

Monitoring current relay PRI-31

Stromüberwachungsrelais PRI-31



- ▶ Universal supply AC 24 - 240 V und DC 24 V
- ▶ universale Versorgungsspannung AC 24 - 240 V und DC 24 V
- ▶ Fluent adjusting actualing current via potentiometer, choice of 4 ranges : AC 0.1-1 A, AC 0.2-2 A, AC 0.5-5 A, AC 0.8-8 A
- ▶ kontinuierliche Stromeinstellung durch Potentiometer, Wahl von 4 Bereichen: AC 0.1-1 A, AC 0.2-2 A, AC 0.5-5 A, AC 0.8-8 A
- ▶ Adjustable delay 0 - 10 s
- ▶ einstellbare Zeitverzögerung 0 - 10 s
- ▶ Output contact: 1x changeover 16 A
- ▶ Ausgangskontakt: 1x Wechsler 16 A
- ▶ possible to use for current scanning from current transformer - up to 600 A!
- ▶ ausnutzbar für Stromabtasten aus Stromtransformator - bis zum 600 A!
- ▶ Supply is not galvanically separated from measured current, it must be in the same phase
- ▶ Versorgung ist nicht galvanisch getrennt, vom Mess Strom und muß in der gleichen Phase sein
- ▶ 1-phase, 1-MODULE, DIN rail mounting
- ▶ 1-Phase, 1-MODUL, Befestigung auf DIN-Schiene

Technical parameters

Technische Daten

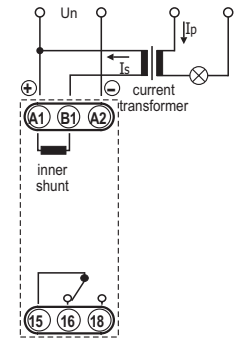
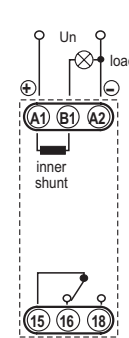
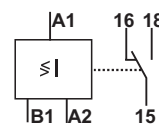
PRI-31

Supply circuit	Versorgungskreis	
Supply terminals:	Versorgungsklemmen:	A1 - A2
Supply voltage:	Versorgungsspannung:	AC 24 - 240 V (AC 50 - 60 Hz) and DC 24 V
Consumption:	Leistungsaufnahme:	max. 1.5 VA
Supply voltage tolerance:	Toleranz:	-15 %; +10 %
Measuring circuit	Messkreis	
Load:	Lastanschluß:	between A2 - B1
Current range:	Strombereich:	PRI-31/1 AC 0.1 - 1 A PRI-31/2 AC 0.2 - 2 A PRI-31/5 AC 0.5 - 5 A PRI-31/8 AC 0.8 - 8 A
	applicable also for current transformer angebracht auch für Stromwandler	
Advised current transformers:	Empfohlene Stromtransformator:	see page 58
Max. permanent current / Inrush overload <1ms:	Max. Dauerstrom / Höchstüberlastung <1ms:	PRI-31/1 1 A / 2.5 A PRI-31/2 2 A / 2.5 A PRI-31/5 5 A / 6.3 A PRI-31/8 8 A / 20 A
Current adjustment:	Stromwerteeinstellung:	potentiometer
Time delay:	Zeitverzögerung:	adjustable, 0 - 10 sec
Accuracy	Genauigkeit	
Setting accuracy (mechanical):	Einstellungsgenauigkeit:	5 %
Repeat accuracy:	Wiederholungsgenauigkeit:	<1 %
Temperature dependancy:	Abhängung von Temperatur:	< 0.1 % / °C
Limit values tolerance:	Grenzwerttoleranz:	5 %
Hysteresis (fault to OK):	Hysteresis (aus Fehlestand in OK):	0.6-1.2 % of the range
Output	Ausgang	
Number of contacts:	Anzahl der Wechsler:	1x changeover, (AgNi)
Rated current:	Nennstrom:	16 A / AC1
Breaking capacity:	Schaltleistung:	4000 VA / AC1, 384 W / DC
Output indication:	Ausgangsanzeige:	green / red LED
Other information	Andere Informationen	
Operating temperature:	Umgebungstemperatur:	-20 .. +55 °C
Storage temperature:	Lagerstemperatur:	-30 .. +70 °C
Electrical strength:	Elektrische Festigkeit:	4 kV (supply - output)
Operating position:	Arbeitsstellung:	any / wahlfrei
Mounting:	Befestigung/DIN-Schiene:	DIN rail EN 60715
Protection degree:	Schutzart/frontseitig:	IP 40
Overvoltage cathegory:	Spannungsbegrenzungs-kategorie:	III.
Pollution degree:	Verschmutzungsgrad:	2
Max. cable size:	Anschlußquerschnitt:	max. 2.5 mm ² / with cavern 1.5 mm ²
Dimensions:	Abmessung:	90x17.6x 64 mm, page 87-89
Weight:	Gewicht:	57 g
Standards:	Normen:	EN 60255-6, EN 61010-1

