



HXE110

Single Phase
Smart Meter

Focus on creating value for clients

HXE110

HXE110 is a smart single phase direct connected residential meter. Enable utilities to monitor all essential factors of power grid such as voltage, current, power factor and power quality items.

Hot plug module design enable utilities to deploy it in different environments with different communication requirements.

As multiple I/O extensible property is an important factor in smart meter to guarantee future smart grid application.



Main functionalities

Measurement

- 1P2W connection
- Direct connection
- Import & Export & Total & Net kWh
- Import & Export kvarh
- Four-quadrant kvarh
- Total & Per tariff

Instantaneous Values

- Power, voltage, Current
- Power Factor, Frequency

Power Quality Monitoring

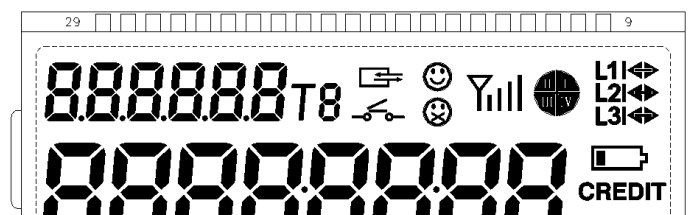
- Under & Over voltage
- Power down
- Reverse Energy Sense
- Low power factor, Low & High Frequency

Events & Alarm

- Multiple kinds of events
- Up to 500 records for individual kind of event
- Pre-programmed Alarms for meter Self-check
- Alarms, tamper and power quality trigger event log
- Alarms indicator (LED/LCD)

LCD

- Display area size 64.5mmx23mm
- Display digital size 8.4mmx5mm
- Backlight (optional)
- Configurable automatic & manual display list
- Test mode (optional)
- OBIS codes (according to IEC62056-64)



RTC (Real Time Clock)

- Quartz crystal time resource
- Gregorian calendar
- DST (Daylight Saving Time, optional)
- Lithium battery(exchangeable/inner) or/and super capacitor

Billing Data

- 13 monthly billing periods
- 62 daily billing periods
- Automatic reset/ Manual reset

Local access

- PC software
- HHU
- 3 data access levels
- Data access management for all ports
- Metrology data protection

Load Profile

- Up to 512k bytes of non-volatile memory
- Over 100 days storage (8 channel, 15 minutes)
- Up to 60 channels per profile
- Capture period (0,1,5,15, 30, 60, ...1440 min)
- Energy, power, voltage, current, frequency, etc.

Communication

- Optical port: IEC62056-21E or HDLC
- RS485 port: IEC62056- 21E or HDLC
- P1 port (optional)
- Hot-plug module: GPRS, PLC, 3G, RF,4G , etc.
- Up to 4 Independent communication ports
- HAN port: M-bus (optional)
- Data encryption schemes to ensure the data security in communication

Anti-Tamper

- 6 sealing position (1 terminal cover, 2 main cover, 2 module cover and 1 Sealable button)
- Main & Terminal & Module cover removal detection
- Reverse current
- Strong magnetic field detection (optional)
- By-pass detection (optional)

Demand Monitoring (optional)

- Block/Slide mode
- Programmable integration period (1~60 minutes)
- Import & Export Active MD
- Import & Export Reactive MD
- Import & Export Apparent MD
- Pre-set time (automatic) MD reset
- Manual reset (button/ communication) MD reset

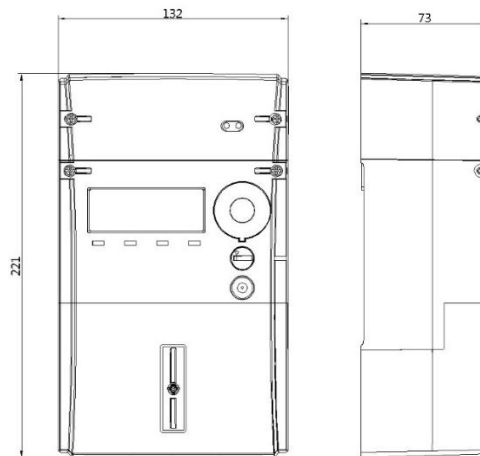
TOU (Tariff Of Use, optional)

- Up to 4 tariffs
- Up to 8 day tables, Up to 8 divisions per day
- Up to 8 week tables
- Up to 6 season tables
- Up to 50 holiday & special days tables

