

## 1 Introduction



► This installation manual contains important information regarding the installation of the eTactica Gateway model EG-200, which must be followed.

- Read the entire manual before beginning the installation in order to avoid making mistakes and to reduce the chances of any danger during the installation process.
- Pay attention to the installation instructions and be prepared to look them up during the installation process.

## 2 Safety Information

This manual contains information which you must observe for your own personal safety and the prevention of injury or damage. Such information is highlighted by the warning triangle shown below.

### 2.1 Hazard Classification

#### DANGER

This warning indicates danger with high risk, which if not avoided, can lead to death or serious injuries.

#### WARNING

This warning indicates danger with medium risk, which if not avoided, can lead to serious or major injuries.

#### CAREFUL

This warning indicates a lower risk, which if not avoided, can lead to minor or major injuries.

#### ATTENTION

This warning indicates that there is important information regarding the product or its parts requiring particular attention.

### 2.2 Installation Information

#### WARNING

- **Be sure to observe all hazard statements and warnings and cautions.**
- **Read the section entitled “Safety Information” very carefully.**

### 2.3 Safety Notes

#### DANGER

##### Risk of lethal electric shock.

Only low voltage current is present in the connection between the Gateway and slave devices.

- Install the Gateway only in approved cabinets or housings so that all connections are appropriately covered and protected.
- To restrict access by unauthorized persons, the electrical cabinet should be locked. Turn the power off before installation or maintenance, and provide protection against unintentional power-up during work.
- Install the Gateway in a dry environment.
- Protect the Gateway from humidity and moisture.

#### WARNING

- Always install data and power cables so that they are separated (Refer to DIN EN 50174-2).

#### ATTENTION

- To prevent damage caused by a power surge, the Gateway should be protected by a surge arrester (SPD Type 1) and surge protector (SPD Type 2) upstream of the power source.
- Make sure that the power source which supplies the Gateway with voltage can be switched off easily, for example via a C2 or B6 miniature circuit breaker. This must be marked as the disconnecting device for the power source and be easily accessible.
- No maintenance on the Gateway is required.

## 3 Target Group

The activities described in this document may only be carried out by a certified electrician with the following qualifications:

- Training in the installation and commissioning of electrical equipment.
- Safety regulations training in electrical hazards and safety.
- Knowledge of relevant standards and guidelines.

## 4 Description

The eTactica EG-200 Gateway collects and analyzes live energy data from eTactica measurement devices or 3rd party devices, using the Modbus/RTU protocol on a RS485 network. The EG-200 then sends the data onwards to a specified internet destination via either an Ethernet or a Wi-Fi connection. Alternatively, the EG-200 can run as a Modbus/TCP to RTU bridge for use with 3rd party management systems.

The EG-200:


- Is DIN-rail fastended, 2- units wide
- Supports up to 32 Modbus devices
- Supports data storage via a micro SD-card slot
- Has built-in early tripping alerts for measured breakers
- Has a built-in webserver for device configuration and live measurements
- Supports secure messaging using TLS-PSK

## 5 Intended Use

The Gateway must only be used when installed in an appropriately protected cabinet, in a dry, indoor space. Install the Gateway according to the instructions in this manual. Other uses or installation methods may lead to personal injury or damage to property. This includes any modifications to the Gateway, unless specifically authorized by ReMake Electric ehf. Any other use of the product aside from its intended use, as described in this manual, is deemed to be improper. Unauthorized alterations, modifications, repairs, or opening of the product casing will void the warranty and are prohibited. This manual is a part of the product and must be read, followed, and kept accessible at all times.

## 6 Disposal

The Gateway must not be placed in regular waste disposal.

-  ► Dispose of the Gateway in accordance with your local regulations on electronic waste.

## 7 Contact Information

In case of any technical problems with this product, please contact ReMake Electric ehf at:

ReMake Electric ehf	Tel.: +354 535 3000
Hlíðasmara 14	Internet: <a href="http://www.etactica.com">http://www.etactica.com</a>
201 Kopavogur	Email: <a href="mailto:info@etactica.com">info@etactica.com</a>
Iceland	

## 8 Scope of Delivery

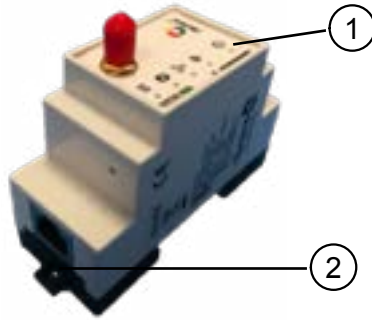


Fig. 1: Scope of delivery of the Gateway

	Designation	Article nr.	Quantity
1	EG-200	5060474160070	1
2	Molex connector 39500	82235424318	1
3	Terminating resistor 120ohm 1/4W	A105981CT-ND	1
4	On Shore connector OSTTJ	OSTTJ027150	1
5	Installation Manual		1

