

PowerLogic™ EM3000 Series Technical Datasheet

The PowerLogic™ EM3000 series energy meters is a cost-attractive, feature-rich energy metering offer for DIN rail, modular enclosures. With Modbus and protocol support, you can easily integrate these meters into commercial and non-critical buildings to add simple energy management applications to any BMS, AMR or EMS system.

Applications

Cost management applications

- Bill checking to verify that you are only charged for the energy you use.
- Sub-billing individual tenants for their active energy consumption.
- Aggregation of energy consumption.

Network management applications

- Basic metering of electrical parameters to better understand the behaviour of your electrical distribution system.



PB125611



METSEEM3122



PB125612



METSEEM3322



PB125613



METSEEM3712

The solution for

All markets that can benefit from a solution that includes PowerLogic™ EM3000 series meters:

- Buildings & industry
- Data centres and networks
- Infrastructure

Benefits

Optimise your energy consumption & enable energy efficiency practices:

- Collect and analyse energy consumption data from each area for each type of load or circuit
- Gain an accurate understanding of business expenses by allocating the energy-related costs
- Identify energy savings opportunities and monitor continuously
- Use information to implement actions designed to reduce energy consumption

Monitor the energy consumption of your tenants or customers and establish accurate invoices:

- Drive energy-efficient behaviour
- Allow building owners to bill tenants for individual measured utility usage
- Give accurate and achievable objectives for energy savings

Features

- Multi-line circuit: Measure individual phase energy in three phase network system
- Partial and Total energy: Separate counters for measuring active energy
- Current: Direct connected or whole current with the option of 45 A/63 A/100 A/125 A, 1 A or 5 A CT operated
- Internal clock: Quartz crystal based back up by super capacitor

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.

Competitive advantages

- Compact size
- MID compliant for Wh (selected models) providing certified accuracy and data security
- Onboard Modbus communication
- Configurable Baud Rate
- Communication protection: enable or disable through communication
- A complete range of energy meters
- Compatible with Power Logic range
- Direct connect upto 125 A
- Password: configurable from 0-9999*
- Pulse output*: configurable pulse constant (imp/kWh), pulse width (ms)

Conformity of standards*

- BS /EN/IEC61557-12:2021
- BS/EN/IEC 61326-1
- BS/EN/IEC 62052-11:2020
- BS/EN/IEC 62053-21
- BS/EN/IEC62052-31:2015
- BS/EN/IEC 61010-1:2010
- UL 61010-1:2010
- BS/EN/IEC 61010-2-30
- UL 61010-2-30
- BS/EN 50470-3
- BS/EN 50470-1
- ANSI C12.16
- ANSI C12.20
- CE, UL and UKCA certified

* Available in selected references

PowerLogic™ EM3000 Series

Feature selection

Current Input/ Wh Accuracy	EM3000 series Energy meters		
45 A Direct/ Class 1	EM3122		
63 A Direct/ Class 1		EM3212	EM3224
1 A or 5 A CT/ Class 0.5S /Class 1		EM3712	EM3724
100 A Direct/ Class 1	EM3322		
125 A Direct/ Class 1		EM3412	EM3424
Communication Protocol			
Non-Communication		✓	
MODBUS	✓		✓
Measurement (Intergrated)			
Active energy - Total and Partial energy	✓	✓	✓
2 Quadrant Active	✓	✓	✓
MID compliant (Wh)			✓
Digital outputs			
Pulse output only		✓	
Internal clock			
Quartz crystal based			✓
Date/time format (DD-MMM-YYYY/hh:mm)			✓
Commercial reference			
Commercial References/ordering references	METSEEM3122 METSEEM3322	METSEEM3212 METSEEM3712 METSEEM3412	METSEEM3224 METSEEM3724 METSEEM3424

