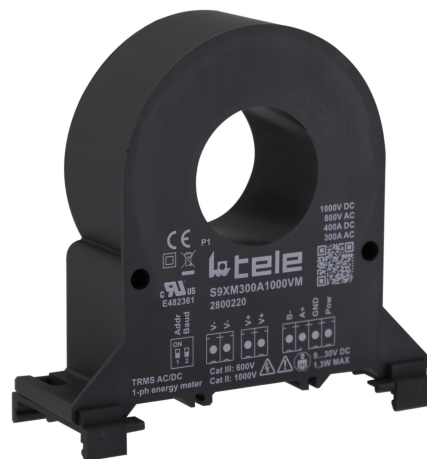




Power / Energy meter - Single phase AC/DC RS485 MODBUS

S9XM300A1000VM
Part No. 2800220

- THD available on the Current measurement
- 0,5 % Accuracy
- RS485 Modbus integrated
- Bidirectional Energy metering
- Din rail mountable
- Fully configurable by free interface software
- Bootloader for updating firmware
- Available Measure register: MSW first, LSW first or hundreds



Technical data

Function

Single-phase Power meter able to measure RMS AC or DC Current and Voltage.

1. Mechanical design

PBT plastic housing, IP rating IP20

DIN-rail mountable with DIN-rail clips (included) for horizontal/vertical mounting, screw predisposition for horizontal/vertical mounting

Mounting position: any

Dimensions: 89,1 x 99,25 x 28,5mm (without connectors)
Ø33mm (current transformer)

Terminals: - 1,5mm² 4-pole connector (3,5mm pitch)
- 1,5mm² 2-pole connector (3,5mm pitch)

DIP-switch: 2 poles (Baudrate and Address) for connection with the configuration software

Weight: 370g

2. Indicators

Yellow LED ON: indication of supply voltage

Yellow LED flashing: indication of communication via RS485

3. Power Supply

Input: 9...30 V DC; terminals Pow(+), GND(-)
Protection against polarity reversal and overtemperature

Power consumption: < 1,3 W

4. RS485 Modbus RTU

Baudrate: 1200 ... 115200 Baud (Standard: 9600);
terminals GND, A+, B-

5. Measuring circuit

Measurements available: Irms, Vrms, Watt, Var, Va, Vpk, Ipk,
Frequency, Cosφ, Energy bidirectional,
THD, MIN and MAX of each measure

Type of Measure: RMS or DC

Sampling rate: 11k samples per second

Crest factor: 1,8 (current measurement)

Working frequency: 1 ... 400Hz or DC

Input impedance: 1MΩ ±1%

Range:

Current: up to 300A AC/DC

Voltage: up to 800V AC / 1000V DC

6. Accuracy (@25°C up to 200Hz)

Current sensors:

Voltage, Current, Active Power: < 0,5% f.s.

Frequency: +/- 0,1 Hz

Energy: +/- 1% of reading

Vpeak, I peak: +/- 5% f.s.

Range 500mV < V < 10V: Maximum error 0,5%

Temperature coefficient: <100ppm/°C

Band Width: > 800Hz

7. General specifications

Temperature coefficient: < 200 ppm/°C

Operation temperature: -15 to +65°C

Storage temperature: -40 to +85°C

Humidity: 10 to 90% (not condensing)

Altitude: Up to 2000m above sea level

Overvoltage category: Cat III up to 600V;

Cat II up to 1000V

Isolation: 3kV on bare wire for Current measure
4kV for Voltage measure (reinforced insulation to power supply and serial output)

Standards: EN61000-6-4/2006 + A1 2011;

EN64000-6-2/2005; EN61010-1/2010

Certifications: CE, UL recognized component

Configuration: With software or via RS485 Modbus.

Communication to free interface program for:

- configuration of all the available parameters;
- possibility of firmware upgrade (if available).

