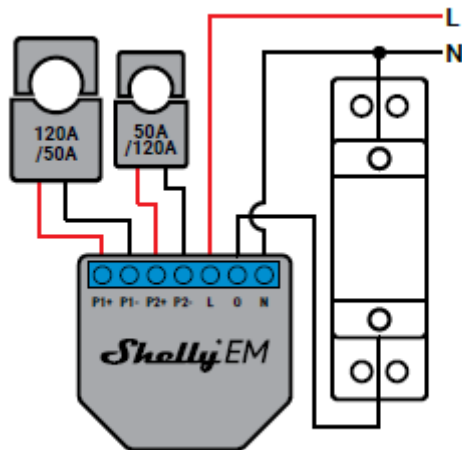


Shelly[®]EM

2 CHANNEL WIFI ENERGY METER USER AND SAFETY GUIDE



This document contains important technical and safety information about the device and its safety use and installation. Before beginning the installation, please read this guide and any other documents accompanying the device carefully and completely. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of the law or refusal of legal and/or commercial guarantee (if any). Allterco Robotics is not responsible for any loss or damage in case of incorrect installation or improper operation of this device due to failure of following the user and safety instructions in this guide.



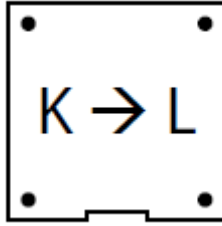
Legend

- **N** - Neutral input (110-230V AC);
- **L** - Line input (110-230V AC);
- **O** - Output for contactor control (max 2A);
- **P1+** - Positive connection of current transformer 1
- **P1-** - Negative connection of current transformer 1
- **P2+** - Positive connection of current transformer 2
- **P2-** - Negative connection of current transformer 2

The Dual WiFi Energy Meter, Shelly® EM by Allterco Robotics is intended to be mounted into a standard in-wall console or next to the breakers, in order to monitor the electric power through it, independent for each channel and heavy-duty contactor control. Shelly may work as a standalone Device or as an accessory to a home automation controller.

- Purpose of control: Operating
- Construction of control: Independently mounted
- Type 1.B Action
- Pollution Degree 2
- Impulse Voltage: 4000 V

On the bottom of your Split core transformer, you will see an arrow showing how you must place it on the line cable. The arrow shows the direction of the current/voltage flow.



Specification

- Power supply - 110-230V ±10% 50/60Hz AC
- Max measurement per channel - 120A/230V
- Relay Max Load - 2A/230V
- Working temperature - - 40°C up to 40°C
- Radio signal power - 1mW
- Radio protocol - WiFi 802.11 b/g/n
- Frequency: 2412-2472 MHz; (Max. 2483,5 MHz)
- Operational range (depending on local construction) - up to 50 m outdoors, up to 30 m indoors
- Dimensions(HxWxL) - 39x36x17 mm
- Electrical consumption - < 1 W

Technical Information

- Control through WiFi from a mobile phone, PC, automation system or any other Device supporting HTTP and/or UDP protocol.
- Microprocessor management.

⚠ CAUTION! *Danger of electrocution. Mounting the Device to the power grid has to be performed with caution.*

⚠ CAUTION! *Do not allow children to play with the button/ switch connected to the Device. Keep the Devices for remote control of Shelly (mobile phones, tablets, PCs) away from children.*

Introduction to Shelly®

Shelly® is a family of innovative Devices, which allow remote control of electric appliances through mobile phone, PC or home automation system. Shelly® uses WiFi to connect to the devices controlling it. They can be in the same WiFi network or they can use remote access (through the Internet). Shelly® may work standalone, without being managed by a home automation controller, in the local WiFi network, as well as through a cloud

service, from everywhere the User has Internet access. Shelly® has an integrated web server, through which the User may adjust, control and monitor the Device. Shelly® has two WiFi modes - Access Point (AP) and Client mode (CM). To operate in Client Mode, a WiFi router must be located within the range of the Device. Shelly® devices can communicate directly with other WiFi devices through HTTP protocol. An API can be provided by the Manufacturer. Shelly® devices may be available for monitor and control even if the User is outside the range of the local WiFi network, as long as the WiFi router is connected to the Internet. The cloud function could be used, which is activated through the web server of the Device or through the settings in the Shelly Cloud mobile application. The User can register and access Shelly Cloud, using either Android or iOS mobile applications, or any internet browser and the web site: <https://my.Shelly.cloud/>.

Installation Instructions

⚠ CAUTION! *Danger of electrocution! The mounting/ installation of the Device should be done by a qualified person (electrician).*

⚠ CAUTION! *Danger of electrocution! Do not connect the current transformer clamp to the Line, before wiring it to Shelly EM. Even if only the current transformer is connected, there might be high voltage across its connection cables.*

⚠ CAUTION! *Danger of electrocution. Even when the Device is turned off, it is possible to have voltage across its clamps. Every change in the connection of the clamps has to be done after ensuring all local power is powered off/disconnected.*

⚠ CAUTION! *Do not connect the Device to appliances exceeding the given max load!*

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

⚠ CAUTION! *Use the Device only with power grid and appliances which comply with all applicable regulations. a short circuit in the power grid or any appliance connected to the Device may damage the Device.*

⚠ RECOMMENDATION! *The Device may be connected to and may control electric circuits and appliances only if they comply with the respective standards and safety norms.*

Declaration of conformity

Hereby, Allterco Robotics EOOD declares that the radio equipment type Shelly EM 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.cloud/knowledge-base/devices/shelly-em/>

Manufacturer: Allterco Robotics EOOD

Address: Bulgaria, Sofia, 1407, 103 Cherni vrah Blvd.

Tel.: +359 2 988 7435

E-mail: support@shelly.cloud

Web: <http://www.shelly.cloud>

Changes in the contact data are published by the Manufacturer at the official website of the Device <http://www.shelly.cloud> All rights to trademarks She® and Shelly®, and other intellectual rights associated with this Device belong to Allterco Robotics EOOD.

