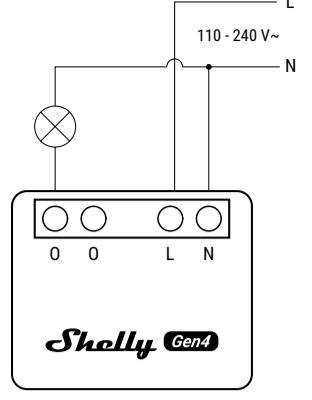


English  
Deutsch  
Italiano  
Español  
Português  
Français  
Polski  
Nederlands



English  
Italiano

Wiring diagram  
Schema elettrico

Legend  
Device terminals

- O: Output terminals (bridged internally)
- L: Live (110-240 V~) terminal
- N: Neutral terminal

Wires

- L: Live wire (110-240 V~)
- N: Neutral wire

Deutsch  
Anschlussplan

Legende  
Geräteklemmen

- O: Ausgangsklemmen (intern gebückt)
- L: Klemme für Phaseneleiter (110-240 V~)
- N: Klemme für Neutralleiter

Kabel

- L: Phaseneleiterkabel (110-240 V~)
- N: Neutralleiterkabel

English  
User and safety guide

Shelly EM Mini Gen4

Compact smart energy meter

Referred to in this document as "the Device".

**Safety information**

For safe and proper use, read this guide, and any other documents accompanying this product. Keep them for future reference. Failure to follow the installation procedures can lead to malfunction, danger to health and life, violation of law, and/or refusal of legal and commercial guarantees (if any). Shelly Europe Ltd. is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure to follow the user and safety instructions in this guide.

This sign indicates safety information.

This sign indicates an important note.

**DANGER!** Risk of electric shock. Installation of the Device to the power grid must be performed carefully by a qualified electrician.

**DANGER!** Before installing the Device, turn the circuit breakers off. Use a suitable test device to make sure there is no voltage on the wires you want to connect. When you are sure that there is no voltage, proceed to the installation.

**DANGER!** Before making any changes to the connections, ensure there is no voltage present at the Device terminals.

**DANGER!** Connect the Device only to a power grid and appliances that comply with all applicable regulations. A short circuit in the power grid or any appliance connected to the Device can cause fire, property damage, and electric shock.

**DANGER!** The Device may be connected only to electric circuits and appliances that comply with the applicable standards and safety norms.

**DANGER!** Do not connect the Device to appliances that exceed the specified maximum electric load.

**DANGER!** Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.

**DANGER!** The Device and the appliances connected to it, must be secured by a cable protection switch in accordance with EN60998-1 (tripping characteristic B or C, max. 16 A rated current, min. 6 kA interrupting rating, energy limiting class 3).

**DANGER!** Do not use the Device if it shows any sign of damage or defect.

**DANGER!** Do not attempt to repair the Device yourself.

**DANGER!** The Device is intended only for indoor use.

**DANGER!** Keep the Device away from dirt and moisture.

**DANGER!** Keep the devices (mobile phones, tablets, PCs) for remote control of Shelly away from children.

**Product description**

Shelly EM Mini Gen4 is a Matter-compatible compact smart energy meter, which allows remote monitoring of electric appliances energy consumption. Equipped with a multi-protocol wireless MCU, it supports Zigbee and Bluetooth connectivity for a secure connection.

The Device has an embedded web interface to monitor, control, and adjust its settings. The web interface is accessible at <http://192.168.33.1> when connected directly to the Device access point or at its IP address when accessed from the same network.

The Device can access and interact with other smart devices or automation systems if they are in the same network infrastructure. Shelly Europe Ltd. provides APIs for the devices, their integration, and cloud control. For more information, visit <https://shelly-api-docs.shelly.cloud>.

**DANGER!** The Device comes with factory-installed firmware. To keep it updated and secure, Shelly Europe Ltd. provides the latest firmware updates free of charge. Access the updates through either the embedded web interface or the Shelly Smart Control mobile application. Installation of firmware updates is the user's responsibility. Shelly Europe Ltd. shall not be liable for any lack of conformity of the Device caused by the failure of the user to install the available updates in a timely manner.

**Installation instructions**

To connect the Device, we recommend using solid single-core wires or stranded wires with ferrules. The wires should have insulation with increased heat resistance, not less than PVC T105°C (221°F).

Do not use buttons or switches with built-in LED or neon glow lamps.

When connecting wires to the Device terminals, consider the specified conductor cross section and stripped length. Do not connect multiple wires into a single terminal.

For security reasons, after you successfully connect the Device to the local Wi-Fi network, we recommend that you disable or password-protect the Device AP (Access Point).