Measurement accuracy

		As per EN / IEC 62053-21/22/23	As per BS / EN / IEC 61557-12	As per EN 50470-3	Current range of operation
EM31xx	Active Energy	Class 1 (IEC 62053-21)	Class 1 (PMD DD)		I _{max} =45 A, I _{ref} =10 A, I _{min} =0.5 A, and I _{st} =0.04 A
EM32xx	Active Energy	Class 1 (IEC 62053-21)	Class 1 (PMD DD)	Class B (Select model)	I _{max} =63 A, I _{ref} =10 A, I _{min} =0.5 A, and I _{st} =0.04 A
EM33xx	Active Energy	Class 1 (IEC 62053-21)	Class 1 (PMD DD)		I _{max} =100 A, I _{ref} =20 A, I _{min} =1 A, and I _{st} =0.08 A
EM34xx	Active Energy	Class 1 (IEC 62053-21)	Class 1 (PMD DD)	Class B (Select model)	I _{max} =125 A, I _{ref} =20 A, I _{min} =1 A, and I _{st} =0.08 A
EM37xx (x/1 A Current input)	Active Energy	Class 1 (IEC 62053-21)	Class 1 (PMD SD, PMD Sx)	Class B (Select model)	I _{max} =1.2 A, I _{nom} =1 A, and I _{st} =0.002 A
EM37xx (x/5 A Current input)	Active Energy	Class 0.5S (IEC 62053-22)	Class 0.5S (PMD SD, PMD Sx)	Class C (Select model)	I _{max} =6 A, I _{nom} =5 A, and I _{st} =0.005 A

See your Schneider Electric representative for complete ordering information.

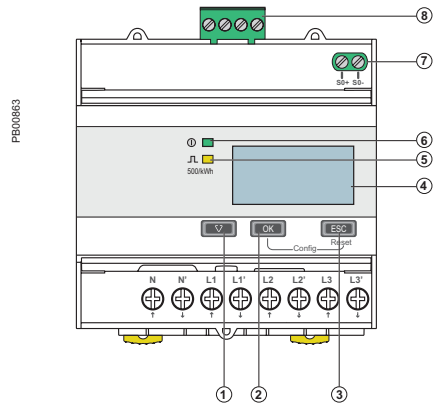
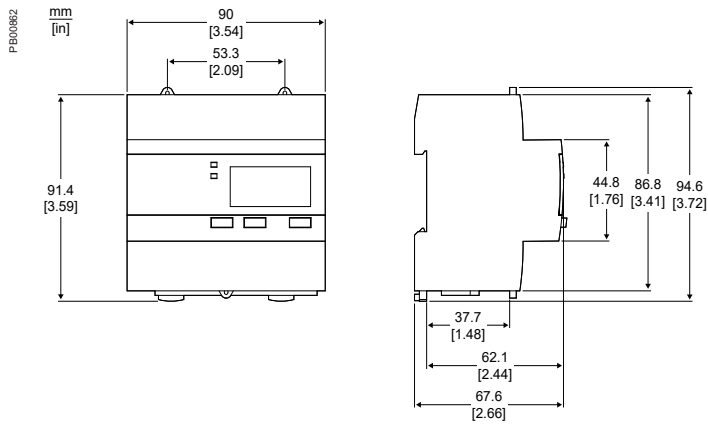
PowerLogic™ EM3000 Series

Technical Specifications

	EM3122	EM3212/EM3224	EM3322	EM3412/EM3424	EM3712/EM3724	
Width in mm x number of modules	18 mm x 5		18 mm x 7		18 mm x 5	
Wiring type (scheme)	3PH3W, 3PH4W, 1PH2W L-N, 1PH2W L-L, 1PH3W L-L-N					
Operating Temperature	-25...70 °C (-13...158 °F)					
Storage temperature	-40...85 °C (-40...185 °F)					
Wiring capacity	16 mm ²	50 mm ²			6 mm ² for I and 4 mm ² for V	
LCD display	99999999.9 kWh			99999999.9 kWh / MWh		
IP Protection	IP40 front, IP20 casing					
Over voltage and measurement	Category III, Pollution Degree 2					
Control Power/Self Powered Meter	Self Powered Meter					
Operating Voltage	3 x 100/173 Vac to 3 x 277/480 Vac (50/60 Hz)					
Altitude	< 3000 m (9842 ft)					
Humidity	5%–95%					
Voltage inputs	Measured voltage	Wye: 100 - 277 V L-N, 173 - 480 V L-L ±20% Delta: 173 - 480 V L-L ±20%				
	Overload	332 V L-N or 575 V L-L				
	Impedance	3 MΩ	6 MΩ		3 MΩ	
	Frequency	50/60 Hz ±10%				
	Measurement category	III				
	Maximum device consumption	< 10 VA at 45 A	< 10 VA at 63 A	< 10 VA at 100 A	< 10 VA at 125 A	< 10 VA at 125 A
	Wire	16mm ² / 6 AWG		50 mm ² / 1 AWG		2.5 mm ² / 14 AWG
Current inputs	Nominal current (I _n)	10 A	10 A	20 A	20 A	5 A 1A
	Measured current (I)	0.5...45 A	0.5...63 A	1...100 A	1...125 A	50 mA...6 A (for I _n :5 A) 10 mA...1.2 A (for I _n :1 A)
	Maximum Current (I _{max})	45 A	63 A	100 A	125 A	6 A (for I _n :5 A) 1.2 A (for I _n :1 A)
	Withstand	45 A continuous, 114 A at 10 sec/hr	63 A continuous, 160 A at 10 sec/hr	100 A continuous, 256 A at 10 sec/hr	125 A continuous, 320 A at 10 sec/hr	20 A continuous (for I _n : 5 A), 10 A continuous (for I _n : 1A) at 10 sec/hr
	Frequency	50/60 Hz ±10%				

