

MONITORING RELAYS- CURRENT

AC

	PRI-32	Monitoring by current transformer (wire through an opening, galv. separated, without heat loss), adjust. current 1-20 A, multivoltage AC 24-240 and DC 24 V, output 8 A changeover. page 108
	PRI-34	Multifunction current monitoring relay, measured by built-in current transformer, rated current 2 A, 5 A, 16 A (suitable for current transformer), AC / DC supply 24 - 240 V, output 16 A prep. page 109
	PRI-35	Undercurrent monitoring relay, measured by external current transformer, rated current 5 A, AC / DC supply 24 - 240 V, output 16 A prep. page 109
	PRI-51	Monitoring of current by in-built transformer, 7 ranges, range 5 A is suitable for current transformer, supply and output as PRI-32, difference from PRI-32: direct monitoring and finer ranges (higher sensitivity) = higher accuracy in measuring. page 112
	PRI-52	For scanning the current up to 25 A. Long distance device diagnostics (black-out, increase of take-off) Priority relay. Supplying voltage AC 230 V. Output 8 A/SPST switching over. page 113
	PRI-53	For monitoring the current in 3-phase devices. Power supply: 24-240 V AC/DC, galvanically separated from the circuit of the monitored current 2 types depending on the strength of rated current I_n (1 A, 5 A). page 114

AC/DC

The image shows two identical white electronic modules with black knobs and green indicator lights. They are connected by a yellow line, suggesting they are part of a network or system.

PRI-41
(Hysteresis) 3 inputs
divided into 3 ranges
(selectable by a switch).
page 115

PRI-42
(Window) as PRI-41 but
function "WINDOW".

Relay for current monitor

Type	Design	Supply voltage	Secure variables				Setting				Description	Page	
			Phases	Range			Delay	Hysteresis	Memory Errors				
PRI-32	1-M	AC 24-240 V DC 24 V	1	AC 1 - 20 A	●	x	x	x	x	●	x	Monitors the overflow of the current flowing through the guarded conductor, passed through the hole in the panel.	108
PRI-34/2A PRI-34/5A PRI-34/16A	1-M	AC/DC 24-240 V	1	AC 0.1 - 2 A AC 0.25 - 2 A AC 0.8 - 16 A	●	●	●	x	●	●	●	Monitors the current depending on the selected function. The power supply is not galvanically isolated from the monitored current terminals. It is possible to connect ext. current transformer.	110
PRI-35	1-M	AC/DC 24-240 V	1	AC 0.5 - 5 A	x	●	●	x	x	x	●	Protects the pump motor (submersible pump) against no-load operation with ext. current transformer. The power supply is not galvanically separated from the monitored current terminals. Terminals A2, B2 are internally connected.	109
PRI-51/0.5A PRI-51/1A PRI-51/0.1-10A PRI-51/2A PRI-51/5A PRI-51/8A PRI-51/16A	1-M	AC 24-240 V DC 24 V	1	AC 0.05 - 0.5 A AC 0.1 - 1 A AC 0.1-10 A AC 0.2 - 2 A AC 0.5 - 5 A AC 0.8 - 8 A AC 1.6 - 16 A	●	x	●	x	x	●	x	Monitors the excess current flowing through the conductor connected to the monitored terminals. The power supply is galvanically isolated from the monitored current terminals. It is possible to connect ext. current transformer.	112
PRI-52	1-M	AC 230 V	1	AC 0.5 - 25 A	●	x	●	x	x	●	x	Monitors the overflow of the current flowing through the guarded conductor, passed through the hole in the sidewall.	113
PRI-53/1 PRI-53/5	6-M	AC/DC 24 - 240 V	3	AC 3 x 0.4 - 1.2 A AC 3 x 2 - 6 A	●	●	●	x	x	●	●	Monitors current drop or overcurrent in 3-phase connection. The power supply is not galvanically isolated from the monitored current terminals. Up to three current transformers can be connected to the product.	114
PRI-41/230 V PRI-41/24 V	3-M	AC 230 V AC/DC 24 V	1	AC/DC 1.6 A AC/DC 5 A AC/DC 16 A	●	●	●	●	●	●	●	Monitors current drop or overshoot in 1-phase connection. Galvanically isolated power supply. Choice of three monitored current ranges.	115
PRI-42/230 V PRI-42/24 V	3-M	AC 230 V AC/DC 24 V	1	AC/DC 1.6 A AC/DC 5 A AC/DC 16 A	●	●	●	●	●	●	●		

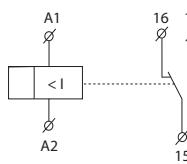
PRI-32 | Current monitoring relay of Imax level passing through a hole in 1P - AC



