



# THREE PHASE 4 WIRE MULTI-FUNCTION ENERGY METER

Model No: SMART-SME 200D

- 100 A Direct Load
- 7 Module Wide
- Bi-Directional Measurement
- 2 Pulse Outputs
- RS 485 Modbus or M-bus Communication
- Multi kWh, kVarh, W, Var, VA, PF, Hz, dmd, etc.
- Multi-Tariffs



## INTRODUCTION

The Smart Controller series measure and display the characteristics of three phase four wires (3p, 4w) supplies, including voltage, frequency, current, power active and reactive energy, import or exported.

Energy is measured in terms of kWh, KVArh. Maximum demand current can be measured over preset periods of up to 60 minutes. In order to measure energy the unit requires voltage and current input in addition to the supply required to power the product.

Smart Controller series support max. 100A direct connection, save the cost the trouble to connect CTs, giving the unit a cost-effective and easy operation. Built-in interface provides pulse and RS485 modbus RTU output/MBus port. All the configuration are password protected.

## SPECIFICATION

Nominal Voltage(Un)	3x230/400V 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)	10A
Maximum Rated Current (Imax)	0.4% Ib-Imax
Operational Current Range	30 Imax for 0.01s
Over Current withstan	50 or 60Hz
Pulse Output	≤ 2W/10VA
Display	LCD
Max Reading	999999.99 kWh/kVarh

## PERFORMANCE CRITERIA

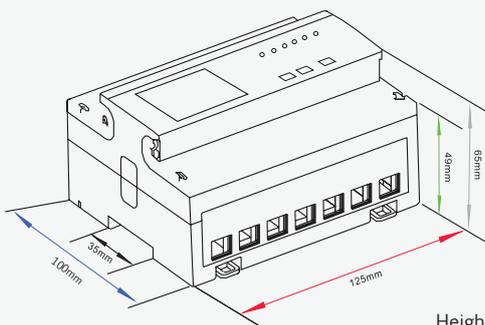
Operating Humidity	≤ 90%
Storage Humidity	≤ 95%
Operating Temperature	-25°C - +55°C
Storage Temperature	-40°C - +70°C
Reference Temperature	23°C± 2°C
International Standard	IEC 62053-21 / EN50470-1/3
Accuracy Class	Class1/Class B
Installation Category	CAT III
Mechanical Environment	M1
Degree of Pollution	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

## MULTI-TARIFF

Time Clock Accuracy	< 1s/day
Tariffs	4
Time Segments	10



## DIMENSIONS



Height 100mm  
Width 125mm  
Depth 65mm

## 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	EN13757-3
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	400imp/kWh



## WIRING DIAGRAM

