



SINGLE PHASE MULTI-FUNCTION ENERGY METER

Model No: SMART-SME 100D

- 45 A Direct Load
- Module 17.5mm Wide
- RS 485 Modbus or M-bus Communication
- Measuring kWh, W, A, PF, Hz, dmd, etc.
- Bi-Directional Measurement
- 2 Pulse Outputs



INTRODUCTION

Modbus/Mbus are advanced Single Phase Energy monitoring solution with built-in configuration push button and LED data display particularly Indicated for energy and other parameter metering and for cost allocation.

Housing for DIN-rail mounting, IP51 protection degree direct connection for energy and other parameter metering and cost allocation. Housing for DIN-rail mounting , IP51 protection degree, direct connection up to max 45A.

The meter can be provided with a pulses output proportional to the active energy being measured and a RS485 output / M-bus output port for remote monitoring. It is an ideal choice as a sub-meter for AMR system or SCADA system.

SPECIFICATION

Nominal Voltage(Un)	120V or 230V ac
Operational Voltage	80%~120% of Un
Insulation Capabilities	
- AC Voltage withstand	4KV for 1 minute
- Impulse Voltage withstand	6KV-1.2μS
Basic Current (Ib)	5A
Maximum Rated Current (Imax)	45A
Operational Current Range	0.4% Ib-Imax
Over Current withstand	30 Imax for 0.01s
Operational frequencyRange	50 / 60Hz
Internal Power Consumption	≤ 2W/10VA
Pulse Output	1000imp/kWh
Display	LCD with backlight
Max Reading	999999 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	2
Protection Against Penetration of Dust and Water	2
Insulating Encased Meter of Protective Class	IP51(indoor)
Attitude	II
Electrostatic Discharges	up to 2000m
Electromagnetic HF Fields	8kV contact / 15kV air gap
Electrical Fast Transients	IEC 61000-4-3
Surge	4kV
Radiated and Conducted	4kV
Emission	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

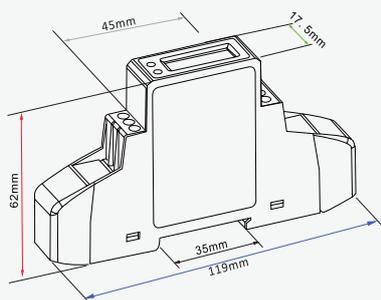
Bus Type	M-bus
Protocol	13757-3
Baud Rate	300/600/1200/2400/4800/9600
Parity	NONE/EVEN/ODD
Stop Bit	1 or 2
Primary Address	1 to 250
Secondary Address	00 00 00 01 to 99 99 99 99

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



Height 119mm
Width 17.5mm
Depth 62mm



WIRING DIAGRAM