EAN code
PRI-32: 8595188121965

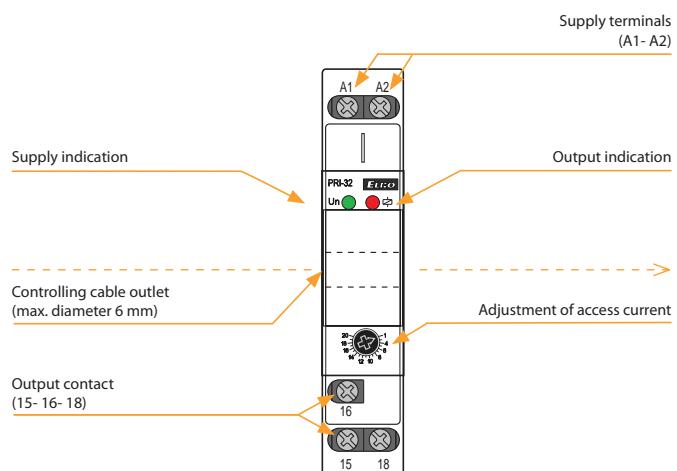
Technical parameters		PRI-32
Supply circuit		
Supply terminals:	A1 - A2	
Voltage range:	AC 24 - 240 V, DC 24 V (AC 50-60 Hz)	
Burden:	max. 1.5 VA/1 W	
Max. dissipated power (Un + terminals):	2 W	
Operating range:	-15 %; +10 %	
Measuring circuit		
Current range:	1 - 20 A (AC 50-60 Hz)	
Current adjustment:	potentiometer	
Accuracy		
Setting accuracy (mech.):	5 %	
Repeat accuracy:	< 1 %	
Temperature dependency:	< 0.1 %/°C (°F)	
Limit values tolerance:	5 %	
Overload capacity:	max. 100 A/10 s	
Output		
Number of contacts:	1x changeover/SPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1	
Breaking capacity:	2000 VA/AC1, 240 W/DC	
Output indication:	red LED	
Mechanical life:	60.000.000 ops.	
Electrical life (AC1):	150.000 ops.	
Other information		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)	
Dielectrical strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP10 terminals	
Overtvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm²):	solid wire max. 2x 2.5 or 1x 4, with sleeve max. 1x 2.5 or 2x 1.5 (AWG 12)	
Dimensions:	90 x 17.6 x 80.5 mm (3.5" x 0.7" x 3.2")	
Weight:	75 g (2.6 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27	

Symbol

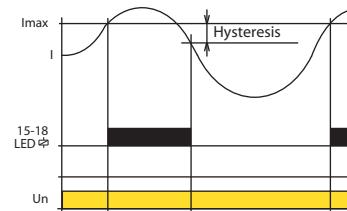


- Current transformer is a part of the product. Inside this transformer there is a wire which senses the volume of flowing current.
- This construction reduces thermal stress of product when compared with conventional solutions with inbuilt shunt, and increases current range up to 20 Amps, and galvanically separates monitored circuit.
- For heating bars in sliding rails, heating cables, indication of current flow, controlling of 1-phase motor consumption,...
- Supply is galvanically separated from measuring current.
- Current exceeding - current flowing through monitored wire must not exceed 100 A.

Description

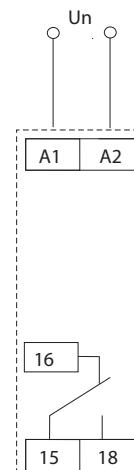


Function



Monitoring relay PRI-32 serves to monitor current level in single phase AC circuits. Due to its fluent adjustment of release current, it is predestined for applications with necessity of current flow indication, and can be used as precedence relay. Output relay is off in normal state. In case the set current level is exceeded, it switches. Multivoltage supply is an advantage.

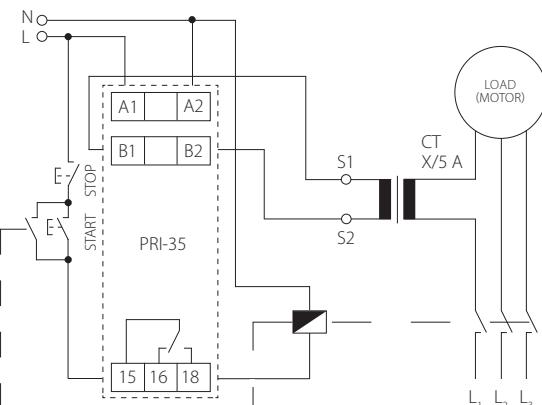
Connection





Technical parameters		PRI-35
Supply		
Supply terminals:	A1 - A2	
Voltage range:	AC/DC 24 - 240 V (AC 50-60 Hz)	
Consumption (max.):	3.8 VA / 0.7 W	
Supply voltage tolerance:	-15 %; +10 %	
Measuring circuit		
Current range:	adjustable, AC 0.5 - 5 A	
Max. permanent current:	AC 10 A	
Inrush overload < 1s:	30 A	
TRIP delay (t):	adjustable, 0.5 - 2.5 s	
Accuracy		
Setting accuracy (mech.):	5 %	
Temperature dependancy:	< 0.1 % / °C (°F)	
Limit values tolerance:	5 %	
Hysteresis (fault to OK):	10 %	
Output		
Number of contacts:	1x changeover / SPDT (AgNi)	
Rated current:	16 A / AC1	
Switching power:	4000 VA/AC1, 384 W/DC	
Switching voltage:	250 V AC/24V DC	
Power dissipation (max.):	1.2 W	
Mechanical life:	10.000.000 ops.	
Electrical life (AC1):	100.000 ops.	
Other information		
Operating temperature:	-20 to +55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 to +70 °C (-22 °F to 158 °F)	
Dielectric strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel / IP20 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Cable size (mm²):	max. 1x 2.5, max. 2x 1.5/ with sleeve max. 1x 2.5	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	65 g (2.3 oz)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27	