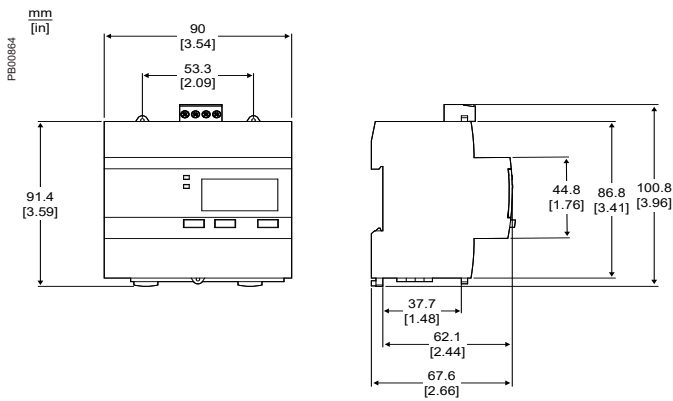
PowerLogic™ EM3000 Series dimensions

EM3122/EM3212/EM3224 series dimensions

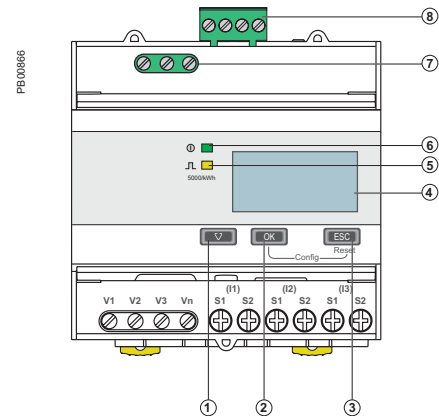
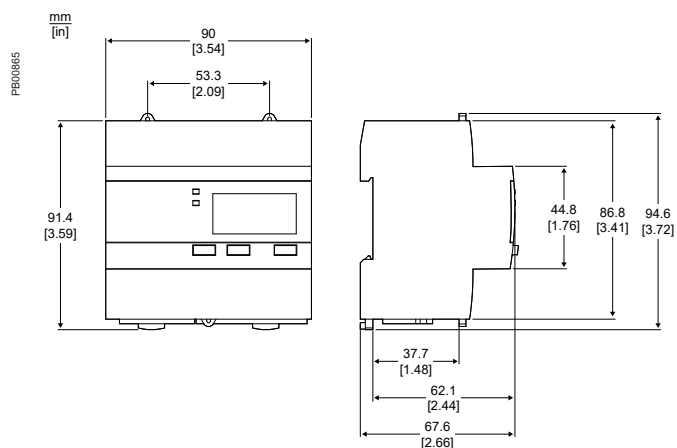


Power Logic EM3122/EM3212/EM3224 Series parts

1. Selection
2. Confirmation
3. Cancellation
4. Display for measurement and configuration
5. Flashing yellow meter indicator to check accuracy
6. Green indicator: on/off, error
7. Pulse out for remote transfer (EM3212)
8. RS485 Communication (EM3122/EM3224)



