



COUNTIS E13x

Energy meters

Single-phase - direct 100 A

Energy meters



COUNTIS E13x

The solution for

- > High Rise Building
- > Outdoor venues
- > Docks
- > Data centres
- > Shopping centres



Strong points

- > Compact
- > RS485 communication (MODBUS)

Conformity to standards

- > IEC 62053-21



Overview

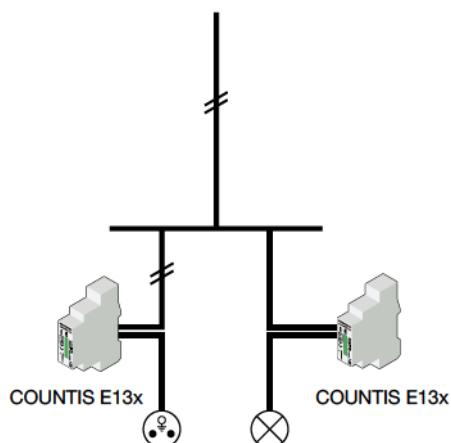
The SOCOMEC COUNTIS E13X Meter is an energy meter designed for single-phase metering and direct connection to 100 A. With multifunction monitoring and compact size in one module, it supports RS485 communication and is suited to domestic and commercial power distribution systems.

Functions

COUNTIS E13x is a modular electrical energy meter which can display both total active energy (kwh) and total reactive energy (kvarh) on an LCD screen.

The meter is intended to record single-phase load energy, with direct connection to 100 A.

Applications



General Characteristics

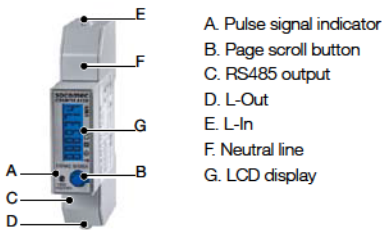
- Compact design
- Measurement accuracy: 1
- LCD display

Advantages

- Compact size, one module.
- RS485 communication (MODBUS).
- Energy values can be remotely transmitted via the communication output to a (PC/BMS/etc.) system for billing analysis, energy saving or energy cost management.

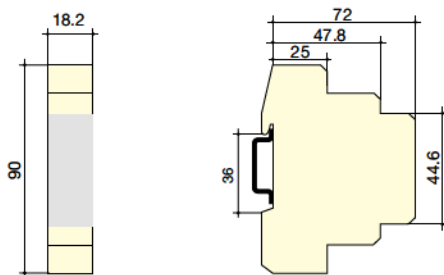
Model	Key functions
E13x	MODBUS RS485 communication

Panel



- A. Pulse signal indicator
- B. Page scroll button
- C. RS485 output
- D. L-Out
- E. L-In
- F. Neutral line
- G. LCD display

Dimensions

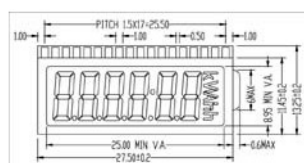


COUNTIS E13X	
Type	Modular
No. of modules	1
Dimensions Width x Height x Depth	18.2 x 95.3 x 72
Case protection rating	IP 20
Panel protection rating	IP 51
Type of display	LCD 5+1 bit
Rigid cable connection section	10 mm ²
Flexible cable connection section	10 mm ²

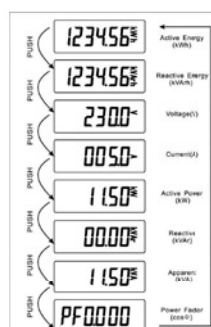
Electrical characteristics

Communication	COUNTIS E13X
Interface	RS485
Type	2 wires or 3 half duplex wires
Protocol	MODBUS RTU
MODBUS speed	9600 bauds

Display screen

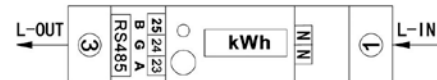


LCD display dimensions



LCD screen parameter display/switching

Connection



Note: 23, 24 and 25 correspond respectively to A-, G and B+. If the RS485 communication converter has no G port, this can be left unconnected. The neutral wire may either connect to one of the N ports, or it may simultaneously connect to both N ports.

Features and technical parameters

Features

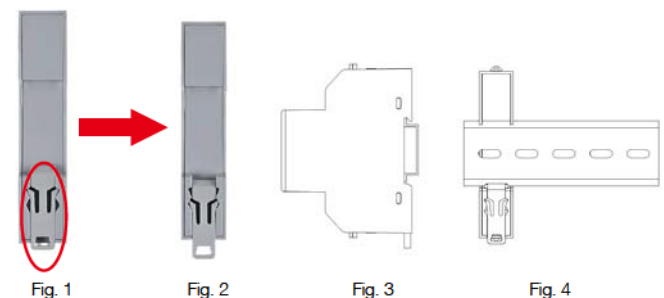
- Allows reading of network electrical parameters within a defined period of time, analysis of power quality and load conditions
- Standard DIN-RAIL mounting (conforms to German industry standard)
- Direct connection up to 100A current, only 18 mm wide
- RS485 communication supported, protocol: Modbus-RTU
- Multiple rate functionality Once a user configures the time period via RS485 communication, the meter will measure energy consumed in each different time period
- Meter comes with batteries to support multiple rate functionality. RTC accuracy as high as 0.5 seconds/day
- Blue backlit LCD screen may be read easily even in low light
- Current and voltage display
- Accurate measurement of active and reactive energy
- Displays data in two different ways:
 - a. Automated cycling of data display at 5 second time intervals
 - b. Checking of data via an external button
- Casing material: Fire-retardant ABS
- Protection rating: IP51 (Interior energy meters)

Technical Parameters

Item	Specification
Standard:	IEC62053-21
Rated voltage:	230V ± 20%
Rated current:	5(100) A
Pulse constant:	1000 Imp/kWh
Frequency:	50 - 60 Hz
Accuracy rating:	1.0
Display:	LCD 5+1 = 99999.9 kW
Operating temperature:	-20-65 °C
Power consumption:	≤ 8 VA
Average humidity:	≤ 75 %
Maximum humidity:	≤ 95 %
Startup current:	0.004 Ib
Red light flashing:	Pulse indicator, width = 90 ms
Material:	Casing: ABS+PC alloy, hook: ABS

Mounting instructions

1. Select a 35 mm standard rail (length as required), and secure to the chosen position for mounting.
2. Push the clips down one tooth, see Figs.1 and 2.
3. As shown in Fig. 3, fit the meter into the rail, then push the clips up a tooth to mount the meter onto the rail (see Fig. 4).
4. Connect as shown in the wiring diagram.
5. After connecting, seal the wiring cover with lead seals.



References

Type	COUNTIS E13X Reference
100 A direct - with MODBUS communication via RS485	48C0 3031