Connection

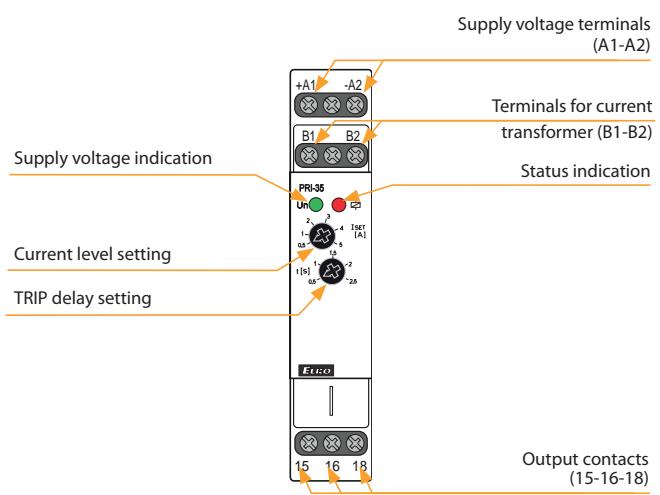


- Designed to protect a motor of a pump (submersible pump) against dry running.
- Monitor a current of a motor by means of current transformer (CT) X/5A.
- Current level (I_{SET}) and TRIP delay (t) are adjustable by potentiometers
- Indication of operating states by the red LED on the front panel.

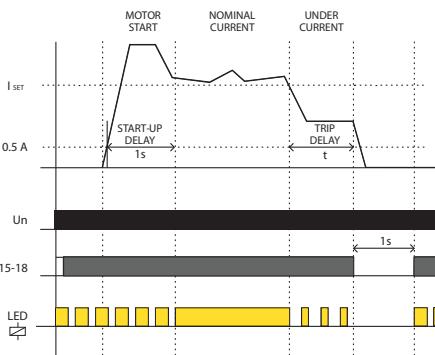


- The power supply is not galvanically separated from the monitored current terminals, terminals A2, B2 are internally connected.
- Wiring between B1, S1 and B2, S2 must be insulated and not connected to any external voltage or ground.
- External current transformer X/5A must be used.

Description



Function



Right after connecting a supply voltage, an output relay is immediately closed and waits for a motor to be started by a START button. Once the START button is activated a contactor closes and the motor starts. An auxiliary contact of the contactor bridges the START button and keeps the contactor closed.

Fixed START-UP delay prevents undercurrent spikes when the contactor contacts bounce.

If the motor current is higher than the I_{SET} value after the START-UP delay, the output relay and contactor remain closed.

If the motor current falls below the I_{SET} value, the TRIP delay is triggered and after running out a set time the output relay opens and contactor drops out.

The output relay is open for 1s, then the output relay closes again and waits for the next start activated by the START button.

NEW

**Technical parameters****PRI-34****Supply**

Supply terminals:	A1 - A2
Voltage range:	AC/DC 24 - 240 V (AC 50-60 Hz)
Consumption (max.):	3.8 VA / 0.7 W
Supply voltage tolerance:	-15 %; +10 %

Measuring circuit

Current range:	PRI-34/2A In - 2A PRI-34/5A In - 5A PRI-34/16A In - 16A (50-60 Hz) PRI-34/2A 4A/10A PRI-34/5A 10A/16A PRI-34/16A 17A/32A
Max. permanent current / inrush overload (1s):	10 - 100 % In
Current level setting (I _{max}):	5 - 95 % In
Current level setting (I _{min}):	30 ms
TRIP delay (d):	adjustable, 0.5-10 s

Accuracy

Setting accuracy (mech.):	5 %
Repeatable accuracy:	< 1 %
Temperature dependency:	<0.1 % / °C
Limit values tolerance:	5 %
Hysteresis (fault to OK):	5 % (function O1, U1, W) I _{max} - I _{min} (function O2, U2)

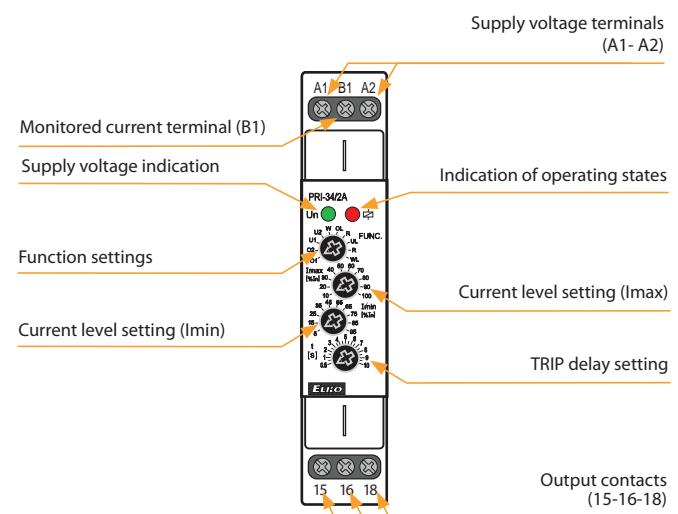
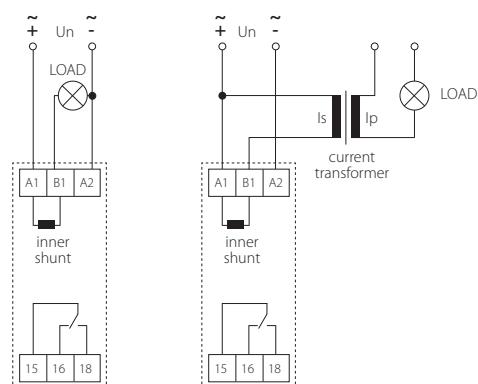
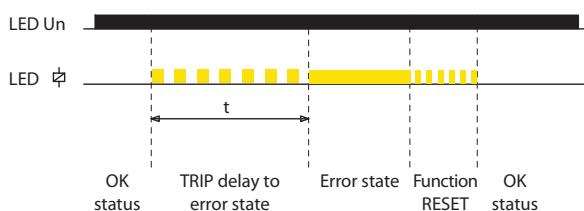
Output

