



HXE110

**Single Phase
Two Wire Smart Meter**

Focus on creating value for clients



HXE110 is a smart residential meter with modular design. With plug & play communication module (GPRS/PLC/RF), the meter is designed to keep it working in complex environment by selecting suitable communication module.

■ Highlights

- Plug & play communication module
- Open standardized protocol: DLMS/COSEM
- Local and remote firmware upgrade
- Data encryption schemes to ensure the data security in communication
- Internal switch relay for load demand control by configuration or remote communication

■ Main Functionalities

➤ Measurement

- Forward and reverse active energy in tariff
- Forward and reverse reactive energy in tariff
- Forward and reverse apparent energy in tariff
- Four quadrant reactive energy in tariffs
- Instantaneous value measurement

➤ Tariff

- Up to 4 tariffs
- up to 8 divisions per day, weekend configurable
- Up to 4 seasons, working days and weekend tariff scheme configurable per season
- Up to 100 holidays configurable individually. Holidays applied with sole tariff or with a holiday tariff scheme
- 8 daily tables
- Standby tariff table available

➤ 12-Month Billing Data

➤ Demand

- Demand Interval configurable
- Block or slide mode configurable
- Forward and reverse active MD in tariff with

time stamp

- Forward and reverse reactive MD in tariff with time stamp
- Forward and reverse apparent MD in tariff with time stamp
- Cumulative MD

➤ LCD display

- Large digit LCD display, easy for reading
- Display readable without main power (RWP)
- Standardized OBIS display
- 2-month billing data (forward active in tariff) displayable
- LCD backlights to increase readability in low light conditions(optional)

➤ LED for metering calibration

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5\text{s}$ (23°C)
- Day light saving configurable
- Calendar type configurable: MMDDYY, DDMMYY or YYMMDD

➤ Event Record

- Multiple event detections and records with categories of operation, power grid and tampering
- Event record with large capacity(up to 200 items per event type)
- Neutral line sensor for tampering-proof, detecting bypass, neutral line earthed(optional)

➤ Load control

- Up to 100A
- Flexible load control method

➤ Load profile

- Up to 17 channels
- 3400K bytes available in total
- Average, maximum, minimum value of voltage, current, power, frequency can be recorded

■ Specifications

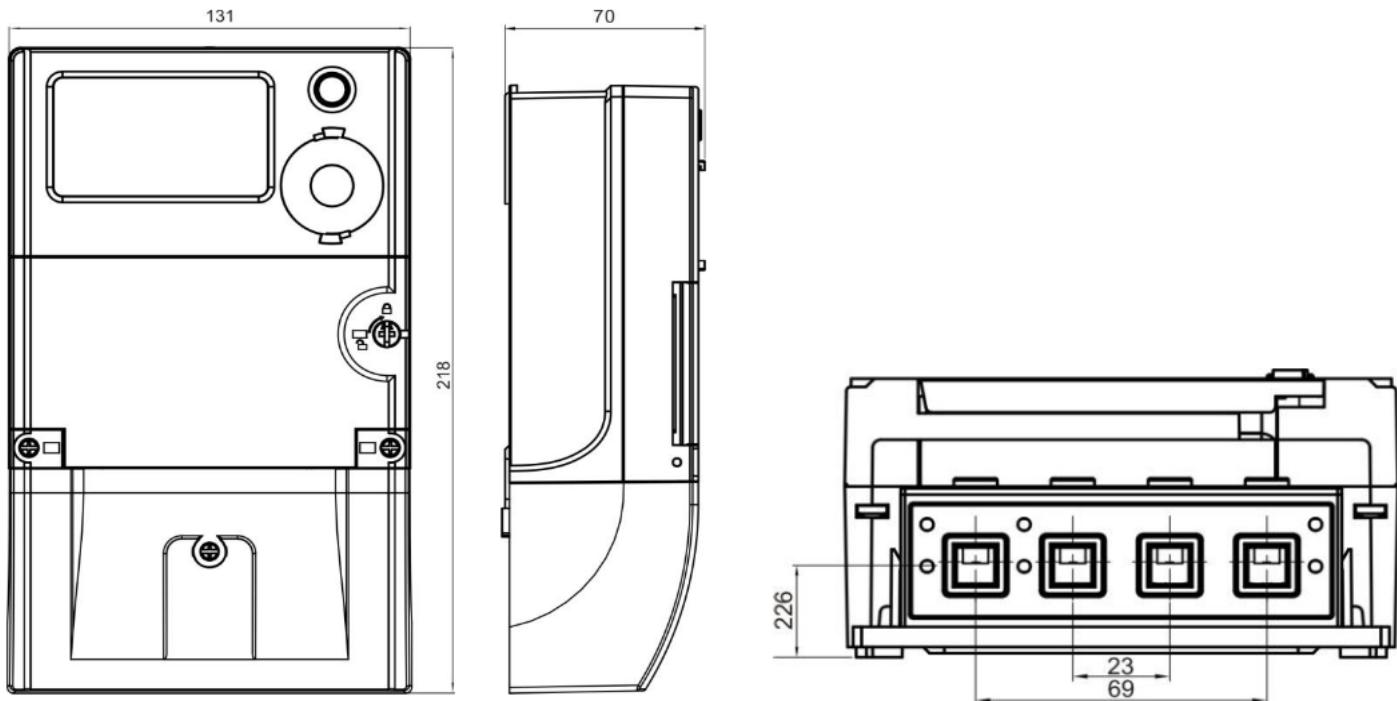
Description	Value
Accuracy	Class 1 or 2 (IEC), Class A or B (MID)
Voltage	
Reference voltage	110-127V, 220-240V
Operating voltage range	80%-115%Un
Current	
Basic current	5A,10A
Maximum current	40A, 60A, 80A, 100A
Starting current	<0.4%lb
Frequency	50Hz or 60Hz
Temperature	
Operation range	-25°C to +60°C
Limit range for storage and transport	-40°C to +75°C
Humidity	Up to 95%
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 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 Terminals	Ø 8mm
Housing	
Protection degree	IP54(with long terminal cover)
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC
Terminal cover	Opaque PC

