

- Star-Delta start-up
- Supply voltage selectable via power modules
- 2 change over contacts
- Width 22.5mm
- Industrial design



## Technical data

### 1. Functions

S Star-Delta start-up

### 2. Time ranges

Start-up time

| Time range | Adjustment range |      |
|------------|------------------|------|
| 10s        | 500ms            | 10s  |
| 30s        | 1500ms           | 30s  |
| 1min       | 3s               | 1min |
| 3min       | 9s               | 3min |

Transit time

| Time range (fixed) |
|--------------------|
| 40ms               |
| 60ms               |
| 80ms               |
| 100ms              |

### 3. Indicators

Green LED ON: indication of supply voltage  
delta-contactor in on-position  
(terminals 25-28)

Green LED flashes: indication of star-time

Yellow LED ON/OFF: indication of star-contactor  
(terminals 15-18)

### 4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40  
Mounted on DIN-Rail TS 35 according to EN 50022  
Mounting position: any  
Shockproof terminal connection according to VBG 4  
(PZ1 required), IP rating IP20  
Tightening torque: max. 1Nm  
Terminal capacity:  
1 x 0.5 to 2.5mm<sup>2</sup> with/without multicore cable end  
1 x 4mm<sup>2</sup> without multicore cable end  
2 x 0.5 to 1.5mm<sup>2</sup> with/without multicore cable end  
2 x 2.5mm<sup>2</sup> flexible without multicore cable end

### 5. Input circuit

Supply voltage: 12 to 400V AC terminals A1-A2 (galvanically separated)  
selectable via power modules TR2

Tolerance: according to specification of power module

Rated frequency: according to specification of power module

Rated consumption: 2VA (1.5W)

Duration of operation: 100%

Reset time: 100ms

Residual ripple for DC: -

Drop-out voltage: >30% of the supply voltage

Overvoltage category: III (according to IEC 60664-1)

Rated surge voltage: 4kV

### 6. Output circuit

2 potential free change over contacts

Rated voltage: 250V AC

Switching capacity (distance <5mm): 750VA (3A / 250V AC)

Switching capacity (distance >5mm): 1250VA (5A / 250V AC)

Fusing: 5A fast acting

Mechanical life: 20 x 10<sup>6</sup> operations

Electrical Life: 2 x 10<sup>5</sup> operations  
at 1000VA resistive load

Switching frequency: max. 60/min at 100VA resistive load  
max. 6/min at 1000VA resistive load  
(according to IEC 947-5-1)

Overvoltage category: III (according to IEC 60664-1)

Rated surge voltage: 4kV

### 9. Accuracy

Base accuracy: ±1% (of maximum scale value)

Frequency response: -

Adjustment accuracy: ≤5% (of maximum scale value)

Repetition accuracy: <0.5% or ±5ms

Voltage influence: -

Temperature influence: ≤0.01% / °C

### 10. Ambient conditions

Ambient temperature: -25 to +55°C (according to IEC 68-1)  
-25 to +40°C (according to UL 508)

Storage temperature: -25 to +70°C

Transport temperature: -25 to +70°C

Relative humidity: 15% to 85%  
(according to IEC 721-3-3 class 3K3)

Pollution degree: 3 (according to IEC 664-1)

Vibration resistance: 10 to 55Hz 0.35mm  
(according to IEC 68-2-6)

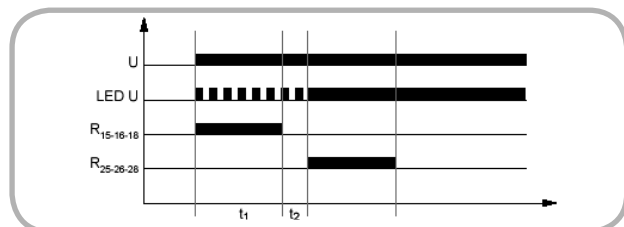
Shock resistance: 15g 11ms (according to IEC 68-2-27)

## Functions

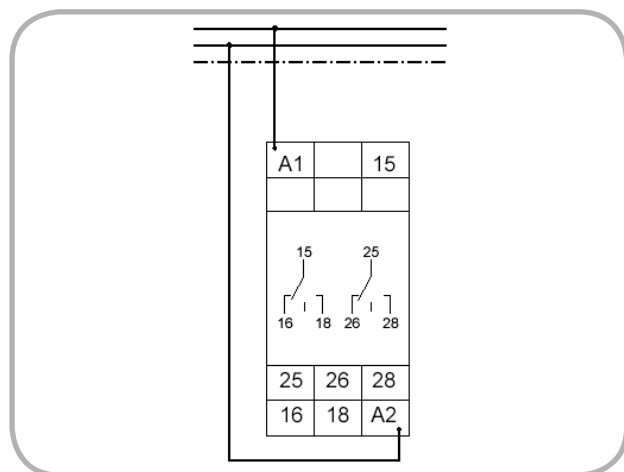
### Star-Delta start-up (S)

When the supply voltage  $U$  is applied, the star-contact switches into on-position (yellow LED illuminated) and the set star-time  $t_1$  begins (green LED flashing). After the interval  $t_1$  has expired (green LED illuminated) the star-contact switches into off-position (yellow LED not illuminated) and the set transit-time  $t_2$  begins. After the interval  $t_2$  has expired the delta-contact switches into on-position.

To restart the function the supply voltage must be interrupted and re-applied.



## Connections



## Dimensions