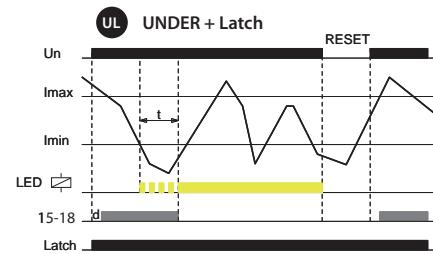
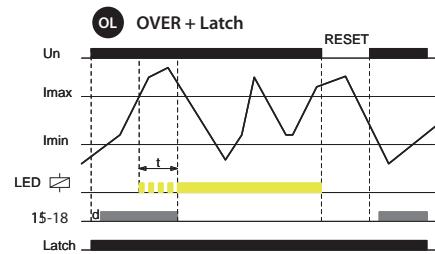
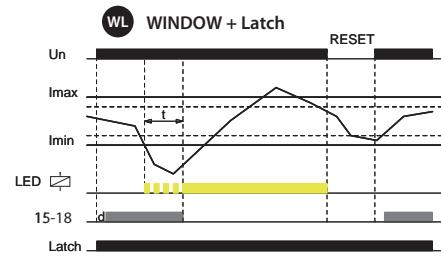
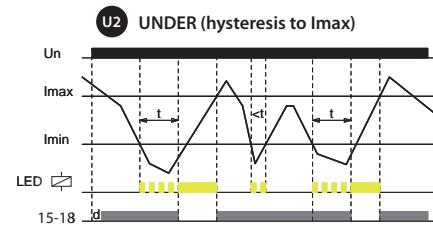
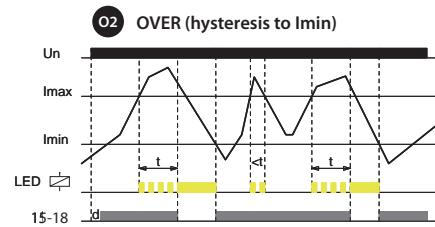
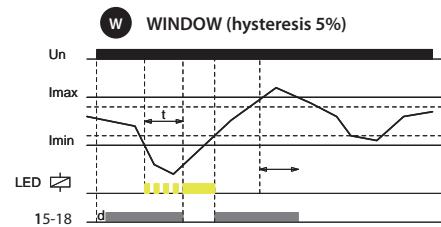
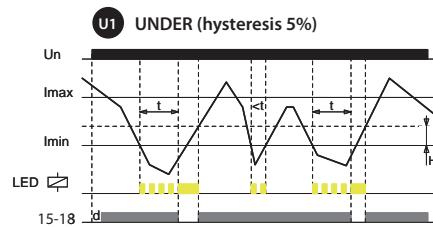
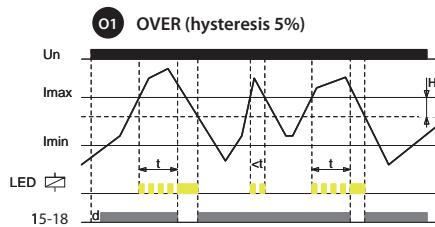
Number of contacts:	1x changeover (AgNi)
Current rating:	16 A / AC1
Breaking capacity:	4000 VA/AC1, 384 W/DC
Switching voltage:	250 V AC / 24 V DC
Power dissipation (max.):	1.2 W
Mechanical life:	10.000.000 ops.
Electrical life (AC1):	100.000 ops.

Other information

Operating temperature:	-20 to +55 °C (-4 °F to 131 °F)
Storage temperature:	-30 to +70 °C (-22 °F to 158 °F)
Dielectric strength:	4 kV (supply - output)
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 from front panel / IP20 terminals
Oversupply category:	III.
Pollution degree:	2
Cable size (mm ²):	max. 1x 2.5, max. 2x 1.5/ with sleeve max. 1x 2.5
Dimensions:	90 x 17.6 x 64 mm (3.5"x0.7"x2.5")
Weight:	60 g (2.1 oz.)
Standards:	EN 60255-1, EN 60255-26, EN 60255-27

- It is used to monitor the value of alternating current in, e.g.: motors, heating cables, illumination and other devices
- Power supply and monitoring circuits are not galvanically isolated
- Measures true root mean square value of the current - TRUE RMS
- Monitors current exceeding the upper current limit (I_{max}) and falling below the lower current limit (I_{min}) – according to the selected function
- Smooth adjustment of both current limits
- Adjustable TRIP delay (to eliminate short-term current spikes)
- Option to select functions with error state memory (Latch)
- Possibility to extend the current range using an external current transformer

Description**Connection****Indication of operating states (red LED):**

**OVER:**

- If the amount of the monitored current is lower than the set limit I_{max} , the output relay is switched on. If the I_{max} is exceeded, the relay will open after the set delay (error state).
- If the current falls below the fixed hysteresis (O1 function) or the set lower limit (O2 function), the relay switches back on.
- If the OL function (OVER + Latch) is selected, when the current I_{max} is exceeded, the relay remains open even when the current returns from the error state. Reset memory errors can be done in two ways:
 - Short-term interruption of supply voltage
 - Setting the function switch to R (RESET) and back

UNDER:

If the amount of the monitored current is higher than the set limit I_{min} , the output relay is switched on. When the current drops below the I_{min} , it opens relay after the set delay (error state).

If the current exceeds the fixed hysteresis (function U1) or the set upper limit (function U2), the relay switches on again.

