



## MA304H4

### Smart Poly Phase Meter

- Smart meter MA304H4 for smart energy data management
- Compliant with DLMS/COSEM and M-Bus
- Modular WAN/LAN capacity and HAN equipment's management
- Improve revenue and energy efficiency with advanced measurement with TOU
- Accurate clock and daylight saving time supported
- Disconnect/Reconnect
- Remote authenticated firmware upgrade
- Protect from fraud or tampering, alarm and events record
- Security, reliability
- optional short terminal cover for convenient installation
- Advanced design for operating costs reduction



## Main features

- **Measurement**
  - Total active and reactive energy
  - Import and Export active and reactive energy
  - Instantaneous voltage and current, PF, Vrms, Irms, active and reactive power
- **Billing data**
  - 175 days meter & M-Bus equipment's data available
  - Cumulative active and reactive energy
- **Profiles for energy and power quality**
  - 4 programmable channels for active and reactive energy and power quality profile
  - Programmable profiles capture period ( typically 5, 10, 15, 30 or 60 minutes )
- **Real time clock**
  - Accuracy according to IEC 61038
  - Daylight saving time supported
  - Synchronization with Time zone available
- **Communication interface**
  - WAN communication to CS via RF between meter and gateway or via LTE M/ GPRS/ NB-IoT/ LTE
  - HAN communication with Wired M-Bus to smart water/ gas/ heat meter
  - Wired M-Bus supports up to 50mA power supply
  - Available interface to IHD or more applications
  - Optical local communication, IEC62056-21 mode E
- **Display**
  - LCD without backlit, With OBIS code and icons. Four programmable display mode
  - Two LED, for active and reactive energy pulse output
- **Anti-tamper features**
  - Main and terminal cover open detection ( power on and power outage )
  - Access with incorrect key and reply
  - Magnetic field detection
- **Load control**
  - Disconnect / reconnect on request locally or remotely
  - 3-phase union relay
  - Automatically disconnect and reconnect with threshold
- **Event record**
  - Up to 40 kinds of event record with timestamp
  - Power failure long term / short term
  - Tampering events
  - Voltage related events
  - Relay control events
  - Firmware upgrade events
- **Privacy and security**
  - Support high level security 3, 4, 5 with encryption and authentication
  - Keys change wrapping
- **Advanced flexible platform design**
  - Support different communication channels GPRS / LTE / LTE M/ NB-IoT/ RF mesh/ PLC
  - Replace communication module without turning off
  - Support authenticated firmware upgrade remotely/locally
  - Compliant with DLMS/COSEM and M-Bus



## Technical specifications

### Reference standard

- EN 50470-1, EN 50470-3, IEC 62055-21, IEC 61008-1, IEC 62059-31/41, IEC 62052-11, IEC 62053-21/22/23
- IEC 62056-21/46/53/61/62 EN 13757-2/4 EN55022

### Approval

- DLMS
- MID/IEC

### Electrical

<b>Accuracy</b>	Active Reactive (optional)	Class B Class 2
<b>Voltage</b>	Rated voltage Voltage withstand Operation voltage range	3*230/400V;3*110V/190V;3*127/220;3*220V/380V;3*240V/415 440V 80% to 120% Un
<b>Current</b>	Rated current Starting current	5(100)A,10(100)A 20mA
<b>Frequency</b>	50Hz(60Hz) ± 5%	
<b>Power consumption</b>	Voltage circuit Current circuit	≤1.4W, 10VA ≤0.5VA
<b>Pulse constant</b>	2000 imp/kWh	
<b>Switch relay</b>	I <sub>max</sub> =100A	

### Reliability

<b>Meter life</b>	20 Years
<b>Data retention</b>	>20 Years

### Mechanical

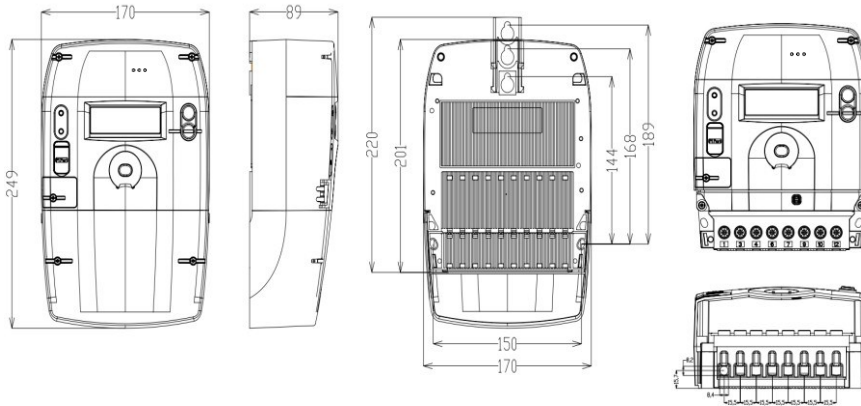
<b>Dimensions (L x W x H)</b>	249 x 170 x 89(mm)
<b>Weight (Kg)</b>	1.7
<b>Enclosure material</b>	PC+GF
<b>Terminals</b>	professional Lifting system with wrong connection prevention
<b>Insulation protection</b>	Class II

### Environmental

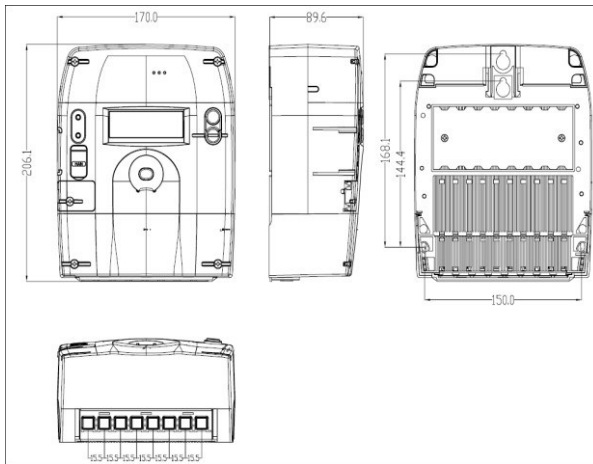
<b>Operating temperature</b>	-40°C to 70°C
<b>Storage temperature</b>	-40°C to 70°C
<b>Operating humidity</b>	Maximum 95% RH
<b>Ingress protection</b>	IP54

### Overall dimensions

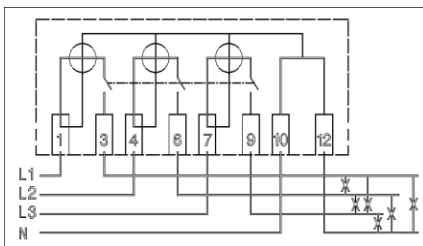
#### Long terminal cover



#### Short terminal cover



### Wiring diagram



### Display format

