



SINGLE PHASE MULTI-FUNCTION ENERGY METER

Model No: SMART-SME 104D

- Max. 100A Direct Load
- 2 Module Wide
- Measuring kWh, W, A, PF, Hz, dmd, etc.
- Active Energy Measured
- Pulse Output
- LCD Display



INTRODUCTION

Smart Controller series is advanced Digital Single Phase multi-function energy meter, which measures up to 100A direct load. The unit measures active energy, reactive energy, current, voltage, power, power factor frequency, demand, etc.

Bi-directional measurement makes this unit an ideal choice for solar PV measurement. A remote communication port is provided. The unit allows Max.100A direct connection, saving the cost and avoiding the trouble to connect external CTs. 1 pulse output is provided for energy measurement.

RS485 mudbus RTU and M-bus EN13757-3 communication parameters are password protected in setup mode. User can check data and set up the meter via the buttons on the front panel.

SPECIFICATION

Nominal Voltage(Un)	120V or 230V ac
Operational Voltage	80%~120% of Un
Instation Capabilities	
- AC Voltage withstand	4KV for 1 minute
- Impulse Voltage withstand	6KV-1.2μS
Basic Current (Ib)	5A
Maximum Rated Current (Imax)	100A
Operational Current Range	0.4% Ib-Imax
Over Current withstand	30 Imax for 0.01s
Internal Frequency Range	50 or 60Hz
Internal Power Consumption	≤ 2W/10VA
Pulse Output 1	1000imp/kWh
Pulse Output 2	1000imp/kWh(only for SDM230DR/Bi)
Max Reading	999999.9 kWh

PERFORMANCE CRITERIA

Operating Humidity	≤ 90%
Storage Humidity	≤ 95%
Operating Temperature	-25°C - +55°C
Storage Temperature	-40°C - +70°C
Reference Temperature	23°C±2°C
International Standard	IEC 62053-21 / EN50470-1/3
Accuracy Class	Class1/Class B
Installation Category	CAT II
Mechanical Environment	M1
Degree of Pollution	E2
Protection Against Penetration of Dust and Water	2
Insulating Encased Meter of Protective Class	IP51 (indoor)
Attitude	II
Electrostatic Discharges	8kV contact / 15kV air gap
Electromagnetic HF Fields	IEC 61000-4-3
Electrical Fast Transients	4kV
Surge	4kV
Radiated and Conducted Emission	EN 55022

ACCURACY

Voltage, Current	0.5%
Frequency	0.2% of mid-frequency
Power Factor	1% of unity (0.01)
Active Power, Apparent Power	±1% of range maximum
Reactive Power	±1% of range maximum
Reactive Energy (Varh)	Class 2
Active Energy (Wh)	Class 1

MODBUS

Bus Type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud Rate	1200/2400/4800/9600bps
Address Range	1-247
Max. Bus loading	64pcs
Communication Distance	1000M
Parity	EVEN/ODD/NONE
Data Bit	8
Stop Bit	1

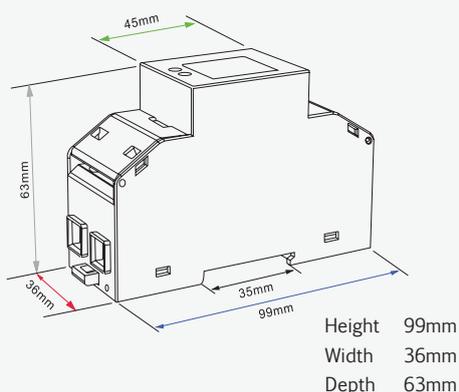
M-BUS

Rated Current	10 A
Max Current	100A A
Min Current	0.5 A
Starting Current	20mA
Stop Bit	1 or 2
Primary Address	1 to 250
Secondary Address	00 00 00 01 to 99 99 99 99

PULSE OUTPUT

Pulse Outputs	2
Pulse Output Type	Passive
Pulse Output 1	Configurable
Pulse width	200/100(default)/60ms
Pulse Output 2	1000imp/kWh

DIMENSIONS



WIRING DIAGRAM

