

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



Technical data

1. Functions

AC or DC current monitoring in 1-phase mains outside the window between I_{min} and I_{max} with adjustable thresholds, timing for start-up suppression and tripping delay separately adjustable

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. 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
 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 10⁶ operations
 Electrical life: 2 x 10⁵ 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	(IR1AAC4X)
	5A AC	terminals i-k	(IR5AAC4X)
	10A AC	terminals i-k	(IR10AAC4X)
	20mA DC	terminals i-k	(IR20mADC4X)
	1A DC	terminals i-k	(IR1ADC4X)
	5A DC	terminals i-k	(IR5ADC4X)
Overload capacity:	1A AC	15A	(IR1AAC4X)
	5A AC	15A	(IR5AAC4X)
	10A AC	15A	(IR10AAC4X)
	20mA DC	500mA	(IR20mADC4X)
	1A DC	3A	(IR1ADC4X)
	5A DC	10A	(IR5ADC4X)
Input resistance:	1A AC	5mΩ	(IR1AAC4X)
	5A AC	5mΩ	(IR5AAC4X)
	10A AC	5mΩ	(IR10AAC4X)
	20mA DC	4.7Ω	(IR20mADC4X)
	1A DC	100mΩ	(IR1ADC4X)
	5A DC	20mΩ	(IR5ADC4X)
Switching threshold I_{max} :	1A AC	0.1 to 1A	(IR1AAC4X)
	5A AC	0.5 to 5A	(IR5AAC4X)
	10A AC	1 to 10A	(IR10AAC4X)
	20mA DC	2 to 20mA	(IR20mADC4X)
	1A DC	0.1 to 1A	(IR1ADC4X)
	5A DC	0.5 to 5A	(IR5ADC4X)
		I_{min} : 10% to 90%	

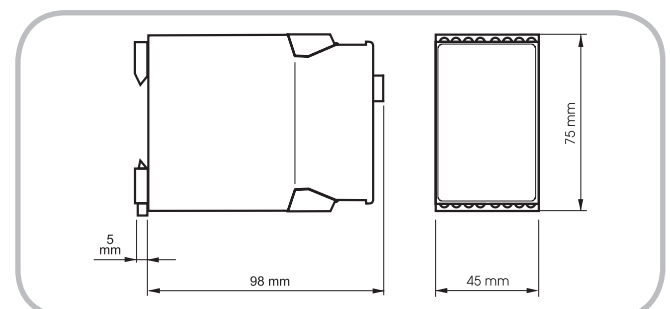
8. Accuracy

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



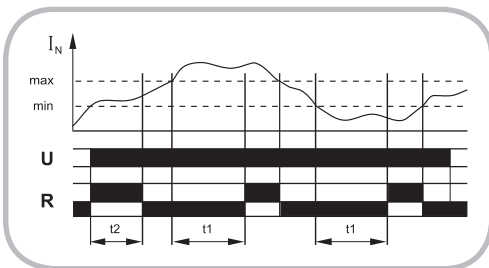
Functions

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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.

Inverted window function

The output relay R switches into off-position (yellow LED not illuminated), when the measured current exceeds the value adjusted at the MIN-regulator. 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 switches into on-position (yellow LED illuminated). When the measured current falls below the maximum value, the output relay again switches into off-position (yellow LED not illuminated). When the measured current falls below the minimum value, the set interval of the tripping delay begins. After the interval has expired, the output relay switches into on-position (yellow LED illuminated).



Connections

