

Acti 9 Energy Meters: Single Phase

iEM2000 Series

Technical data sheet



Acti 9 iEM2000 Series Energy Meters



The Acti 9 iEM2000 and iEM2100 Series Energy Meters offer a cost-attractive, competitive range of single-phase DIN rail-mounted energy meters ideal for sub-billing and cost allocation applications.

Combined with communication systems, like Smart Link, the Acti 9 iEM2000 Series makes it easy to integrate electrical distribution measurements into customer's energy management systems. It's the right energy meter at the right price for the right job.

Two versions are available: 40 A direct measure (iEM2000 models), and 63 A direct measure (iEM2100 models). Within each set of models, there are different versions to match the specific application, from basic to more advanced:

- iEM2000T: single-phase kilowatt-hour meter without display, with kWh pulse output.
- iEM2000/iEM2100 single-phase kilowatt-hour meter.
- iEM2010 single-phase kilowatt-hour meter, with partial counter, kWh pulse output, MID certified.
- iEM2105 single-phase kilowatt-hour meter, with kWh pulse output.
- iEM2110 single-phase kilowatt-hour meter, multi-tariffs with partial counter and current, voltage, power measurement, pulse outputs, MID certified.
- iEM2135 single-phase kilowatt-hour meter, multi-tariffs with partial counter and current, voltage, power measurement. M-Bus communication, MID certified.
- iEM2150 single-phase kilowatt-hour meter with partial counter and current, voltage, power measurement. Modbus communication.
- iEM2155 single-phase kilowatt-hour meter, multi-tariffs with partial counter and current and voltage, power measurement. Modbus communication, MID certified.

Innovative design makes the meters smart and simple:

- Easy to install for panel builders.
- Easy to commission for contractors and installers.
- Easy to operate for end users.

Applications

- Cost management applications.
- Bill verification.
- Sub-billing and cost allocation, including two tariffs.

Network management applications.

- Basic electrical parameters like current, voltage and power.

Market segments

- Buildings & Industry.
- Data centres and networks.
- Infrastructure (airports, road tunnels, telecom).

Characteristics

- Self-powered meters.
- Compliance with IEC 62053-21, IEC 62053-23, EN50470-3.
- Compact, 1 or 2 module width.
- Onboard Modbus or M-Bus communication.
- Anti-tamper security features ensure the integrity of your data.
- MID compliant (selected models) providing certified accuracy and data security.

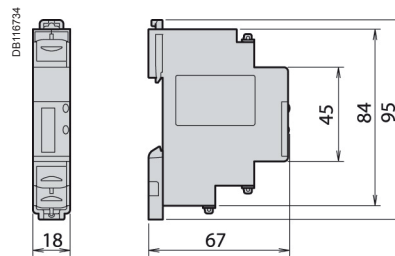
Meter model and description	Current measurement	Part number
iEM2000T basic energy meter, without display	Direct connected to 40 A	A9MEM2000T
iEM2000 basic energy meter	Direct connected to 40 A	A9MEM2000
iEM2010 energy meter, kWh pulse output	Direct connected to 40 A	A9MEM2010
iEM2100 basic energy meter	Direct connected to 63 A	A9MEM2100
iEM2105 energy meter, kWh pulse output with partial meter	Direct connected to 63 A	A9MEM2105
iEM2110 energy meter, kWh and kvarh pulse outputs with two tariffs, four quadrant energy measurement, MID certified	Direct connected to 63 A	A9MEM2110
iEM2135 energy meter, M-Bus communication, four quadrant energy measurement, two tariffs, MID certified	Direct connected to 63 A	A9MEM2135
iEM2150 energy meter, Modbus communication, four quadrant energy measurement	Direct connected to 63 A	A9MEM2150
iEM2155 energy meter, Modbus communication, four quadrant energy measurement, two tariffs, MID certified	Direct connected to 63 A	A9MEM2155

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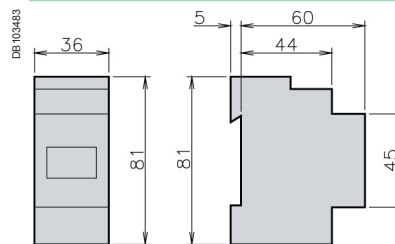
iEM2000 & iEM2100 technical specifications									
FUNCTION GUIDE	iEM2000T	iEM2000	iEM2010	iEM2100	iEM2105	iEM2110	iEM2135	iEM2150	iEM2155
Direct connection	Up to 40 A			Up to 63 A					
Circuit	1 phase plus neutral			1 phase plus neutral					
Width	1 x 18 mm module (18 mm)			2 x 18 mm modules (36 mm)					
MID compliance		■	■			■	■		■
Multi-tariff						2 tariffs	2 tariffs		2 tariffs
Four quadrant energy measurement						■	■	■	■
Communication							M-Bus	Modbus	
Digital input (tariff switching)						1			
Pulse output for kWh/kvarh	1		1		1	2			
Pulse output operation	100 pulses / kWh (120 ms long)				1 pulse / kWh (200 ms long)	1 to 1000 pulses / kWh or kvarh (30 to 100 ms long)			
Accuracy class: Active Energy	Class 1 IEC 62053-21	Class 1 IEC 62053-21 Class B EN50470-3	Class 1 IEC 62053-21 Class B EN50470-3	Class 1 IEC 62053-21	Class 1 IEC 62053-21	Class 1 IEC 62053-21 Class B EN50470-3	Class 1 IEC 62053-21 Class B EN50470-3	Class 1 IEC 62053-21	Class 1 IEC 62053-21 Class B EN50470-3
Accuracy class: Reactive Energy						Class 2 (according to IEC62053-23)			
Display capacity		999999.9 kWh		99999 kWh or 999.99 MWh		999999.99 kWh			
Voltage range (L-N)	184 to 276 Vac			184 to 276 Vac		92 to 276 Vac			
Operating frequency	50/60 Hz			50/60 Hz					
Meter constant LED	3200 flashes per kWh			1000 flashes per kWh					
Wiring capacity (Top)	4 mm ²			6 mm ²		4 mm ²			
Wiring capacity (Bottom)	10 mm ²			32 mm ² (16 mm ² iEM2100/iEM2105)					
Consumption	<10 VA			2.5 VA		3 VA			
IP protection	IP40 front panel and IP20 casing			IP40 front panel and IP20 casing					
Temperature	-10°C to +55°C			-25°C to +55°C					
kWh	■	■	■	■	■	■	■	■	■
kVARh						■	■	■	■
Active power						■	■	■	■
Reactive power						■	■	■	■
Power Factor						■	■	■	■
Current and voltage						■	■	■	■
Frequency						■	■	■	■

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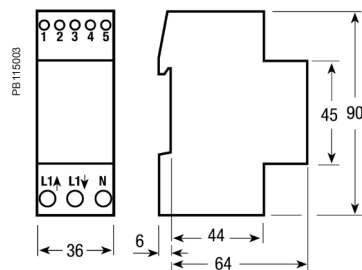
iEM2000 dimensions



iEM2100/iEM2105 dimensions



iEM2110/iEM2135/iEM2150/iEM2155 dimensions



NOTE: See the appropriate product *Installation Guide* for complete instructions.

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