

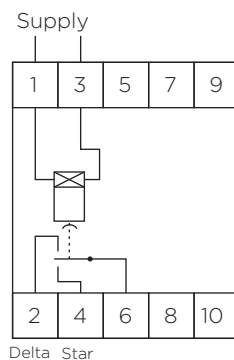
## Star / Delta Timer



### Description

Multi-range Star / Delta timer with adjustable transition delay for starting inductive motors. DIN rail mountable for front and back panel positioning.

### Wiring Diagram



### FEATURES

- Microprocessor controlled
- Relay releases to failsafe neutral centre position
- Adjustable Star time : 30 / 60 sec
- Adjustable Transition time : 40 - 180 sec
- Modular 35.5mm DIN rail mountable
- 6A SPDT output relay with neutral centre position
- LED indication for Star and Delta relay On

### Time Specifications

Time Ranges 1 - 30 sec  
Star 3 - 60 sec

Transition 40 - 180 ms

Range Accuracy  $\leq 0.5\%$

Scale Accuracy  $\pm 5\%$

Repeat Accuracy  $\pm 0.2\%$

Time Variation  $\leq 0.05\% / V$   
within rated power  
supply and ambient  
temperature  $\leq 0.2\% / ^\circ C$

Reset Time 500 ms

### Output Specifications

Output Specifications SPDT

Rated Isolation 6000 VAC

Voltage (contact / electric)  
1000 VAC  
(contact / contact)

Nominal Rate in AC1 2500 VA  
(Ag-Ni)

Rated Current 6A

Rated Voltage 250V

Mechanical Life  $10 \times 10^6$  cycles

Electrical Life  $110 \times 10^3$  cycles (at max load)

Operation Frequency  $\leq 1800$  cycles/h

### Supply Specifications

Power Supply AC Type 110, 230, 400V  
(Galvanic)  $525V \pm 10\%$   
50 / 60 Hz  $\pm 5\%$

Isolation 4kV

Consumption  $\pm 3VA$

$\pm 6VA$  525 V

Power Supply DC Types 12, 24, 48 V  $\pm 10\%$   
(Non-galvanic)

Isolation None

Consumption  $\pm 100$  mA

### General Specifications

Power ON Delay  $\leq 300$  ms

Power OFF Delay  $\leq 200$  ms

Indication for  
Power Supply ON LED green  
Output ON LED red

Environment

Degree Of Protection IP 20  
Operating Temperature  $-10$  to  $+50^\circ C$   
Storage Temperature  $-50$  to  $+85^\circ C$   
Weight 200g

## Star / Delta Timer Mode of Operations

### Function

The output relay is normally in the neutral centre position. When the power supply is applied, the relay switches to star position (contact 4) and the star period starts. At the end of the set time period, the relay returns to the neutral centre position and the transition delay between star and delta position starts.

At the end of the transition delay (adjustable from 40 to 180 ms), the relay switches in delta position (contact 2) and does not release until the power supply is interrupted for at least 500ms. If the power supply is interrupted for more than 500ms before the star time period has expired, the relay returns to the neutral position.

### Operations Diagram

#### FUNCTION