EM3712 series dimensions



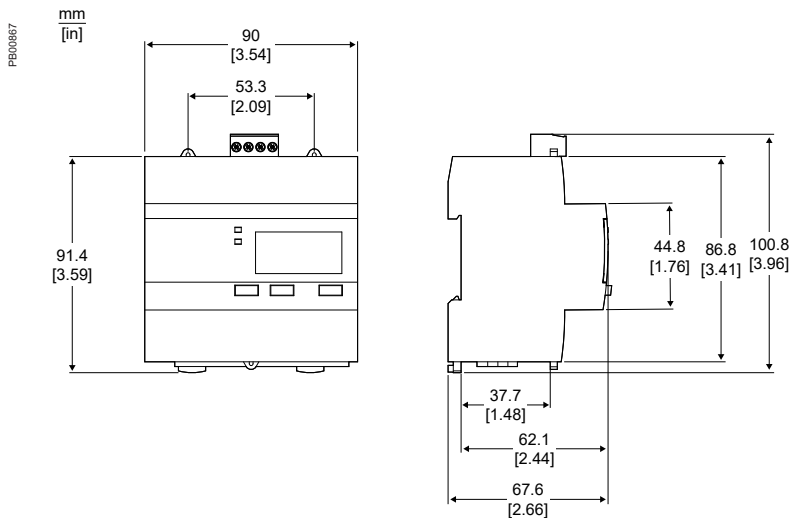
Power Logic EM3712/EM3724 Series parts

1. Selection
2. Confirmation
3. Cancellation
4. Display for measurement and configuration
5. Flashing yellow meter indicator to check accuracy
6. Green indicator: on/off, error
7. Pulse Output(EM3712)
8. RS485 Communication (EM3724)

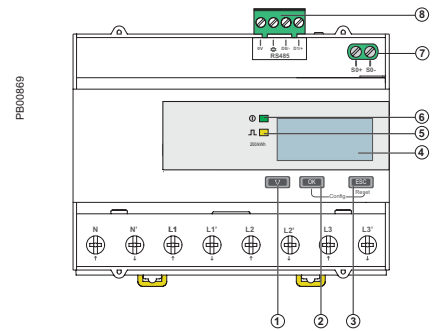
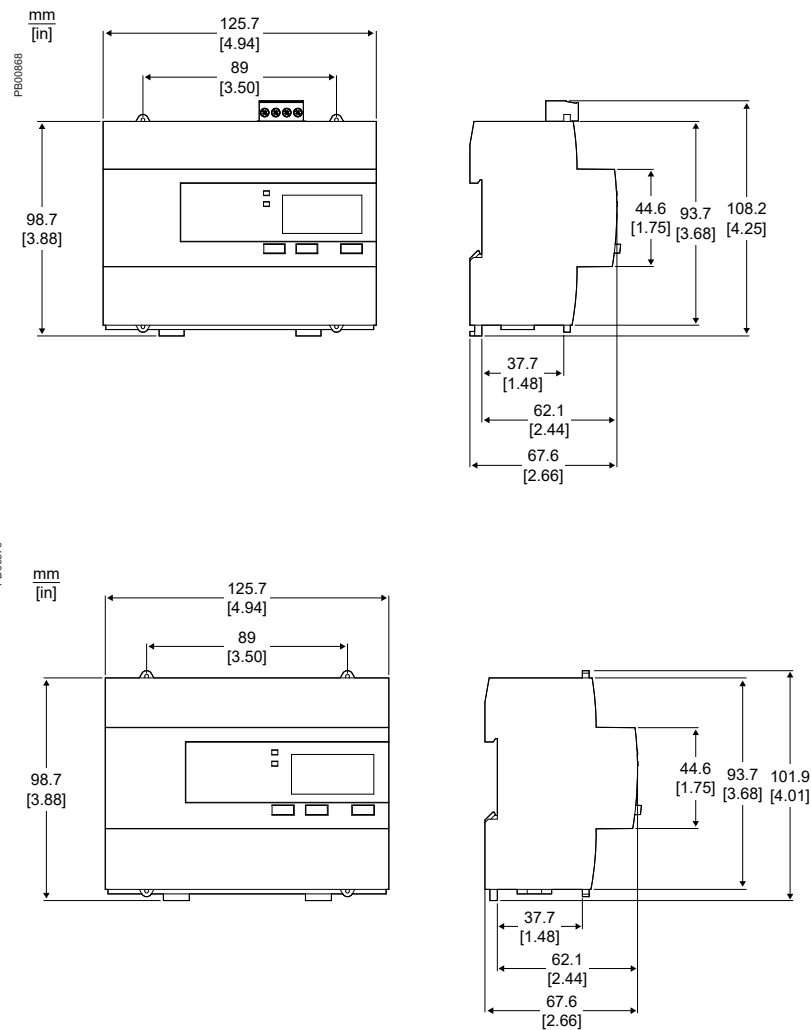
Please see the appropriate **Installation Guide** for accurate and complete information on the installation of this product.

PowerLogic™ EM3000 Series dimensions

EM3724 series dimensions



EM3322/EM3412/EM3424series dimensions



Power Logic EM3322/EM3412/EM3424 Series parts

1. Selection
2. Confirmation
3. Cancellation
4. Display for measurement and configuration
5. Flashing yellow meter indicator to check accuracy
6. Green indicator: on/off, error
7. Pulse Output for remote transfer
8. RS485 Communication

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



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