**Product data sheet**

**Characteristics**

**METSEPM2220**
EasyLogic PM2220, Power & Energy meter, up to 15th H, LCD, RS485, class 1

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### Main

- **Range**: EasyLogic
- **Product name**: EasyLogic PM2200
- **Device short name**: PM2220
- **Product or component type**: Power meter

### Complementary

- **Device application**: Power monitoring
- **Sub billing**: Sub billing
- **Power quality analysis**: total harmonic distortion
  up to the 15th harmonic
- **Type of measurement**: Apparent power min/max, total
  Active and reactive power min/max, total
  Current min/max, avg
  Voltage min/max, avg
  Frequency min/max, avg
  Total current harmonic distortion THD (I) per phase
  Total voltage harmonic distortion THD (U) per phase
  Power factor min/max, avg
  Apparent energy total
  Active and reactive energy total
- **Metering type**: Active, reactive, apparent energy (signed, four quadrant)
  Current I, I1, I2, I3
  Peak demand currents
  Peak demand power PM, QM, SM
  Unbalance current
  Active power P, P1, P2, P3
  Reactive power Q, Q1, Q2, Q3
  Demand power P, Q, S
  Voltage U, U21, U32, U13, V, V1, V2, V3
  Apparent power S, S1, S2, S3
  Calculated neutral current
- **Accuracy class**: Class 1 active energy conforming to IEC 62053-21
  Class 1 reactive energy conforming to IEC 62053-24
  Class 5 harmonic distortion (I THD & U THD)
- **Measurement accuracy**: Apparent power +/- 1 %
  Active energy +/- 1 %
  Reactive energy +/- 1 %
  Active power +/- 1 %
  Voltage +/- 0.5 %
  Power factor +/- 0.01

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.

Jan 2, 2020
<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement current</td>
<td>5...6000 mA</td>
</tr>
<tr>
<td>Measurement voltage</td>
<td>35...480 V AC 50/60 Hz between phases 20...277 V AC 50/60 Hz between phase and neutral 480...999000 V AC 50/60 Hz with external VT</td>
</tr>
<tr>
<td>Frequency measurement range</td>
<td>45...65 Hz</td>
</tr>
<tr>
<td>[Us] rated supply voltage</td>
<td>44...277 V AC 45...65 Hz +/- 10 % 44...277 V DC +/- 10 %</td>
</tr>
<tr>
<td>Network frequency</td>
<td>50 Hz 60 Hz</td>
</tr>
<tr>
<td>Ride-through time</td>
<td>100 ms 120 V AC typical 400 ms 230 V AC typical 50 ms 125 V DC typical</td>
</tr>
<tr>
<td>[In] rated current</td>
<td>1 A 5 A</td>
</tr>
<tr>
<td>Maximum power consumption in VA</td>
<td>6 VA at 277 V AC</td>
</tr>
<tr>
<td>Maximum power consumption in W</td>
<td>3.3 W (power lines (AC)) 2 W at 277 V (power lines (DC))</td>
</tr>
<tr>
<td>Input impedance</td>
<td>Current (impedance &lt;= 0.3 mOhm) Voltage (impedance &gt; 5 MOhm)</td>
</tr>
<tr>
<td>Tamperproof of settings</td>
<td>Protected by access code</td>
</tr>
<tr>
<td>Display type</td>
<td>Backlit LCD</td>
</tr>
<tr>
<td>Display colour</td>
<td>Monochrome</td>
</tr>
<tr>
<td>Display resolution</td>
<td>128 x 128 pixels</td>
</tr>
<tr>
<td>Demand intervals</td>
<td>Configurable from 1 to 60 min</td>
</tr>
<tr>
<td>Information displayed</td>
<td>Demand current (past value) Demand current (present value) Demand power (past value) Demand power (present value) Voltage Current Frequency Energy consumption Harmonic distortion Power factor Active power Apparent power Reactive power Unbalanced in % Harmonic amplitude</td>
</tr>
<tr>
<td>Control type</td>
<td>4 x button</td>
</tr>
<tr>
<td>Local signalling</td>
<td>Red LED: output signal 1...9999000 pulse/ k_h (kWh, kVAh, kVARh) Green LED: module operation and integrated communication</td>
</tr>
<tr>
<td>Number of inputs</td>
<td>2 pulse</td>
</tr>
<tr>
<td>Number of outputs</td>
<td>0</td>
</tr>
<tr>
<td>Communication port protocol</td>
<td>Modbus RTU at 4800 bps, 9600 bps, 19200 bps, 38.4 Kbps even/odd or none - 2 wires, insulation 2500 V</td>
</tr>
<tr>
<td>Communication port support</td>
<td>Screw terminal block: RS485</td>
</tr>
<tr>
<td>Data recording</td>
<td>Time stamping Min/max for 8 parameters</td>
</tr>
<tr>
<td>Function available</td>
<td>Real time clock</td>
</tr>
<tr>
<td>Sampling rate</td>
<td>64 samples/cycle</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>Enable/disable communication ports</td>
</tr>
<tr>
<td>Communication service</td>
<td>Remote monitoring</td>
</tr>
<tr>
<td>Language</td>
<td>Spanish French English Russian Portuguese German Chinese</td>
</tr>
<tr>
<td>Product certifications</td>
<td>CE conforming to IEC 61010-1</td>
</tr>
</tbody>
</table>
CULus conforming to UL 61010-1  
CULus conforming to CSA C22.2 No 61010-1  
RCM  
EAC  
C-Tick  

**Mounting mode**  
Clip-on  

**Mounting position**  
Vertical  

**Mounting support**  
Framework  

**Provided equipment**  
1 x installation guide  

**Measurement category**  
Category III 480 V  
Category II 480…600 V  

**Electrical insulation class**  
Double insulation  
Class II  

**Flame retardance**  
V-0 conforming to UL 94  

**Connections - terminals**  
Current transformer: screw connection (bottom) 6  
Voltage inputs: screw connection (top) 4  

**Material**  
Polycarbonate  

**Width**  
96 mm  

**Depth**  
76.09 mm total:  
61.64 mm embedded:  

**Height**  
96 mm  

**Net weight**  
300 g  

**Compatibility code**  
PM2220  

**Environment**  
**Service life**  
7 year(s)  

**IP degree of protection**  
IP54 front: conforming to IEC 60529  
IP30 body: conforming to IEC 60529  

**Relative humidity**  
5…95 % at 50 °C  

**Pollution degree**  
2  

**Ambient air temperature for operation**  
-10…60 °C  

**Ambient air temperature for storage**  
-25…70 °C  

**Operating altitude**  
<= 2000 m  

**Electromagnetic compatibility**  
Electrostatic discharge conforming to IEC 61000-4-2  
Radiated radio-frequency electromagnetic field immunity test conforming to IEC 61000-4-3  
Electrical fast transient/burst immunity test conforming to IEC 61000-4-4  
Surge immunity test conforming to IEC 61000-4-5  
Conducted RF disturbances conforming to IEC 61000-4-6  
Magnetic field at power frequency conforming to IEC 61000-4-8  
Voltage dips and interruptions immunity test conforming to IEC 61000-4-11  
Emission tests conforming to FCC part 15 class A  

**Overvoltage category**  
III  

**Offer Sustainability**  
**REACH Regulation**  
REACH Declaration  

**REACH free of SVHC**  
Yes  

**EU RoHS Directive**  
Compliant  

**Mercury free**  
Yes  

**RoHS exemption information**  
Yes  

**China RoHS Regulation**  
China RoHS declaration  

**WEEE**  
The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins