COUNTIS M03

Energy meters

Single-phase - direct 45 A

COUNTIS M03

The solution for

- Colleges and universities
- Infrastructures
- Data centers
- Shopping centers

Strong points

- Compact
- RS485 communication(MODBUS)

Conformity to standards

- IEC 62052-11
- IEC 62053-21
- IEC 62053-23

Overview

The SOCOMEC COUNTIS M03 Meter is an energy meter designed for single-phase metering and direct connection to 45 A.

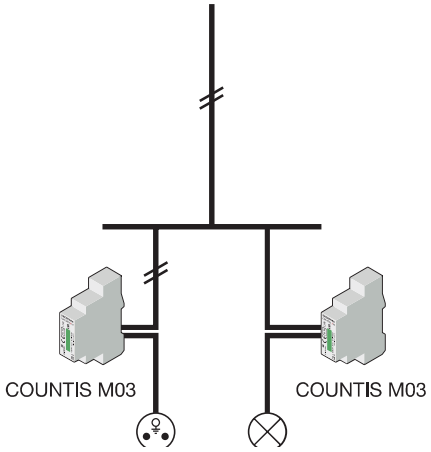
With multifunction monitoring and compact size in one module, it supports RS485 communication and is suited to domestic and commercial power distribution systems.

Functions

COUNTIS M03 is a modular electrical energy meter which can display active energy(kWh) and other data on an LCD screen.

The meter is intended to record single-phase load energy, with direct connection to 45 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
M03	MODBUS RS485 communication + 2 pulses output

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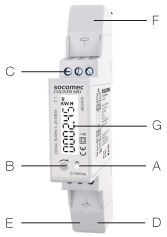
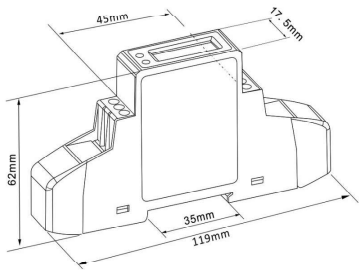
Panel



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

Dimensions

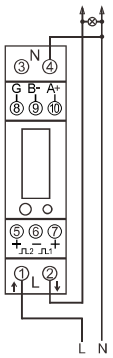


	COUNTIS M03
Type	Modular
No. of modules	1
Dimensions Width x Height x Depth	17.5 x 119 x 62 mm
Case protection rating	IP 20
Panel protection rating	IP 51
Type of display	LCD Backlight
Rigid cable connection section	2.5-10 mm²
Flexible cable connection section	2.5-10 mm²
Weight	100 g

Electrical characteristics

Communication	COUNTIS M03
Interface	RS485
Type	2 wires or 3 half duplex wires
Protocol	MODBUS® RTU
MODBUS speed	1200/2400/4800/9600bps

Connection



Features and technical parameters

Features

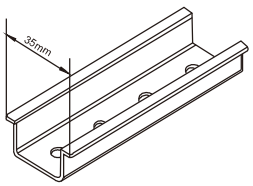
- The meter can calculate the current and active power demand and the maximum demand value
- Standard DIN-RAIL mounting (conforms to German industry standard)
- Direct connection up to 45A current, only 18 mm wide
- RS485 communication supported, protocol: Modbus-RTU
- White backlit LCD screen may be read easily even in low light
- Multi-parameter monitoring: I, V, P, Q, S and P F, etc.
- 2 channels of pulse output (the first can be set)
- Protection rating: IP51 (Interior energy meters)

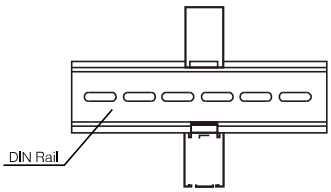
Technical Parameters

Item	Specification
Standard:	IEC62052-11，IEC62053-21
Rated voltage	230V±20%
Rated current:	5(45) A
Pulse constant:	1：Adjustable；2：1Wh/imp
Frequency:	50 / 60 Hz
Accuracy rating:	1.0
Display:	LCD 5+1 = 99999.9 kW
Operating temperature:	-25 ~ +55 ℃
Power consumption:	≤ 2W/10VA
Average humidity:	≤ 90 %
Maximum humidity:	≤ 95 %
Startup current:	0.004 Ib
Installation Category:	CAT II
Class of pollution:	2

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
3. Fit the meter into the rail, then push the clips up a tooth to mount the meter onto the rail.
4. Connect as shown in the wiring diagram.
5. After connecting, seal the wiring cover with lead seals.





