XTM35SC current / voltage meter

Other unit names:

- **VE EMDIN02**

The XTM35SC is an inexpensive current meter that can be purchased (e.g. on Amazon). It measures consumption, voltage and current on one phase. It does not require an external measuring ring. Suitable for home automation and smaller equipment. Of course, it is not MID compliant. The measurement results can also be queried remotely via Modbus RTU communication.
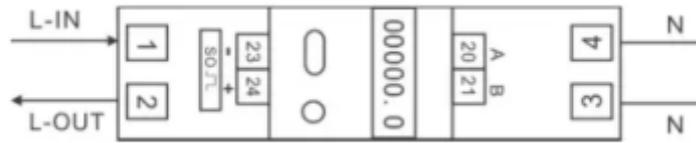
Description:

- 35 mm standard rail mounting according to the DIN EN50022 standard.
- Bipolar width (module 17.5mm), conforms to the DIN43880 standard
- Standard configuration 5 + 1 digit display (9999999.1kWh) LCD. Function can be selected (display voltage current, power, frequency, power factor).
- Setup measurement single-phase two-wire active energy consumption. It's nothing to do with the direction of load current flow. Compliance with GB / T17245.321-2008 standard.

Specification:

- Power supply: 230V, 1 phase
- Current: 5 (80) A
- Accuracy class: 1.0
- Frequency: 50/60Hz
- Display mode: LCD 5+1 digits = 99999.9 kWh
- Power Consumption: ⇐0.4W (8VA)
- Temperature range: -20 to 65 °C
- LED: 1 flashing / pulsing
- Pulse output: 1000 imp/kWh
- Voltage: 12 to 27V
- Current: 27mA
- Pulse value: 90 ms
- Model: XTM35SC
- Accuracy: Class 1
- Voltage: 220V
- Current: 5〿30A 15/15〿60A Optional (optional)
- Insulation performance: AC voltage 4kv for 1 minute, 1.2/50us waveform pulse voltage 6kv
- Size: 80 x 65 x 35mm / 3.15 x 2.56 x 1.38inch

Wiring

Modbus maps

RS485 communication interface, MODBUS RTU protocol:

- Baudrate: 9600 Baud
- Parity: Even
- Databits: 8
- Stopbits: 1

32 bit (2 words) input registers

The registers are read-only.

Register Nr	32 bit address	Description	Note
30000	0	Voltage (V)	
30008	4	Current (A)	
30018	9	Power (W)	
30026	13	Volt-ampere reactive (var)	
30042	21	Power factor - Leistungsfaktor (pf - W/VA)	
30054	27	Frequency - Frequenz (Hz)	
30256	128	Energy - Energie (kWh)	

32 bit (2 words) holding registers

The registers are read / write.

Register Nr	32 bit address	Description	Note
40000	0	Baudrate	Default value: 9600
40008	4	-	-
40012	6	-	-
40016	8	Modbus RTU Address	Default value: 45
40024	12	-	Default value: 1000
40032	16	-	-

xtm35sc, modbus, modbus rtu, measuring, power, communication, current meter, voltmeter

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