



LR101

Single Phase Electronics Energy Meter

Designed Residential consumers

Providing a strong foundation for your Smart Grid initiatives



Key Feature

- ◆ Accuracy: Class 1.0 for Kwh and Class2.0 for Kvarh
- ◆ Bi-directional and double channel measurement.
- ◆ Operation normal under 500mT magnetic field
- ◆ Anti-tamper design.
- ◆ Support optical probe data fast reading.
- ◆ Large size LCD display includes power outage condition.
- ◆ Support Plug-play communication module.
- ◆ Support IEC 62056-21 (1107) protocol and DLMS/COSEM

Technical Point

Description	Value
Voltage	
Reference voltage	230v
operating voltage range	70%-120%Un
Current	
Basic current	5A, 10A
Maximum current	60A, 80A, 100A
Starting current	0.4%Ib
Accuracy	
	Class 1.0 for kWh Class 2.0 for kvarh
Frequency	
Rated frequency	50Hz
Frequency range	±2%
Pulse constant	
	1000 imp/kWh
Temperature	
Normal Operation range	-25°C to +55°C
Limit operation range	-40°C to +70°C
Limit range for storage and transport	-40°C to +85°C
Humidity	
	Up to 95% non-condensing
Power Consumption	
Power consumption in voltage circuit (active)	≤2 W
Power consumption in voltage circuit (apparent)	≤10 VA
Power consumption in current circuit	≤1 VA

Insulation Strength

AC voltage test	4kV
Surge Withstand	6kV
Protection class	Class II

Electromagnetic Compatibility

Electrostatic discharges	Contact 8kV, air 15kV
Fast transient burst	4kV
Immunity to Impulse voltage (IEC62052-11)	6kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection Degree

IP54

■ Main Functionalities

➤ Measurement

- Instantaneous Vrms, Irma, Frequency.
- Export/import active energy, apparent Power.
- Active energy demand registers.

- Failure detect (Memory error, relay error, measurement error, etc.)

- Power quality event (Under voltage / Over voltage / Current imbalance, Power failure, etc.)

➤ Relay Control

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s$
- Gregorian calendar
- Automatic leap year switch

- Relay automatic disconnect after power outage
- Tamper disconnect (open meter cover, open terminal cover include power off tamper detection)
- Over active power limitation

➤ Billing data record

- One daily profiles record, up to 12 days
- Month billing record, up to 12 months

➤ Optical port

- Comply with IEC62056-21 standard.
- Support data burst reading mode.

➤ Event record

- Tamper detect (Meter cover open, terminal cover open, current reverse, magnetic detect etc.)

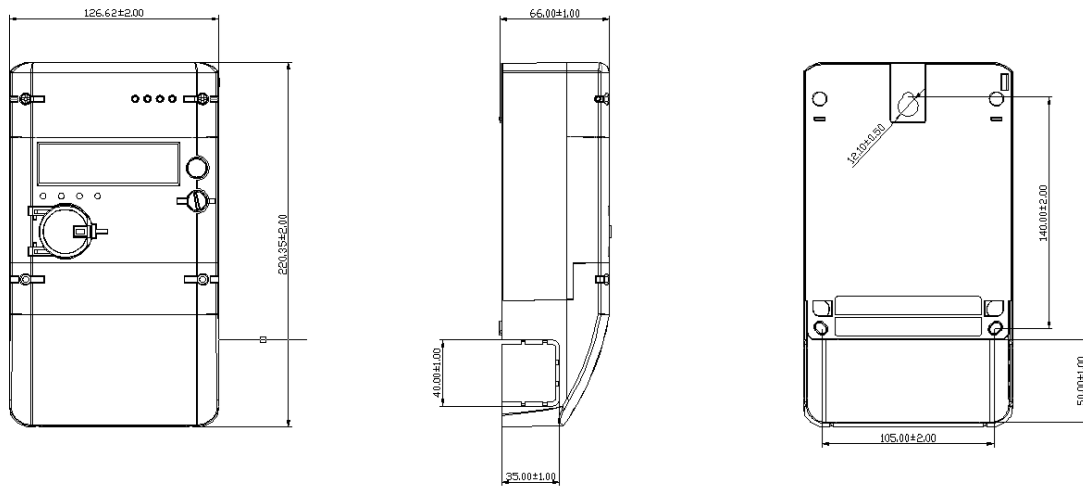
➤ Communication

- Optical port comply with IEC62056-21 E mode. Support local communication
- Plug-play Slot support connect RF/PLC/GSM module for remote communication

➤ **Security**

- Password protect parameter configuration.
- High level security: Support authentication and encryption with AES128 and GMAC algorithm for local and remotely communication.

Meter Installation Dimensions



➤ Connection