If the UL function (UNDER + Latch) is selected, when the current drops below I_{min} , the relay remains open even when returning from the error state. Reset the error memory can be done as in the previous case.

WINDOW:

If the amount of the monitored current is lower than I_{max} and at the same time higher than I_{min} , the output relay voltage is switched on. If the I_{max} is exceeded or the drop below the I_{min} relay opens after the set delay (error state).

To return from the error state, a fixed hysteresis is applied.

If the WL function (WINDOW + Latch) is selected, the error state is stored in memory again even when returning from the error state. Reset the error memory can be done as in the previous cases.

Legend:

t = TRIP delay to error state
d = delay 0,3s after connection of power supply Un
H = hysteresis

PRI-51 | Current monitoring relay of I_{max} level in 1P - AC



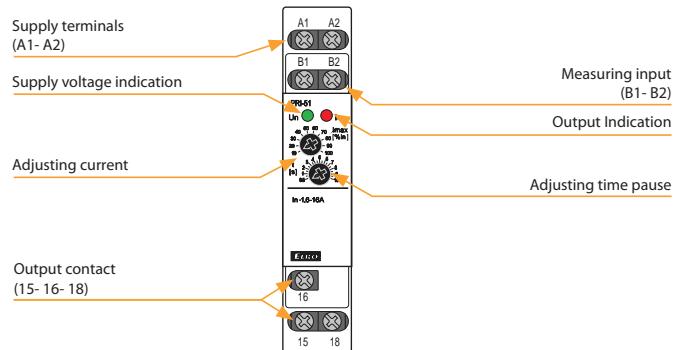
EAN code
 PRI-51/0.5A: 8595188142885
 PRI-51/1A: 8595188124904
 PRI-51/2A: 8595188124911
 PRI-51/5A: 8595188124928
 PRI-51/8A: 8595188124935
 PRI-51/0.1-10A: 8595188155717
 PRI-51/16A: 8595188124942

Technical parameters		PRI-51
Supply circuit		
Supply terminals:	A1 - A2	
Voltage range:	AC 24 - 240 V and DC 24 V (AC 50-60 Hz)	
Burden:	max. 25 VA/1.6 W	
Max. dissipated power (Un + terminals):	2.5 W	
Supply voltage tolerance:	-15 %; +10 %	
Measuring circuit		
Load:	between B1 - B2	
Current range:	PRI-51/0.5 A: AC 0.05-0.5 A PRI-51/1 A: AC 0.1-1 A PRI-51/2 A: AC 0.2-2 A PRI-51/5 A*: AC 0.5-5 A	PRI-51/8 A: AC 0.8-8 A PRI-51/0.1-10 A: AC 0.1-10 A PRI-51/16 A: AC 1.6-16 A (AC 50-60 Hz)
Max. permanent current:	PRI-51/0.5 A: 2 A PRI-51/1 A: 4 A PRI-51/2 A: 8 A PRI-51/0.1-10 A: 10 A PRI-51/5 A, PRI-51/8 A, PRI-51/16 A: 17 A	
Inrush overload <1ms:	50 A	
Current adjustment:	potentiometer	
Time delay:	adjustable 0.5 - 10 s	
Accuracy		
Setting accuracy (mechanical):	5 %	
Repeat accuracy:	< 1 %	
Temperature dependancy:	< 0.1 %/°C (°F)	
Limit values tolerance:	5 % (10 % for 0.05 - 0.5 A and 0.1 - 10 A range)	
Hysteresis (fault to OK):	5 %	
Mechanical life:	60.000.000 op.	
Electrical life (AC1):	150.000 op.	
Output		
Number of contacts:	1x changeover/SPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1	
Breaking capacity:	2000 VA/AC1, 240 W/DC	
Output indication:	red LED	
Other information		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)	
Dielectrical strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP10 terminals	
Overvoltage category:	III.	
Pollution degree:	2	
Max. cable size (mm ²):	solid wire max. 2x 2.5 or 1x 4, with sleeve max. 1x 2.5 or 2x 1.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	72 g (2.5 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27	

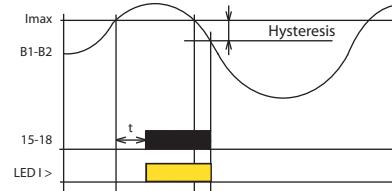
* applicable also for current transformer

- It serves for monitoring of heating in rail-switches, heating cables, consumption of 1-phase motors, indicates current flow.
- Flexible adjustment by potentiometer.
- Adjustable delay 0.5 - 10 s to eliminate short current peaks.
- It is possible to use for current scanning from current transformer.
- Supply is galvanically separated from measured current, it must be in the same phase.

Description



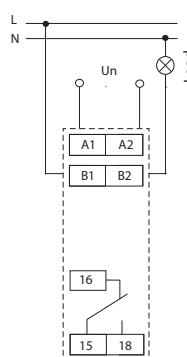
Function



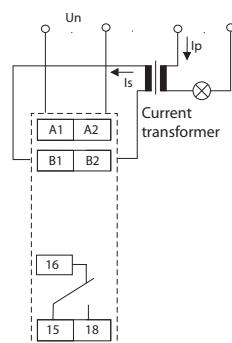
Monitoring relay PRI-51 serves to monitor current level in one-phase AC circuits. Gradual setting of actuating current of monitoring relay enables many different applications. Output relay is in normal state opened. After the set current level is reached, relay closes after the set delay (0.5 - 10 s). 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.

