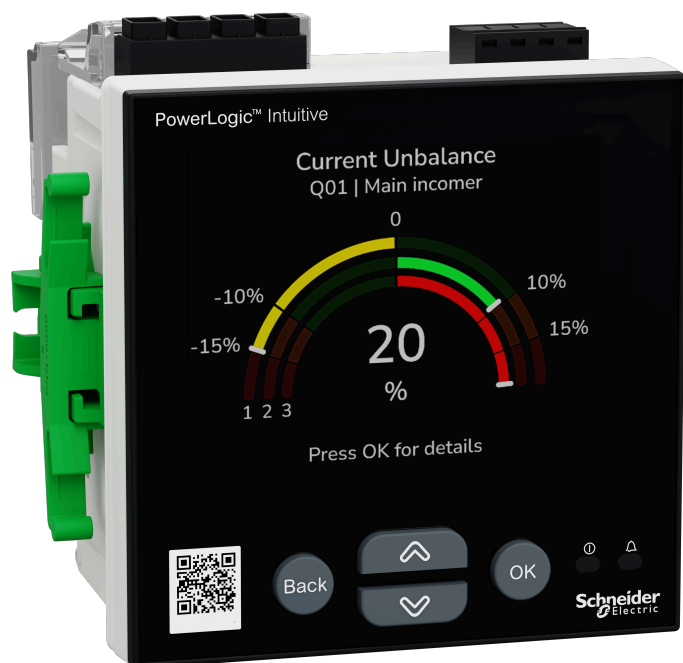


PowerLogic™ Intuitive PM7100 / PM7200 / PM7300 series

User Manual

7EN02-0489-00
08/2026



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Safety information

Important information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that accompany this symbol to avoid injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

Failure to follow these instructions will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this equipment. A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Metering equipment symbols

The following IEC 60417 and ISO 7000 symbols may be used on the metering equipment:

Symbol	Reference	Description
	IEC 60417-5172	Protective Class II equipment To identify equipment meeting the safety requirements specified for Class II equipment (double or reinforced insulation).
	ISO 7000-0434B	Caution To indicate that caution is necessary when operating the device or control close to where the symbol is placed. To indicate that the current situation needs operator awareness or operator action to avoid undesirable consequences.
	ISO 7000-1641	Operator's manual To identify the location where the operator's manual is stored or to identify information that relates to the operating instructions. To indicate operating instructions should be considered when operating the device or operating controls close to where the symbol is placed.

Notices

Federal Communications Commission (FCC)

FCC Interference Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in compliance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference does not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television (TV) technician for help.

Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 200 mm (7.87 in) between the radiator and your body.

NOTE: The country code selection is for non-US model only and is not available to all US models. As per FCC regulation, all Wi-Fi products marketed in US must be fixed to US operation channels only.

Industry Canada

Industry Canada Statement:

This device complies with Innovation, Science and Economic Development Canada (ISED) license-exempt Radio Standards Specification (RSS). Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 200 mm (7.87 in) between the radiator and your body.

About the document

Document scope

This manual describes the features of the PowerLogic™ Intuitive PM7100 / PM7200 / PM7300 series power meters and provides installation and configuration instructions.

Throughout the manual, the term “meter”, “device”, “equipment” or “product” refers to all models of the PM7100 / PM7200 / PM7300. Any differences between the models, such as a feature specific to one model, are indicated with the appropriate model number or description.

This manual assumes that you understand power metering and are familiar with the equipment and power system in which your meter is installed.

This manual does not include instructions on incorporating meter data or performing meter configuration using energy management systems or software.

Validity note

The characteristics of the products described in this document are intended to match the characteristics that are available on www.se.com. As part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on www.se.com, consider www.se.com to contain the latest information.

Product related information

Refer to the chapter [Safety precautions](#), page 17 for the product related safety messages.

General cybersecurity information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the [Cybersecurity Best Practices](#) document.

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 - [Access the cybersecurity posture.](#)
 - [Learn more about cybersecurity in the cybersecurity academy.](#)
 - [Explore the cybersecurity services from Schneider Electric.](#)

Product related cybersecurity information

Total protection of components (equipment/devices) systems, organizations, and networks from cyber attack threats requires multi-layered cyber risk mitigation measures, early detection of incidents, and appropriate response and recovery plans when incidents occur. For more information about cybersecurity, refer to the Cybersecurity Guidelines, page 49.

