

aMeter100

Single Phase Smart Energy Meter

Designed for residential and industrial energy management

Providing flexible solution for your AMI initiatives

www.wasion.com

Description	Value
Voltage	
Reference voltage	230V
operating voltage range	60% ~ 130%Un
Current	
Basic current	5A
Maximum current	60A
Starting current	0.4%Ib
Accuracy	Class 1.0 for kWh, Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz
Frequency range	± 5%
Pulse constant	Default: 1000 imp/kWh , 1000 imp/kvarh
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)	≤6 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)	8 kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection degree	IP54
Breaker	Optional
Lifetime	Bi-stable relay 10000 cycles at I_{max} PF=1 and PF=0.5L
Performance	UC2 or UC3
Maximum switching Voltage	250VAC
Maximum switching current	100A
Maximum switching power	30kVA
Lifetime	\geq 15 years

■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irma, Frequency,
- Import/export active energy, import/export reactive energy, 4Q reactive energy, apparent energy
- Lots of energy and demand registers (A+, A-, R+, R-, +S,-S)

➤ RTC

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

➤ Tariff

- Up to 8 tariff
- Up to 100 exception day/Holiday
- Up to 6 seasons and 6 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ Battery backup

- Flexible backup power for RTC, including replaceable battery or inside battery or super capacitor

➤ Load control

- Remote control command support
- Over current control support
- Power limit support

➤ Firmware upgrading

- The firmware can be upgraded via local interface and WAN interface.
- Schedule activity image support
- Roll-back last version image support

➤ Profiles

- Energy and power profiles (30min(default), up to 32 channels, up to 90 days)
- Daily profiles (24h, up to 32 channels, up to 32 days)
- Month billing profiles, Up to 12 billing records and 32 channels
- Configurable interval and capture objects of profiles

➤ Event record

- Fraud detection log (Meter cover, terminal cover, current reverse, magnetic detect etc.)
- Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event log (Under voltage / Over voltage, (Sag/Swell), Power up/down, etc.)
- Over current/Current imbalance
- Security event log (Parameters change, clock adjust, etc.)
- Standard event log(Power up/down, synchronization, etc.)

➤ Disconnect control

- Over power limit disconnect and reconnect automatically according to configurable delay time
- Tamper disconnect(meter cover removed, terminal cover removed, magnetic detection)
- No credit disconnect , reconnect by charge

- Disconnect or reconnect control by remote

➤ **WAN communication (optional)**

- Plug and play module to support various communication technology
- G3 PLC or BPLC, RF Mesh
- GPRS, 3G, 4G, Ethernet
- Protocol: DLMS/COSEM

➤ **HAN communication (optional)**

- RS485
- RF module or FSK PLC
- Communicate with in-home display(UIU/IHD)
- Protocol: DLMS/COSEM

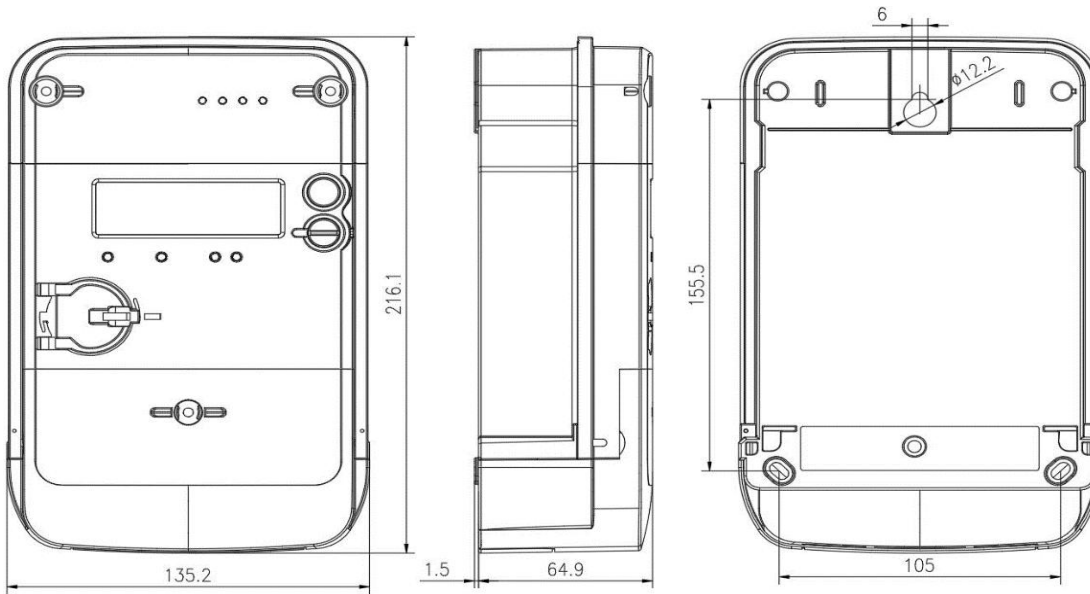
➤ **Optical port**

- Comply with IEC62056-21 standard
- Protocol: DLMS(IEC62056-21 mode E)
- Sealing for optical port is supported

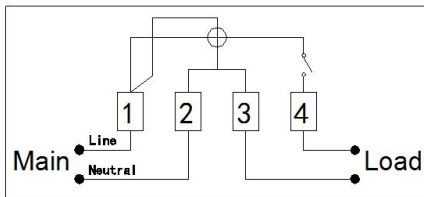
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remote communication
- HLS support authentication and encryption for local and remote communication

➤ Meter Installation Dimensions



➤ Meter Wiring



➤ Certificates

MID

