

MT34- A- ver.R

Three-phased communication module



Communication module MT34-A-ver.R is PLC (Power Line Carrier) module for data transfer over power line from serial line of connected device to other PLC module and subsequent transfer to another device via serial interface.

The module can be a part of PLC modules group, mainly within the range of one distribution transformer at the low voltage level of 230V. The module comprises one basic part that includes power base of output amplifiers, input amplifiers, PLC modem, communication channels and power supply.

Technical data

Power supply

3x230V +10% - 20%

Frequency

48Hz ÷ 60Hz

Output

max. 10W / 50W reception / transmission

External interface

Three-phased PLC communication channel, free-phased, in accordance with CENELEC 50065-1

Cover

IP 54 (higher option is available in metal sheet versions)

Wall vertical mounting

PLC communication

Carrier frequency: 60kHz ÷ 145 kHz

Modulation: D-BPSK

Carrier amplitude: 10Vpp(Rz=10 Ω)

Carrier amplitude: 10Vpp(Rz=10 Ω)

Reception sensitivity: 1mV

Transmission and reception: 3 phase, N

Transmission rate: 10k Bd

Permanent external interface

2x serial RS232 communication
one internal (service)

One galvanically isolated
Communication rate: 300 ÷ 115200 Bd
Basic format: 8-N-1
HW control : YES

1x serial RS485 communication channel
galvanically isolated
Communication rate: 300 ÷ 115200 Bd
connector: screwing terminals

Additional external interface

M-Bus interface – master module
galvanically isolated

number of connection points: max. 20 meters
max. bus length: 3000m
Communication rate: 300 Bd, 2400 Bd
Time of communication start after power supply
 ≤ 1 s (valid even for bus overload withdrawal)

Voltage on M-bus terminals:
mark level ($U_{MU,M}$) +36V
(with 20 meters)
space level ($U_{MU,S}$) +20V

Internal measuring resistor (R_M): 68 Ω
Sensed current from meters:
Mark level (I_M): 0 \div 1,5 mA per meter
Space level (I_S): 15 \div 20 mA
Decisive overload current: ≥ 60 mA
Transition from overload to normal: automatic
connector: screwing terminals

Indication

Led indication inside of cabinet by opening of the front part
CONTROL – green led indicates an overall modem state
TX – green led indicates a state of transmitted data toward MT39-Lx slave modules after PLC communication
RX – yellow led indicates data reception from MT39-Lx slave modules after PLC communication
At serial channels, there are indication Leds, Rx, Tx and control signals CTS, RTS (at RS232).

Other options

Back-up powering from external back-up power supply

Option of temperature monitoring in a place of dataconcentrator installation or even option of smoke sensor connection

Safety

Modem is made in 2 protection class plastic cabinet
Breakdown rating between primary and secondary circuits: 4 kV 50Hz / 1min

EMC

Electrostatic resistance:
8kV according to IEC 61000-4-2
Radiofrequency resistance 80 MHz \div 2 GHz:
10 \div 30 V/m according to IEC 61000-4-3
Burst test: 4kV according to IEC 61000-4-4

Size and mounting

260 x 235 x 150 mm
Weight: cca. 2850g

Climate environment

Operation temperature: -30°C \div 60°C
without condensation
storage temperature: -40°C \div 70°C
Rel. humidity: 0 \div 80%