

eNet radio signal quality meter

Art. no.: FMDT

Operating instructions

1 Safety instructions



Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

These instructions are an integral part of the product, and must remain with the end customer.

2 Battery safety instructions

This device or its accessories are supplied with batteries in the form of button cells.

DANGER! Batteries can be swallowed. This can lead directly to death by suffocation. Dangerous substances may cause severe internal burns leading to death within 2 hours.

Keep new and used batteries away from children.

Do not use devices if the battery compartment does not close securely and keep away from children.

If you suspect that a battery has been swallowed or is in any orifice of the body, seek immediate medical attention.

WARNING! Improper handling of batteries can result in explosion, fire or chemical burn due to leakage.

Do not heat or throw batteries into fire.

Do not reverse polarity, short-circuit or recharge batteries.

Do not deform or disassemble batteries.

Replace batteries only with an identical or equivalent type.

Remove empty batteries immediately and dispose of in an environmentally friendly manner.

3 Device components

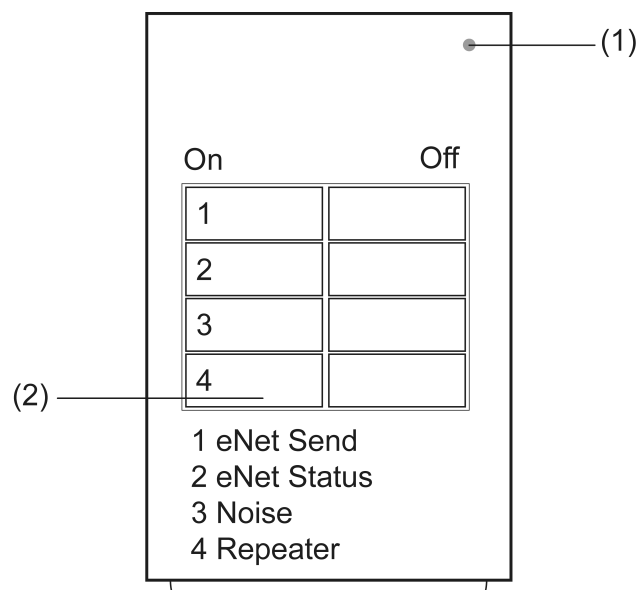





Figure 1: Front view

- (1) LED display
(2) Button field

4 Function

Intended use

- Indication of the radio signal quality in eNet installations
- Indication of third-party radio in the area of an eNet installation
- Switch-on, switch-off of the repeater function of suitable eNet devices
-  Only with eNet Server Software up to version 1.4
-  This device is unsuitable for testing the radio signal quality of the eNet server, as it cannot detect all the telegrams of the eNet server.
-  In systems with an eNet servers, we recommend checking the radio signal quality of the eNet installations with the eNet server.

Product characteristics

- Indication of the signal quality of a selected eNet device using LEDs
- Display of the signal quality of status messages using LEDs
- Indication of radio signals of non-eNet radio transmitters in the 868.3 MHz frequency band using LEDs
- Switch-on, switch-off of the repeater functions of network-operated actuators, transmitters and energy sensors
- Battery-powered device
- Devices switches off after 5 minutes without actuation.

5 Information for electrically skilled persons

5.1 Operation



DANGER!



Electrical shock when live parts are touched.

Electrical shocks can be fatal.

During commissioning, cover the parts carrying voltage on the device and in their surrounding area.

Indication of the signal quality of a selected eNet radio transmitter, actuator or sensor

In this operating mode, only the eNet telegrams of a selected device are evaluated. In the case of multichannel devices, the telegrams of all the channels are evaluated.

-  During the selection of a device or the diagnostics, switch off any available eNet servers.
- Press the **On** button of Channel 1.
LED (1) turns red if no telegrams of a previously selected eNet device are received. The operating mode **eNet Send** is switched on.
- Press the **On** button of Channel 1 for longer than 4 seconds.
LED (1) flashes red, selection mode is switched on.
- On the radio transmitter/sensor, trigger a telegram,
or
■ press the **Prog** button on the actuator/energy sensor.
During radio reception, LED (1) turns green.
LED (1) turns red. The eNet device is selected.
-  Only one eNet device can ever be selected. The selection remains intact when the diagnostics device is switched off. A newly selected device replaces the previous device.

- Trigger additional telegrams on the selected eNet device.
LED (1) of the diagnostics device displays the signal quality of the received telegrams for approx. 3 seconds. Then the LED (1) turns red again.

i The display of the LEDs is updated on each newly-received telegram. A varying signal quality can cause the LEDs to flicker.

LED turns green	Signal quality is sufficient for a secure connection.
LED turns alternately green and red	Signal quality is borderline for a secure connection.
LED turns red	Signal quality is not sufficient for a secure connection or there is no reception.