To enable the access point and the Bluetooth connection of the Device, press and hold the Reset/control button for 5 seconds.

To perform a factory reset of the Device, press and hold the Reset/control button for 10 seconds.

1. Connect the load to the O terminal of the Device and the Neutral wire, as shown on fig. 1. Connect the Live wire to an L terminal of the Device.

**Adding Zigbee Device**

Before you start, make sure you have:

- 2.4 GHz Wi-Fi network
- A Matter-compatible hub connected to the Internet
- A mobile device with Bluetooth enabled and a Matter-compatible app installed

1. Enable the access point of the Device by pressing and holding the Reset/control button for 5 seconds.

2. Scan the Matter QR code inside the box.

3. Follow the instructions that appear on your screen to complete the process.

① Keep the QR code for future reference. If you reset the device, you will need that code again.

**Specifications**

**Physical**

- Size (HxWxD): 29x34x16 mm / 1.34x1.11x0.63 inch

• Weight: 13 g / 0.46 oz

• Screw terminals max torque: 0.4 Nm / 3.5 lb/in

• Conductor cross section: 0.2 to 2.5 mm<sup>2</sup> / 24 to 14 AWG (solid, stranded, and bootlace ferrules)

• Conductor stripped length: 6 to 7 mm / 0.24 to 0.28 in

• Mounting: Wall console / In-wall box

• Shell material: Plastic

• Shell color: White

• Terminals color: Grey

**Environmental**

• Ambient working 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: 110-240 V~

• Power consumption: < 1 W

**Output circuits ratings**

• Power metering: Yes

• Max. measurement voltage: 240 V~

• Max. measurement current: 16 A

• Max. measurement power: 3840 W

**Sensors, meters**

• Voltmeter (AC): 110-240 V~ / 50/60 Hz

• Voltmeter accuracy: ±2%

• Ammeter (AC): 0 - 16 A

• Power and energy meters: Active power

• Active energy

• Measurement data storage: At least 10 days of 1 min data resolution

• Data export: CSV for PQ recorded values

• JSON format export through RPC

**Radio**

• Protocol: 802.11 b/g/n

• RF band: 2412 - 2472 MHz

• Max. RF power: < 20 dBm

• Range: Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)

**Bluetooth**

• Protocol: 4.2

• RF band: 2402 - 2480 MHz

• Max. RF power: < 4 dBm

• Range: Up to 30 m / 98 ft outdoors, up to 10 m / 33 ft indoors (depending on local conditions)

**Zigbee**

• Protocol: 802.15.4

• RF band: 2400 - 2483.5 MHz

• Max. RF power: < 20 dBm

• Range: Up to 100 m / 328 ft indoors and 300 meters / 984 ft outdoors (Depends on local conditions)

**Microcontroller unit**

• CPU: ESP-Shelly-C68F

• Flash: 8 MB

**Firmware capabilities**

• Schedules: 20

• Webhooks (URL actions): 20 with 5 URLs per hook

• WiFi range extender: Yes

• BLE Gateway: Yes

• Scripting: Yes

• MQTT: Yes

• Encryption: Yes

**Shelly Cloud inclusion**

The Device can be monitored, controlled, and set up through our Shelly Cloud home automation service. You can use the service through either our Android, iOS, or Harmony OS mobile application or through any internet browser at <https://control.shelly.cloud/>.

If you choose to use the Device with the application and Shelly Cloud service, you can find instructions on how to connect the Device to the Cloud and control it from the Shelly app in the application guide: <https://shelly.link/app-guide>.

The Shelly mobile application and Shelly Cloud service are not conditions for the Device to function properly. This Device can be used standalone or with various other home automation platforms.

**Troubleshooting**

In case you encounter problems with the installation or operation of the Device, check in knowledge base page: <https://shelly.link/shelly-em-mini-gen4>

**Declaration of Conformity**

Hereby, Shelly Europe Ltd. declares that the radio equipment type Shelly EM Mini Gen4 is in compliance with Directive 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: [https://shelly.link/em\\_mini\\_gen4\\_doc](https://shelly.link/em_mini_gen4_doc)

**Manufacturer**

Shelly Europe Ltd.

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**Official website:** <https://www.shelly.com>

Changes in contact information are published by the Manufacturer on the official website.

All rights to the trademark Shelly® and other intellectual rights associated with this Device belong to Shelly Europe Ltd.

**Product liability**

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**Microcontroller unit**

• CPU: ESP-Shelly-C68F

• Flash: 8 MB

**Firmware-Funktionen**

• Zeitstufen: 20

• Webhooks (URL-Aktionen): 20 mit 5 URLs per Hook

• WiFi-Range Extender: Ja</