DIP-switch:

DIP 1	DIP 2	
0	0	All settings from Eeprom
1	0	Address 1, Baudrate 9600
1	1	Address 1, Baudrate 38400

Remarks:

- Modbus connection: A+ and B- as per Modbus RTU standard
- Modbus Register reference: with reference to the logical address, for example 40010, corresponds to physical address n°9 as per Modbus RTU standard
- Modbus functions supported: 3 (read multiple registers, max 100), 6 (write single), 16 (write multiple)
- **Any changes made by dip-switch requires to reset via power supply or sending reset command**

Energy storage data on flash memory: 4,5 years minimum,
45 years typical

Minimum Current measurement (cut off): 250mA

Minimum Power measurement (cut off): 1 W

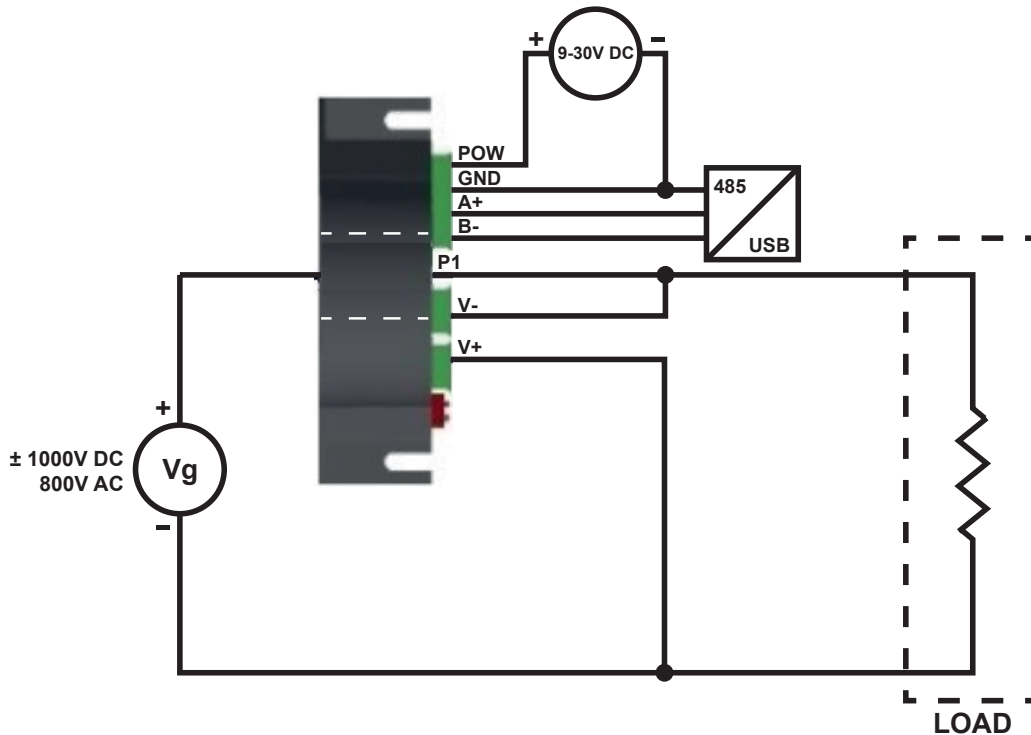
Measurement refresh: every 50 cycles or 1 second
(the faster), programmable
with software

Configuration software

The free interface software is downloadable from our website www.tele-online.com/products/sensact
To communicate with the module you have to connect via USB port directly on your PC using the serial converter
S-USB485; part No. 498513.

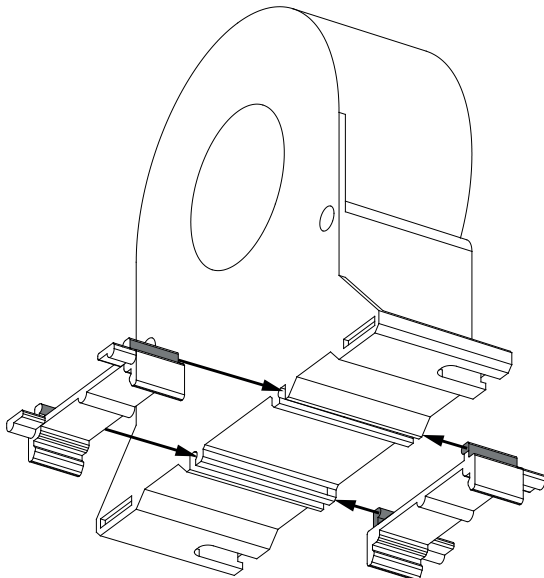
You can configure the module via RS485 using the register map downloadable at www.tele-online.com/products/sensact

Connections



Positioning clips for DIN-rail

For vertical DIN-rail mounting



For horizontal DIN-rail mounting

