⚠️ **Read the user manual carefully before using the device!** The user is responsible for damages, losses, and accidents caused by not following the warnings in the user manual. In case of malfunctions resulting from this, the device will be out of warranty coverage.

# ERC
## Remote Monitoring Device

- Dimensions 96x96mm,
- 3.5" TFT Screen,
- On-Off control,
- Changeable IP address, NetMask, Gateway, and DNS,
- RS485 connection with changeable Baudrate,
- Connect up to 10 slave devices via RS485,
- Ability to add parameter queries for connected slave devices,
- CE marked according to EN standards.



**ORDER CODE: ERC**

## Technical Specifications

### Electrical Specifications

| | |
|---|---|
| Supply Voltage | 90-250V AC, 50/60Hz |
| Power Consumption | Maximum 7VA |
| Connection | Terminal of Power 2.5mm2, Signal 1.5mm2 |
| EMC | EN 61326-1: 2021 |
| Safety Requirements | EN 61010-1: 2010 (Pollution degree 2, overvoltage category II) |

### Environmental Specifications

| | |
|---|---|
| Operating/Storage Temperature | 0 ... +50°C / -25 ... 70°C |
| Relative Humidity | Operates at humidity up to 80% at 31°C, then decreases linearly and drops to 50% at 40°C |
| Protection Class | According to EN 60529 standard; Front panel: IP65, Rear panel: IP20 |
| Altitude | Maximum 2000m |

⚠️ **It should be used in environments free from flammable and corrosive gases.**

| Box | |
|---|---|
| Mounting Type | Installed by compression onto the panel |
| Dimensions | W96xH96xD81mm |
| Weight | Approximately 400 grams |
| Enclosure Materials | Self-extinguishing plastics are used |

⚠️ **The device should not be wiped with cleaning agents containing solvents (such as thinner, gasoline, acid, etc.) or abrasive cleaning agents**

# Connection Diagram

⚠️ ENDA ERC is a panel type device. The device must be used in accordance with the instructions. There should be no electricity in the connection cables during installation. The device must be protected from moisture, vibration, and pollution. Attention should be paid to the operating temperature. Shielded and twisted cord cable should be used in input and output lines not connected to the grid. These cables should not pass near high power lines and devices. The screen line must be grounded from the device end. Installation and electrical connections must be made by technical personnel in accordance with the instructions in the user manual.
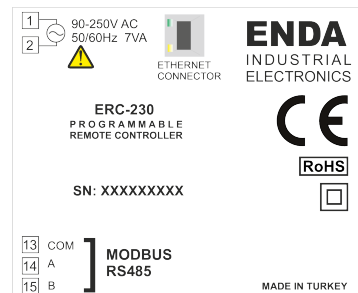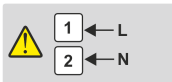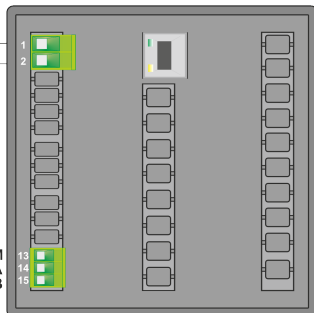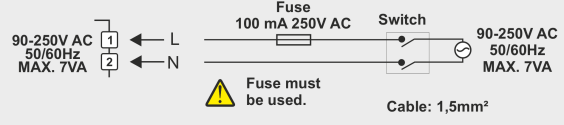


**Note:**
1- Supply cables must comply with the requirements of IEC 60277 or IEC 60245.
2- In accordance with safety regulations, the mains switch must be in a location easily accessible by the operator and must have a sign indicating its relevance to the device.

# Dimensions and Installation

96mm

96mm

02.12.2022 14:35

Slave States

| Slave Label | Address | Error Status |
|---|---|---|
| Cheese Section 1 | 1 | ✓ |
| Deli 1 | 3 | ✓ |
| Cheese Section 2 | 9 | ✓ |
| Deli 2 | 13 | ✓ |
| Beverage Cabinet | 17 | ✓ |

