- Industrial design
- Width 45mm
- AC or DC current monitoring in 1-phase mains
- 2 change over contacts

Technical data

1. Functions

AC or DC overcurrent monitoring in 1-phase mains with adjustable threshold, timing for start-up suppression and tripping delay separately adjustable and adjustable hysteresis

2. Time ranges

	Adjustment range	
Start-up suppression time:	0.5s	5s
Tripping delay:	0.5s	5s

3. Indicators

Green LED ON: indication of supply voltage
Yellow LED ON/OFF: indication of relay output

4. Mechnical 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
Initial torque: max. 1Nm
Terminal capacity:
1 x 0.5 to 2.5mm² with/without multicore cable end
1 x 4mm² without multicore cable end
2 x 0.5 to 1.5mm² with/without multicore cable end
2 x 2.5mm² flexible without multicore cable end

5. Input circuit

For DC monitoring units the use of transformer modules TR3 is prescribed !!
Supply voltage:

6 to 220V DC	terminals A1-A2 selectable via switching power supply modules SN3
24 to 48V AC/DC	terminals A1-A2 selectable via power supply modules NT3
12 to 440V AC	terminals A1-A2 (galvanically separated) selectable via transformer modules TR3

Tolerance:

6 to 220V DC	depends on selected switching power supply module
24 to 48V AC/DC	-15% to +10%
12 to 440V AC	-15% to +10%

Rated frequency: 48 to 63Hz
Rated consumption:

6 to 220V DC	3W
24V AC/DC	2VA (2W)
36V AC/DC	3VA (3W)
42V AC/DC	3.5VA (3.5W)
48V AC/DC	4VA (4W)
12 to 440V AC	4VA (3W)

Duration of operation: 100%
Reset time: 500ms
Residual ripple for DC: 10% (switching power supply SN3 only)
Drop-out voltage: >30% of the supply voltage

6. Output circuit

2 potential free change over contacts
Switching capacity: 1500VA (6A / 250V)
Fusing: 6A fast acting
Mechanical life: 20 x 10^6 operations
Electrical life: 2 x 10^5 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)
Insulation voltage: 250V AC (according to IEC 664-1)
Surge voltage: 4kV, overvoltage category III (according to IEC 664-1)

7. Measuring circuit

Input:	1A AC	terminals i-k	(IH1AAC4X)
	5A AC	terminals i-k	(IH5AAC4X)
	10A AC	terminals i-k	(IH10AAC4X)
	20mA DC	terminals i-k	(IH20mADC4X)
	1A DC	terminals i-k	(IH1ADC4X)
	5A DC	terminals i-k	(IH5ADC4X)
Overload capacity:			
	1A AC	15A	(IH1AAC4X)
	5A AC	15A	(IH5AAC4X)
	10A AC	15A	(IH10AAC4X)
	20mA DC	500mA	(IH20mADC4X)
	1A DC	3A	(IH1ADC4X)
	5A DC	10A	(IH5ADC4X)
Input resistance:			
	1A AC	5mΩ	(IH1AAC4X)
	5A AC	5mΩ	(IH5AAC4X)
	10A AC	5mΩ	(IH10AAC4X)
	20mA DC	4.7Ω	(IH20mADC4X)
	1A DC	100mΩ	(IH1ADC4X)
	5A DC	20mΩ	(IH5ADC4X)
Switching threshold I_{max}:			
	1A AC	0.1 to 1A	(IH1AAC4X)
	5A AC	0.5 to 5A	(IH5AAC4X)
	10A AC	1 to 10A	(IH10AAC4X)
	20mA DC	2 to 20mA	(IH20mADC4X)
	1A DC	0.1 to 1A	(IH1ADC4X)
	5A DC	0.5 to 5A	(IH5ADC4X)
Hysteresis I_{min}:		10% to 90%	

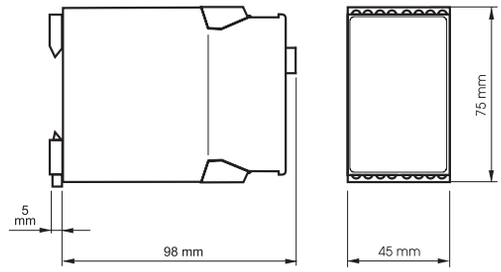
8. Accuracy

Base accuracy: -
Adjustment accuracy: ≤5% (of maximum scale value)
Repetition accuracy: ≤1%
Voltage influence: ≤0.5%
Temperature influence: ≤0.1% / °C

9. Ambient conditions

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

10. Dimensions

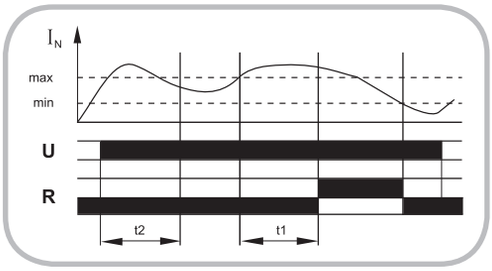


Functions

AC or DC overcurrent monitoring in 1-phase mains with adjustable threshold, timing for start-up suppression and tripping delay separately adjustable and adjustable hysteresis

When the supply voltage U is applied (green LED illuminated), the set interval of the start-up suppression (t_2) begins. Changes of the measured current during this period do not affect the state of the output relay.

Overcurrent monitoring
When the measured current exceeds the value adjusted at the MAX-regulator the set interval of the tripping delay (t_1) begins. After the interval has expired, the output relay R switches into on-position (yellow LED illuminated). When the measured current falls below the value adjusted at the MIN-regulator by more than the value adjusted at the MIN-regulator, the output relay switches into off-position (yellow LED not illuminated).



Connections