



IQ0304100b1

Direct 3-phase 100A 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 DSRM 5.0.2.
- > Accurate clock and daylight-saving time supported.
- > RS-485 port for reading and/or controlling Modbus RTU devices.

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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: 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).
- > 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.

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.
- > Modbus Master through the RS-485 port (A/B/ GND). Through this wired interface it is possible:
 - > To read data from supplementary (sub-)devices. This data is made available via 16 channels with 48 registers each and can be logged in configurable profiles.
 - > To control RS-485 devices remotely.

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.

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.
- > Two LEDs for active and reactive 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.
 - > 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 specifications

Reference standard

- > EN 50470-1, EN 50470-3, IEC 62052-11, IEC 62053-21/23/52, IEC 62056-21/53/61/62, IEC 60695-2/11, IEC 60529, IEC 60068-2/75, IEC 62054-21
- > EIA-485, Modbus-V1.1b3

Electrical

Accuracy	Active	Class B
	Reactive	Class 2
Voltage	Rated Voltage	3*230V / 400v
	Operation voltage range	80% to 120% Un
Current	Rated current	5A
	Min / Max current	25mA / 100A
Frequency	50Hz \pm 5%	
Power consumption	Voltage circuit	\leq 2W, 10VA per phase
	Current circuit	\leq 0.5VA per phase
Pulse constant	2000 imp/kWh(kvarh)	

Reliability

Meter life	15 Years	Data retention	\geq 15 Years
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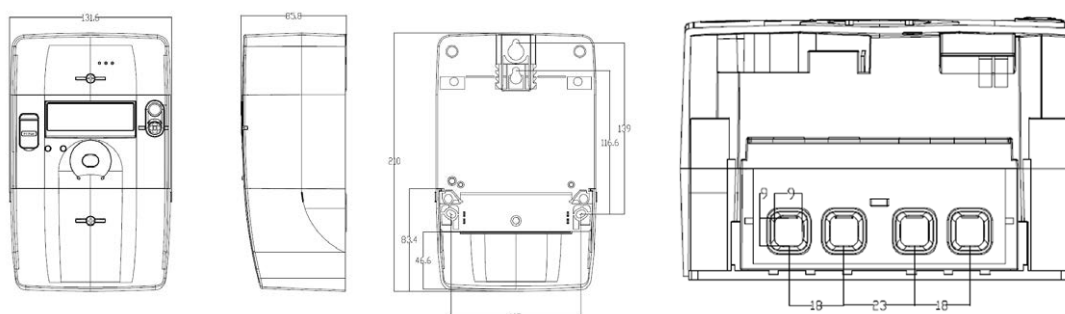
Mechanical

Dimensions (L x W x H)	210 x 131.6 x 85.8(mm)	Weight (Kg)	1,8
Enclosure material	PC+GF(glass filled polycarbonate)	Insulation protection	Class II
Terminals	Professional Lifting system		

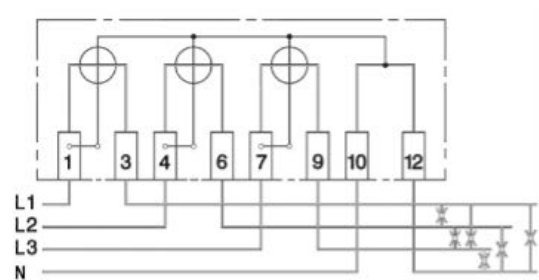
Environmental

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

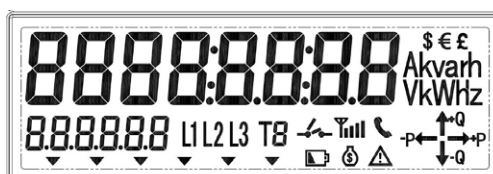
Overall dimensions



Wiring diagram



Display format



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