



## W-SD Star-Delta Timer

The W-SD is a Star-Delta timer. Specially designed for induction motor starting, the star-delta transfer time is set to 0.06s or 0.1s with the star-delta transfer time selector on the lower-right side of the front panel. When input voltage is available, the relay star will energize and star time period begin the timing cycle. At the end of the timed period, the relay star will be de-energized, the adjustable delay star to delta period start. At the end of the transfer timed period, the relay delta will energize. When input voltage is removed, the timing circuit is reset and both relays (Star-Delta) are de-energized. Two relay outputs for Star and Delta. Fit standard 8 pin sockets.

### Specification

#### Feature:

Supply voltage	: DC (V) 12, 24
	AC (V) 220, 380
System frequency	: 50/60 Hz.
Power consumption	: 2VA
Accuracy	: ±1% max
Star-Delta transfer time	: Programmable at 0.06s or 0.1s

#### Relay output

First operation	: $\lambda$ relay
Output type	: ( $\lambda$ operation circuit) Relay : SPDT
	( $\Delta$ operation circuit) Relay: SPDT
Contact rating	: 5A at 250 VAC
Operations	: Mechanical: $2 \times 10^7$ times
	Electrical: $1 \times 10^5$ times

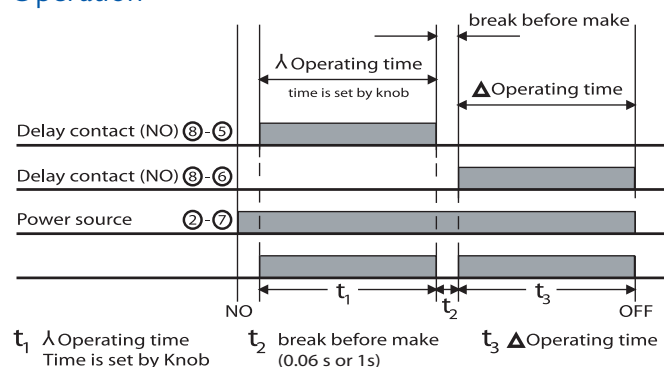
#### Environmental

Operating temperature	: $-10^\circ$ to $+55^\circ$ C
Storage temperature	: $-10^\circ$ to $+70^\circ$ C
Ambient humidity	: Max 85%RH

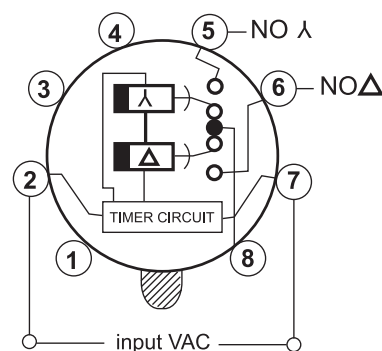
#### Enclosure

Material	: Plastic case
Mounting	: Panel, surface
Connection	: 8-Pin round socket
Indicator	: LED 2x5 mm
Dimension (mm)	: 39X49X82
Weight	: 146 g.

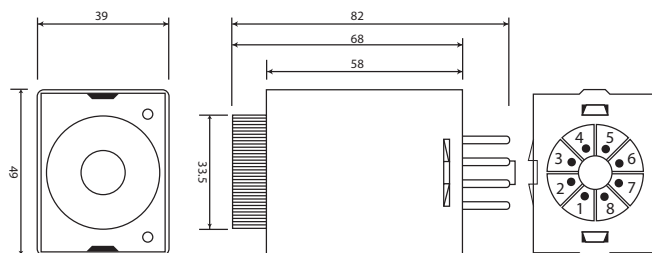
### Operation



### Diagram



### Dimension in mm.



### Type Selection

Code	Model	$\lambda$ Time ranges	$\lambda$ to $\Delta$ Time ranges
4100	W-SD15	0-15 sec.	0.06 s. or 0.1 s.
4101	W-SD30	0-30 sec.	0.06 s. or 0.1 s.
4102	W-SD60	0-60 sec.	0.06 s. or 0.1 s.
4103	W-SD120	0-120 sec	0.06 s. or 0.1 s.