kwhiq
energy information technology





IQ ENERGY METERING SOLUTIONS





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Meet the new 1-phase 65A energy monitoring solution

We provide Energy Information Technology with comprehensive monitoring, security and control functionality. Our modular approach let you choose your preferred communication technology.



Direct 1-phase 65A meter IQ0102065BNEM01-0

- Plug and play 4G-LTE Cat-M communication module with 2G fallback and optional NB-IoT (optional support for other communication technologies like PRIME-PLC/G3-PLC/LAN/...).
- Compliant with DLMS/COSEM.
- Improve revenue and energy efficiency with advanced measurement and tariffication.
- Remote authenticated firmware upgrade.
- Last Gasp function.
- Protected from fraud or tampering. Alarm and events record. MID approved.
- P1 port to push data in accordance with DSMR 5.0.2.
- Accurate clock and daylight saving time supported.

mainfeatures

Measurement and power quality

- Energy registers: total active and reactive energy, import and export active and reactive energy, reactive energy per quadrant.
- Rated energy registers: these energy values per tariff rate.
- Demand: (rated) demand and maximum demand registers with configurable maximum demand integration period (typically 5, 15, 30 or 60 minutes).
- Instantaneous/average active, reactive and apparent power
- Instantaneous net frequency, power factor, voltage (rms) and current (rms).

Billing data

- 13 months meter & equipment data available; cumulative active energy import and export, cumulative reactive energy import and export.
- 31 days cumulative active energy import and export, cumulative reactive energy import and export, cumulative reactive energy for each quadrant 1~4.

Profiles for energy and power quality

- 55 days logging of cumulative active energy, import and export with a capture period of 15 minutes.
- 31 days logging of cumulative active energy, import and export for rate 1 and rate 2, with daily captures.
- 15 days logging of average voltage, current, import & export active & reactive power, power factor. With 10 minute captures.
- Periodicity and channels of the profiles are programmable.

Firmware upgrade

- Remote authenticated firmware upgrade.

Real time clock

- Accuracy according to EN62054-21 (< 0,5 sec deviation per day).
- Daylight saving time supported.
- Remote and local synchronization available.
- RTC retention during power outages (5 days).

Communication interface

- Remote communication to HES via modular LTE Cat-M / NB-IoT / 2G communication module.
  - Always on or triggered configuration.
  - Last gasp to push information before powering off.
- P1 port with RJ12 connector to push data to customer's device (DSMR 5.0.2).
- Local communication via optical port.

Display

- LCD without backligt.
- With Obis codes and icons.
- Three programmable display modes (auto scroll, manual scroll and steady message).
- LEDs on the WAN communication module to indicate the communication status.
- Two LEDs for active and reactive energy pulse output.

Anti-tamper features

Detection and alarming for:

- Main and terminal cover open (power on and power outage).
- Communication module removal.
- Access with incorrect credentials.
- Magnetic field tampering.

Event record

- Up to 255 kinds of event records with timestamp.
  - Long / short term power failure.
  - Tampering events.
  - Voltage quality events.
  - Firmware upgrade events.

Privacy and security

- DLMS Low Level Security.
- DLMS High Level Security 5 (AES/GMAC).
- Data encryption and authentication.
- Key-wrapping.

technicalspecifiations

Reference standard

- EN 50470-1, EN 50470-3, IEC 62059-31/41, IEC 62052-11, IEC 62053-21/23; IEC 62056-21/46/53/61/62, EN55022

Electrical

Accuracy	Active	Class B
	Reactive	Class 2
Voltage	Rated Voltage	230V
	Operation voltage range	80% to 120% Un
Current	Rated current	5(65)A
	Starting current	20mA
Frequency	50Hz ± 2%	
Power consumption	Voltage circuit	≤2W, 10VA
	Current circuit	≤1VA
Pulse constant	2000 imp/kWh(kvarh)	

Reliability

Meter life	15 Years
Data retention	≥15 Years

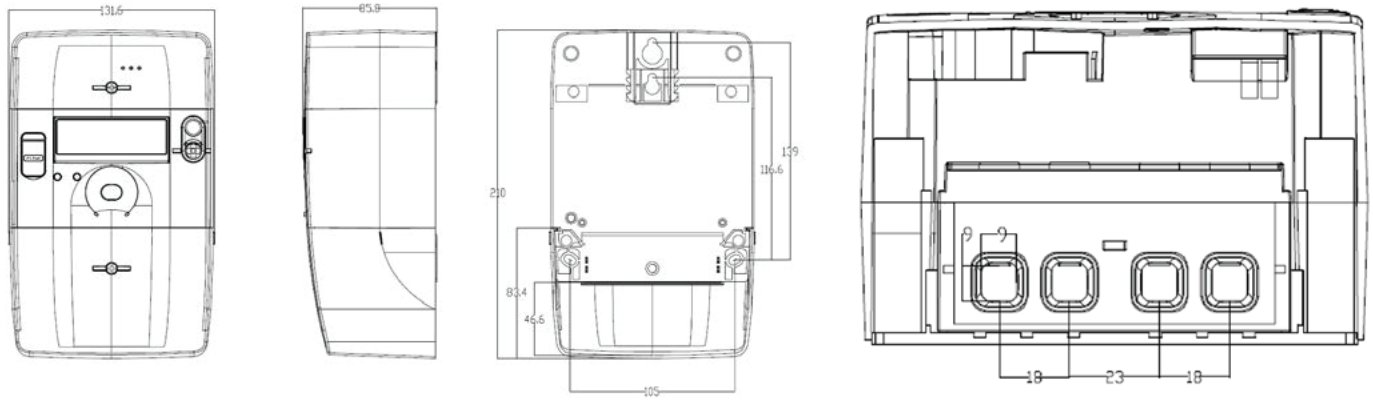
Mechanical

Dimensions (L x W x H)	210 x 131.6 x 85.8(mm)
Enclosure material	PC+GF
Insulation protection	Class II
Weight (Kg)	0.95
Terminals	Professional Lifting system with wrong connection prevention

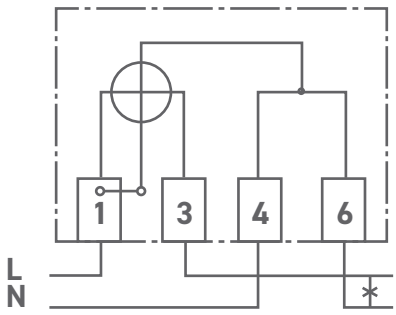
Environmental

Operating temperature	-40 ° C to 70 ° C
Operating humidity	Maximum 95% RH
Storage temperature	-40 ° C to 70 ° C
Ingress protection	IP54

Overall dimensions



Wiring diagram



Display format



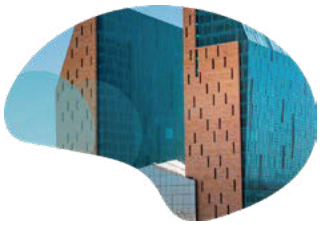
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