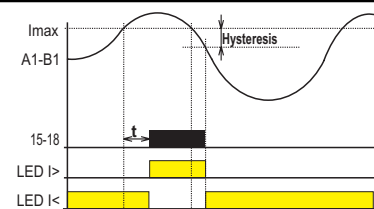
Connection / Schaltung

You can information about current transformers find on page 58

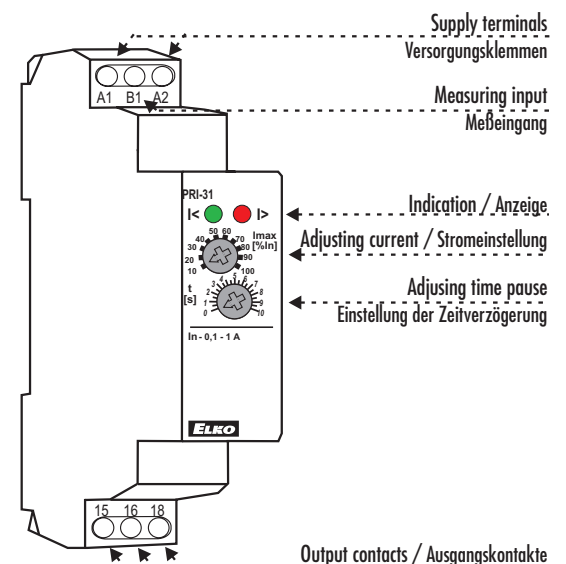
PRI-31 with current transformer for rising of current ranges
PRI-31 mit Umspanner für Strombereichserhöhung



Function / Funktion



Description / Beschreibung



Monitoring current relay PRI-32

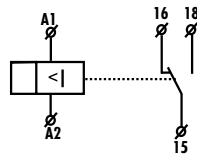
1M



- for heating bars in sliding rails, heating cables, indication of current flow, controlling of 1-phase motor consumption ...
- controls only AC current
- fluent adjusting actualing current via potentiometer 1 - 20 A
- universal supply AC 24 - 240 V and DC 24 V
- supply is galvanic separated from measuring current
- current exceeding – current flowing through monitored wire must not exceed 100 A
- output contact: 1x changeover 8 A
- clamp terminals
- 1-phase, 1-MODULE, DIN rail mounting

Technical parameters	PRI-32
Supply circuit	
Supply terminals:	A1 - A2
Supply voltage:	AC 24 - 240 V, DC 24 V (AC 50 - 60 Hz)
Consumption:	max. 1.5 VA
Supply voltage tolerance:	-15 %; +10 %
Measuring circuit	
Current range:	1 - 20 A
Current adjustment:	potentiometer
Accuracy	
Setting accuracy (mechanical):	5 %
Repeat accuracy:	<1 %
Temperature dependancy:	< 0.1 % / C
Limit values tolerance:	5%
Overload capacity:	max.100 A / 10 s
Output	
Number of contacts:	1x changeover (AgNi)
Rated current:	8 A / AC1
Breaking capacity:	2500 VA / AC1, 240 W / DC
Output indication:	red LED
Other information	
Operating temperature:	-20.. +55 °C
Storage temperature:	-30.. +70 °C
Electrical strength:	4 kV (supply - output)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP 40 from front panel
Overvoltage category:	III.
Pollution degree:	2
Max. cable size (mm ²):	solid wire max. 2x2.5 or 1x4, with sleeve max. 1x2.5 or 2x1.5
Dimensions:	90x17.6x 64 mm, see page 90-92
Weight:	68 g
Standards:	EN 60255-6, EN 61010-1