Indication of the signal quality of eNet radio transmitters, actuators or sensors

In this operating mode, all the eNet telegrams are evaluated except for those of the device selected under **eNet Send**.

i During the diagnostics, switch off any available eNet servers.

- Press the **On** button of Channel 2.

The operating mode **eNet Status** is switched on.

LED (1) of the diagnostics device displays the signal quality of the received eNet telegrams for approx. 3 seconds. Then, the LED turns red.

i The display of the LEDs is updated on each newly-received telegram. A varying signal quality can cause the LEDs to flicker.

- Trigger the telegrams of a radio transmitter or sensor.

or

- Press the **Prog** button of an actuator or energy sensor.

LED turns green	Signal quality is sufficient for a secure connection.
LED turns alternately green and red	Signal quality is borderline for a secure connection.
LED turns red	Signal quality is not sufficient for a secure connection or there is no reception.

Application example: Do the status telegrams of all of the actuators connected to a radio transmitter reach this radio transmitter?

To do this, select the radio transmitter with the **eNet Send** operating mode, so that the telegrams of the radio transmitter are not evaluated. Switch to the **eNet Status** operating mode. Operate the actuators with the radio transmitter. If the LED (1) is green, all the status telegrams of the actuators are reaching the radio transmitter.

Display of third-party radio

In this operating mode, third-party radio in the 868.3 MHz frequency band as a so-called "signal-noise distance", i.e. the distance between a maximum level of the third-party radio signal and the noise level is displayed. This also includes the eNet radio of the relevant project or another one.

i During the diagnostics, switch off any available eNet servers.

- Press the **On** button of Channel 3.

The operating mode **Noise** is switched on.

The LED of the diagnostics device displays whether third-party radio exists.

LED turns green	No third-party signals available.
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LED turns alternately green and red	Weak third-party signals available. Faults through third-party radio are possible when the eNet installation is operated at the edge of the range.
LED turns red	Strong third-party signals available. Faults through third-party radio are possible.

Switching on the repeater function of an eNet device

The transmitting range of the diagnostic device is restricted to avoid unintentional activation or deactivation of the repeater function.

- Switch the eNet device to programming mode (see eNet device instructions).
- Press the **On** button of Channel 4.
LED (1) turns green for 3 seconds. The repeater function is switched on.

i If the LED (1) remains off, no eNet device is in programming mode or in transmitting range.

- Exit the programming mode of the eNet device (see eNet device instructions).

Switching off the repeater function of an eNet device

- Switch the eNet device to programming mode (see eNet device instructions).
- Press the **Off** button of Channel 4.
LED (1) turns red for 3 seconds. Repeater function is switched off.

i If the LED (1) remains off, no eNet device is in programming mode or in transmitting range.

- Exit the programming mode of the eNet device (see eNet device instructions).

Inserting the battery

The battery is included.

- i** Obey the battery safety instructions.

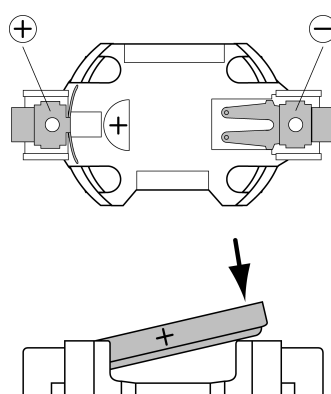


Figure 2: Inserting the battery

- Unscrew the battery compartment on the back of the diagnostics device. Use a small flat head screwdriver or Phillips screwdriver PH1 for this.
- Keep contacts of batteries and device free of grease.
- Apply battery to the positive contact of the battery holder. Observe polarity: the positive pole of the battery must be at the top.
- Press gently on battery to snap it in.
- Close and screw the battery compartment with max. 0.3 Nm.
Diagnostics device is ready for operation.

6 Disposal of batteries



Remove empty batteries immediately and dispose of in an environmentally friendly manner. Do not throw batteries into household waste. Consult your local authorities about environmentally friendly disposal. According to statutory provisions, the end consumer is obligated to return used batteries.

7 Technical data

Rated voltage	DC 3 V
Battery type	1×Lithium CR 2450N
Ambient temperature	-5 ... +45 °C
Degree of protection	IP20
Radio frequency	868.0 ... 868.6 MHz
Radio range in free field	max. 100 m
Transmission capacity	max. 20 mW
Receiver category	2

8 Troubleshooting

After the operating mode eNet Send, eNet Status or Noise is switched on, the LED will flash green for approx. 5 seconds.

Battery is discharged.

Replace the battery with the same type (see Inserting battery).

9 Conformity

Hereby Albrecht Jung GmbH & Co. KG declares that the radio system type

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corresponds to the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address: www.jung.de/ce

10 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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