

EM4300 series

Technical Data Sheet

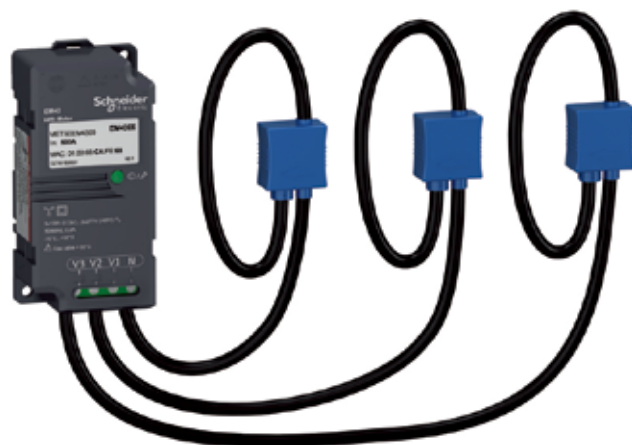
The PowerLogic wireless range is designed to retrofit existing switchboards, and enhance energy efficiency of buildings in operation for many years.

It achieves this by monitoring energy consumption, to detect potential savings, and monitoring operation of the electrical system, to optimize service to the building occupants.

Applications

Electrical circuits and load monitoring

- Energy management
- Sub-billing/tenant metering
- Equipment sub-billing
- Energy cost allocation



DB407247

The solution for

Markets that can benefit from a solution that includes PowerLogic EM4300 series meters:

- Buildings
- Industry
- Healthcare
- Data centre and networks
- Infrastructure

Benefits

System integrators' benefit

- Ease of integration
- Ease of setup
- Cost effectiveness

Panel builders' benefit

- Ease of installation
- Cost effectiveness
- Aesthetically pleasing
- Simplified ordering

End users' benefit

- Ease of use
- Precision metering & sub-billing
- Billing flexibility
- Comprehensive, consistent and superior performance

Competitive advantages

- Easy to install and operate
- Flexible current sensors, immediately fitted around any cable or bar without disconnection
- Minimal interruption to supply and operations
- Equipment can be scaled and implemented over time
- Broad, accurate scope of collected data

Power management solutions

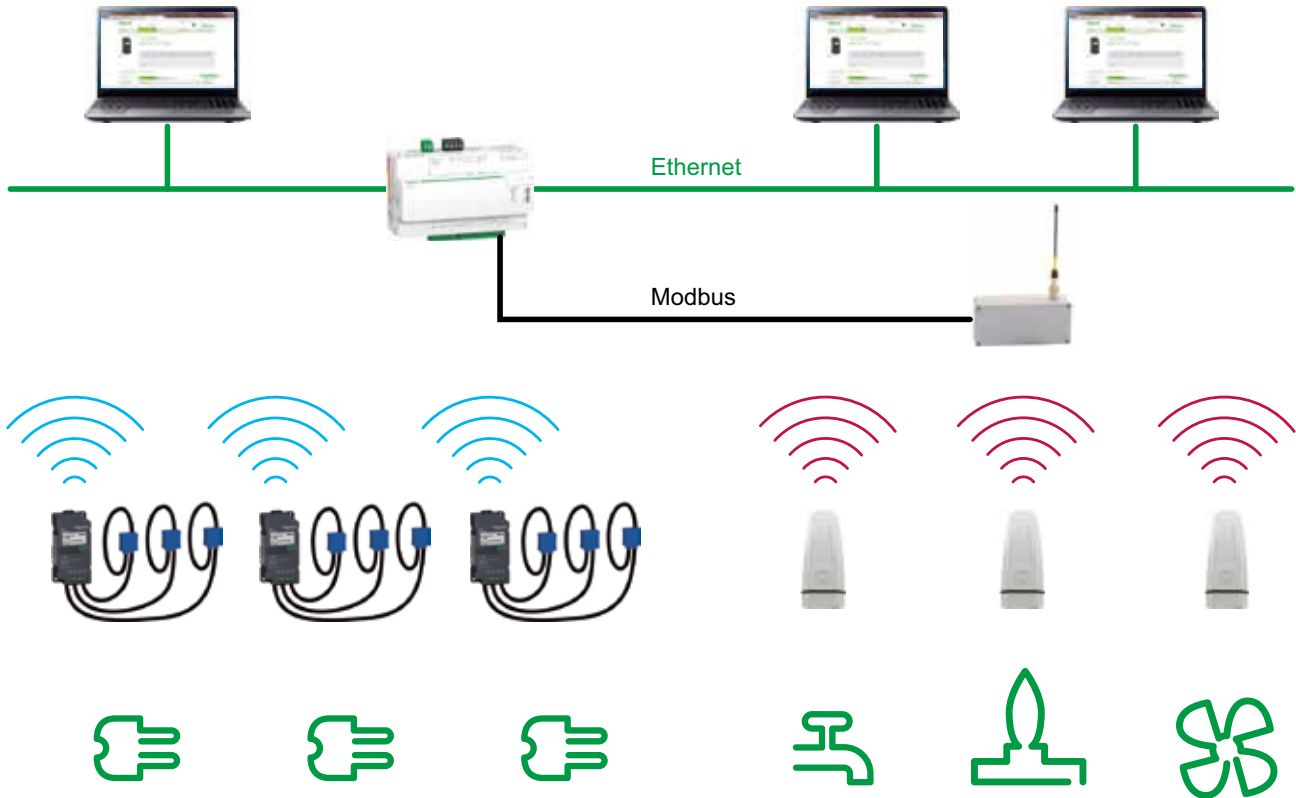
Schneider Electric provides innovative power management solutions to increase your energy efficiency and cost savings, maximise electrical network reliability and availability, and optimise electrical asset performance.