Display	
Digit size	8.0mm x 4.2mm
Number of digits	8
Communication Interface	
Optical communication	DLMS/COSEM, data encryption
RS485	DLMS/COSEM, data encryption
plug-and-play communication module	According to Corresponding standard
Weight	
Net weight	Approx.0.87kg (without communication module) Approx.0.93kg (+PLC communication module) Approx.0.93kg(+GPRS communication module)
Package	Approx.0.4kg
Dimension	190mm×130mm×78mm (Extended terminal cover)

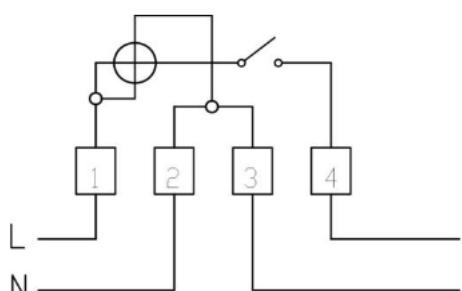
■ Standard

IEC62052-11	Electricity metering equipment (a.c.) General requirements, tests and test conditions – Part 11: Metering equipment
IEC62053-21	Electricity metering equipment (a.c.) Particular requirements –Part 21:Static meters for active energy(classes 1 and 2)
IEC62053-23	Electricity metering equipment (a.c.) – Particular requirements –Part 23: Static meters for reactive energy (classes 2 and 3)
IEC62056-21	Electricity metering – Data exchange for meter reading, tariff and load control – Part 21:Direct local data exchange
IEC62056-46	Electricity metering – Data exchange for meter reading, tariff and load control – Part 46: Data link layer using HDLC protocol
IEC62056-47	Electricity metering – Data exchange for meter reading, tariff and load control – Part 47:COSEM transport layer for IP networks
IEC62056-61	Electricity metering – Data exchange for meter reading, tariff and load control – Part 61:OBIS Object identification system
IEC62056-62	Electricity metering – Data exchange for meter reading, tariff and load control – Part 62:Interface classes
EN50470-1	Electricity metering equipment (a.c.) —Part 1: General requirements, tests and test conditions — Metering equipment(class indexes A, B and C)
EN50470-3	Electricity metering equipment (a.c.) —Part 3: Particular requirements —Static meters for active energy (class indexes A, B and C)

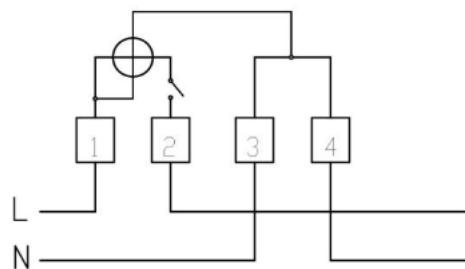
■ Dimensions



■ Connection Diagram



Symmetric Connection



Asymmetric Connection

COMPANY HEADQUARTERS

Add: 1418-5 Moganshan Road,
Shangcheng Industrial Zone, 310011,
Hangzhou City, China

Tel: 86 571 28029898
Fax: 86 571 28029258

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