

Overview

The single-phase energy meter adopts microelectronic technology and large-scale integrated circuits, applying advanced technologies such as digital sampling process and SMT technology. It bidirectionally measures AC positive active energy and negative active energy with rated frequency 50/60Hz, which displays total active energy, positive active energy, negative active energy, temporary active energy, voltage, current, active power, power factor, frequency, constant, baud rate and meter ID, and features good reliability, small size, light weight, beautiful appearance, flexible and convenient installation.


Functional features

1. 35mm DIN rail mounting
2. high accuracy measurement of active energy at level 1
3. LCD display with backlight
4. LED indicates impulse output
5. parameters can be quickly checked by one key
6. bi-directional measuring
7. RS485 communication support

Technical parameters

Reference voltage: AC220/230V
Rated current: 5(60)A
Rated frequency: 50/60Hz
Accuracy level: 1.0
Constant pulse: 1600imp/kwh
Power consumption: ≤2W, 10VA
Starting current: 0.004Ib
Operating temperature: -20°C~+55°C
Relative humidity: 5%~95%

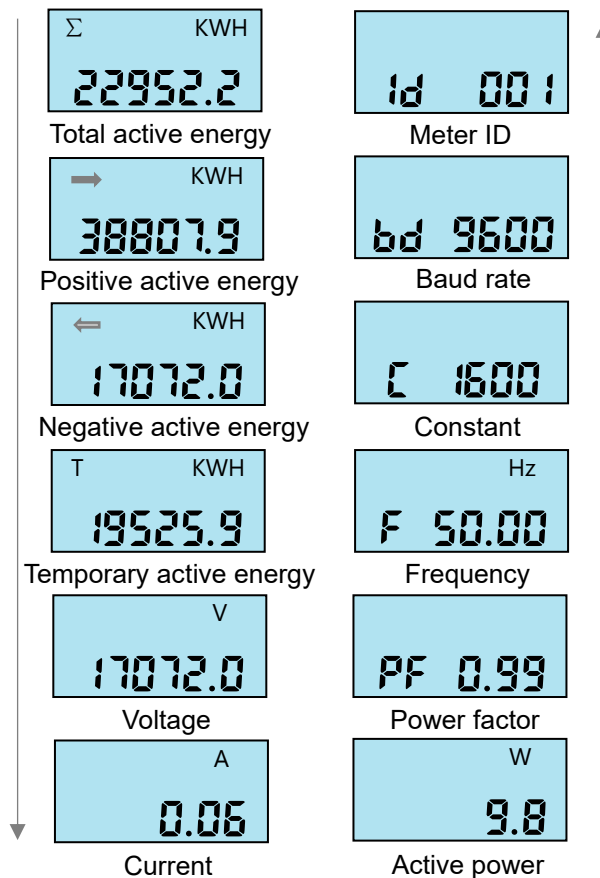
Note:

Press  key for 6 seconds to reset temporary kwh to 0, but the total kwh can't be reset.

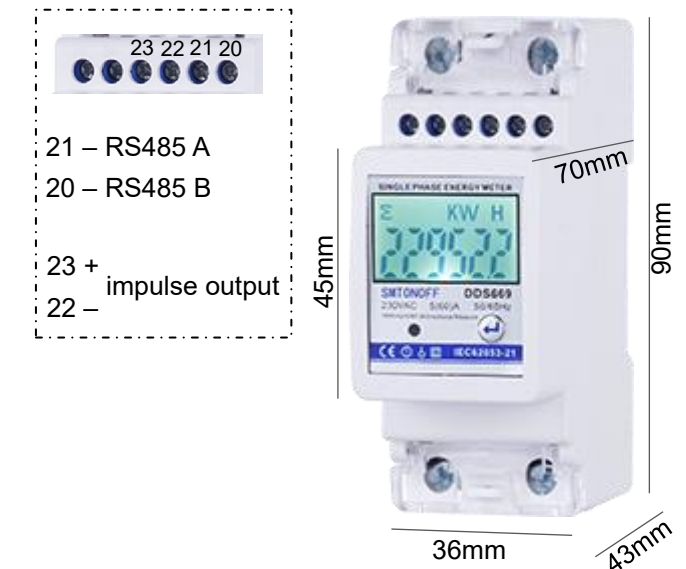
Bi-directional Measuring Multifunction Energy Meter



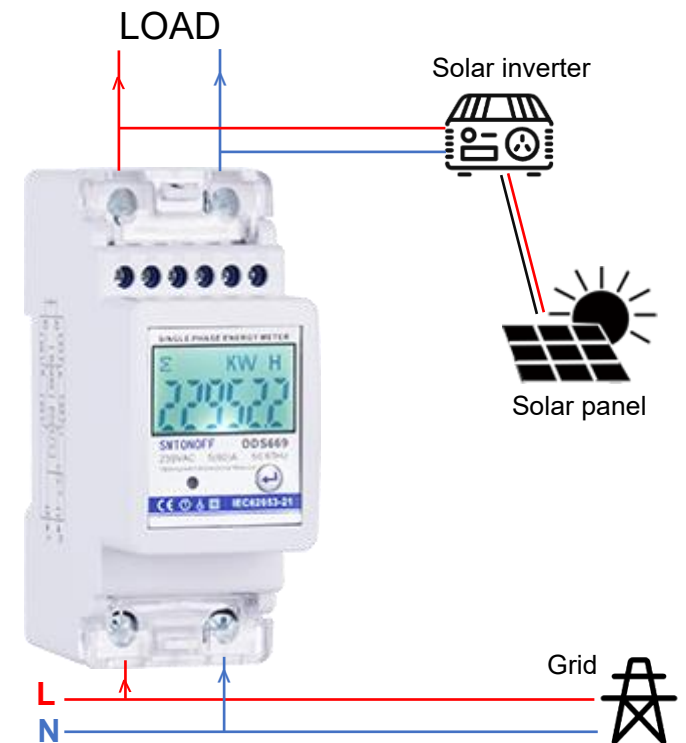
Click  to shift parameters display in turn as below:



Dimensions



Wiring diagram



MODBUS-RTU communication address table (03 04 read, 10 write, 00 multi-function)						
Address (HEX)	Data	Data format	Data length (word)	Unit	Read/Write	Explanations
0x00	Voltage	Int	1	0.1V	R	Ua (for example, Address 04 00 00 00 02 CRC0 CRC1)
0x03	Current	Int	1	0.01A	R	Ia
0x07	Total active power	Int	1	W	R	$\sum P$
0x13	Total power factor	Int	1	0~1.000	R	$\sum \cos\Phi$
0x1A	Voltage frequency	Int	1	0.01Hz	R	FR
0x001D	Total active energy	long	2	0.01kWh	R	

Meter setting parameters (Read) / (Write)						
0x3F (high 8-bits)	Communication address	Int	1		R	1~247
0x3F (low 8-bits)	Baud rate	Int	1		R	3-1200; 2-2400; 1-4800; 0-9600

For example - Read operation on register (data register)

Read energy consumption:

Distributed data (HEX): 00 04 00 1D 00 02 E0 1C

Data explanation:

Data	Explanations
00	Meter address
04	Functional code, read data register
00 1D	Start to read register from 00 1D address
00 02	Read data length, 1 word (2 bits)
E0 1C	Verify former data CRC, low bit ahead, high bit behind

Response: 00 04 04 00 00 99 58 80 EE

Data explanation:

Data	Explanations
00	Meter address
04	Response functional code
04	Responded data length 2 bits

Data	Explanations
00 00 09 58	(covert decimal 39256) 392.56kW responded data, 2 bits int data
80 EE	Responded CRC verification