

Threshold relay for three-phase network RCL105

LOREME

- **3 current inputs up to 100A**
Three-phase or three single phase networks
- **Split core current sensors**
type Tio
- **3 relay outputs**
Monitoring of each phases
- **Front face LCD 2 lines of 16 characters**
Display of three currents
Thresholds settings
- **Can be used like 3 single phase relays**



The RCL105 is a three-phase current relay, for monitoring and protection of unbalanced load by controlling the current in each phase.

The LCD display allows a fine setting of thresholds and a quick view of current values.

Applications:

- Monitoring and protection of electric networks.

Measures :

- Alternating current 45...65Hz : (3I)
- Current imbalance : $\Delta \Sigma I$ in %

Current measure inputs:

- three 333mV input for split-core current transformer (Tio)
(measure up to 100Arms. current sensor distance > 30 meters)
- current ratio configurable

Relay output :

- 3 alarm relays (250V 1A)
- Free potential change over contact
- Threshold, sens, hysteresis and delay
are setting with front push buttons

Features :

- Symmetrical DIN rail mounting (EN50022)
- modular housing (6 modules : 105mm long)
- wiring on screw or spring terminal blocks (2.5mm² section max)
- protection rating (case / terminal blocks) : IP20
- conformal coating for electronic.

Front face :

- LCD display. 2 lines of 16 characters (back lighting)
Display of measures (« display » button)
- Three push buttons allows the configuration of device :
Current ration, threshold, ...
- A serial link under the hinged front face can be use for firmware update
(USB / jack 3.5mm cable available separately)

transformer mV output

Remote split core current transformer
Very low profile, non intrusive
remote distance up to 30 meters
Measure up to 500 Aac



Version and order code:

RCL105

MEASURE INPUT

TYPE	RANGE
Current	0..1..5..100A (according to Tio model)
Input impedance	Not applicable
Power consumption	negligible
Overload	500A > 10 seconds
Measurement rate	continuous
Frequency	45 to 65 Hz

METROLOGY

TYPE	ACCURACY	CONDITIONS
Current	+/- 0.5 %	from 20 to 105% of current range

(The accuracy are given in % of full range)

Measure conditions:

frequency : 45.....65 Hz, cos phi > 0.75 ; peak factor <1.5, harmonic rank 10 maxi , ambient temperature from 15 to 30°C

Remarque : the no respect with the above conditions (under-use of input, harmonic distortion rate, climatic conditions, saturation, ...) leads to a downgrading of the metrological performances.

RELAY

Switching power 250Vac / 1A

POWER SUPPLY

80...265Vac-dc ; 2.5VA	standard
20...80Vac-dc ; 2.5VA	on request

ENVIRONMENT

Operating temperature	-20 to 60 °C
Storage temperature	-20 to 85 °C
Humidity	85 % not condensed
Weight	300 g
Protection rating	IP 20
Dielectric strength	2500 Vrms continuous
	Supply/measure/relays

MTBF (MIL HDBK 217F)	> 2 000 000 Hrs @ 25°C
Life time	> 200 000 Hrs @ 30°C

Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC

Immunity standard for industrial environments
EN 61000-6-2Emission standard for industrial environments
EN 61000-6-4

EN 61000-4-2 ESD	EN 61000-4-8 AC MF
EN 61000-4-3 RF	EN 61000-4-9 pulse MF
EN 61000-4-4 EFT	EN 61000-4-11 AC dips
EN 61000-4-5 CWG	EN 61000-4-12 ring wave
EN 61000-4-6 RF	EN 61000-4-29 DC dips

EN 55011
group 1
class A

WIRING AND OUTLINE DIMENSIONS:

