Quick Installation & Configuration manual

AC current transducer
AC Voltage Monitor
Sensor

Installation Manual AC measurement

Functional description & components

Function

Simple open loop AC current transducer can measure AC currents in range of 0-100A. To transfer data to the monitoring system it can be used together with AC Voltage Monitor Sensor.

Components

The transducer consists of a plastic housing with open/closed AC current loop and 4 pins terminal connector. Current transceiver is a simple plastic case with 4 pins input, power 12V socket and analog 0-5V RJ12 output.

Safety instructions

- Please observe the valid regulations for installation in the country in which current transducer is installed and operated, and the national regulations for accident prevention. Please also observe any internal company regulations, such as work, operating and safety regulations.
- The technical specifications and limit values stated must not be exceeded under any circumstances. In particular, this applies to the specified ambient temperature range and IP protection category.

Siting location requirements

To ensure proper functionality, the conditions specified in section "Technical specifications" must be observed.

Installation procedure

Notes on assembly
- Be careful, transducers max. voltage for isolation is 2kV.
- The transducer can measure AC current on any current wire, not more then 10 mm in diameter. Just open the cover, insert the wire and close.

- Max. distance for AC current transducer from monitoring unit is 50 meters.

Installation

The transducer and the transceiver installed together.
- Mount transducer using M4 screws and M4 nuts. Distance between mounting holes is 50 mm.
- Mount current transceiver using M4 screws and M4 nuts. Distance between mounting holes is 60 mm.
- Use a 4-core flat cable and two green connectors supplied with the transceiver and the transducer to assemble the connecting cable.

Testing transducers

Do not tweak transducer's variable resistors! They are tweaked by the manufacturer for optimal measurement. Tweaking these may result in incorrect measurement.

Technical specifications

AC Current Transducer

|	
Dimensions	60 × 61 × 16 mm
Weight	150 g
Power input	-12V / +12V
Operating temperature	Min. -10° C, Max.80° C
Operating humidity	Min. 5% - Max. 95% (Non-Condensing)
Outputs	4 pin terminal
Power Consumption	1 Watt
Max. distance	50 m

AC Voltage Monitor Sensor

Dimensions	68 × 47 x 26 mm
Weight	160 g
Inputs	RJ-12 / RJ-11

Operating temperature	Min. -10° C, Max.80° C
Operating humidity	Min. 5% - Max. 95% (Non-Condensing)
Power input	12V DC, 1A
Power Consumption	100 mW
Max. distance	50 m
Special Features	Transferred voltage - 0 .. 5V

Connection

Connect one end of RJ11 / RJ12 cable to monitoring unit and the other end to analog output of transceiver. Connect transceiver to power adapter 12V. Connect transceiver and transducer with Connecting cable. The monitoring system will automatically sense current transducer as a sensor.

The new sensor will appear in the web interface of the system. Click on "System tree" menu and you will find a new sensor marked by an icon "fV" (abreviation from: Voltage function, used for sensor monitors and converters). Click on the sensor to open it's properties.
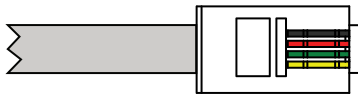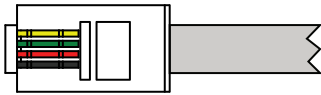
RJ11 (6p4c)

RJ11	Pins	Conductor	
1	GND	Black	
2	+12V	Red	
3	Auto/NC	Green	
4	Input	Yellow	

RJ11 (6p4c)

Input / Bus
Auto / NC
+ 12V
+ GND

4 3 2 1   1 2 3 4

AC CURRENT TRANSDUCER / AC VOLTAGEMONITOR SENSOR CONNECTION

AC CURRENT

AC CURRENT

AC VOLTAGE MONITOR SENSOR

POWER CABLE

AC CURRENT TRANSDUCER

GROUND
INPUT 0.. +5V
POWER OUTPUT -12V
POWER OUTPUT +12V

+ - M G

12V +0.5A   RJ11

Overall stats

Sensors tree

Dry contacts

Event log

Logic schemes

Cameras

Map

29.80 °C
High alarm

fV Converter 20.40
Normal

Power 12V 0.25A

Power-1
off

Power-2
off

Dry Contacts

Dry-1

A modal window with sensor properties will pop up.

1. Change type of the sensor by choosing "Current". Choosing any type of the sensor does not affect sensor properties, it only changes sensor icon for comfort of usage.

2. Change the name of sensor, for example "AC current".
3. Use "Expression formula": 20*x, where K=20.
4. Put in the threshold levels by dragging: Low alarm, Low warning, High warning, High alarm levels.
5. For example, graph above shows that the state of the sensor at the moment is "Normal" because 20.4 is between "Low warning" and "High warning" states, which is considered "Normal" state.
6. Click "Save" or "Apply" at the bottom of the "Properties" window. The page will reload and the sensor will update by changing it's icon type to "A" (abreviation from: "Ampers").