kwhiq
energy information technology

IQ ENERGY METERING SOLUTIONS

kwhiq

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Meet the new IQ0304100MEGR01+D
3-phase 100A electricity metering solution

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

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IQ0304100MEGR01+D smart three phase direct connected meter

> › Plug and play 4G-LTE communication module (optional support PRIME-PLC/G3-PLC/NB-IoT technology)
> › Compliant with DLMS/COSEM
> › Energy efficiency with advanced measurement with TOU
> › Disconnect / reconnect
> › Remote authenticated firmware upgrade
> › Last Gasp function
> › Protect from fraud or tampering
> › MID approved

main features

Measurement and power quality
› Import and export active/reactive/apparent energy/demand/power, 4 quadrants reactive energy/power; Configurable maximum demand integration period (typically 5, 15, 30 or 60 minutes); Instantaneous import voltage and current per phase, import/export power factor, Frequency; Instantaneous THDs for voltage, current, phase difference (voltage/current) per phase.

TOU
› 2 sets of tariff structure, up to 8 tariffs; 8 season/week/day profiles; 420 special days

Billing data
› 3 monthly billing data, 3 daily billing data

Load profile for energy and power quality
› At least 12 programmable channels for energy and demand load profile; At least 16 programmable channels for power quality load profile; Programmable profiles period (typically 5, 15, 30, 60 minutes). At least 90 days capacity for 30 minutes period.

Real time clock
› Remote and local synchronization available

Communication interface
› Optical port, baud rate default 9600bps
› Plug-and-Play module: support PRIME-PLC/G-PLC/4G-LTE/NB-IoT module
› One RS-485 interface (RJ-45 terminal with 12VDC 5W power out) for external communication module and connect to other RS-485 meters
› One RJ-45 RS-485 interface for IHD (RJ-45 terminal with 12VDC 5W power out)

Display and indicators
› Character type LCD to support text based messages with back light
› Two LEDs indicate active and reactive pulse
› One bi-color LED indicates the remote communication status

Disconnect/reconnect
› A latching relay, which complies with IEC 62055-31 UC3, supports the disconnect/reconnect power supply.

Backup power supply
› Replaceable battery with independent seal, support at least 1 year without main power supply.

Anti-tamper features
› Current reversal detection and measurement; CT open and CT bypass; Magnetic field detection and protection; Face cover and terminal cover open detection (normal and power outage); Phase Sequence Reversal; Phase voltage missing, neutral line missing; Phase-neutral swap.

Terminals
› One RJ-45 terminal for IHD port
› One RJ-45 terminal for RS-485 communication port

technical**specifiations**

Reference standard

> IEC 62052-11, IEC 62053-21/23, EN 50470-1/3, DIN 43857, IEC 62056-21/46/53/61/62

Electrical

Accuracy	Active	Class 1
	Reactive	Class 2
Voltage	Rated Voltage	3x230V/400V, 3x240/415V, 3x133V/230V
	Operation voltage range	80% to 120% Un
Current	Rated current	5(100)A
	Starting current	20mA
Frequency	50/60Hz ± 5% Hz	
Pulse constant	1000 imp/kWh(kvarh) (configurable as requirement)	
Power consumption	2W / 5 VA without P2 and P3 communication 6W / 16 VA with P2 and P3 communication No connected P1 device	
Power quality	EN50160	

Reliability

Meter life	≥15 Years
Data retention	≥20 Years
Real-time clock accuracy	Typically 5 ppm at 23 °C

Mechanical

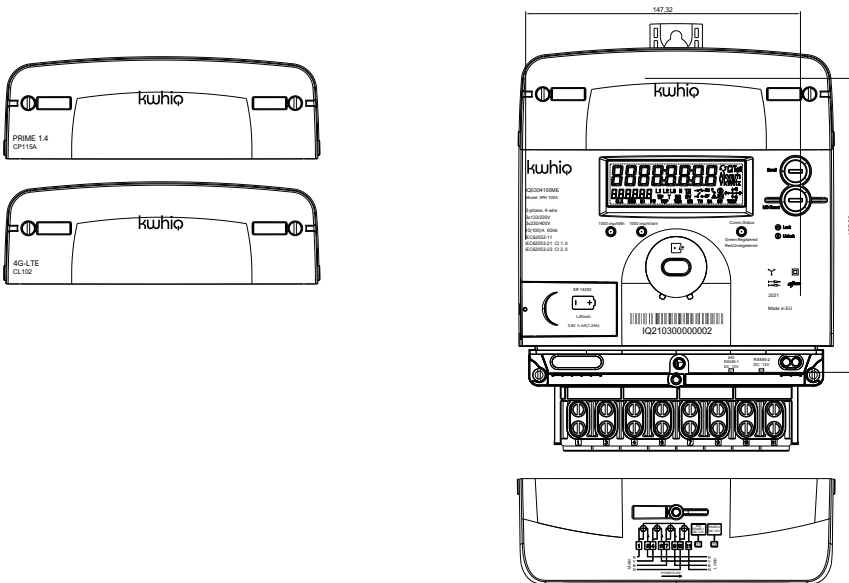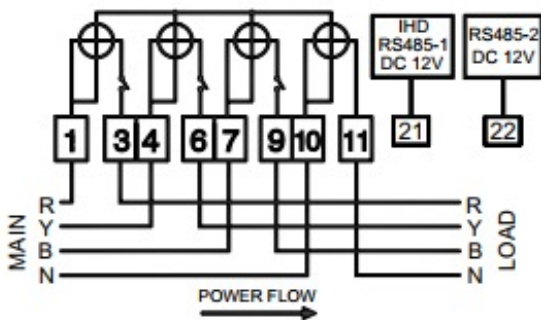|	
Dimensions (L x W x H)	216.5×170.5×87(mm)
Enclosure material	PC+GF
Insulation protection	Class II
Weight (Kg)	2.1
Terminals	Barrel type (RJ-45)

Environmental

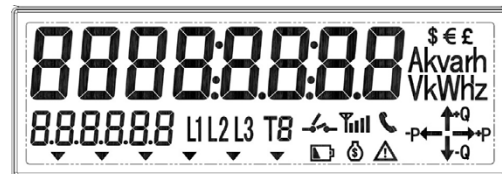|	
Limit operating temperature	-25 ° C to 75 ° C
Operating humidity	Maximum 95% RH
Storage temperature	-25 ° C to 85 ° C
Ingress protection	IP54

Overall dimensions

Wiring diagram

Pin no.	1	2	3	4	5	6	7	8
Pin-out	Modem PSU (12VDC+)		NC	RS-485 (+)	RS-485 (-)	NC	GND (VDC-)	

Display format

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