

Acti9 iEM2xxx Range Technical Datasheet

iEM2000, iEM2100, iEM2400 series

The Acti9 iEM2xxx range energy meters offer a cost-attractive, competitive range of single-phase DIN rail-mounted energy meters ideal for sub-billing, cost allocation applications and support two protocols (Modbus RS-485 or M-Bus) that allow them to integrate seamlessly into any energy monitoring system.

Applications

- Monitor power consumption for each floor, office sector, unit or workshop with maximum current from 40 A, 45 A, 63 A and 100 A
- Allocate energy cost to lower cost of operations, optimise building’s power efficiency
- Connect to power management software to take full advantage of the IoT digital power installation
- Various businesses, industrial and residential applications



A9MEM2000



A9MEM2055



A9MEM2155



A9MEM2435

The solution for:

All markets that can benefit from a solution that includes Acti9 PowerLogic™ iEM2000, iEM2100, iEM2400 series meters:

- Buildings
- Industry
- Data Centre & networks
- Infrastructures (airport, road tunnels, telecom...)

Benefits

The Acti9 PowerLogic™ iEM2xxx meters are economical and easy to install in panelboards and switchboards:

- DIN rail mounted, compact size
- Accurate data measurement with Class 1 accuracy for kWh and Class 2 accuracy for kVARh*
- Measures basic electrical parameters like voltage, current, frequency, power factor and power*

Energy management system:

To get the most effective use from your Schneider Electric measurement and metering devices, we offer a range of dedicated data loggers and gateways for your building energy management.

*in selected references.

Competitive advantages*

- Compact size - Compatible with Acti9 range, 18 mm width in iEM2000, 36 mm width in iEM2100 and iEM2400
- Display - available in displayless, electromech counter display or LCD display
- Communication - Pulse output, Modbus RS-485 or M-Bus communication port
- Self-powered, direct connect upto 100 A
- MID, UKCA MIR compliant providing certified accuracy and data security
- Four quadrant measurement
- Two tariffs
- Basic electrical parameter measurement eg. V, I, F, PF, PQS

Conformity of standards

- BS/EN/IEC 61557-12:2018/AMD1:2021*
- BS / EN / IEC 62053-21
- BS / EN / IEC 62053-23*
- BS / EN 50470-1/3:2006*
- BS / EN / IEC 62052-11
- BS / EN / IEC 62052-31:2015*
- BS / EN / IEC 61326-1
- BS / IEC / EN 61010-1
- BS / EN / IEC 63000:2018
- CE, UKCA, UKCA MIR certified

iEM2xxx Range Feature selection

Functions	iEM2000T	iEM2000/iEM2010	iEM2050/ iEM2055	iEM2100/ iEM2105	iEM2110	iEM2135/ iEM2155	iEM2150	iEM2435/ iEM2455
40A I _{max}	■	■						
45A I _{max}			■					
63A I _{max}				■	■	■	■	
100A I _{max}								■
Communication port			RS-485			M-Bus (iEM2135) RS-485 (iEM2155)	RS-485	M-Bus (iEM2435) RS-485 (iEM2455)
Pulse output (Energy)	1	1 (iEM2010)	1	1 (iEM2105)	2			2
Digital inputs (Tariff switching)					1	1		
Display Type	No	Electromechanical Counter	LCD					
Width (mm)	18		17.5	36				35.7
Multi Tariff counter			2		2	2		2
Wh accuracy (BS/EN/IEC 62053-21)	Class 1							
Compliance to BS/EN/IEC 61557-12	■	■		■				
VARh accuracy (BS/EN/IEC 62053-23)	Class 2				Class 2			
4 Quadrants measurement			■			■		
MID Class B (BS/EN 50470-3), 50 Hz		■	■ (iEM2055)		■	■		■
V A F PF			■			■		
Power (P Q S)			■			■		

See your Schneider Electric representative for complete ordering information.

Acti9 iEM2xxx Range technical specifications

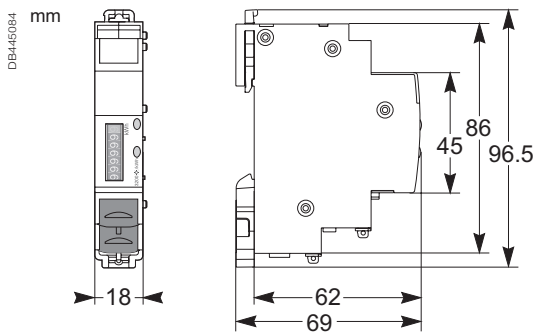
iEM2000, iEM2100, iEM2400 series technical specifications

	iEM2000/ iEM2000T/ iEM2010	iEM2050/iEM2055	iEM2100/iEM2105	iEM2110/iEM2135/ iEM2150/iEM2155	iEM2435/iEM2455
Type of measurement	True rms for single-phase AC systems with direct connect/whole current measurement				
Max. current (Imax)	40 A	45 A	63 A	63 A	100 A
Basic current (Inom)	5 A		10 A	5 A	5 A
Starting current	40 mA	20 mA	40 mA	15 mA	20 mA
Voltage range (L-N)	184 to 276 V AC	195 to 253 V AC	207 to 253 V AC	184 to 276 V AC	195 to 253 V AC
Frequency range	50 Hz MID and IEC / 60 Hz IEC				
Max. kWh resolution	999999.9 kWh	9999.99 kWh to 99999.9 MWh	999.99 kWh/MWh	999999.99 kWh	9999.99 kWh to 99999.9 MWh
Pulse output	100 pulses/kWh (120 ms), 5...35 V DC, 1...20 mA (except iEM2000)	10000, 2000, 1000, 100, 10, 1, 0.1, 0.01 pulses/kWh (11.2 or 32 ms), 5...27 V DC, max 100 mA	1 pulse/kWh (200 ms), 18 mA at 24 V DC or 100 mA at 230 V AC (only for iEM2105)	1 to 1000 pulses/kWh or kVARh (30 to 100 ms) (only for iEM2110)	10000, 2000, 1000, 100, 10, 1, 0.1, 0.01 pulses/kWh, (5...32 ms), 5...27 V DC, max 100 mA
Meter constant LED	3200 flashes per kWh	10000 flashes per kWh	1000 flashes per kWh	1000 flashes per kWh	10000 flashes per kWh
Cable size (power connection)	10 mm ²	10 mm ²	16 mm ²	33 mm ²	35 mm ²
Cable size (for communications)	4 mm ²	2.5 mm ²	6 mm ²	4 mm ²	2.5 mm ²
Internal burden, at 240 V L-N, 50 Hz	<10 VA		<2.5 VA	<3 VA	<10 VA
Active energy	■				
Reactive energy		■		■	■
Active power		■		■	■
Reactive power		■		■	■
Apparent power		■		■	■
Power Factor		■		■	■
Current and voltage		■		■	■
Frequency		■		■	■
LED for local signalling	Green LED: power ON Yellow LED: 3200 impulse per kWh	Red LED: 10000 impulse per kWh	Yellow LED: 1000 impulse per kWh	Yellow LED: 1000 impulse per kWh	Red LED: 10000 impulse per kWh
CE, UKCA* certification	■				
IP degree of protection (IEC 60529)	IP40 front panel and IP20 casing	IP51 front panel and IP20 casing	IP40 front panel and IP20 casing		IP51 front panel and IP20 casing
Operating temperature	-10°C to +55°C For iEM2000T: Temp range is: I < 32 A: -25 °C to +65 °C, I > 32 A: -25 °C to +55 °C (K55)	-25°C to +55°C			
Storage Temperature	-40°C to +70°C	-30°C to +70°C	-25°C to +70°C	-25°C to +70°C	-30°C to +70°C
Humidity at +55°C	<95 %	<75 %	<95 %	<95 %	<75 %
Green Premium product (RoHS, China RoHS, REACH, PEP, EOL)	■				
Altitude	<2000 m	<2000 m	<3000 m	<2000 m	<2000 m
Measurement category	Category III				
Pollution degree	2				
Commercial reference number	A9MEM2000 A9MEM2000T A9MEM2010	A9MEM2050 A9MEM2055	A9MEM2100 A9MEM2105	A9MEM2110 A9MEM2135 A9MEM2150 A9MEM2155	A9MEM2435 A9MEM2455

* in selected references.

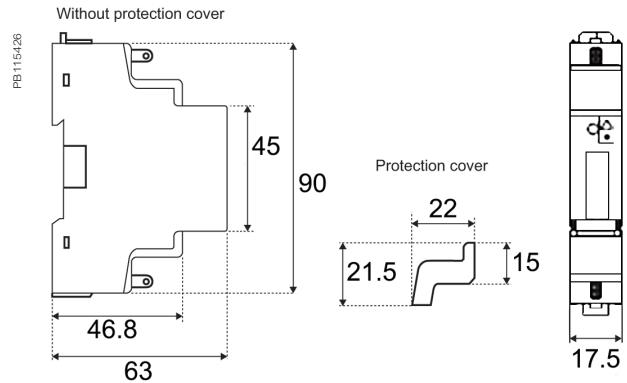
Acti9 iEM2xxx range dimensions

iEM2000/iEM2000T/iEM2010 dimensions



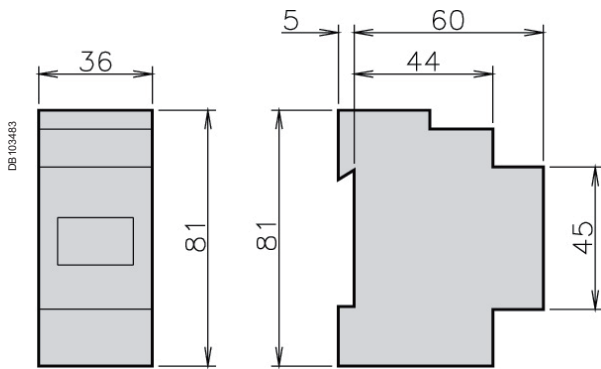
Maximum diameter power connection clamps 8 mm² (solid copper). See the appropriate product Installation Guide for complete instructions.

iEM2050/iEM2055 dimensions

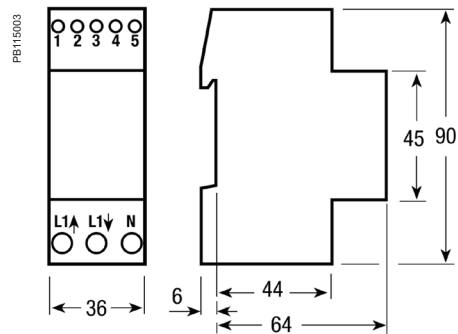


Maximum diameter power connection clamps 8 mm² (solid copper). See the appropriate product Installation Guide for complete instructions.

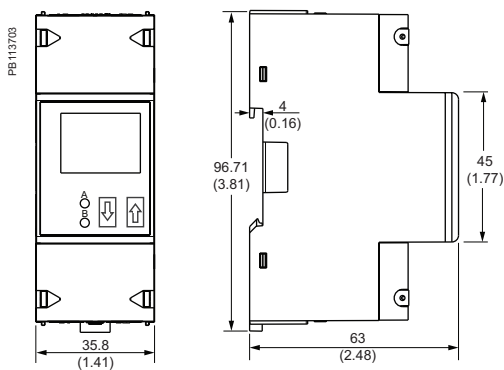
iEM2100/iEM2105 dimensions



iEM2110/iEM2135/iEM2150/iEM2155 dimensions



iEM2435/iEM2455 dimensions



Please see the appropriate Installation Guide for accurate and complete information on the installation of this product.

Acti9 iEM2xxx range commercial reference numbers

iEM2000, iEM2100, iEM2400 series commercial/ordering reference numbers

Commercial reference number	Product description
A9MEM2000T	iEM2000T energy meter, Class 1, 230 V, 40 A, pulse output, no display
A9MEM2000	iEM2000 energy meter, Class 1, 230 V, 40 A, MID, electromechanical counter display
A9MEM2010	iEM2010 energy meter, Class 1, 230 V, 40 A, MID, pulse output, electromechanical counter display
A9MEM2050	iEM2050 power and energy meter, Class 1, 230 V, 45 A, RS-485, 2 tariffs, pulse output, LCD display
A9MEM2055	iEM2055 power and energy meter, Class 1, 230 V, 45 A, RS-485, MID, 2 tariffs, pulse output, LCD display
A9MEM2100	iEM2100 energy meter, Class 1, 230 V, 63 A, LCD display
A9MEM2105	iEM2105 energy meter, Class 1, 230 V, 63 A, pulse output, LCD display
A9MEM2110	iEM2110 power and energy meter, Class 1, 230 V, 63 A, MID, 2 tariffs, 2 pulse outputs, 4 quadrants, LCD display
A9MEM2135	iEM2135 power and energy meter, Class 1, 230 V, 63 A, M-Bus, MID, 2 tariffs, 4 quadrants, LCD display
A9MEM2150	iEM2150 power and energy meter, Class 1, 230 V, 63 A, RS-485, 4 quadrants, LCD display
A9MEM2155	iEM2155 power and energy meter, Class 1, 230 V, 63 A, RS-485, MID, 2 tariffs, 4 quadrants, LCD display
A9MEM2435	iEM2435 power and energy meter, Class 1, 230 V, 100 A, M-Bus, MID, 2 tariffs, 2 pulse outputs, 4 quadrants, LCD display
A9MEM2455	iEM2455 power and energy meter, Class 1, 230 V, 100 A, RS-485, MID, 2 tariffs, 2 pulse outputs, 4 quadrants, LCD display

See your Schneider Electric representative for complete ordering information.



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Over 75 % of Schneider Electric products
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