Single and Polyphase smart electricity meter, based on PLC communication is the cost optimal solution for smart residential and mid-size commercial environments. This future-proof investment includes:

- **IDIS interoperability**
- **Remote connection/disconnection**
- **Multi-Energy management (gas, water, heat)**
- **Extensive anti-tampering features**

- **Customer port for in-house display (RJ11)**
- **Secure communication with encryption and authentication**
- **Photovoltaic friendly design**
- **Integrated demand/response functions**
- **DLMS protocol for easy integration**

**Meter dimensions**
## Type overview

<table>
<thead>
<tr>
<th>Network</th>
<th>Low voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
<td>1P2W, 3P4W</td>
</tr>
<tr>
<td>Communication</td>
<td>Optical port, RJ11 port, M-Bus, PLC</td>
</tr>
<tr>
<td>Input – output options</td>
<td>Output 6 A/230 V relay, Output OPTOMOS 0.1 A, Input alarm, External key input</td>
</tr>
</tbody>
</table>

## Technical specifications

### Nominal voltage
- **ME381-D3 BS**: 240 V
- **ME381-D1 DIN**: 240 V
- **MT381-D1 DI**: 240 V
- **MT381-D2 DIN**: 240 V
- **MT381-T1 CT – DIN**: 3 x 240/415 V

### Voltage range
- 0.8 – 1.15 Un

### Reference frequency
- 50 Hz or 60 Hz

### Current
- Nominal current (In)
- Base current (Ib)
- Maximal current (Imax)

#### Current options
- **ME381-D3 BS**: 5 A
- **ME381-D1 DIN**: 5 or 10 A
- **MT381-D1 DI**: 5 A
- **MT381-D2 DIN**: 5 A
- **MT381-T1 CT – DIN**: 6 A

### Accuracy class
- Active energy: Class 2 or Class 1 (IEC62052 - 11, IEC62053 - 21) A or B (EN 50470 - 3, EN 50470 - 1)
- Reactive energy: Class 3 or Class 2 (IEC62053 - 23)
- Apparent energy: Calibrated up to 3%

### Real-time clock
- Accuracy: <5ppm or <±3 min/year
- Back-up power supply: Super-Cap: > 7 days; Li battery: > 10 years, life time up to 20 years

### Switching device
- Integrated
- External

### Temperature ranges (IEC 62052 - 11)
- Operation: -25 °C ... +70 °C; extended -40 °C ... +70 °C
- Storage: -40 °C ... +80 °C

### Ingress protection IEC 60529
- IP 54

### Liquid Crystal Display

#### Basic functionality
- Measurement: Two way ("energy") measurements, Active energy & power, 4Q Reactive energy & power, Apparent energy & power, Instantaneous value of voltage, Current, Power factor, Frequency and Power, Absolute measurement of active energy & power
- Tariff functions: Time-of-use (TOU) measurement of active energy and maximum demand (up to 8 tariffs, 12 seasons, 12 weekly programs, 16 masks, 16 switches)
- Load profiles: Two Load profiles with different daily and hourly registration periods with up to 32 objects, Four separate profiles for sub-metering (M-bus), Seven independent Event logs for different functionalities
- Communication: Full DLMS-COSEM and IEC 1107 compliance, Four independent communication interfaces: Optical port, RJ11 (for in-house display), M-bus (wired), PLC
- Power quality: Voltage sag, swell and cut, Daily peak and minimum, Voltage and current asymmetry, Power failure

#### Specific
- Backlit LCD display, Detection of opening main and terminal cover, External magnetic field detector, Detection of meter wiring, Prepayment, In-house display support, Power quality supervision, Secured communication channels, Switching device up to 3x100A (UC3), Remote FW upgrade, RTC (Super-Cap)

#### Optional
- RTC (Li battery), M-Bus (wireless with external dongle), ZigBee (wireless with external dongle)