⚠ WARNING

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

- Set a display passcode to help reduce the risk of unauthorized physical access to the meter.
- Disable unused ports/services and default accounts, where possible, to minimize pathways for malicious attacks.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use cybersecurity best practices (for example: least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, interruption of services, or unintended operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Environmental data

For product compliance and environmental information, refer to the Schneider Electric Environmental Data Program.

Available languages of the document

The document is available in these languages:

- French (7FR02-0489)
- Spanish (7ES02-0489)
- German (7DE02-0489)
- Chinese (7ZH02-0489)

Related documents

Title of documentation	Reference number
PowerLogic™ Intuitive PM7100 / PM7200 / PM7300 instruction sheet	PKR39369
PowerLogic™ Engineering Suite configuration guide	7EN02-0505
EcoStruxure™ Power Device (EPD) user guide	DOCA0365

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

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1. Safety precautions

Installation, wiring, testing, and service must be performed in compliance with all local and national electrical codes.

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Always apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E in the USA, CSA Z462 or applicable local standards.
- Always turn off all power supplying equipment before working on or inside the equipment.
- Always use a properly rated voltage sensing device to confirm that all power is off.
- Do not exceed the maximum ratings of this device.
- Do not install this product in hazardous classified locations.
- Always install products rated only for basic insulation on insulated conductors.
- Replace all doors, covers, and protective devices before powering the equipment.
- Treat communications and I/O wiring connected to multiple devices as hazardous live until determined otherwise.
- Never short the secondary of a Voltage Transformer (VT).
- Never bypass external fusing.
- Never open circuit a Current Transformer (CT).
- Connect current inputs only to AC systems and only through grounded CTs. Use UL 2808-listed energy-monitoring CTs for UL 2808-compliant installations.
- This product has not been evaluated for retrofit (modification of a field-installed panel) applications as per UL 2808.
- Do not install CTs in equipment where they exceed 75% of the wiring space of any cross-sectional area in the equipment.
- Do not install CTs or meter in areas where ventilation openings may be blocked or in areas of breaker arc venting.
- Secure CT secondary conductors to ensure they do not contact live circuits.
- Do not install CTs using Class 2 wiring methods or connect them to Class 2 equipment. See NFPA 70E in the USA or applicable local standards.
- Do not mount the meter within 50.8 mm (2 in) of any live circuits including the primary conductors, primary terminals, and primary lugs.
- Do not allow the meter to contact the panel interior insulation inside the enclosure.
- Do not use water or any liquid material to clean the product. Use a cleaning cloth to remove dirt. If dirt cannot be removed, contact local Technical Support representative.
- Before installation, verify the rating and the characteristics of the supply side over current protection devices. Do not exceed the maximum current or voltage rating of the meter.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING**UNINTENDED OPERATION**

- Do not use the meter for critical control or protection applications where human or equipment safety relies on the operation of the control circuit.
- Do not use the meter if wrench icon  is displayed on the top left corner of the display screen.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠ WARNING**INACCURATE DATA RESULTS**

- Do not rely solely on data displayed on the display or in software to determine if this device is functioning correctly or complying with all applicable standards.
- Do not use data displayed on the display or in software as a substitute for proper workplace practices or equipment maintenance.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠ WARNING**POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY**

- Set a display passcode to help reduce the risk of unauthorized physical access to the meter.
- Disable unused ports/services and default accounts, where possible, to minimize pathways for malicious attacks.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use cybersecurity best practices (for example: least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, interruption of services, or unintended operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

2. Meter overview

2.1 Overview

The PowerLogic™ Intuitive PM7100 / PM7200 / PM7300 series power and energy meters offer value for energy monitoring and cost management applications. These meters comply with Class 0.2S or Class 0.5S accuracy standards featuring high quality, reliability, and affordability in a compact, easy-to-install format.

The key features of the meters are:

- Intuitive color graphical display
- Power and energy metering: 3-phase voltage, current, power, demand, energy, frequency, and power factor
- Multi-tariff controlled by internal clock, digital inputs or communication
- Power quality analysis: THD, thd, and TDD
- Harmonics: individual odd and even up to 31st
- Digital outputs/digital inputs
- Relay outputs
- Time-stamped alarms
- Data logging
- Bluetooth® LE communication with core specification version 5.3

NOTE: Bluetooth is available only in specific models.