Specifications

Application		Direct connection
Accuracy	Active	Class 1 (IEC) / Class B (EN)
	Reactive	Class 2 (IEC)
Voltage	Reference voltage	1P2W: 220V, 230V, 240V
	Operating voltage range	70%-120%Un
Current	Basic current	5A/10A
	Maximum current	60A,80A,100A
	Starting current	≤0.4%Ib(active) ≤0.5%Ib(reactive)
Frequency		50Hz
Temperature	Operation range	-40°C~70°C
	Limit range for storage and transport	-40°C~70°C
Humidity		Up to 95% non-condensing
Power Consumption	Power consumption in voltage circuit (active)	≤2W
	Power consumption in voltage circuit (apparent)	≤10VA
	Power consumption in current circuit	≤2 VA
Insulation Strength	AC voltage test	4kV during 1min
	Impulse voltage test	1.2/50μs mains connections 6kV
EMC	Electrostatic discharges(Contact discharges)	8kV
	Electrostatic discharges(Air discharges)	15kV
	Surge immunity test	4kV
	Fast transient burst test	4kV
	Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection (diameter)	Terminals	9.5mm
Housing	Protection degree	IP54
	Meter cover	Polycarbonate + GF with a transparent window
	Meter base	Polycarbonate + GF
	Terminal cover	Polycarbonate + GF
Communication Interface	Optical communication	IEC62056-21E or HDLC
	RS485	HDLC
Weight	Net weight	Approx.1.08kg
	Package	Approx.0.1kg
Dimension (H x W x D)	With long terminal cover	221/201mm×132mm×73mm
Standard		IEC62052-11, IEC62053-21, IEC62053-23, IEC62056-21, IEC62056-42, IEC62056-46, IEC62056-47, IEC62056-53, IEC62056-61, IEC62056-62 EN50470-1, EN50470-3

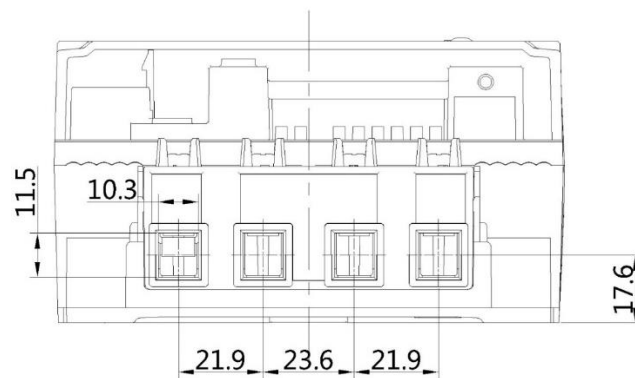
■ Dimensions



Dimension of smart meter

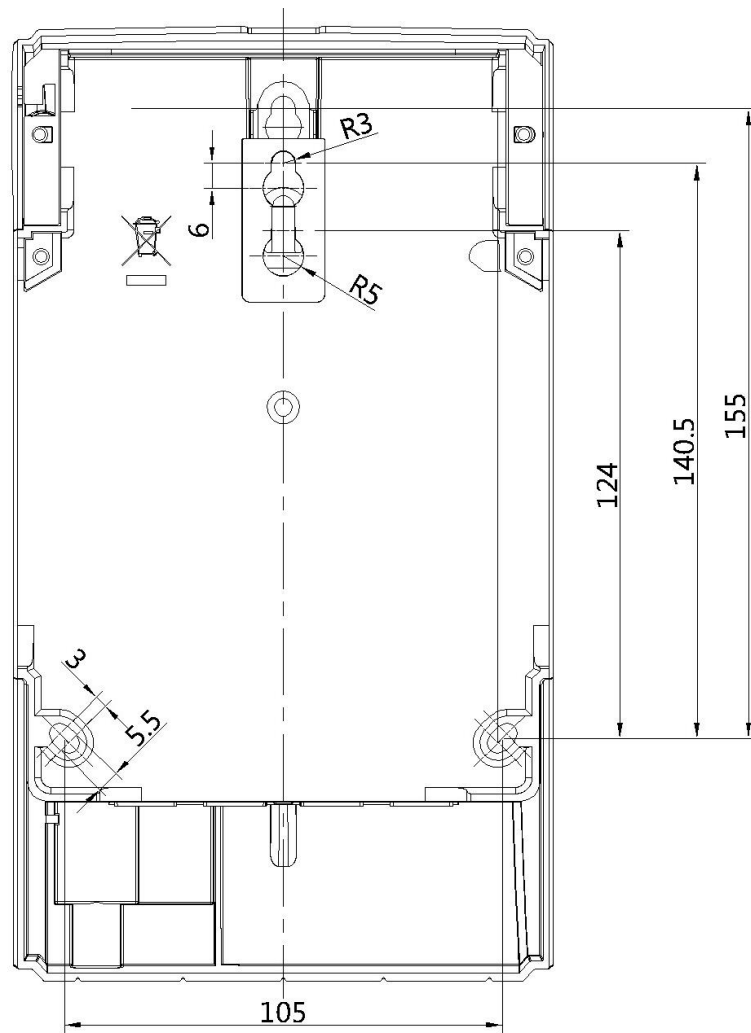
- Length——221mm(30mm terminal cover) or 201mm(10mm terminal cover)
- Width——132mm
- Height——73mm
- Terminal space——30mm or 10mm

■ Terminal drawing

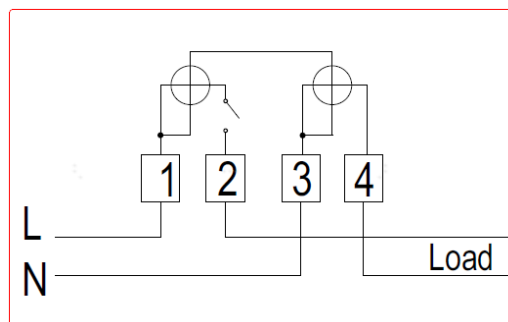


Dimension of Terminal Block

■ Installation Dimension



■ Connection Diagram



1P2W LLNN Connection