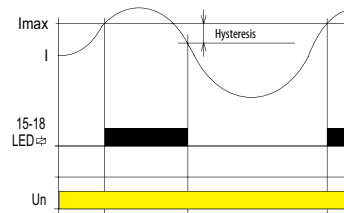
Symbol



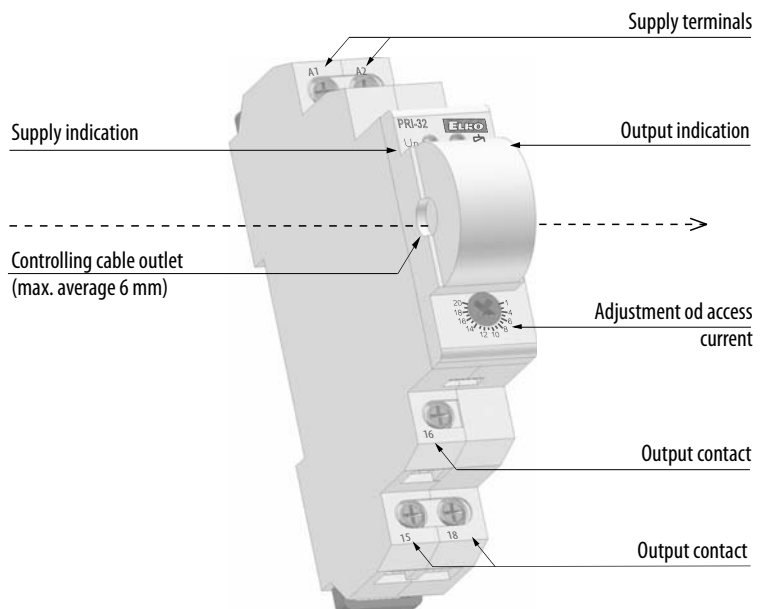
Connection



Function



Description



Function description

Monitoring relay PRI-32 is determined for control of current level in one phase AC circuits. Fluent adjustment of access current level predestines this device for many various applications. Output relay is in normal state off. By overpassing of adjusted current level relay is closed. An advantage of this relay is universal supply. It is possible to control a load that does not have consistent supply as PRI-32.

Monitoring current relay PRI-51

1M



- to monitor heating rods in shunts, heating cables, to indicate current flow, to monitor consumption of one-phase engines
- fluent adjusting actualing current via potentiometer, choice of 5 ranges: AC 0.1-1 A, AC 0.2-2 A, AC 0.5-5 A, AC 0.8-8 A, AC 1.6-16 A
- adjustable delay 0.5 - 10 s to eliminate short current peaks
- possible to use for current scanning from current transformer - up to 600 A!
- universal supply AC 24 - 240 V and DC 24 V
- supply is not galvanically separated from measured current, it must be in the same phase
- output contact: 1x changeover 8 A
- 1-phase, 1-MODULE, DIN rail mounting, replacement for PRI-31

Technical parameters

PRI-51

Supply circuit

Supply terminals:	A1 - A2
Supply voltage:	AC 24 - 240 V a DC 24 V (AC 50 - 60 Hz)
Consumption:	max. 1.5 VA
Supply voltage tolerance:	-15 %; +10 %

Measuring circuit

Load:	between B1 - B2										
Current range:	<table border="1"> <tr> <td>PRI-51/1</td> <td>PRI-51/2</td> <td>PRI-51/5</td> <td>PRI-51/8</td> <td>PRI-51/16</td> </tr> <tr> <td>AC 0.1-1A</td> <td>AC 0.2-2A</td> <td>AC 0.5-5A</td> <td>AC 0.8-8A</td> <td>AC 1.6-16A</td> </tr> </table>	PRI-51/1	PRI-51/2	PRI-51/5	PRI-51/8	PRI-51/16	AC 0.1-1A	AC 0.2-2A	AC 0.5-5A	AC 0.8-8A	AC 1.6-16A
PRI-51/1	PRI-51/2	PRI-51/5	PRI-51/8	PRI-51/16							
AC 0.1-1A	AC 0.2-2A	AC 0.5-5A	AC 0.8-8A	AC 1.6-16A							