- Serial port with Modbus protocol (RS-485)
- Ethernet port with Modbus TCP/IP and BACnet/IP
- IPv4, IPv6, DPWS, DHCP, BOOTP
- MID/MIR compliance

2.2 Meter models

The following table provides an overview of various meter models, highlighting their key features and specifications:

Model	Commercial reference	Description
PM7112DUW	METSEPM7112DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, accuracy class 0.5S (Wh) and accuracy class 2 (varh), one digital input and one digital output, two multi-tariffs, 34 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7142DUW	METSEPM7142DUW	Front panel mount with integrated display, 96 x 96 mm form factor, TCP/IP Ethernet communication port, accuracy class 0.5S (Wh) and accuracy class 2 (varh), one digital input and one digital output, two multi-tariffs, 34 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7151DUW	METSEPM7151DUW	Front panel mount with integrated display, 96 x 96 mm form factor, TCP/IP Ethernet communication port, accuracy class 0.5S (Wh) and accuracy class 2 (varh), two digital inputs and two digital outputs, two relay outputs, four multi-tariffs, 35 alarms, 31st harmonic, 14 parameters x 15 minutes x 180 days data logging and the meter calibrated to comply with MID/MIR standards.
PM7211DUW	METSEPM7211DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), one digital input and one digital output, two multi-tariffs, 34 alarms, 31st harmonic, 14 parameters x 15 minutes x 180 days data logging, and the meter calibrated to comply with MID/MIR standards.
PM7212DUW	METSEPM7212DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), one digital input and one digital output, two multi-tariffs, 34 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7222DUW	METSEPM7222DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), two digital inputs

Model	Commercial reference	Description
		and two digital outputs, four multi-tariffs, 35 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7231DUW	METSEPM7231DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), four digital inputs, two relay outputs, 16 multi-tariffs, 37 alarms, 31st harmonic, 14 parameters x 15 minutes x 180 days data logging, and the meter calibrated to comply with MID/MIR standards.
PM7232DUW	METSEPM7232DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), four digital inputs, two relay outputs, 16 multi-tariffs, 37 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7252DUW	METSEPM7252DUW	Front panel mount with integrated display, 96 x 96 mm form factor, TCP/IP Ethernet communication port, Bluetooth, accuracy class 0.5S (Wh) and accuracy class 2 (varh), two digital inputs and two digital outputs, two relay outputs, four multi-tariffs, 35 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7332DUW	METSEPM7332DUW	Front panel mount with integrated display, 96 x 96 mm form factor, RS-485 communication port, Bluetooth, accuracy class 0.2S (Wh) and accuracy class 2 (varh), four digital inputs, two relay outputs, 16 multi-tariffs, 37 alarms, 31st harmonic, and 14 parameters x 15 minutes x 180 days data logging.
PM7351DUW	METSEPM7351DUW	Front panel mount with integrated display, 96 x 96 mm form factor, TCP/IP Ethernet communication port, Bluetooth, accuracy class 0.2S (Wh) and accuracy class 2 (varh), two digital inputs and two digital outputs, two relay outputs, 16 multi-tariffs, 31st harmonic, 35 alarms, 14 parameters x 15 minutes x 180 days data logging, and the meter calibrated to comply with MID/MIR standards.

2.3 Feature summary

The following table provides an overview of the key features and functionalities of the meter models:

		PM7112DUW	PM7142DUW	PM7151DUW	PM7211DUW	PM7212DUW	PM7222DUW
Power and energy metering: 3-phase voltage, current, power, demand, energy, frequency, and power factor		✓	✓	✓	✓	✓	✓
Accuracy	Wh	Class 0.5S	Class 0.5S	Class 0.5S	Class 0.5S	Class 0.5S	Class 0.5S
	varh	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2
Digital inputs (S1, S2, S3, S4)		1	1	2	1	1	2
Digital outputs (D1, D2)		1	1	2	1	1	2
Relay outputs (R1, R2)		—	—	2	—	—	—
Alarms		34	34	35	34	34	35
Multi-tariffs		2	2	4	2	2	4
Power quality analysis: THD, thd, and TDD		✓	✓	✓	✓	✓	✓
Power quality analysis: Harmonics, individual (odd and even) up to		31st	31st	31st	31st	31st	31st
Data logging (parameters x minute interval x days)		14x15x180	14x15x180	14x15x180	14x15x180	14x15x180	14x15x180
Bluetooth communication		—	—	—	✓	✓	✓
Communications: RS-485 Modbus protocol		✓	—	—	✓	✓	✓
Communications: Ethernet port with Modbus TCP and BACnet/IP		—	✓	✓	—	—	—
MID/MIR		—	—	✓	✓	—	—

		PM7231DUW	PM7232DUW	PM7252DUW	PM7332DUW	PM7351DUW
Power and energy metering: 3-phase voltage, current, power, demand, energy, frequency, and power factor		✓	✓	✓	✓	✓
Accuracy	Wh	Class 0.5S	Class 0.5S	Class 0.5S	Class 0.2S	Class 0.2S
	varh	Class 2	Class 2	Class 2	Class 2	Class 2

	PM7231DUW	PM7232DUW	PM7252DUW	PM7332DUW	PM7351DUW
Digital inputs (S1, S2, S3, S4)	4	4	2	4	2
Digital outputs (D1, D2)	—	—	2	—	2
Relay outputs (R1, R2)	2	2	2	2	2
Alarms	37	37	35	37	35
Multi-tariffs	16	16	4	16	16
Power quality analysis: THD, thd, and TDD	✓	✓	✓	✓	✓
Power quality analysis: Harmonics, individual (odd and even) up to	31st	31st	31st	31st	31st
Data logging (parameters x minute interval x days)	14x15x180	14x15x180	14x15x180	14x15x180	14x15x180
Bluetooth communication	✓	✓	✓	✓	✓
Communications: RS-485 Modbus protocol	✓	✓	—	✓	—
Communications: Ethernet port with Modbus TCP and BACnet/IP	—	—	✓	—	✓
MID/MIR	✓	—	—	—	✓

Functions and characteristics

This section details the various functions and characteristics of the meters.

Table 1 - General

Use on LV and MV systems	✓
Basic metering with THD and min/max readings	✓
Input metering	✓
Monthly auto reset for max demand, Wh	✓
CT polarity/phase sequence detections	✓

Table 2 - Instantaneous rms values

Current (Average, per phase and neutral)	✓
Voltage (Average, per phase L-L, and L-N)	✓
Frequency	✓
Real, reactive, and apparent power (Total and per phase)	Signed, four quadrant
True power factor (Average and per phase)	Signed, four quadrant
Displacement PF (Average and per phase)	Signed, four quadrant
% Unbalanced I, V L-N, and V L-L	✓

Table 3 - Energy values

Partial and non-resettable accumulated active, reactive, and apparent energy	Received/Delivered, net and absolute
--	--------------------------------------

Table 4 - Demand values

Current average	Present, last, predicted, peak, and peak date time
Active power	Present, last, predicted, peak, and peak date time
Reactive power	Present, last, predicted, peak, and peak date time
Apparent power	Present, last, predicted, peak, and peak date time

Table 4 - Demand values (Continued)

Peak demand with timestamping	✓
Demand calculation (Sliding, fixed and rolling block, and thermal methods)	✓
Synchronization of the measurement window to input, communication command or internal clock	✓
Configurable demand intervals	✓

NOTE: Reactive power and energy are calculated according to IEC 62053-24. Harmonics are not included in this calculation.

Table 5 - Power quality measurements

THD (Total Harmonic Distortion), thd	I, V L-N, V L-L
TDD (Total Demand Distortion)	✓
Individual harmonics (odd and even)	✓

Table 6 - Other measurements

I/O Timers and Counters ⁽¹⁾	✓
Operating timer ⁽¹⁾	✓
Active load timer ⁽¹⁾	✓
Alarm counters and alarm logs	✓

Table 7 - Data recording

Min/max of instantaneous values, plus phase identification ⁽¹⁾	✓
Alarms with 1 s timestamping ⁽¹⁾	✓
Data logging	Data logging up to 14 parameters with configurable interval and duration (for example, 14 parameters for 180 days at 15-minute interval)
Maintenance, alarm, and event logs	✓
Preset energy	✓

Table 8 - Wetting voltage

Wetting voltage	✓
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2.4 Data display and analysis tools

2.4.1 Meter configuration

Meter configuration can be performed through the display and PowerLogic™ Engineering Suite.

PowerLogic™ Engineering Suite is a meter configuration tool that can be downloaded for free at www.se.com.

See the PowerLogic™ Engineering Suite online help or the PowerLogic™ Engineering Suite device configuration guide (7EN02-0505) for instructions on how to configure your meter. To download a copy, go to www.se.com and search for PowerLogic™ Engineering Suite device configuration guide.

⁽¹⁾ Stored in non-volatile memory.

