



SDM230-Modbus

Single-phase Meter User Manual

Step1. Overview

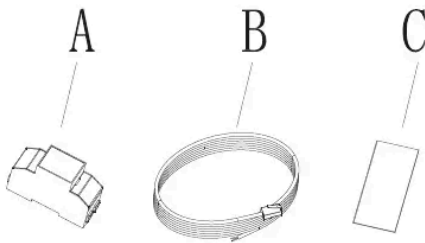
The energy-meters "with a blue back-lighted LCD screen for perfect reading" are used to measure single-phase like residential, Utility and Industrial application. The unit measures and displays various important electrical parameters, and provide a communication port for remote reading and monitoring. Bi-directional energy measurement makes the unit a good choice for solar PV energy metering.

Step2. Technical Parameters

General Specifications	
Voltage	230Vac
Voltage range	176~276Vac
Base current(Ib)	10A
Current range	0.5~100A
Power consumption	<2W/10VA
Frequency	50/60Hz(±10%)
AC voltage withstand	4KV for 1 minute
Impulse voltage withstand	6KV-1.2uS waveform
Max. Reading	999999.9kWh
Accuracy	
Voltage	0.5% of range maximum
Current	0.5% of nominal

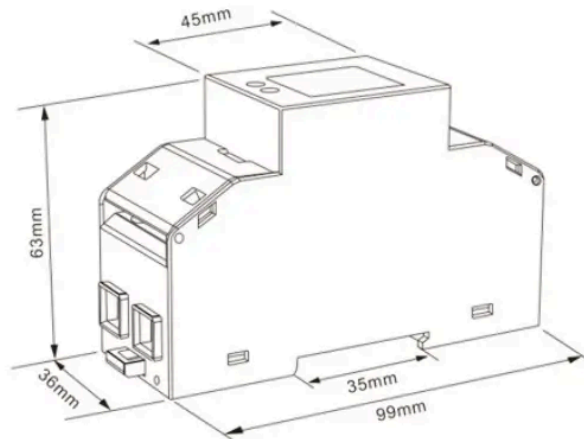
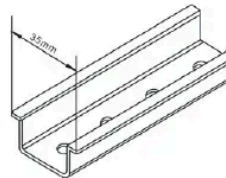
Frequency
Power factor
Active power
Reactive power
Active energy
Reactive energy
Environment
Operating temperature
Storage and transportation temperature
Reference temperature
Relative humidity
Altitude
Installation category
Degree of pollution
Communication
Communication
Baud rate
Mechanics
Din rail dimensions
Mounting
Sealing
Material

Step3. Unpacking



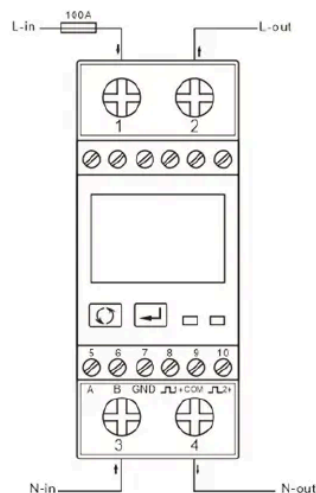
Item	Number	Description
A	1	Single phase meter
B	1	RS485 cable (standard length 5m)
C	1	User Manual

Step4. Dimension (Unit: mm)

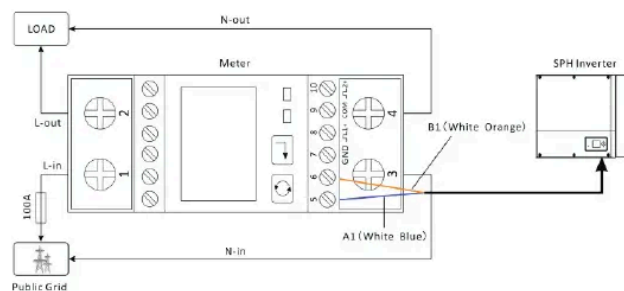


Step5. Installation

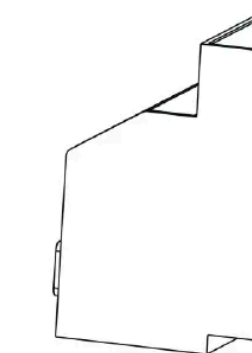
Wire diagram:



The Ingress Protection rate is IP51 and the pollution degree is PD2, So meter must be install in door. The whole installation chart shows as below:



before screw the cable. Please open the cover of meter:



The standard communication distance for the inverter is 5m, if it is not connected through the network. Note: be careful the wire colors are wrong, it may destroy the inverter.

Step6. LCD display

Item Descriptions



Scroll display by Button

After initialization and self-test, the meter display the measurement results.

1	7 digits used to display measured values or RTC
2	Total value
4	Import information, Export information
5	Max. Demand for Power or Current
6	Pulse output 1 and Pulse output 2
7	Measurement units
8	PF = power factor Hz = frequency
9	Bar display of Power
10	Communication indicator
11	Time information
12	Low battery warning
13	Lock symbol



When it is powered on, the meter will initialize and do self-checking.



Full screen → software version → Modbus ID → Baud rate → total kWh

is total kWh. If the user wants to see more information, he needs to press the button on the front panel.

The display order by screen is as follows:

Total kWh → Import kWh → Export kWh → Total kVarh → Import kVarh → Export kVarh → Max. Demand for Power or Current → W → Var → VA → Pulse constant → Modbus running time.