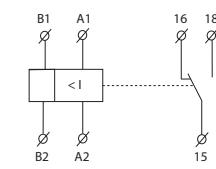
Connection



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



Symbol



Example of an order

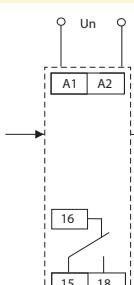
Always specify all reference name of current relay according to required range, for example PRI-51/5.



EAN code
PRI-52: 8595188136556

Technical parameters		PRI-52
Supply		
Supply terminals:	A1 - A2	
Voltage range:	AC 230 V (50-60 Hz)	
Power input (apparent/loss):	max. 5 VA/1.4 W	
Max. dissipated power:	2.5 W (Un + terminals)	
Supply voltage tolerance:	-15 %; +10 %	
Measuring circuit		
Current range:	AC 0.5 to 25 A (AC 50-60 Hz)	
Maximal permanent current:	25 A	
Inrush overload < 1s:	50 A	
Current adjustment:	potentiometer	
Time delay:	adjustable 0.5 to 10 s	
Accuracy		
Setting accuracy (mechanical):	10 %	
Repeat accuracy:	< 1 %	
Temperature dependance:	< 0.2 %/°C (°F)	
Limit values tolerance:	10 %	
Hysteresis:	0.25 A	
Output		
Number of contacts:	1x changeover/SPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1	
Breaking capacity:	2000 VA/AC1, 240 W/DC	
Output indication:	red LED	
Mechanical life:	60.000.000 ops.	
Electrical life (AC1):	150.000 ops.	
Other information		
Operating temperature:	-20 to 55 °C (-4 °F to 131 °F)	
Storage temperature:	-30 to 70 °C (-22 °F to 158 °F)	
Dielectrical strength:	4 kV (supply - output)	
Operating position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from front panel/IP10 terminals	
Oversupply category:	III.	
Pollution degree:	2	
Max. cable size (mm ²):	max. 2x 2.5, max. 1x 4/ with sleeve max. 1x 2.5, max. 2x 1.5 (AWG 12)	
Dimensions:	90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")	
Weight:	65 g (2.3 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27	

Connection



- Relay is designated for:
 - distant device diagnostic (short circuit, take-off increasing)
 - preferred (priority) relay - two appliances (boiler and floor heating) operating on one phase, but never run together - prevention against current overload and circuit breaker tripping. Enables to save your main breaker expenses
 - current transit indicator - informs about heating activation, ceramic hob, ventilator...
 - changing over of appliances according to inverter's (converter) output by photocell applications
- Hole for threaded conductor passes through the body of device.
- Part of device is current transformer, which is sensing size of current in threaded conductor.
- Slight setting (by potentiometer) of tripping current - range AC 0.5 to 25 A.

Description

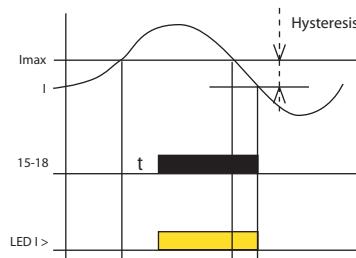
Supply terminals
(A1 - A2)

Hole for threaded conductor
(max. Ø 5.8 mm/0.23")

Supply voltage indication
Adjusting of time delay

Output indication
Adjusting of current in A
Output contact
(15-16-18)

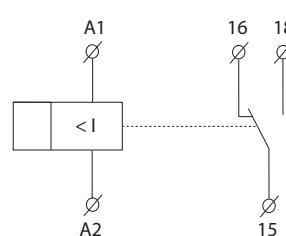
Functions



Monitoring relay PRI-52 serves for monitoring of current level in 1-phase AC circuits. Slight setting of release current level designates this relay for many various applications. Output relay is in normal status switched off. When set current level is overrun, relay gets closed after preset delay. By return from error to normal status is used hysteresis.

Advantage of PRI-52 is that the hole for threaded conductor is located under the level of covering in the switchboard - thanks that, threaded conductor is not accessible for unwanted manipulation.

Symbol



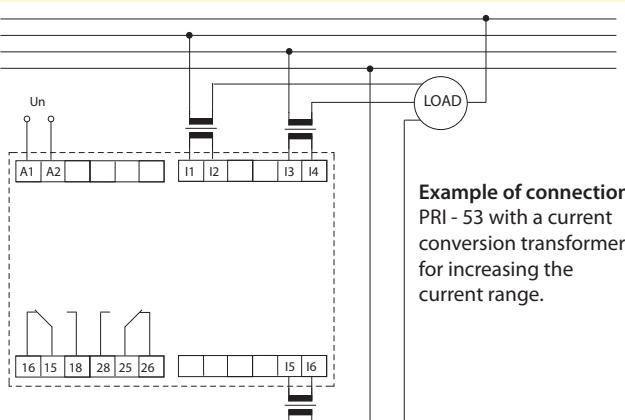
PRI-53 | Current monitoring relay of Imin or Imax in 3P



