

Product data sheet

Specifications



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

A9MEM2050

Main

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

Complementary

Poles description	1P + N
Type of measurement	Active energy Active and reactive power Power factor Current Voltage Frequency Apparent power
Metering type	Active energy (signed, two quadrant)
Device application	Sub billing Multi-tariff
Accuracy class	Class 1 active energy conforming to IEC 62053-21
Analogue input type	Direct input
Maximum current [Imax]	45 A
[Ib] basic current	5 A
Rated current	45 A
Rated voltage	230 V
Network frequency	50 Hz 60 Hz
Frequency measurement range	45...66 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 99999.9 kWh
Information displayed	Tariff (2)
Communication port protocol	Modbus RTU at 1200...9600 bit/s even/odd or none
Communication port support	Screw terminals: RS485

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

Local signalling	Red LED: metering and activity 10000, 2000, 1000, 100, 10, 1, 0.1 or 0.01 imp/kWh
Number of outputs	1 pulse energy monitoring:
Impulse duration	11.2...32 ms
[Us] rated supply voltage	195...253 V AC
Maximum power consumption in VA	10 VA at 240 V AC
Maximum power consumption in W	2 W per phase
[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) 8...10 mm² cable(s) Power circuit: tunnel type terminals (top) 8...10 mm² cable(s) Pulse output: screw clamp terminals (top) 2.5 mm² cable(s) Communication: screw clamp terminals (bottom) 2.5 mm² cable(s)
Tightening torque	Power circuit: 0.35 N.m flat screwdriver 2.2 mm Pulse output: 0.1 N.m flat screwdriver 1.3 mm Communication: 0.1 N.m flat screwdriver 1.3 mm
Wire stripping length	Power circuit: 7.5 mm Pulse output: 7 mm Communication: 7 mm
Standards	IEC 62053-21 IEC 62053-23
Product certifications	CE

Environment

IP degree of protection	IP51 front panel: conforming to IEC 60529 IP20 casing:
Ambient air temperature for operation	-40...70 °C
Ambient air temperature for storage	-40...80 °C
Operating altitude	< 2000 m
Relative humidity	0...75 % operation 0...95 % storage
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	85.000 g
Unit Type of Package 2	BB1

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	5.560 kg

Contractual warranty

Warranty (in months)	18
----------------------	----



Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



Environmental footprint

Total lifecycle Carbon footprint	28 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	7 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	21 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.2 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile

Use Better



Materials and Substances

Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Compliant
REACH Regulation	Free of Substances of Very High Concern above the threshold

Use Longer



Lifetime extension

Repair	No
--------	----

Use Again



Repack and remanufacture

Recyclability potential, in %	0
End of life manual availability	End of Life Information
Take-back	No
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins