



HXE310-KP

Three Phase
Network Prepayment
Keypad Meter

Focus on creating value for clients



HXE310-KP is a new generation of smart prepayment meter which integrates STS with AMI functionalities. With a keypad in the front of the meter cover, it supports multi-vending feasibilities for both remote and local credit charging.

■ Highlights

- STS standard protocol ensures an open and secure operating system
- Optical communication, open protocol: DLMS/COSEM (E mode)
- Internal switch relay for load demand control by configuration or remote communication
- Prepayment and post-payment mode switchable for users' convenience
- A plug-and-play communication module (GPRS/ PLC/RF/ZIGBEE)

■ Main Functionalities

➤ Measurement

- Unidirectional or Bi-directional Measurement
- Record active energy in tariffs
- Instantaneous value measurement

- 12-month billing data and other frozen data for inquiry

- Prepayment is made via a numeric token with extended ways of recharging

➤ LCD Display

- Balance display configurable
- Large digit LCD display, easy for reading
- LCD backlights to increase readability in low light conditions(optional)
- Scrolling display configurable for instant information enquiry
- Display readable without main power (RWP)
- LCD backlights to increase readability in

low light conditions

- 6-month billing data (active energy) displayable

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s$ (23°C)
- Day light saving configurable

➤ Event Record

- Fraud protection function. The relay will be disconnected for fraud protection once detects the cover open and terminal cover open events
- Multiple event detections and records with categories of operation, power grid and tampering

- RS485 Communication with interface in accordance to DLMS standard (optional)

- Emergency Credit for a certain sum of energy

- supply depending on User's credit level
- User-friendly mode for energy supply for low credit during weekends or holidays (optional)
- **Tampering Proof**
 - Meter Cover open detection and record
 - Meter terminal detection and record
 - Bypass (optional)
 - Large magnetic event(optional)
- Auxiliary Terminal for Energy Pulse Output(optional)
- **Demand**
 - Demand Interval configurable
 - Block or slide mode configurable
- Forward and reverse active MD with time stamp
- **Tariff**
 - TOU
 - Step configurable.
- **Load profile**
 - Channel quantity customized before leaving the factory; Up to 8 channels
 - Data for load profile record configuration

■ Specifications

Description	Value
Accuracy	Class 1 or 2 (IEC), Class A or B (MID)
Voltage	
Reference voltage	3×220/380V-3×240/415V
Operating voltage range	70%-120%Un
Current	
Basic current	5A,10A
Maximum current	40A, 60A, 80A, 100A
Starting current	< 0.4%Ib
Frequency	50Hz or 60Hz
Temperature	
Operation range	-25℃ to +60℃
Limit range for storage and transport	-40℃ to +75℃
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	∅ 8mm