Recommended current transformers: applicable also for current transformer

Max. permanent current:	more information page 67				
Inrush overload <1ms:	1 A	2 A	5 A	8 A	16 A
Current adjustment:	100 A				
Time delay:	potentiometer				
Accuracy	adjustable 0.5-10 s				

Setting accuracy (mechanical):

Repeat accuracy:	5 %
Temperature dependency:	<1 %
Limit values tolerance:	< 0.1 % / °C
Hysteresis (fault to OK):	5 %
Output	5 %

Number of contacts:	1x changeover (AgNi)
Rated current:	8 A / AC1

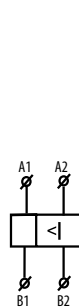
Breaking capacity:	2500 VA / AC1, 240 W / DC
Output indication:	green / red LED

Other information	green / red LED
Operating temperature:	-20.. +55 °C
Storage temperature:	-30.. +70 °C
Electrical strength:	4 kV (supply - output)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP 40 from front panel
Overvoltage category:	III.
Pollution degree:	2
Max. cable size (mm ²):	solid wire max. 2x2.5 or 1x4, with sleeve max. 1x2.5 or 2x1.5
Dimensions:	90 x 17.6 x 64 mm, see page 90-92
Weight:	58 g
Standards:	EN 60255-6, EN 61010-1

Function description

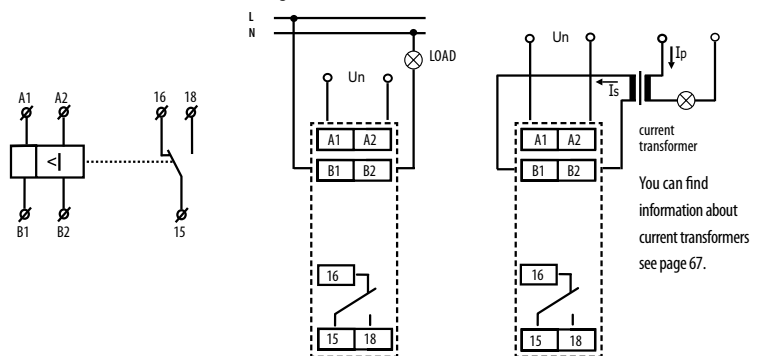
Monitoring relay PRI-51 serves to monitor current level in one-phase AC circuits. Gradual setting of actuating current of monitoring relay enables many different applications. Output relay is in normal state open. After the set current level is reached, relay closes after the set delay (0.5-10s). When returning from faulty to normal state there is a hysteresis (5%). Multi-voltage of this relay is an advantage. It is possible to monitor load which doesn't have the same supply as monitoring relay PRI-51. Range of PRI-51 can be increased by an external current transformer.

Symbol



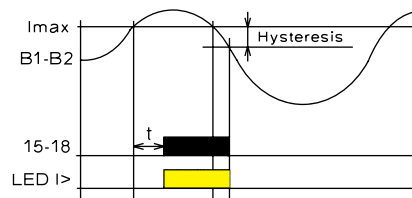
Connection

Example Connection: PRI-51 with current transformer for current range increase

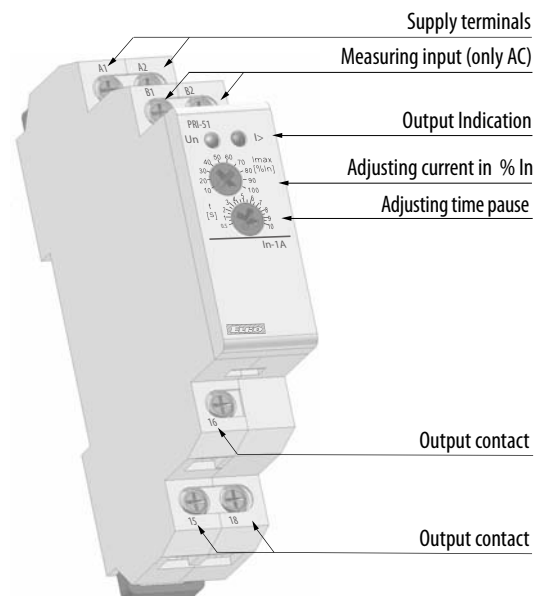


You can find information about current transformers see page 67.

Function



Description



Example of an order

Always specify all reference name of current relay according to required range, for example PRI-51/5.