Conformity of standards

- IEC 61557-12
- IEC 61000-4-3
- IEC 62053-22
- IEC 61000-4-4
- IEC 62053-24
- IEC 61000-4-5
- IEC 61010-1
- IEC 61000-4-6
- IEC 61000-4-2
- IEC 61000-4-8

EM4300 series

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PowerLogic wireless range is designed to retrofit existing switchboards, and enhance energy efficiency of buildings in operation for many years, by:

- Monitoring energy consumption, to detect potential savings.
- Monitoring operation of the electrical system, to optimize service to the building occupants.
- PowerLogic EM4300 meters collect a broad scope of electrical data, from the distribution line they are fitted on.
- PowerLogic WT4100/4200 transmitters collect data from various meters (water, air, gas, steam etc.) with pulse outputs.

Collected data from both these sources are transmitted to a data concentrator, which enables their reading by various energy management services and software.

For data concentrators of various types, see:

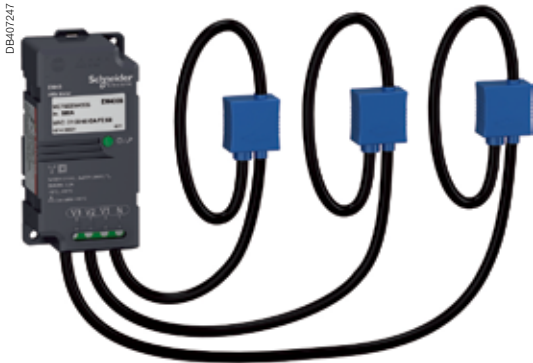
- **Com’X for Ethernet networks**

<http://www.schneider-electric.com/en/product-range/62072-enerlin-x-com-x/?parent-category-id=82258>

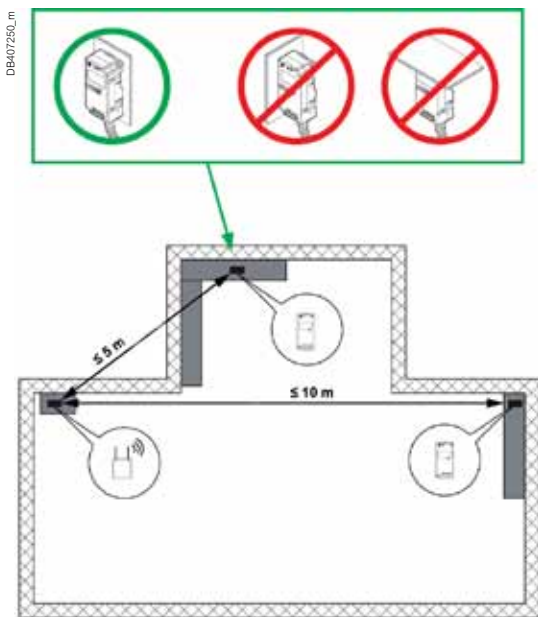
- **SmartStruXure Lite MPM managers for BACnet, EnOcean, CANbus nest works**