EAN code
PRI-53/1: 8595188142137
PRI-53/5: 8595188142144

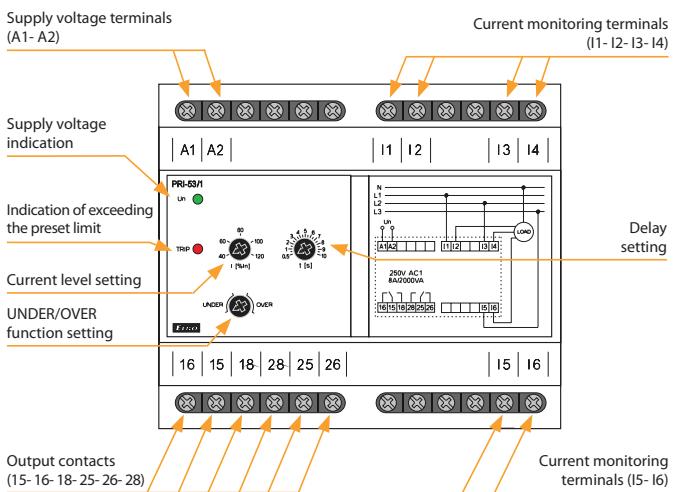
Technical parameters	PRI-53/1	PRI-53/5
Supply terminals:	A1, A2	
Current monitoring terminals		
1st phase:	I1, I2	
2nd phase:	I3, I4	
3rd phase:	I5, I6	
Supply voltage:	24 - 240 V AC/DC	
Tolerance of voltage range:	± 10 %	
Operating AC frequency:	(50-60 Hz)	
Burden (max):	3 VA/1.2 W	
Max. dissipated power (Un + terminals):	2.5 W	
Rated current In:	AC 1 A	AC 5 A
Current level - I:	adjustable 40 - 120 % In	
Overload capacity		
Continuous:	2 A	10 A
Max. 3s:	20 A	50 A
Difference:	fix 1 % In	
Delay (until failure):	adjustable 0.5 - 10 s	
Output relay - contact:	2x changeover/SPDT (AgNi) gilded	
AC contact capacity:	250 V/8 A, max. 2000 VA	
DC contact capacity:	30 V/8 A	
Mechanical life:	30.000.000 ops.	
Electrical life (AC1):	200.000 ops.	
Other information		
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)	
Storing temperature:	-30°C to 70 °C (-22°F to 158°F)	
Dielectric strength	4 kV (power supply - output)	
Overtvoltage category:	III.	
Pollution level:	2	
Protection degree:	IP40 from front panel/IP20 terminal	
Max. cable size (mm²):	max. 2x 1.5/1 x 2.5 (AWG 12)	
Dimensions:	90 x 105 x 64 mm (3.5" x 4.1" x 2.5")	
Weight:	213 g (7.5 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27	

Connection

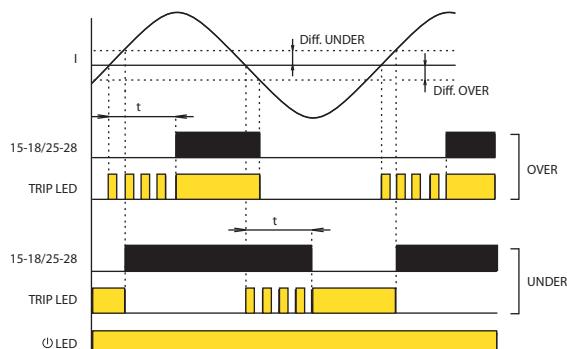


- It is intended for monitoring the current in 3-phase devices (e.g. cranes, motors, etc.).
- 24 - 240 V AC/DC power supply, galvanically separated from the circuit of the monitored current.
- Adjustable delay level (when exceeding the preset limit).
- Adjustable function:
 - UNDER - monitors the drop in the strength of current below the preset value (I)
 - OVER - exceeding the preset value (I).
- 2 types depending on the strength of rated current In (1 A, 5 A).
- Option of connecting via the current transformers to increase the value of the monitored current.

Description



Functions



After the supply voltage is connected the green LED is on.

UNDER function:

If the strength of the monitored current in all phases exceeds the preset level I, the relay is triggered and the red LED is off. If the strength of the monitored current drops in any phase below the level I, the relay is disconnected after the preset delay timing elapses and the red LED goes on. The red LED flashes during the delay.

If the strength of the monitored current returns above the level I+difference, the relay is triggered without delay and the red LED goes off.

OVER function:

If the strength of the monitored current is lower in all phases than the preset level I, the relay is disconnected and the red LED is off.

If the strength of the monitored current exceeds in any phase the level I, the relay is triggered after the preset delay timing elapses and the red LED goes on. The red LED flashes during the delay.

If the strength of the monitored current again drops below the level I - difference, the relay is disconnected without delay and the red LED goes off.

PRI-41, PRI-42 | Current monitoring relay of Imin and Imax in 1P - AC/DC



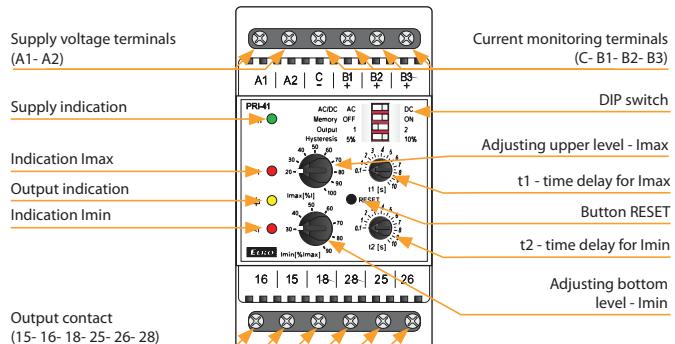
EAN code:
 PRI-41/110V: 8595188140508
 PRI-41/230V: 8595188140485
 PRI-41/400V: 8595188147446
 PRI-41/24V: 8595188140492
 PRI-42/110V: 8595188140539
 PRI-42/230V: 8595188140515
 PRI-42/400V: 8595188147484
 PRI-42/24V: 8595188140522

