# Product data sheet

Specifications

## modular single phase power meter iEM2050 - 230V - 45A with communication Modbus

A9MEM2050

## Main

| | |
|---|---|
| **Range** | Acti9 |
| **family** | Acti9 iEM2000 |
| **Device short name** | iEM2050 |
| **Product or component type** | Energy meter |

## Complementary

| | |
|---|---|
| **poles description** | 1P + N |
| **Type of measurement** | Active and reactive energy<br>Active and reactive power<br>Power factor<br>Current<br>Voltage<br>Frequency<br>Apparent power |
| **Metering type** | Active, reactive, apparent energy (signed, four quadrant) |
| **Device application** | Sub billing<br>Multi-tariff |
| **Accuracy class** | Class 1 active energy conforming to IEC 62053-21<br>Class 2 reactive energy conforming to IEC 62053-23 |
| **Input type** | Direct input |
| **Maximum current [Imax]** | 45 A |
| **[Ib] basic current** | 5 A |
| **Rated current** | 45 A |
| **Rated voltage** | 230 V - 15...10 % |
| **Network frequency** | 50 Hz |
| **Frequency measurement range** | 45…55 Hz |
| **Technology type** | Electronic |
| **Display type** | LCD display |
| **Sampling rate** | 32 samples/cycle |
| **Measurement current** | 0.25…45 A |
| **Display digits** | 6 |
| **Maximum value measured** | 9999.99 kWh<br>99999.9 kWh |
| **Tariff counter** | Tariff (2) |
| **Communication port protocol** | Modbus RTU at 1200...9600 bit/s even/odd or none |
| **Communication port support** | Screw terminals: RS485 |

| | |
|---|---|
| Local signalling | Red LED: metering and activity 0.01, 0.1, 1, 10, 100, 1000, 2000 or 10000 p/kWh |
| Digital inputs | 0 |
| Digital outputs | 1 pulse energy monitoring: |
| Impulse duration | 11.2...32 ms |
| Supply voltage | 195...253 V AC 50 Hz |
| Maximum power consumption in VA | 10 VA at 240 V AC |
| Maximum power consumption in W | 2 W |
| [Uimp] rated impulse withstand voltage | 6 kV 1.2/50 μs |
| mounting mode | Clip-on |
| mounting support | DIN rail |
| Connections - terminals | Power circuit: tunnel type terminals (bottom) 1 8…10 mm² cable(s) <br> Power circuit: tunnel type terminals (top) 1 8…10 mm² cable(s) <br> Pulse output: screw clamp terminals (top) 1 2.5 mm² cable(s) <br> Communication: screw clamp terminals (bottom) 1 2.5 mm² cable(s) |
| Tightening torque | Power circuit: 0.35 N.m flat screwdriver 2.2 mm <br> Pulse output: 0.1 N.m flat screwdriver 1.3 mm <br> Communication: 0.1 N.m flat screwdriver 1.3 mm |
| Wire stripping length | Power circuit: 7.5 mm <br> Pulse output: 7 mm <br> Communication: 7 mm |
| Standards | IEC 62053-21 <br> IEC 62053-23 |
| Product certifications | CE |

## Environment

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|---|---|
| IP degree of protection | IP51 front panel: conforming to IEC 60529 <br> IP20 casing: |
| Ambient air temperature for operation | -25…55 °C |
| Ambient air temperature for storage | -30…70 °C |
| Operating altitude | < 2000 m |
| Relative humidity | 0…75 % at 55 °C |
| Colour | White |
| 9 mm pitches | 2 |
| Width | 17.5 mm |
| Height | 90 mm |
| Depth | 63 mm |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 6.800 cm |
| Package 1 Width | 2.000 cm |
| Package 1 Length | 10.000 cm |
| Package 1 Weight | 86.000 g |
| Unit Type of Package 2 | BB1 |

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| | |
|---|---|
| **Number of Units in Package 2** | 10 |
| **Package 2 Height** | 7.800 cm |
| **Package 2 Width** | 11.000 cm |
| **Package 2 Length** | 22.000 cm |
| **Package 2 Weight** | 912.000 g |
| **Unit Type of Package 3** | S03 |
| **Number of Units in Package 3** | 60 |
| **Package 3 Height** | 30.000 cm |
| **Package 3 Width** | 30.000 cm |
| **Package 3 Length** | 40.000 cm |
| **Package 3 Weight** | 6.555 kg |

# Sustainability

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## Well-being performance

✓ Reach Free Of Svhc

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✓ Mercury Free

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✓ Rohs Exemption Information     Yes

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**Eu Rohs Directive**     Compliant

EU RoHS Declaration

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**China Rohs Regulation**     China RoHS declaration

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

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