<http://www.schneider-electric.com/en/product-range/62191-smartstruxure-lite-solution/?parent-category-id=1200>

EM4300 series



- Functions
 - Electrical circuits and loads monitoring, through a combination of power and energy metering with wireless communication.
- Features and benefits
 - Installation time and therefore total cost of ownership is minimized thanks to:
 - Wireless communication.
 - Attached flexible current sensors, immediately fitted around any cable or bar without disconnection. Power-off time to fit several meters in a switchboard in a matter of minutes.
 - Equipment can be scaled over time, according to savings fields identification, or other matters of interest.
 - Broad scope of collected data make PowerLogic EM4300 of high added-value for:
 - Energy management.
 - Energy cost allocations.
 - Electrical network management and supervision.
- Collected information
 - Energy: active, reactive, apparent, phase by phase and aggregated.
 - Active, reactive and apparent powers, power factor.
 - RMS Voltage and frequency.
 - Maximum RMS current and minimum RMS voltage over the last minutes (1 to 30).
- Wireless data transmission
 - Zigbee Pro HA protocol.
 - 2.4 GHz radio frequency.
 - Maximum power: 10 mW (10 dBm).
 - Compatible with Com'X 200/210 Data loggers, Com'X 510 Energy Servers, and MPM gateways.



- RF Operating range
 - The recommended distances between the meter and the receiver are shown here:
 - Wireless meters are inside electrical switchboards.
 - Wireless receivers are located in the technical room with up to 10 metres range.
 - Location of each element has to match distances as described on the picture.
 - All barriers, walls or pipes have to be considered during the installation. Moving an element by few centimetres can increase or decrease the wireless transmission performance.
 - Checking the LQI (Link Quality Index) is recommended to build a robust network.

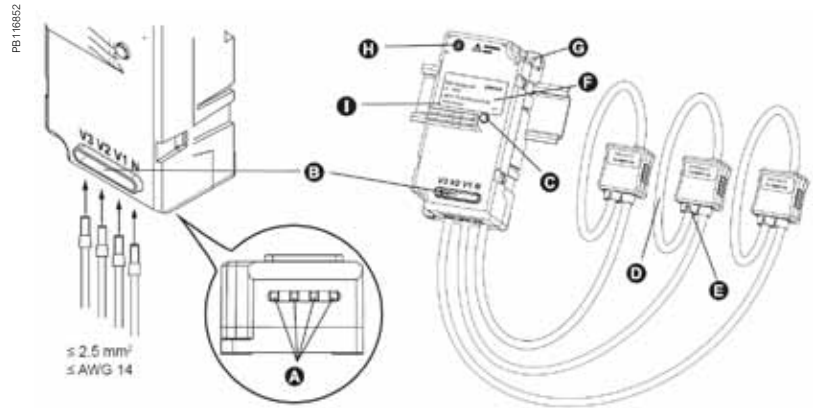
*Note: Do not install the meter if there is a solid concrete wall between the meter and the gateway.
See appropriate Installation Guide for this product.*

EM4300 series

EM4300 meter parts

PB116653

- A** Voltage inputs
- B** Voltage input terminal screws
- C** Status LED (red/green)
- D** Flexible current sensor
- E** Current sensor locking clasp
- F** MAC address location
- G** Mounting hole
- H** Antenna location
- I** Reed switch location



Technical characteristics

Control power	
Powered by L1-N measured input voltage	90 V to 300 V - 50/60 Hz
Maximum supply current	0.4 A
Maximum burden	2.0 W
Measurement characteristics	
Input voltage	90 V to 300 V
Frequency range	50 Hz to 60 Hz
Current range	0 % to 120 % of rated value (200, 500, 1000 or 2000 A)
Current sensors	3 attached to the meter and calibrated as a single unit
Accuracy	1 % on active energy (3-phase with neutral) 2 % accuracy for EM4399
Mechanical characteristics	
Degree of protection (for indoor use only, not suitable for wet locations)	IP20 IK06
Insulation	Class II (IEC 61010-1 CAT III 300 V)
Environmental characteristics	
Operating temperature	-10 °C to 55 °C
Moisture withstand	5 % to 90 % relative humidity, non-condensing, maximum dewpoint 38 °C
Pollution degree	2
Voltage surges	Category III
Altitude	2000 m above sea-level
Standards compliance	
Safety	IEC/EN 61010-1 ed. 3, UL 61010-1 ed. 3
Electromagnetic compatibility	EN 61326-1:2013
Wireless communication	FCC CFR Part 15, subparts B and C

