sensemi
SOLUTIONS

smart metering
solutions.

SED102u

SINGLE PHASE - MODULAR SMART ELECTRICITY METER



PRODUCT OVERVIEW

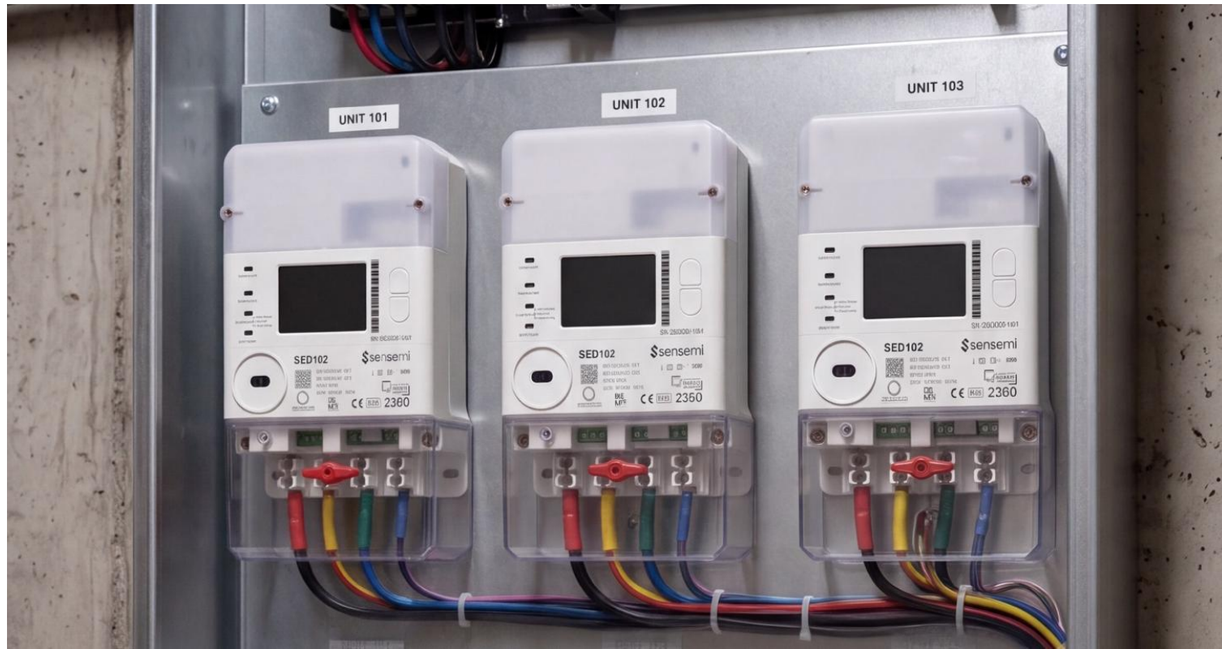
The **SED102u** Smart Electricity Meter is a single-phase meter designed with high flexibility for input communication. It boasts the capability to simultaneously accommodate up to three modules, comprising two communication modules and one input module.

STANDARDS AND COMPLIANCE

IEC 62052-11
IEC 62053-21
IEC 62055-41
IEC 62053-23

PRODUCT FEATURES

- **Terminal holes and screws with anti-dropping design**
- **Plug-and-play communication modules application**
- **Support local/remote firmware upgrade**
- **Big LCD to monitor meter operation**
- **Non-volatile memory to store meter data without using a backup battery**
- **Anti-Tamper design**



sensemi SOLUTIONS

smart metering solutions.

MAIN FUNCTIONS

MEASUREMENTS

- +/- Active energy, +/- Reactive energy, +/- Apparent energy, total active energy and net active energy measurement.
- Voltage, current, power, power factor, frequency.
- Slid demand: Period(15mins) +sliding(3mins), configurable.
- Current date and time.

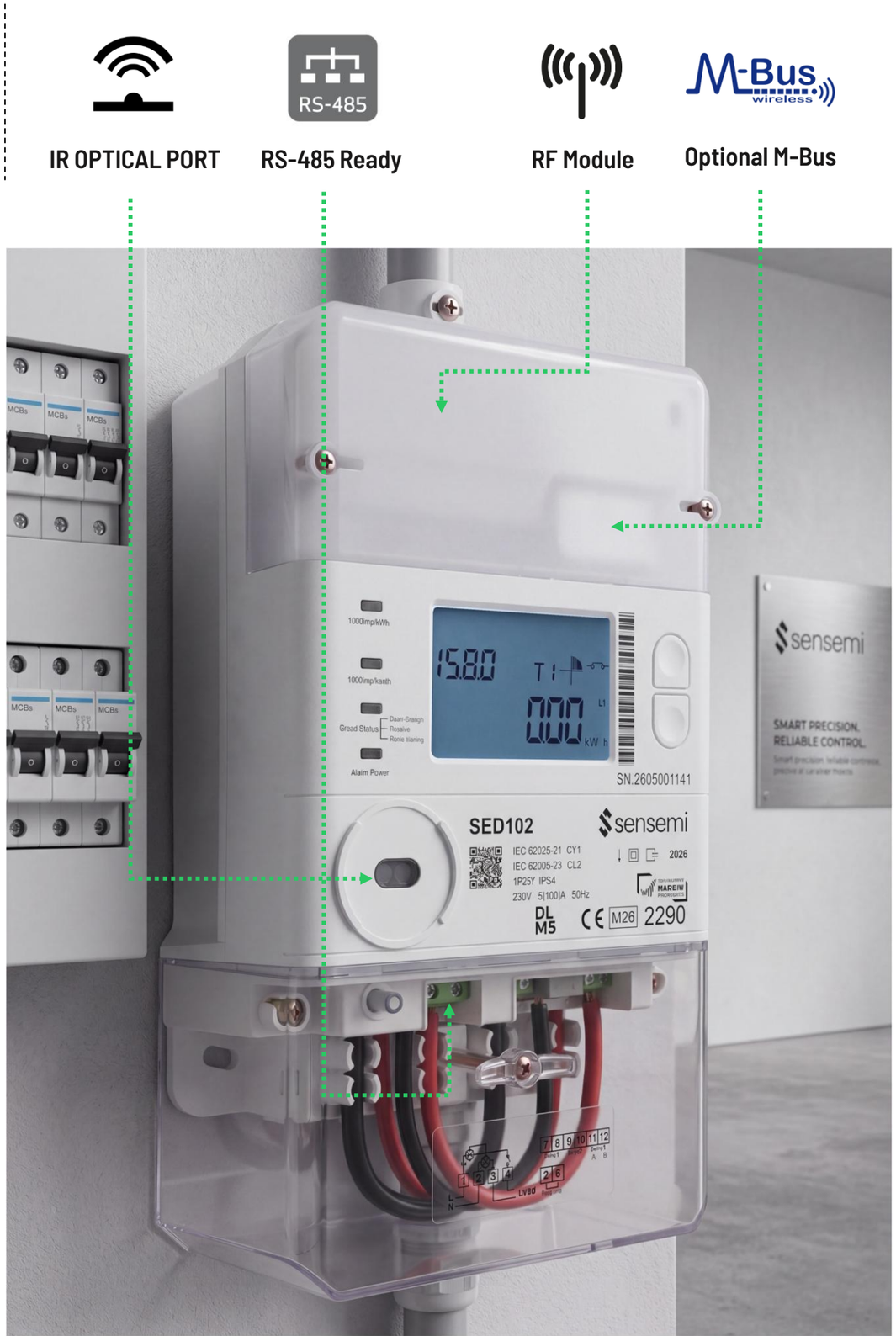
BILLING

- Automatic monthly billing reset on 00:00:00 of the 1st day in each month, configurable.
- Up to 12 monthly billing records of data in meter memory.
- Automatic daily billing reset on 00:00:00 of every day, configurable.
- Up to 62 daily billing records of data in meter memory.
- Remotely reset from AMI central system.

LOAD PROFILES

- Independent Energy profile and quality profile.
- Record up to 100 days of 15-minute load profiles with 16 channels, FIFO basis.
- Load profile interval configurable from 1-60 minutes
- FIFO storage mode.

SUPPORTED COMMUNICATION TECHNOLOGIES:



COMMUNICATION

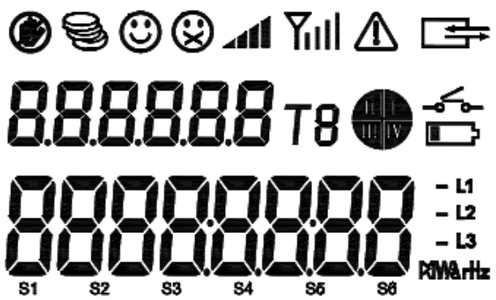
- Equipped with an infrared optical port compliant with the IEC 62056-21 standard for meter programming and data downloading.
- Additional RS485 interface for local communication .
- Plug and play RF module for remote communication with HES.
- Optional Wireless M-BUS communication with gas/water meter.

POWER QUALITY

- Current reverse detection.
- Over-voltage and under-voltage detection with a configurable time threshold.
- Long and short outage detection with a configurable time threshold.
- Over current/over load detection with a configurable time threshold.

LCD DISPLAY

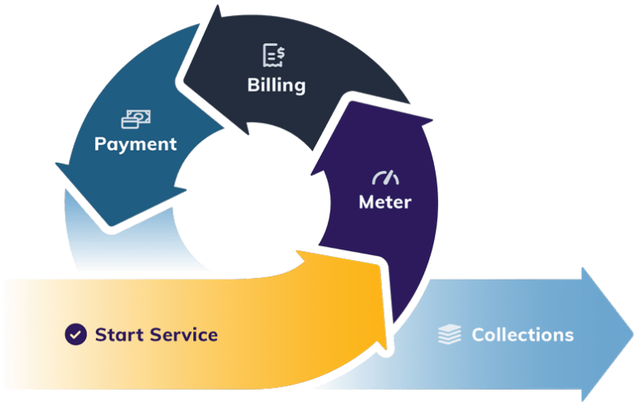
- With backlight.
- 8 digits energy display.
- Capable to display symbols of OBIS code, current tariff index, Current reversal, relay status, tamper and alarm status, sad/smile face, battery low status, Electrical units.
- Support scrolling mode and manual mode with push button to display items.



