

# TCC-H

## overview

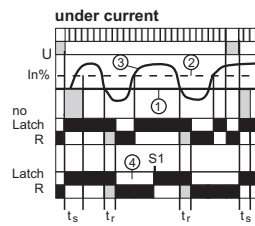
- ◆ AC or DC over or under current monitor
- ◆ DPCO output max. 6A
- ◆ 3 measuring ranges 5mA - 10A RMS
- ◆ level and hysteresis adjustments
- ◆ programmable latch/no latch alarm
- ◆ LED indicators for power supply, contact and reaction timer
- ◆ 45mm DIN rail mount housing



### Function

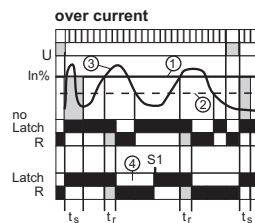
- Control relay active
- Control relay passive
- Contact closed
- Contact open

- ① Threshold "In"
- ② Hysteresis
- ③ Monitored current
- ④ Latch



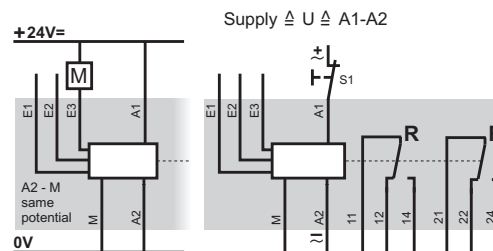
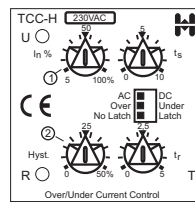
ts... Start surge delay  
tr... Reaction timer  
T... LED indication reaction timer

**Over/under current control relay**  
On application of the supply voltage the output relay pulls in and the timing period  $t_s$  starts.



**Current control with no latch (auto reset) function**  
At the end of  $t_s$ , when the measured current exceeds the set threshold, timing period  $t_r$  starts. At the end of  $t_r$  the output relay changes over if the current measurement still exceeds the threshold.  
The output relay resets immediately when the monitored current reaches the hysteresis set value.

**Current control with latch (manual reset) function.**  
At the end of  $t_s$ , if the measured current exceeds the set threshold, timing period  $t_r$  starts. At the end of  $t_r$  the output relay changes over and remains in this condition, even if the monitored current reaches the hysteresis set value.  
An external reset (S1) must be operated to reset the relay.



| input | range       | resistance | $I_{EMAX}$ (20°C) |
|-------|-------------|------------|-------------------|
| E1-M  | 5mA - 100mA | 1,0 Ohm    | 1,5 A             |
| E2-M  | 50mA - 1A   | 0,1 Ohm    | 3,5 A             |
| E3-M  | 0,5A - 10A  | 0,01 Ohm   | 14 A              |

## specification

|                                   |                              |                                      |
|-----------------------------------|------------------------------|--------------------------------------|
| <b>supply voltage variation</b>   | nominal voltage +10% / -15%  |                                      |
| <b>frequency range</b>            | 48 - 63 Hz                   |                                      |
| <b>duty cycle</b>                 | 100%                         |                                      |
| <b>start surge delay</b>          | 0 - 10s                      |                                      |
| <b>reaction time</b>              | 0 - 5s                       |                                      |
| <b>reset time</b>                 | < 100ms                      |                                      |
| <b>output relay specification</b> | max. 6A 230V~                |                                      |
| Ue/Ie AC-15                       | 120V/4A 240V/3A              |                                      |
| Ue/Ie DC-13                       | 24V/2A                       |                                      |
| <b>expected life time</b>         | DPCO                         | SPCO                                 |
| mechanical                        | 2 x 10 <sup>6</sup>          | resp. 1 x 10 <sup>7</sup> operations |
| electrical                        | 1 x 10 <sup>5</sup>          | resp. 1 x 10 <sup>5</sup> operations |
| <b>screws</b>                     | pozidrive 1                  |                                      |
| <b>screw tightening torque</b>    | 0,6...0,8Nm                  |                                      |
| <b>operating conditions</b>       | -20 to +60 °C non condensing |                                      |
|                                   | * EN 60947-5-1 VDE 0435      |                                      |

## ordering information

| part no      | supply      | output | sup. galv. iso* | CE  | housing types |
|--------------|-------------|--------|-----------------|-----|---------------|
| TCC-H 230Vac | 230V~ 2,5VA | DPCO   | yes             | yes | C             |
| TCC-H 115Vac | 115V~ 2,5VA | DPCO   | yes             | yes | C             |
| TCC-H 24Vac  | 24V~ 2,5VA  | DPCO   | yes             | yes | C             |
| TCC-H 24Vdc  | 24V= 2W     | DPCO   | no              | yes | C             |

\* The measurement input is galvanically isolated from the power supply