Feature selection

Commercial ref. no.	Description
METSEEM4302	EM4302 - 200 A, 55 mm
METSEEM4305	EM4305 - 500 A, 55 mm
METSEEM4310	EM4310 - 1000 A, 125 mm
METSEEM4320	EM4320 - 2000 A, 125 mm
METSEEM4399	EM4399 - 1000 A, 55 mm

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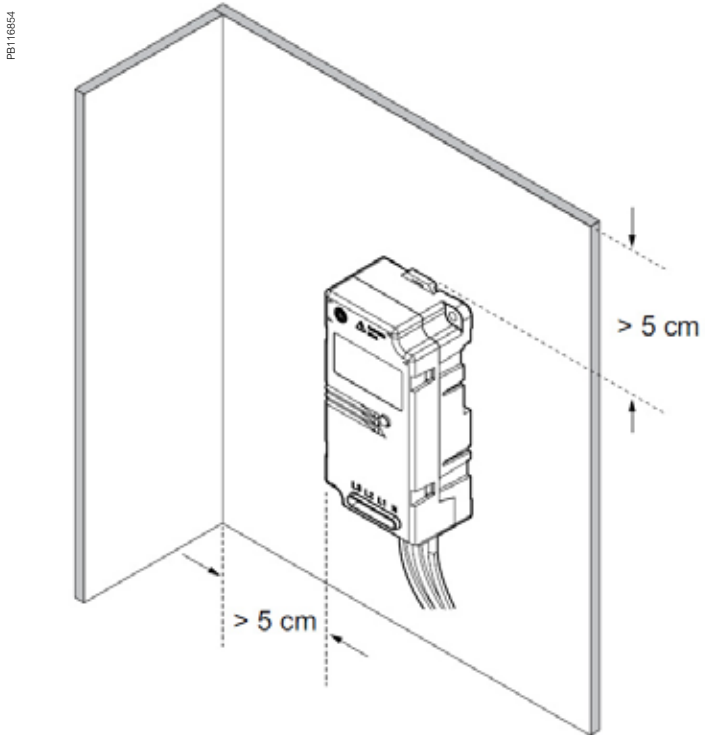
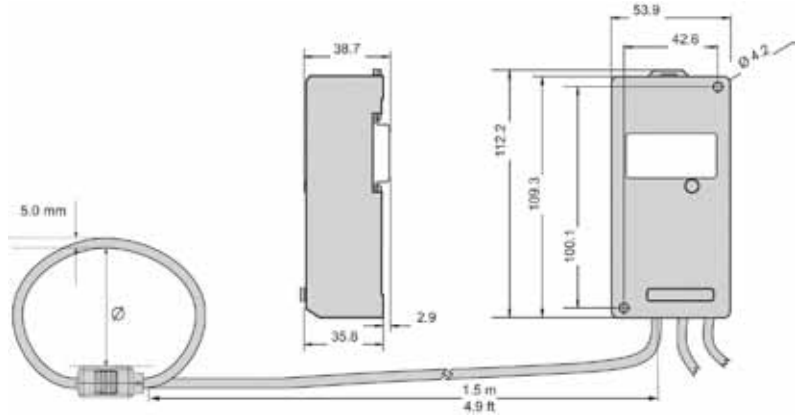


Mounting

- DIN-rail or flat surface.
- Flexible current sensors around conductor to be monitored.
Max inner Ø 55 or 125 mm. For safe and correct mounting, refer to the installation guide.

See appropriate Installation Guide for further information.

Dimensions



Install the meter away from panel edges

Model	I (A)	Ø (mm)	Weight
EM4302	200	55	★
EM4305	500	55	★
EM4310	1000	125	★
EM4320	2000	125	★
EM4399	1000	55	★

★Please consult your Schneider Electric representative.

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Product name
PLSED310096EN

As standards, specifications and designs develop from time to time, please ask for confirmation of the information given in this document.

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Photos: Schneider Electric

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