enda

**Panel Cut-Out**

92mm

92mm

**1**

**1**

6mm   69mm   15mm

**Compression Fitting**

**2**
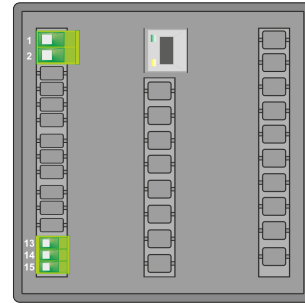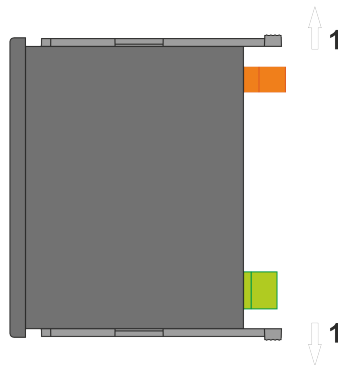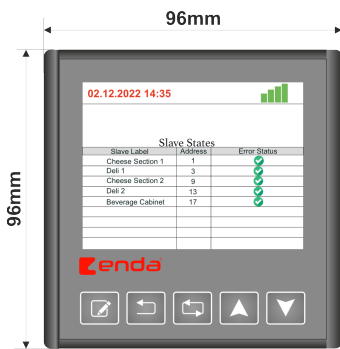
To remove the device from the panel:
- Stretch the compression fitting **1** in the direction of the arrow.
- Pull the fitting in the direction of arrow **2**.
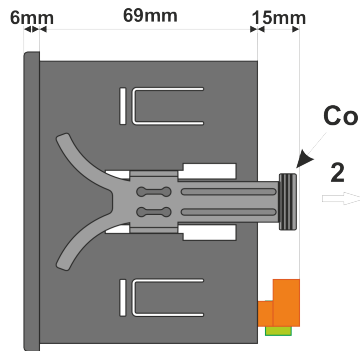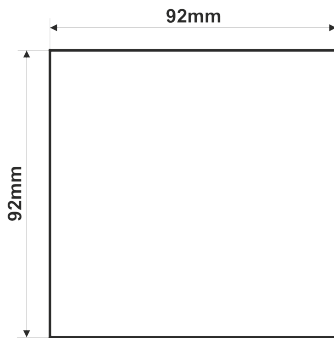
Note:
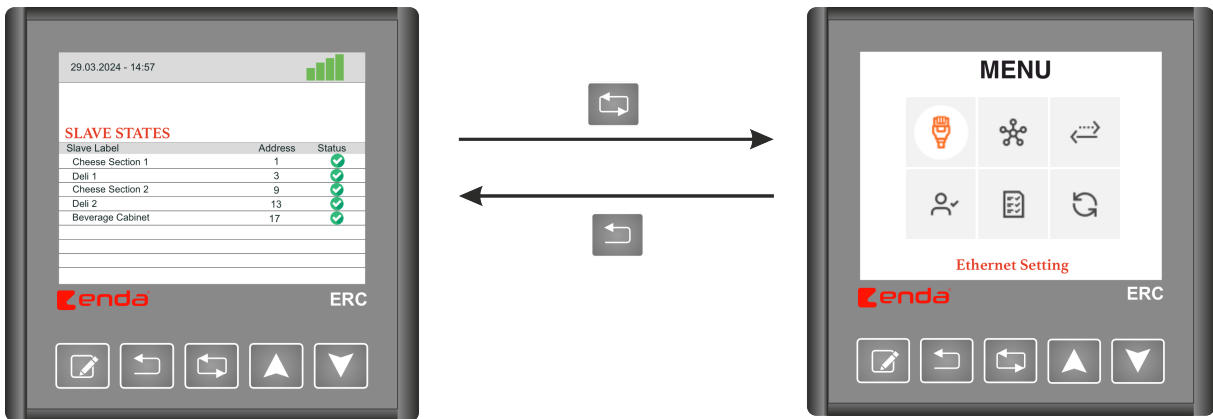1- The panel thickness must be maximum 10mm.
2- If there is less than 60mm clearance behind the device, it becomes difficult to remove from the panel.

## Front Panel



### Menu and Button Definitions

| | |
|---|---|
| ✎ | Enter "Menu Mode" and change parameter. |
| ↰ | Return to previous page in "Menu Mode" and exit parameter. |
| ⇄ | Navigate between options in "Menu Mode". |
| ▲ | Increase value of selected parameter in "Menu Mode". |
| ▼ | Decrease value of selected parameter in "Menu Mode". |
| ⚙ | Return to factory settings page. |

### Menu Definitions

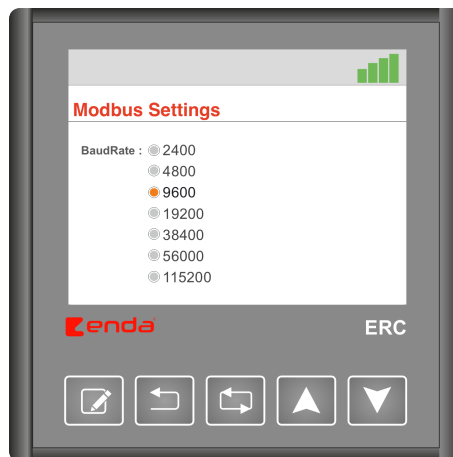| | |
|---|---|
| 🖧 | Page for entering IP, Netmask, Gateway, etc. addresses. |
| ✳ | Page for setting BaudRate and other communication settings. |
| ⇄ | Page for pairing the ERC device with the server. |
| ⌄ | Page showing authorized emails. |
| 🗒 | Page showing tracked parameters. |
| ↻ | Update menu page. |

### Menu Button Usage

- While in "Main Screen", holding down ⇄ for 2 seconds switches to "Menu Mode".

- While in "Menu Mode", pressing ↰ returns to "Main Screen".

- While in "Menu Mode", navigate between menus using ▲ ▼ .

- Press ✎ to enter selected menu.

## Ethernet Page



- Use [⇄] to switch between DHCP-STATIC mode.

- In STATIC IP mode, navigate between parameters using [▲] [▼] buttons.

- Select parameter with [✎] , then change values using arrow buttons.

## Modbus Page



**Modbus Settings**

BaudRate : ○ 2400
○ 4800
● 9600
○ 19200
○ 38400
○ 56000
○ 115200

- Use arrow buttons [▲] [▼] to change Modbus RTU BaudRate. Return to menu with [↩] .

**\* MODBUS CONNECTION DIAGRAM**

120 Ohm

Master Device   Slave Device- 1   Slave Device- 2   Maximum 10 slave devices can be controlled.   Slave Device 10

B   A   B   A   B   A   B   A
-   +   -   +   -   +   -   +

120 Ohm

⚠ **The communication line should be terminated with a 120 Ohm resistor at the beginning and end.**

## Pair Page

29.03.2024 - 14:57

**Pair Page**

Easy Pair Code

**123 456**

Remaining Time

**00 : 59**

ERC
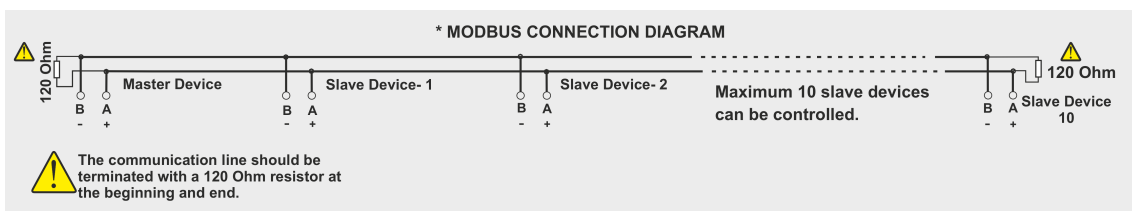
● To pair the server with the ERC device, open Pair Page and enter the 6-digit code shown on the screen into the designated field on the website. Press [icon] to exit the page.

## Authorized Emails Page

29.03.2024 - 14:57

**Autohrized Emails**

Email List

example@enda.com
example2@enda.com

Remove Authorization

ERC

● Authorized emails can be viewed/deleted through this page.

● NOTE: After deleting authorized emails, the server and ERC device must be paired again to access the ERC device from the server.

## Tracked Slave Devices



| 29.03.2024 - 14:57 | | | |
|---|---|---|---|
| **Tracked Slaves** | | | |
| ID | Reg Type | Reg Num | RAW DATA |
| 1 | Input | 0 | 150 |
| 1 | Holding | 0 | 200 |
| 1 | Coil | 0 | 0 |
| 2 | Input | 0 | 45 |
| 2 | Input | 1 | FR |
| 2 | Discrete | 0 | 1 |
| 2 | Holding | 12 | 20 |
| 3 | Input | 0 | 575 |
| 3 | Holding | 5 | 15 |

- Navigate between slave devices and parameters using arrow buttons.

- **ID:** ID number of the connected slave device.

- **Reg Type:** Type of read register. Four different types of registers can be read: Input, Holding, Coil, Discrete.

- **Reg Num:** Address of the read register.

- **RAW DATA:** Value of the read register. If there is a problem with the reading, the message **"FR"** is displayed.

## Update Page



| 29.03.2024 - 14:57 | |
|---|---|
| **Firmware Update** | |
| Rev. No | Revision Name |
| 1 | revision-1.bin |
| 2 | revision-2.bin |
| 3 | revision-3.bin |

Please select the file you want to download

- Upon entering the update page, please wait for the firmware list to be updated.

- Once the firmware list is updated, navigate between files using arrow buttons.

Select the desired file with set.

- After the file download process starts, please wait for the download to complete and the firmware to be updated.

Do not disconnect the device's internet connection or power during this time.

## Status Bar and Error Definitions



| Definitions | | Description |
|---|---|---|
|  | (1) Ethernet Status | Indicates whether the Ethernet cable is connected to the ERC device. |
|  | (2) IP Status | Indicates whether the ERC device has obtained an IP. |
|  | (3) Internet Status | Indicates whether the ERC device has an internet connection. |
|  | (4) Server Connection Status | Indicates the server connection status of the ERC device. |
|  | Slave Error Status | Indicates a connection error with the slave device connected to the ERC device. |