Technical parameters	PRI-41	PRI-42	
Supply circuit			
Supply terminals:	A1 - A2		
Voltage range:	AC 110 V, AC 230 V, AC 400 V or AC/DC 24 V (AC 50-60 Hz)		
Burden max.:	2.5 W/5 VA (AC 110 V, AC 230 V, AC 400 V), 1.4 W/2 VA (AC/DC 24 V)		
Max. dissipated power (Un + terminals):	5.5 W (110 V, 230 V, 400 V) 4.5 W (24 V)		
Operating range:	-15 %; +10 %		
Measuring circuit			
Ranges:*	AC/DC 3.2 - 16 A (AC 50-60 Hz)	AC/DC 1 - 5 A (AC 50-60 Hz)	AC/DC 0.32 - 1.6 A (AC 50-60 Hz)
Terminals:	C - B1	C - B2	C - B3
Input resistance:	2.3 mΩ	11 mΩ	23 mΩ
Max. permanent current:	16 A	8 A	3 A
Inrush overload <1ms:	20 A	16 A	6 A
Time delay for Imax:	adjustable 0.1-10 s		
Time delay for Imin:	adjustable 0.1-10 s		
Accuracy			
Measuring accuracy:	5 %		
Repeat accuracy:	< 1 %		
Temperature dependancy:	< 0.1 %/°C		
Limit values tolerance:	5 %		
Hysteresis (fault to OK):	selectable 5 %/10 % from range		
Output			
Number of contacts:	2x changeover/SPDT (AgNi/Silver Alloy)		
Current rating:	16 A/AC1		
Breaking capacity:	4000 VA/AC1, 384 W/DC		
Inrush current:	30 A/< 3 s		
Switching voltage:	250 V AC/24 V DC		
Output indication:	yellow LED		
Mechanical life:	10.000.000 ops.		
Electrical life (AC1):	100.000 ops.		
Other information			
Operating temperature:	-20 °C to 55 °C (-4 °F to 131 °F)		
Storage temperature:	-30 °C to 70 °C (-22 °F to 158 °F)		
Dielectrical strength:	4 kV (supply - output)		
Operating position:	any		
Mounting:	DIN rail EN 60715		
Protection degree:	IP40 from front panel/IP20 terminals		
Overtvoltage category:	III.		
Pollution degree:	2		
Max. cable size (mm ²):	solid wire max. 1x 2.5 or 2x 1.5/ with sleeve max. 1x 1.5 (AWG 12)		
Dimensions:	90 x 52 x 65 mm (3.5" x 2" x 2.6")		
Weight:	248 g (8.7 oz.) (110 V, 230 V, 400 V); 145 g (5.1 oz.) (24 V)		
Standards:	EN 60255-1, EN 60255-26, EN 60255-27		

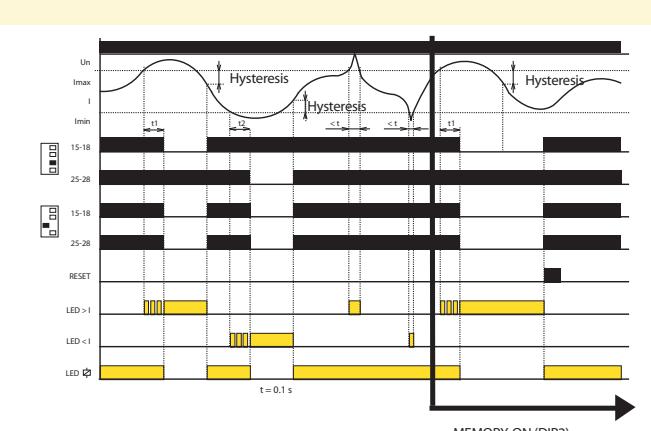
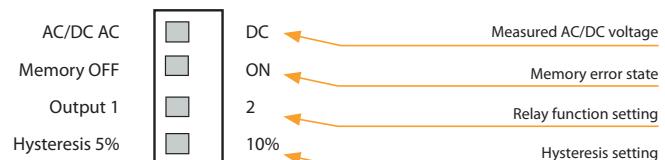
* Only one of the inputs can be connected.

- Used to monitor overloading/relief (machine, motor, etc.), check consumption, diagnostics on a remote device (burning, short circuit, increased current draw, etc.)
- Relay designed for monitoring DC and AC currents in three ranges.
- the relay controls the current size in two independent levels (Imax, Imin).
- Setting the monitored level Imax (in % of range).
- Setting the monitored level Imin.
(in % of range - for PRI-42 - function WINDOW),
(in % of the set upper limit - for PRI-41 - function HYSTERESIS).
- Function of second relay (independently/in parallel).
- Adjustable delay for eliminating short-term outages and surges for every level independently.
- Galvanically separated power supply from monitoring inputs.
- Output contact: for each current level.

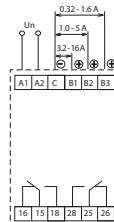
Description



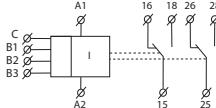
Description and importance of DIP switches



Connection



Symbol



- If the value of the monitored current is in the zone between the set upper and lower levels, the status OK occurs - both relays are closed and the yellow LED illuminates. If the value of the monitored current is outside the set limits (> Imax or < Imin), an error state occurs.
- When moving to an error state I > Imax, it times the delay t1 and a red LED > I simultaneously flashes. After the t1 time elapses, the red LED > I illuminates and the relevant relay opens.
- When moving to an error state I < Imin, it times the delay t2 and a red LED < I simultaneously flashes. After the t2 time elapses, the red LED < I illuminates and the relevant relay opens.
- When moving from the error status to the OK status, the relevant red LED immediately goes out, and the corresponding relay closes.