



Smart Energy Monitoring



Power Monitoring
Shelly EM monitors monophase electrical systems with up to 2 points simultaneously.



Wi-Fi Operated
Connect Shelly EM to your Wi-Fi network. No HUB required!



365 days of data storage
The measurements from Shelly EM are stored in a free cloud for 365 days.

Wi-Fi operated Energy Meter and Contactor Control

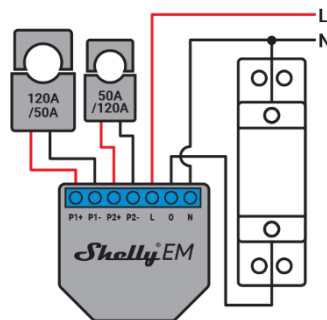
- Power Metering - two independent channels
- Current metering up to 120Amp per channel
- One contactor control (or load up to 2Amp)
- Easy control via app, various protocols and platforms, as well as voice assistants

Features

- No Hub required.
- Monitor status and history as well as current and past power consumption for the day, week, month or year.
- Internal temperature sensor for overheating protection.
- Can automatically turn off the whole circuit if consumption or energy reaches the set limit.
- Compatible with Android, iOS, Amazon Alexa, Google Assistant and home automation servers using MQTT, CoAP and REST API.

Specifications

POWER	POWER
Power supply AC	110-230V \pm 10%, 50/60Hz
Power supply DC	No
SPECIAL FUNCTIONS	SPECIAL FUNCTIONS
Contactor Control	Yes - max 2A
Roller shutter mode	No
Device temperature protection	Yes
Overload protection	No
Power measurement	Yes
FEATURES	FEATURES
Channels	2 Channel
Operational temperature	0 to + 40 °C
Device power consumption	< 1 W
Intelligent On/Off	Yes
Local and remote control	Yes
Sunrise/Sunset	Yes
Weekly Schedule	Yes
UL Listed option	No
CONNECTIVITY	CONNECTIVITY
Wireless/WiFi Protocol	802.11 b/g/n
Radiofrequency	2400 - 2500 MHz
Range	up to 50m outdoors and up to 30m indoors (Depending on the building materials)
DIMENSIONS	DIMENSIONS
Size	39mm x 36mm x 17 mm



- SHELLY-EM-50A WI-FI ENERGY METER 50A 110-230VAC WITH 50AMP CLAMP CT
- SHELLY-EM-120A WI-FI ENERGY METER 120A 110-230VAC WITH 120AMP CLAMP CT
- SHELLY-CLAMP-50 CLAMP CT 50Amp for EM and 3EM Energy Meter
- SHELLY-CLAMP-120 CLAMP CT 120Amp for EM and 3EM Energy Meter

Smart Energy Monitoring

3-Phase 120Amp



Wi-Fi, LAN, and Bluetooth connectivity

Simultaneous Ethernet and Wi-Fi usage. MQTT, inbound and outbound WebSocket, UDP, mTLS support.



Power monitoring

Monitors mono-phase electrical systems with up to 3 points simultaneously. Fast notifications and at least 60 days of 1-minute records storage.



Scripting functionalities

Shelly Pro 3PM fully supports mJS scripting, allowing you to create further features and functionalities.

Wi-Fi operated Energy Meter

- Power Metering 3-Phase or 3 independent circuits
- Current metering up to 120Amps per phase (400Amp option)
- Easy control via app, various protocols and platforms, as well as voice assistants
- LAN Connectivity
- Stored data that can be retrieved for a period up to 60days at 1 minute intervals.

Features

- 4 Quadrant measurement
- Optical pulse indication of energy usage
- Real-time clock
- Data logs
- Accuracy Class B (IEC 62053-21)
- Photovoltaic ready

Specifications

Physical	
Size (HxWxD):	94x19x69 ±0.5 mm / 3.70x0.75x2.71 ±0.02 in
Weight:	62 ±1 g / 2.19 ±0.05 oz
Mounting:	DIN rail
Screw terminals max torque:	0.4 Nm / 4.43 lbin
Conductor cross section:	0.5 to 2.5 mm ² / 20 to 14 AWG (solid, stranded, and bootlace lugs)
Conductor stripped length:	6 to 7 mm / 0.24 to 0.28 in
Shell material:	Plastic
Colour:	White
Environmental	
Ambient temperature:	-20 °C to 40 °C / -5 °F to 105 °F
Humidity:	30 % to 70 % RH
Max. altitude:	2000 m / 6562 ft
Electrical	
Power supply voltage AC:	110 - 240 V, 50/60 Hz
Power supply voltage DC:	N/A
Power consumption:	< 3 W
Sensors, meters	
Internal-temperature sensor:	Yes
Voltmeters (RMS for each phase):	100 - 260 V
Voltmeters accuracy:	±1 %
Ammeters (RMS via CT for each phase and the Neutral):	0 - 120 A
Ammeters accuracy:	±1 % (2 - 120 A), ±2 % (1 - 2 A), ±5 % (0 - 1 A)
Power and energy meters:	[List]
No load threshold:	30 VA per phase
Measurement data storage:	At least 60 days of 1 min data resolution
Data export:	[List]
Radio	
RF band:	2400 - 2495 MHz
Max. RF power:	<20 dBm
Wi-Fi protocol:	802.11 b/g/n
	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors
Wi-Fi Range:	(Depends on local conditions)
Bluetooth Protocol:	4.2
	Up to 10 m / 33 ft indoors and 30 m / 100 ft outdoors
Bluetooth Range:	(Depends on local conditions)