kwhiq
energy information technology



IQ0102080m1

Direct 1-phase 80A meter

- Plug and play LTE Cat-M communication module with GPRS fallback
- Compliant with DLMS/COSEM and MID.
- Improve revenue and energy efficiency with advanced measurement and tariffication.
- Remote authenticated firmware upgrade.
- Protected from fraud or tampering.
- Alarm and events record.
- P1 port to push data in accordance with DSMR 5.0.2
- Accurate clock and daylight-saving time supported.
- Wireless M-bus based local communication

Contact

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Main features

Measurement and power quality
- Energy registers: active energy, reactive energy, and apparent energy in four quadrants.
- Rated energy registers: 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).
- The measurement resolution is 1Wh/varh/VAh

Tariffs
- Programmable 2 sets of tariff structure, with 4 seasons, 4 weeks, 4 days and 8 Time-Of-Use tariffs
- 30 special days tariffs
- 13 months of billing history available; cumulative (re)active energy import & export

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 cumulative active energy import and export 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
- Daylight-saving time supported.
- Remote and local synchronization available.
- Retention of 5 days without power.

Communication interface
- Remote communication to HES via modular LTE Cat-M / GPRS communication module.
- P1 port with RJ12 connector to push data to customer's device (DSMR 5.0.2).
- Local communication via optical port
- Wireless M-bus based local communication, factory mounted, RF wireless on ISM band 868 MHz

Display
- LCD without backlight.
- With Obis codes and icons.
- Two programmable display modes (auto scroll and manual scroll).
- LEDs on the WAN communication module to indicate the communication status.
- One LED for energy pulse output.

Anti-tamper features
Detection and alarming for:
- Main and terminal cover open detection (regardless of meter power status).
- Access attempt with incorrect credentials.
- Magnetic field tampering.
- Phase sequence reverse detection
- Inverse current detection

Event record
- Up to 255 kinds of event records with timestamp such as:
  - Long / short term power failure.
  - Tampering events.
  - M-Bus events.
  - Firmware upgrade events.
- Remote Communication session log in 1 year

Privacy and security
- DLMS Low Level Security
- DLMS High Level Security 3, 4, 5 (AES/GMAC).
- Data encryption and authentication.
- Encryption Key-wrapping.

Technical specifiations

Reference standard
- EN 50470-1, EN 50470-3, IEC 60068-2/75, IEC 62052-11, IEC 62053-21/22/52, IEC 62054-21, IEC 62055-21, IEC 62056-21/53/61/62, IEC 62059-31/41/53, IEC 60695-2/11
- EN 13757-2/4

Electrical

Accuracy	Active	Class B
	Reactive	Class 2
Voltage	Rated Voltage	230V
	Operation voltage range	80% to 120% Un
Current	Rated current	5A
	Min / Max current	20mA / 80A
Frequency	50Hz ± 5%	
Power consumption	Voltage circuit	≤2W, 10VA
	Current circuit	≤0.5VA
Pulse constant	2000 imp/kWh(kvarh)	

Reliability

Meter life	15 Years	**Data retention**	≥15 Years

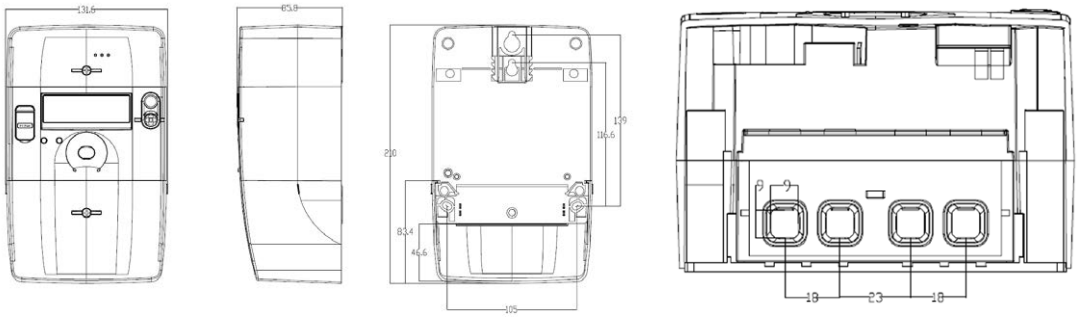
Mechanical

Dimensions (L x W x H)	224 x 134 x 89.5(mm)	**Weight (Kg)**	0.97
Enclosure material	PC+GF(glass filled polycarbonate)	**Insulation protection**	Class II
Terminals	Professional Lifting system		

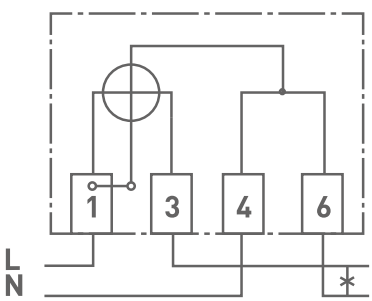
Environmental

Operating temperature	-40 ° C to 70 ° C	**Storage temperature**	-40 ° C to 80 ° C
Operating humidity	Maximum 95% RH	**Ingress protection**	IP54

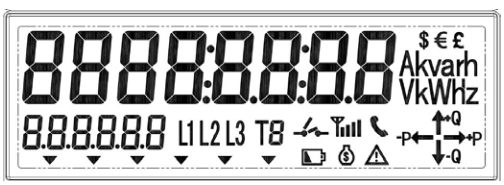
Overall dimensions



Wiring diagram



Display format



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