2.4.2 Bluetooth interface

Meter's instantaneous parameters (data monitoring), device info, date and time, and alarm information can be accessed using the Bluetooth interface from a smartphone through the EcoStruxure™ Power Device (EPD) application.

The EcoStruxure™ Power Device (EPD) is a panel commissioning tool which can be downloaded for free at www.se.com. See the EcoStruxure™ Power Device (EPD) user guide for instructions on how to commission your meter. To download a copy, go to www.se.com and search for EcoStruxure™ Power Device (EPD) user guide (DOCA0365).

NOTE: Limited support for EPD at launch, with full features enabled later.

Data transferred over Bluetooth wireless technology is encrypted using AES 128-bit encryption algorithm.

2.4.3 Modbus command interface

Most of the meter's real-time and logged data, as well as basic configuration and setup of meter features, can be accessed and programmed using a Modbus command interface as published in the meter's Modbus register list along with the meter firmware.

This is an advanced procedure that should only be performed by users with advanced knowledge of Modbus, their meter, and the power system being monitored. For further information on the Modbus command interface, contact Technical Support.

See your meter's Modbus register list at www.se.com for the Modbus mapping information and basic instructions on command interface.

2.4.4 EcoStruxure™ Building Operation

EcoStruxure™ Building Operation is a complete software solution for integrated monitoring, control, and management of energy, lighting, fire safety, and HVAC.

It natively supports the major communication standards in building automation and security management, including TCP/IP, LonWorks, BACnet, Modbus and Ethernet.

2.4.5 EcoStruxure™ Power Monitoring Expert

EcoStruxure™ Power Monitoring Expert is a complete supervisory software package for power management applications.

The software collects and organizes data gathered from your facility's electrical network and presents it as meaningful, actionable information using an intuitive web interface.

EcoStruxure™ Power Monitoring Expert communicates with devices on the network to provide:

- Real-time monitoring through a multi-user web portal
- Trend graphing and aggregation
- Power quality analysis and compliance monitoring
- Pre-configured and custom reporting

See the EcoStruxure™ Power Monitoring Expert online help for instructions on how to add your device into its system for data collection and analysis.

2.4.6 EcoStruxure™ Power Operation

EcoStruxure™ Power Operation is a complete real-time monitoring and control solution for large facility and critical infrastructure operations.

It communicates with your device for data acquisition and real-time control. You can use EcoStruxure™ Power Operation for:

- System supervision
- Real-time and historical trending, event logging
- PC-based custom alarms

See the EcoStruxure™ Power Operation online help for instructions on how to add your device into its system for data collection and analysis.

3. Hardware reference

3.1 Supplemental information

This document should be used along with the instruction sheet included in the box with your device and accessories.

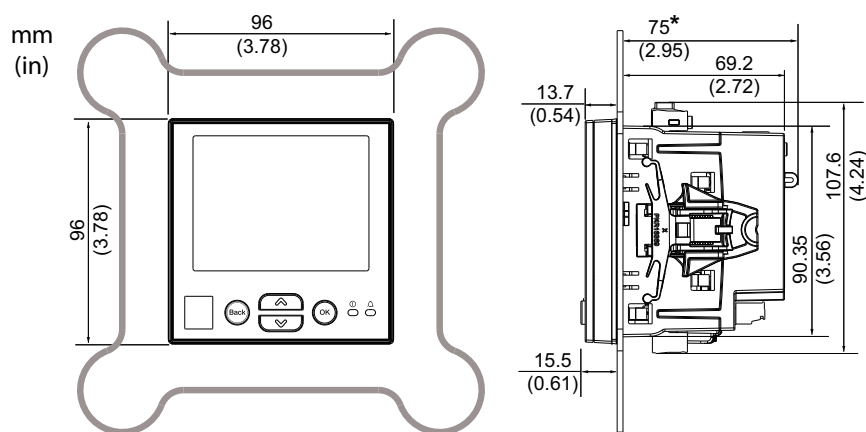
See your device's instruction sheet for information related to installation.

See your product's catalog pages at www.se.com for information about your device, its options, and accessories.

You can download updated documentation from www.se.com or contact your local Schneider Electric representative for the latest information about your product.

3.2 Dimensions

The following illustration shows the meter dimensions:



* The specified depth includes a 1 mm (0.04 in) panel thickness. This dimension may vary depending on the actual panel thickness. For example, if the panel thickness increases, the overall depth (75 mm (2.95)) will decrease accordingly.

3.3 Mounting

The following illustration shows the meter's mounting instructions: