



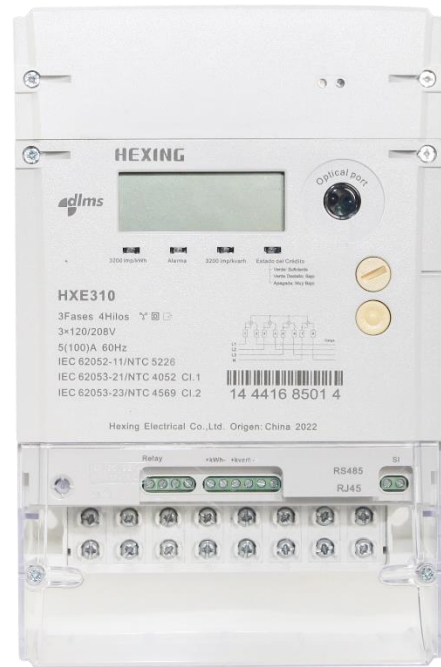
# HXE310

Polyphase  
Smart DC Meter

*Focus on creating value for clients*

# HXE310

HXE310 is a smart two/three phase direct connected 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

- 3P4W/2P3W 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

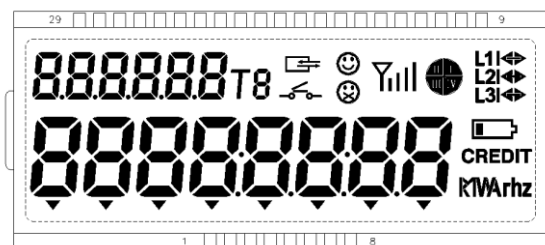
- Under & Over voltage
- Power down
- Reverse Energy Sense
- Low power factor, Low & High Frequency

### Events & Alarm

- Multiple kinds of events
- Up to 100 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 64.5mm×23mm
- Display digital size 8.4mm×5mm
- Backlight (optional)
- Configurable automatic & manual display list
- Test mode
- OBIS codes (according to IEC62056-64)
- RWP (Read Without Power) (optional)



**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 2504kbytes of non-volatile memory
- Over 60 days storage (8 channel, 15 minutes)
- Capture period (5,15, 30, 60, ...1440 min)
- Energy, power, voltage, current, frequency, THD etc.

**Communication**

- Optical port: IEC62056-21E or HDLC
- RS485 port(RJ45 or two wired): IEC62056- 21E or HDLC
- Hot-plug module: GPRS, PLC, 3G, RF,4G , etc.
- Up to 3 Independent communication ports
- Data encryption: DLMS Security suite 0 or suite 1

**Anti-Tamper**

- 7 sealing position (2 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)
- Phase-reverse detection (optional)

**Demand Monitoring**

- 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

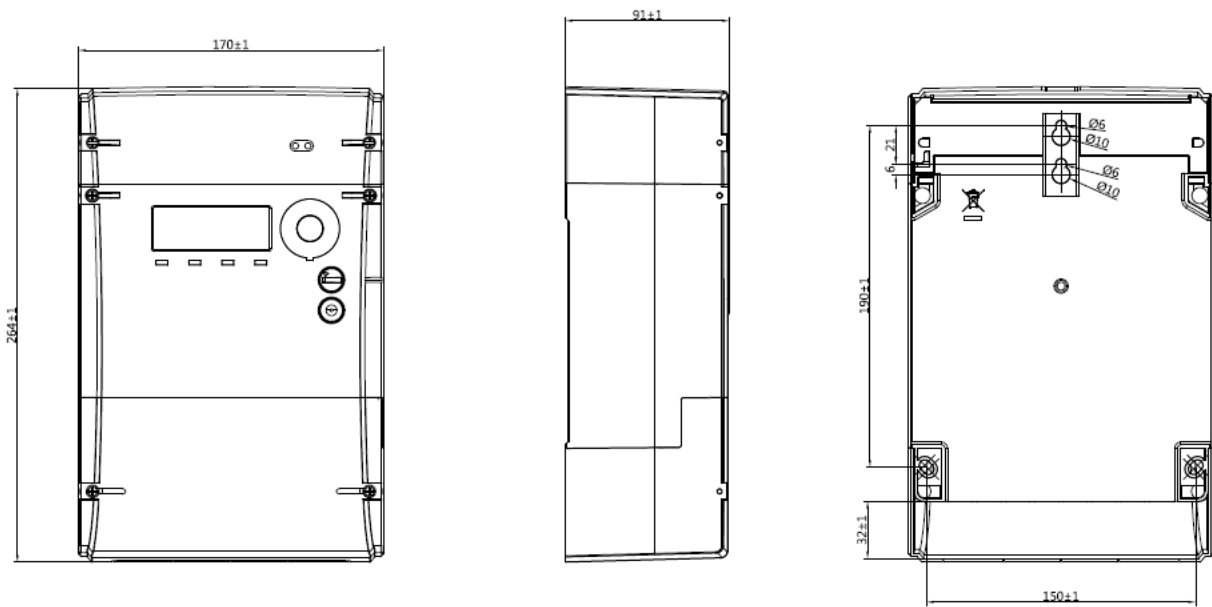
**TOU (Tariff Of Use)**

- 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

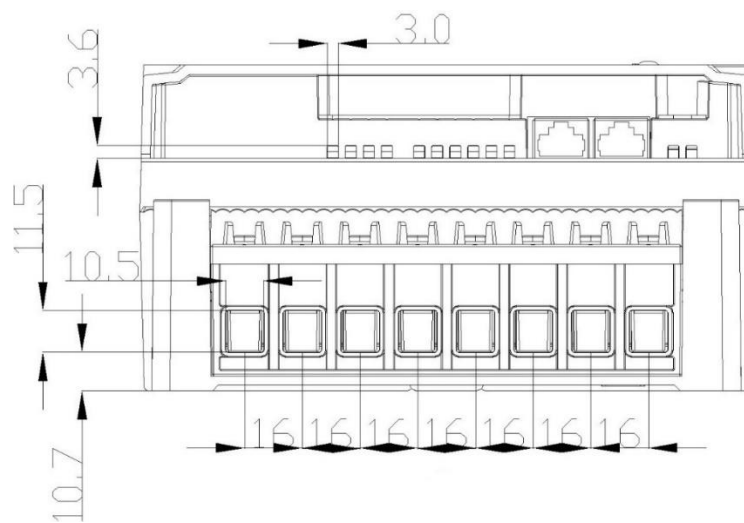
<b>Application</b>		Direct connection
<b>Accuracy</b>	Active	Class 1
	Reactive	Class 2
<b>Voltage</b>	Reference voltage	3P4W: 3×120/208V 2P3W: 2×120/208V
	Operating voltage range	70%-120%Un
<b>Current</b>	Basic current	5A, 10A
	Maximum current	60A, 80A, 100A
	Starting current	≤0.4%Ib(active)    ≤0.5%Ib(reactive)
<b>Frequency</b>		60Hz
<b>Temperature</b>	Operation range	-40°C~70°C
	Limit range for storage and transport	-40°C~70°C
<b>Humidity</b>		Up to 95% non-condensing
<b>Power Consumption</b>	Power consumption in voltage circuit (active)	≤2W
	Power consumption in voltage circuit (apparent)	≤10VA
	Power consumption in current circuit	≤2 VA
<b>Insulation Strength</b>	AC voltage test	4kV during 1min
	Impulse voltage test	1.2/50μs mains connections    6kV
<b>EMC</b>	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)
<b>Connection</b>		10mm
<b>Terminals(diameter)</b>		
<b>Housing</b>	Protection degree	IP54( without suction )
	Meter cover	Polycarbonate + GF with a transparent window
	Meter base	Polycarbonate + GF
	Terminal cover	Polycarbonate + GF
<b>Communication Interface</b>	Optical communication	IEC62056-21E or HDLC
	RS485	IEC62056-21E or HDLC
<b>Weight</b>	Net weight	Approx.2.28kg(3P4W)
		Approx.2.kg(2P3W)
	Package	Approx.0.1kg
<b>Dimension (H x W x D)</b>	With long terminal cover	264mm×170mm×91mm
<b>Standard</b>		IEC62052-11, IEC62053-21, IEC62053-23, IEC62056-21, IEC62056-42, IEC62056-46, IEC62056-47, IEC62056-53, IEC62056-61, IEC62056-62

## ■ Dimensions

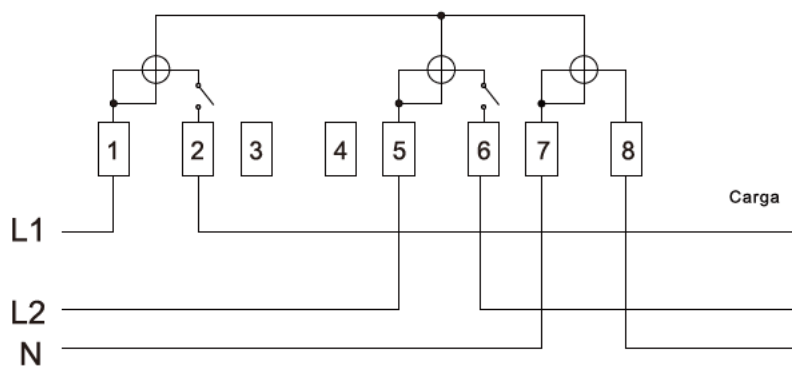


Long terminal cover

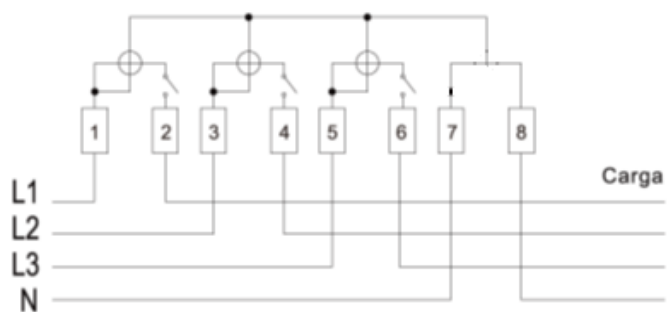
## ■ Terminal drawing



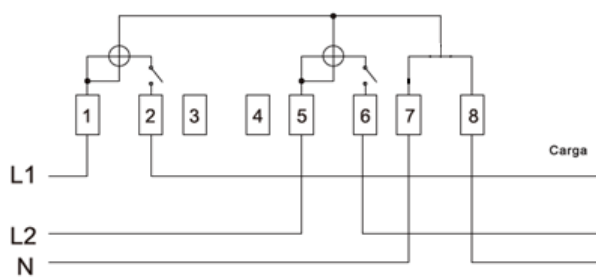




**2P3W Asymmetric Connection(with bypass)**



**3P4W Asymmetric Connection(without bypass)**



**2P3W Asymmetric Connection(without bypass)**