Reference

Type	COUNTIS M03 Reference
45A direct - with Modbus communication via RS485	48C0 **3018**

COUNTIS M13

Energy meters

Single-phase - direct 100 A

COUNTIS M13

The solution for

- High Rise Building
- Infrastructure
- Data centers
- Shopping centers

Strong points

- Compact
- RS485 communication
- (MODBUS)

Conformity to standards

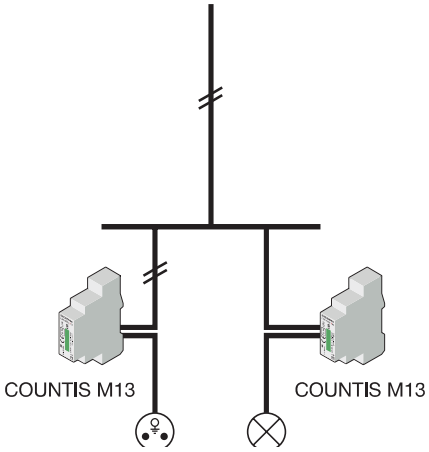
- IEC 62052-11
- IEC 62053-21
- IEC 62053-23

Applications

Overview

The SOCOMEC COUNTIS M13 Meter is an energy meter designed for single-phase metering and direct connection to 100 A.

With multifunction monitoring and compact size in two modules, it supports RS485 communication and is suited to domestic and commercial power distribution systems.



Functions

COUNTIS M13 is a modular electrical energy meter which can display active energy(kWh) and other data on an LCD screen.

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

General Characteristics

- Compact design
- Measurement accuracy: 1%
- LCD display

Advantages

- Compact size, two modules.
- 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
M13	MODBUS RS485 communication

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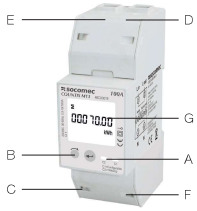
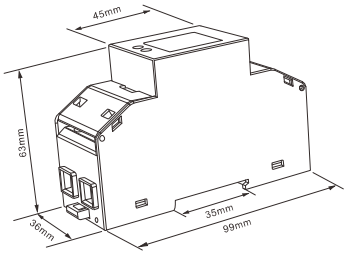
Panel



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

Dimensions

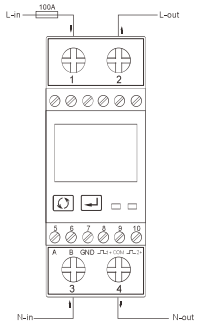


	COUNTIS M13
Type	Modular
No. of modules	2
Dimensions Width x Height x Depth	36 x 99 x 63 mm
Case protection rating	IP 20
Panel protection rating	IP 51
Type of display	LCD Backlight
Rigid cable connection section	4-25 mm²
Flexible cable connection section	4-25 mm²
Weight	200 g

Electrical characteristics

Communication	COUNTIS M13
Interface	RS485
Type	2 wires or 3 half duplex wires
Protocol	MODBUS® RTU
MODBUS speed	1200/2400/4800/9600bps

Connection



Features and technical parameters

Features

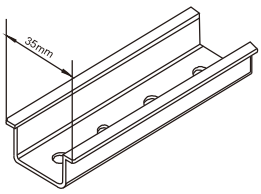
- The meter can calculate the current and active power demand and the maximum demand value
- Standard DIN-RAIL mounting (conforms to German industry standard)
- Direct connection up to 100A current, only 36 mm wide
- RS485 communication supported, protocol: Modbus-RTU
- White backlit LCD screen may be read easily even in low light
- Multi-parameter monitoring: I, V, P, Q, S and P F, etc.
- 2 channels of pulse output (the first can be set)
- Protection rating: IP51 (Interior energy meters)