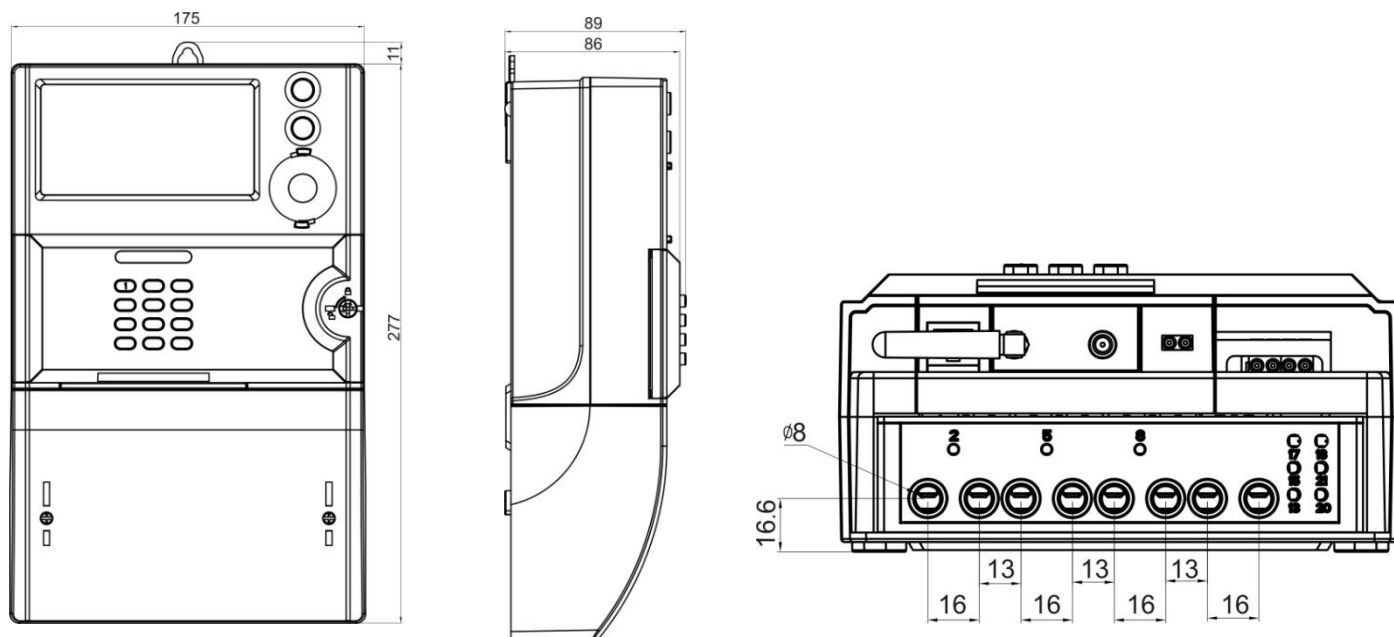
Housing	
Protection degree	IP54(with long terminal cover)
Meter cove	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Opaque PC+ fiber glass
Display	
Digit size	8.8mm x 4.5mm
Number of digits	8
Communication Interface	
Optical communication	DLMS/COSEM
RS485	DLMS/COSEM
PLC/GPRS communication module	
Weight	
Net weight	Extended terminal cover: Approx.1.50kg (without communication module) Approx.1.59kg(+PLC communication module) Approx.1.62kg(+GPRS communication module) Short terminal cover: Approx.1.45kg (without communication module) Approx.1.54kg(+PLC communication module) Approx.1.57kg(+GPRS communication module)
Package	Approx.0.6kg
Dimension	277mm×175mm×89mm (Extended terminal cover) 234mm×175mm×89mm (Short terminal cover)

■ Standard

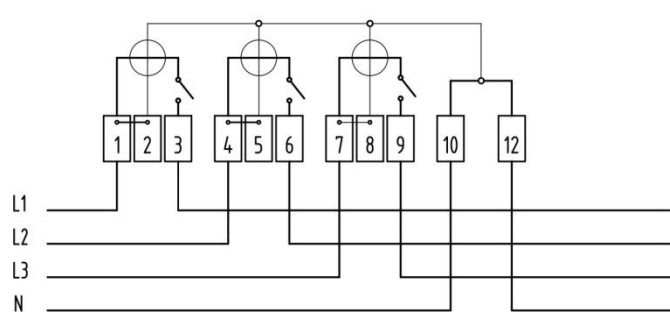
IEC62052-11	Electricity metering equipment (a.c.) General requirements, tests and test conditions – Part 11: Metering equipment
IEC62053-21	Electricity metering equipment (a.c.) Particular requirements –Part 21:Static meters for active energy(classes 1 and 2)
IEC62053-23	Electricity metering equipment (a.c.) – Particular requirements –Part 23: Static meters for reactive energy (classes 2 and 3)
IEC62055-41	Electricity metering - Payment systems - Part 41: Standard transfer specification (STS) - Application layer protocol for one-way token carrier systems
IEC62055-51	Electricity metering - Payment systems - Part 51: Standard transfer specification (STS) - Physical layer protocol for one-way numeric and magnetic card token carriers
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
IEC62056-53	Electricity metering – Data exchange for meter reading, tariff and load control – Part 53:COSEM Application layer
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)

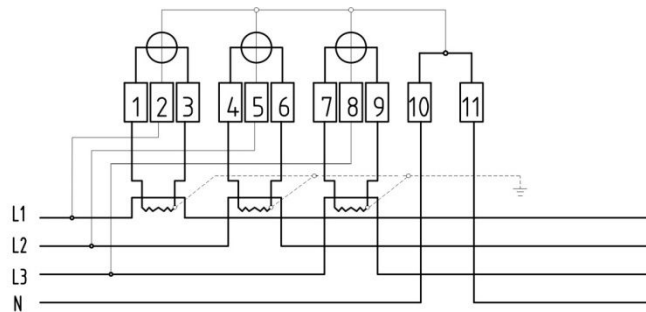
■ Dimensions



■ Connection Diagram



Direct Connection Type



Transformer Operated Type

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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