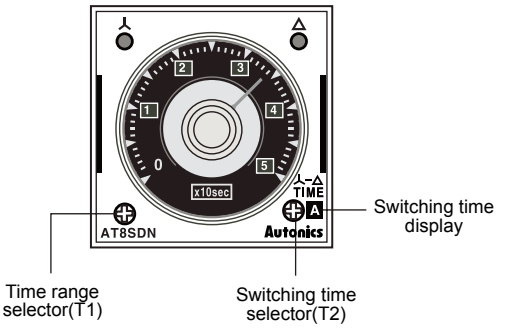
1. T1(Setting time)

Time range	Time unit	Time setting range
0.5	**×10sec**	0.5 to 5sec.
1.0		1 to 10sec.
5		5 to 50sec.
10		10 to 100sec.

2. T2(⅄ - Δ Switching time)

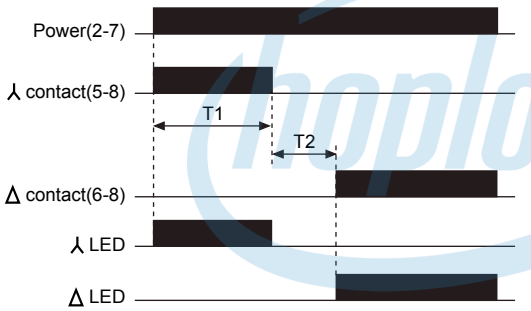
(unit: sec)

Display	**A**	**F**	**F1**	**C**	**D**	**I**
T2 (⅄-Δ Switching time)	0.05	0.1	0.2	0.3	0.4	0.5



■ Output operation mode

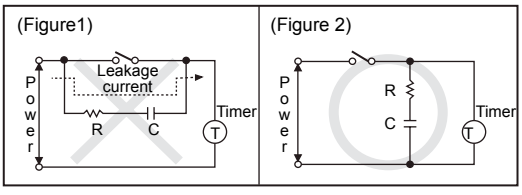
⅄ contact will be ON as soon as power is supplied, ⅄ contact will be OFF when T1 setting time is up then Δ contact will be ON after T2 switching time is up. Δ contact will be OFF when cut off the power at the status of Δ contact is ON.



※T 1: Setting time (⅄contact operation time)
※T2 : ⅄-Δ Swtiching time(⅄ and Δ contact are OFF when power is 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 supply the power to the timer, connection shown in (Fig. 1) might cause malfunction due to leakage current through R and C. Please connect R and C as shown in (Fig.2) to prevent malfunction.



- Change the setting time (T1), time range or ⅄ -Δ switching time(T2). Otherwise, it might cause malfunction if changing the setting time (T1), time range or ⅄-Δ switching time(T2) during operation.
- When performing dielectric voltage test or insulation resistance test while the unit is installed on control panel,
  - Please isolate this unit from the circuit of control panel.
  - Please make all terminals of this unit short- curcuited.
- Do not use this unit at below places.
  - Place where there are severe vibration or impact.
  - Place where strong alkalis or acids are used.
  - Place where there are direct rays of the sun
  - Place where strong magnetic field or electric noise are generated.
- Installation environment
  - It shall be used indoor
  - Altitude Max. 2000m
  - Pollution Degree 2
  - Installation Category II

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