## 9 Technical Data

Electrical Connections	
Supply voltage	12 V DC
Supply current	Max. 1.1A
Supply power	Max. 13 W
Network Communication	Ethernet TCP/IP (10/100Mbit) Wi-Fi (802.11b/g)
Device bus	
RS485-cable length	Max. 60 m
Interface protocol	Modbus/RTU- 19200, 8, E, 1 (default settings)
Modbus address range	0x01 to 0xF7 (1-247 decimal)
Modbus cable	4-wire, 2x shielded twisted pair, multi-stranded
General data	
External memory	Micro SD-card slot
Protection rating	IP2X
Temperature	
— Storage	-20 °C to 70 °C
— Operating	-20 °C to 50 °C
Relative humidity	50 % to 85 %

## 10 Installation

### DANGER

#### Risk of lethal electrical shock

- ▶ Turn power off before commencing the installation or maintenance work and provide protection against unintentional power-up during work.

### 10.1 Installation Information

To install the Gateway you will need the following:

- ▶ An insulated screwdriver
- ▶ Device cable
- ▶ Power supply
- ▶ Ethernet or Wi-Fi connection

## 10.2 Connecting Power and Network Cables

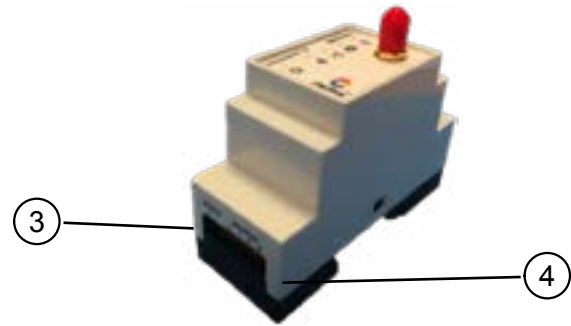


Fig. 2: Connectors

- ▶ Connect the power cable to the Gateway (pos. 3 in Fig. 2).
- ▶ Connect an Ethernet cable to the connector (pos. 2 in Fig. 1) and connect the other end of the cable to an internet router/modem.

## 10.3 Connecting the Gateway to Modbus Device Slaves

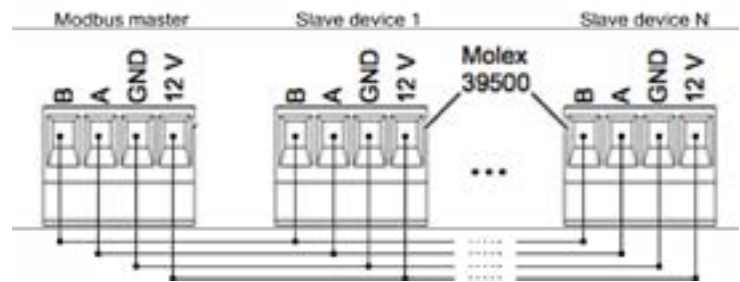


Fig. 3: Wiring the Gateway to device slaves

- ▶ Prepare the device cable (Fig. 3 shows the pin assignment).
- ▶ The devices should be daisy chained (no branches, no loops), with the Gateway at one end. It is recommended that a 120 Ohm resistor be installed between the A and B terminals on the last device in the chain.
- ▶ Always write down the ID for each device and what the device measures. This will enable you to assign the names etc. in the eTactica software platform later, without having to go back to your installation.
- ▶ Connect the cable to the Gateway (pos. 4 in Fig. 2).

## 10.4 Modbus address

Each Gateway has a Modbus address ranging from 0x01 to 0xF7 (1-247 decimal)

### ATTENTION

Eliminate duplicate addresses






- ▶ Note that all devices connected in series to a Modbus Master must have a unique Modbus address
- ▶ Modbus addresses range from 0x01 to 0xF7 (1-247 decimal).

The recommended installation procedure is as follows:

1. Install the Gateway and power up.
2. Wait for the Wi-Fi hotspot to appear on your laptop or tablet, and connect.
3. In your browser, go to the URL 192.168.49.1.
4. Follow the configuration Wizard.

## 10.5 LED Status Indication

The Gateway has 5 LEDs on the front, which indicate the status of the device (pos 1 in Fig. 1).

LEDs	Description
	When this light is on, it indicates that the Gateway is turned on.
	When this light flashes, it indicates Modbus reception
	When this light is on, the Gateway is successfully connected to eTactica.
	When this light is on, the Ethernet cable is connected.
	When this light is on, it indicates that the Wi-Fi hotspot is ready. If it is flashing, it indicates that data is being transmitted.