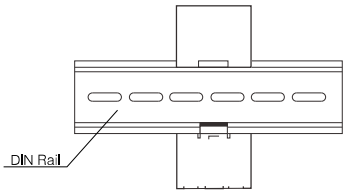
Technical Parameters

Item	Specification
Standard:	IEC62052-11，IEC62053-21
Rated voltage:	230V±20%
Rated current:	10(100) A
Pulse constant:	1：Adjustable；2：1Wh/imp
Frequency:	50 / 60 Hz
Accuracy rating:	1.0
Display:	LCD 6+1 = 999999 kW
Operating temperature:	-25 ~ +55 ℃
Power consumption:	≤ 2W/10VA
Average humidity:	≤ 90 %
Maximum humidity:	≤ 95 %
Startup current:	0.004 Ib
Installation Category:	CAT II
Class of pollution:	2

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.
3. Fit the meter into the rail, then push the clips up a tooth to mount the meter onto the rail.
4. Connect as shown in the wiring diagram.
5. After connecting, seal the wiring cover with lead seals.





References

Type	COUNTIS M13 Reference
100 A direct - with MODBUS communication via RS485	48C0 **3019**

COUNTIS M33

Energy meters

Three-phase - direct 100 A

COUNTIS M33

The solution for

- Industry
- Public buildings
- High Rise Building

Strong points

- RS485 communication (MODBUS) and pulse output
- Multi-parameter measurement and load acquisition

Conformity to standards

- IEC 62052-11
- IEC 62053-21
- IEC 62053-23

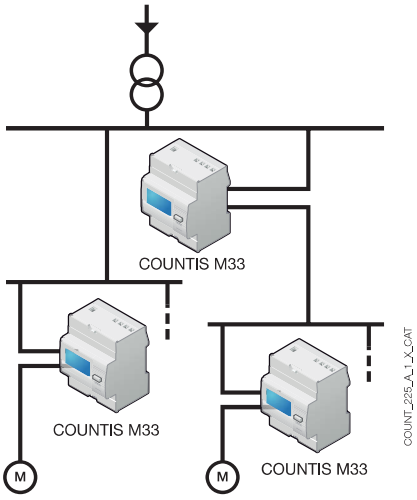
Applications

Overview

COUNTIS M33 is a three Phase four-wire energy meter can be directly connected to 100A current. Used for accumulating active and reactive power and storing this data in tables in memory, monitor demand and total harmonic distortion.

Functions

COUNTIS M33 is a modular active electrical energy meter which can directly display both total active (kWh) and reactive energy (kvarh) on a backlit LCD screen. This series of products is intended for three phase load metering for direct connections to 100 A.



General Characteristics

- Compact design
- Measurement accuracy: 1 %
- Backlit LCD display

Advantages

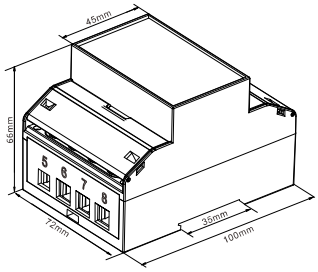
- RS485 communication (MODBUS) or pulse output.
- To enable remote transmission of energy consumption, the COUNTIS M33 offers pulse output and RS485 communication output featuring the Modbus protocol.
- In addition, for the remote transmission function, COUNTIS M33 with RS485 products can be configured remotely and collect multiple electrical parameters.
- Multi-parameter measurement and load curves.
- Multiple electrical parameters (I, U, V, P, Q, S, PF).

Model	Key functions
M33	RS485 MODBUS communication +2pulse outputs

Front panel

A. Input port
B. LCD display
C. Output port
D. RS485
E. Energy pulse signal indicator
F. Energy pulse port

Dimensions

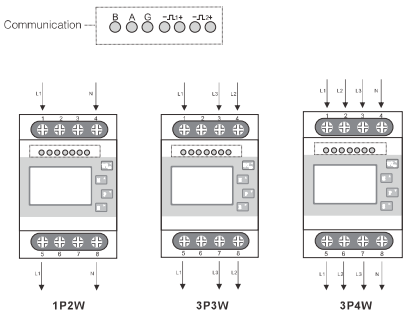


Type	Modular
No. of modules	4
Dimensions Width x Height x Depth	72 x 100 x 66 mm
Case protection rating	IP20
Panel protection rating	IP51
Type of display	Backlit LCD display
Rigid cable connection section	4-25 mm²
Flexible cable connection section	4-25 mm²

Electrical characteristics

Communication	
Interface	RS485
Type	2 wires or 3 half duplex wires
Protocol	MODBUS RTU
MODBUS® speed	2400-38400bps

Connection



Features and technical parameters

Features

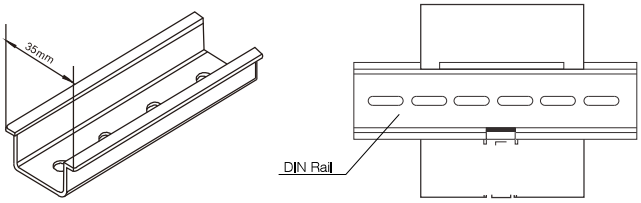
- Measure three-phase active and reactive energy, analyse power quality and load conditions
- Standard DIN-RAIL mounting (conforms to German industry standard)
- Direct input of 100 A current
- RS485 communication supported, protocol: Modbus-RTU
- Demand and maximum demand, total harmonic distortion
- LCD backlit for easy power readings in low light
- Multi-parameter monitoring: I, V, P, Q, S and P F, etc.
- Protection rating: IP51 (Interior energy meters)

Technical parameters

Item	Specification
Standard:	IEC 62052-11，IEC62053-21
Rated voltage:	3 x 230/400V±20%
Nominal (maximum) current:	10(100)A
Pulse constant:	1：Adjustable；2：2.5Wh/imp
Frequency:	50 / 60 Hz
Accuracy rating:	1.0
Display:	LCD
Operating temperature:	-25 ~ +50℃
Storage temperature:	–40 ~ +70℃
Power consumption:	<2W/10VA
Operating humidity:	≤90%
Start current:	0.004Ib

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.
3. Fit the meter into the rail, then push the clips up a tooth to mount the meter onto the rail.



References

Type	COUNTIS M33 Reference
100 A direct with RS485 MODBUS communication	48C0 **3020**

COUNTIS M43

Energy meters

Three-phase - up to 6000 A via CT

COUNTIS M43

The solution for

- Industry
- Public buildings
- High Rise Building

Strong points

- RS485 communication (MODBUS) and pulse output
- Multi-parameter measurement

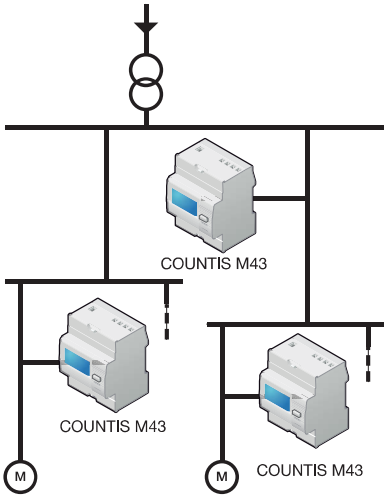
Conformity to standards

- IEC 62052-11
- IEC 62053-22
- IEC 62053-23

Applications

Overview

SOCOMEC COUNTIS M43 Meter is a three-phase four-wire rail-mounted energy meter, able to measure both active and reactive energy via CT connection. It has one RS485 communication.



Functions

The COUNTIS M43 utilizes a modular design, with both active and reactive energy value (kWh, kvarh) directly displayed on a backlit LCD monitor. This series of meters works in three-phase electricity networks via CT input.

General Characteristics

- Compact design
- Measurement accuracy: 0.5%
- LCD display

Advantages

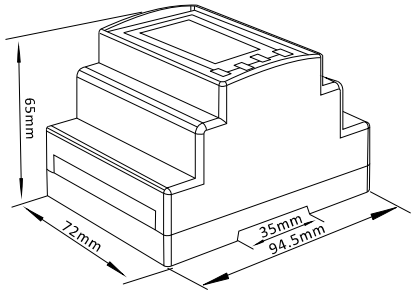
- To enable remote transmission of energy consumption, the COUNTIS M43 series of products offers pulse output and RS485 communication output (using MODBUS).
- In addition, for the remote transmission function, COUNTIS M43 with RS485 products can be configured remotely and collect multiple electrical parameters via communication.

Model	Key functions
M43	RS485 MODBUS communication + 2pulse outputs

Front panel

A. Energy pulse signal indicator
B. Power supply
C. Voltage in port
D. Current CT in port
E. LCD display screen
F. Communication port (pulse out put, RS485)

Dimensions

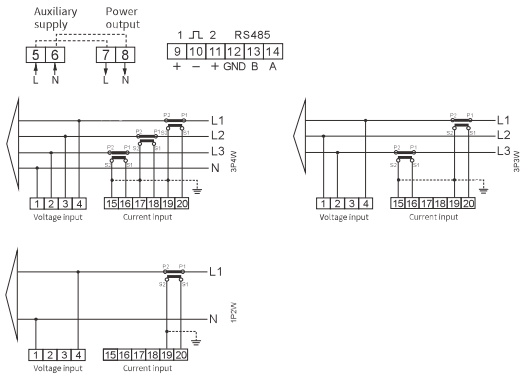


Type	Modular
Quantity	4
Dimensions Width x Height x Depth	72 x 94.5 x 65 mm
Case protection rating	IP20
Panel protection rating	IP51
Type of display	LCD
Rigid cable connection section	0.5-2.5 mm²
Flexible cable connection section	0.5-2.5 mm²

Electrical characteristics

Communication	
Interface	RS485
Type	2 wires or 3 half duplex wires
Protocol	MODBUS RTU
MODBUS® speed	2400-38400bps

Connection



Features and technical parameters

Features

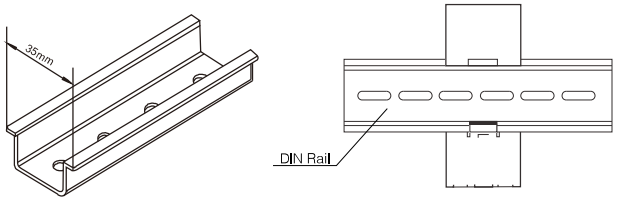
- Measure three-phase active and reactive energy, analyse power quality and load conditions
- Standard DIN-RAIL mounting (conforms to German industry standard)
- CT input, supports 3×1.5(6)A
- RS485 communication supported, protocol: Modbus-RTU
- Demand and maximum demand, total harmonic distortion
- LCD backlit for easy power readings in low light
- Multi-parameter monitoring: I, V, P, Q, S and P F, etc.
- Protection rating: IP51 (Interior energy meters)

Technical Parameters

Item	Specification
Standard:	IEC 62052-11，IEC62053-22
Rated voltage:	3 x 230/400V±20%
Nominal (maximum) current:	5(6)A
Pulse constant:	1：Adjustable； 2：0.3Wh/imp
Frequency:	50 / 60 Hz
Accuracy rating:	0.5S
Display:	LCD
Operating temperature:	- 25 ~ +55℃
Storage temperature:	- 40 ~ +70℃
Power consumption:	< 2W/10VA
Average humidity:	≤ 90%
Startup current:	0.002In

Mounting instructions

1. Select a 35 mm standard rail (length as required), and secure to the chosen position for mounting.
2. Fit the meter into the rail and pull the spring clips down.
3. Let the clips go to mount the meter onto the rail.
4. Connect as shown in the wiring diagram
5. Once connected, screw on the cover.



References

Type	COUNTIS M43 Reference
CT input with RS485 MOSBUS communication	4800 **3021**