



SINGLE PHASE MULTI-FUNCTION ENERGY METER

Model No: SMART-SME 102CT

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



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-1.2 μ S |
| Basic Current (Ib) | 5~9999A |
| Maximum Rated Current (Imax) | 100mV or 100mA |
| Operational Current Range | 20 Imax for 0.01s |
| Over Current withstand | 50 or 60Hz |
| Operational frequency range | \leq 2W/10VA |
| Internal Power Consumption | configurable |
| Pulse Output | 1000imp/kWh |
| Display | LCD with backlight |
| Max Reading | 999999 kWh |

PERFORMANCE CRITERIA

| | |
|--|----------------------------|
| Operating Humidity | \leq 90% |
| Storage Humidity | \leq 95% |
| Operating Temperature | -25°C - +55°C |
| Storage Temperature | -40°C - +70°C |
| Reference Temperature | 23°C \pm 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 | 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 | EN 55022 |

ACCURACY

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

MODBUS

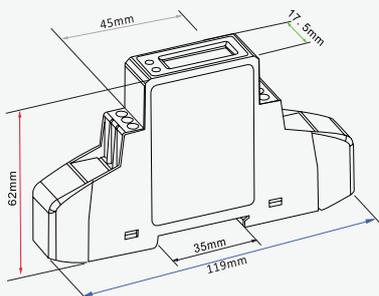
| | |
|------------------------|------------------------|
| Bus Type | RS485 (semi-duplex) |
| Protocol | Modbus RTU |
| Baud Rate | 1200/2400/4800/9600bps |
| Address Range | 1-247 |
| Max. Bus loading | 64pcs |
| Communication Distance | 1000M |
| Parity | EVEN/ODD/NONE |
| Data Bit | 8 |
| Stop Bit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



DIMENSIONS



Height 119mm
Width 17.5mm
Depth 62mm



WIRING DIAGRAM