MAIN FUNCTIONS

TARIFF FUNCTIONS

- 4 tariffs index T1 to T4
- 12 time switch
- 8 day profile table
- 8 week profile table
- 12 seasonal profile table
- 100 special day
- TOU automatically switch, configurable switch date/time
- With battery to maintain clock and calendar



ANTI-TAMPER

- Detection of meter/module/terminal cover, magnetic disturbance, box open, etc.
- Able to detect meter/terminal cover when power off.
- Show tamper alarm on LCD and LED.
- All tamper events will be recorded on meter memory.

PREPAYMENT FUNCTIONS

- Prepayment mode by default, Prepaid/postpaid mode switchable.
- Support online prepayment remotely from the AMI central system.
- Low balance alert by audible alarm & LED alarm to remind user to top up.
- Support emergency mode.
- Standard 12-key keypad on UIU with audio feedback upon keypress

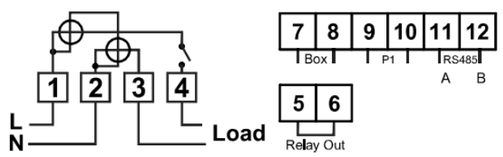
POWER QUALITY

- Current reverse detection.
- Over-voltage and under-voltage detection with a configurable time threshold.
- Long and short outage detection with a configurable time threshold.
- Over current/over load detection with a configurable time threshold.

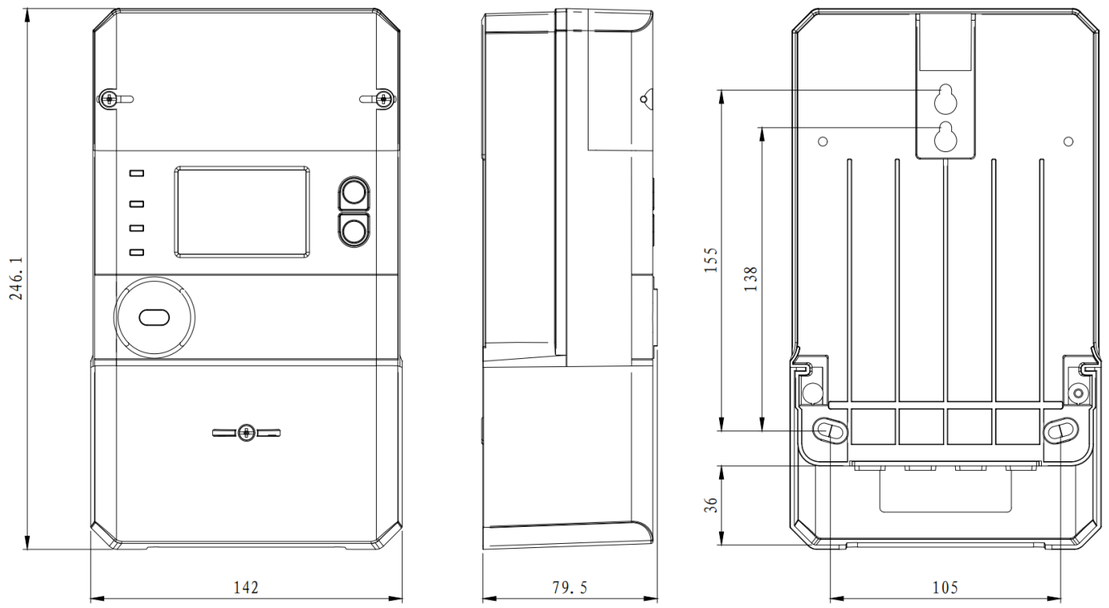
DISCONNECT/RECONNECT SWITCH

- Internal latching relay for disconnect control.
- Remote /local automatic closing without manual trip.
- Relay disconnect when open terminal cover, open meter cover, over-current, over-temperature, over-voltage, power outage and magnetic disturbance, configurable
- Additional auxiliary relay

TERMINAL DIAGRAM:



DIMENSIONS



TECHNICAL SPECIFICATIONS

Parameter	Specification
Operating Voltage	230V
Voltage Range	0.4Un~1.3Un
Current rating	5(100A)
Starting current	0.4% of Ib
Frequency	50Hz±5%
Accuracy Class	Active Energy: CL 1.0 1000 imp/kWh Reactive Energy: CL 2.0 1000 imp/kvarh
Connection	LNNL
Real-time Clock Accuracy	<0.5s/Day

Parameter	Specification	
EMC	Electrostatic discharges(Contact discharges)	8kV
	Electrostatic discharges(Air discharges)	15kV
	Fast transient burst test	4kV
	Surge immunity test	6kV
	Electromagnetic RF field (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Environment	Temperature Range: -40 °C ~ +70 °C Humidity: Up to 95%	
Protective class	II	
Degree of protection	IP54	

