

## **easyE Remote Touch Display**



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### Service

For service and support, please contact your local sales team.

Contact info. [Eaton.com/contact](https://www.eaton.com/contact)

Service page: [Eaton.com/aftersales](https://www.eaton.com/aftersales)

### Original Operating Instructions

is the German-language edition of this document

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Subject to alteration.



**DANGER!**

Hazardous Electrical Voltage!

---

## Before starting with the installation

- Installation requires qualified electrician
  - Disconnect the power supply of the device.
  - Secure against retriggering
  - Verify isolation from the supply
  - Ground and short-circuit
  - Cover or enclose any neighboring live parts.
  - Follow the engineering instructions (IL) of the device concerned.
  - Only suitably qualified personnel in accordance with EN 50110-1/-2 (VDE 0105 part 100) may work on this device/system.
  - Before installation and before touching the device ensure that you are free of electrostatic charge.
  - The functional earth (FE) must be connected to the protective earth (PE) or to the equipotential bonding. The system installer is responsible for implementing this connection.
  - Connecting cables and signal lines should be installed so that inductive or capacitive interference does not impair the automation functions.
  - Install automation devices and related operating elements in such a way that they are well protected against unintentional operation.
  - Suitable safety hardware and software measures should be implemented for the I/O interface so that a line or wire breakage on the signal side does not result in undefined states in the automation devices.
  - Deviations of the mains voltage from the nominal value must not exceed the tolerance limits given in the specifications, otherwise this may result in malfunction and hazardous states.
  - Emergency-Stop devices complying with IEC/EN 60204-1 must be effective in all operating modes of the automation devices. Unlatching the emergency switching off devices must not result in an automatic restart.
  - Built-in devices for enclosures or cabinets must only be run and operated in an installed state;
- desktop devices and portable devices only when the housing is closed.
- Measures should be taken to ensure the proper restarting of programs interrupted after a voltage dip or outage. This should not result in dangerous operating states even for a short time. If necessary, emergency switching off devices should be implemented.
  - Wherever faults in the automation system may cause damage to persons or property, external measures must be implemented to ensure a safe operating state in the event of a fault or malfunction (for example, by means of separate limit switches, mechanical interlocks, etc.).



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## 0.1 About this documentation

This Manual contains all the information you will need in order to use the easyE Remote Touch Display safely and effectively.

The Manual easyE Remote Touch Display manual is considered an integral part of the devices and must always be readily available in the device's close proximity so that users have access to it.

This Manual describes how to handle and use the device in detail for: transportation, installation, commissioning, operation, maintenance, storage, and disposal. It assumes you have electrical engineering knowledge and skills.

It does not, however, go over the corresponding operating system or application software.

Make sure to always use the latest documentation for your device.



Manual easyE Remote Touch Display

MN048027EN

The latest version of this documentation, as well as additional references, is available for download on the Internet. → Section "Further usage information", page 107

Please send any comments, recommendations, or suggestions regarding this document to: DocumentationEGBonn@eaton.com

### 0.1.1 List of revisions

The following significant amendments have been introduced since previous issues:

Publication date	Page	Keyword	New	Modification
05/2021		New edition	✓	
06/2021		Review		✓
03/2022	22, 33, 36, 40, 41, 44, 45, 87, 88	UL approval		✓
10/23	23 80 ff 0 ff	Marine approval Device menu expansion (Setup Wizard and Import/Export) Added EASY-RTD-DC-43-03B2-00 and renamed easy-RTD as RTD	✓ ✓ ✓	✓

## 0.1 About this documentation

### 0.1.2 Target group

This Manual is intended for electricians and electrical engineers, as well as for the people who will be in charge of performing the electrical installation and people who will be using the easyE Remote Touch Display as an operating and monitoring device or as an integrated operating and control device in their own applications.



#### **CAUTION**

Installation requires qualified electrician



Follow the safety instructions for the easyE RTD!

The section on safety instructions must be read and understood by everyone who will be working with the RTD before the actual work is performed RTD.



#### **WARNING**

##### **Incomplete operator manual copies**

Working with individual pages taken out from the operator manual may lead to bodily injury and property damage due to failure to observe relevant safety information.

- ▶ Always work with the latest and full document.

### 0.1.3 Legal disclaimer

All the information in this manual has been prepared to the best of our knowledge and in accordance with the state of the art. However, this does not exclude the possibility of there being errors or inaccuracies. We assume no liability for the correctness and completeness of this information. In particular, this information does not guarantee any particular properties.

Do not use the easyE Remote Touch Display before reading and understanding this manual.

Hazards posed by the RTD cannot be eliminated if the safety instructions are not observed – especially if the easyE Remote Touch Display is commissioned and maintained by unqualified personnel and/or the RTD is used improperly. Eaton assumes no liability for any damages resulting from cases such as these.

### 0.1.4 Device designations and abbreviations

The following general terms are used throughout this manual:


Short designation	Explanation
RTD	Remote Touch Display
Human-machine interface	Human Machine Interface
easyE RTD	easyE Remote Touch Display from 10/23 previously easy-RTD
easyE RTD Standard	EASY-RTD-DC-43-03B1-00 from 10/23
easyE RTD Advanced	EASY-RTD-DC-43-03B2-00



For the exact designation for your easyE Remote Touch Display, please refer to the → "Nameplate", page 22.


## 0.1 About this documentation


### 0.1.5 Writing conventions


Award	Description
 Text	Used for the button labels
<i>Menu/command</i>	Used for menus and commands on the device


#### Warning labels

Risk of personal injury warning.

	<b>DANGER</b> Warns of hazardous situations that result in serious injury or death.
---	--


	<b>WARNING</b> Warns of the possibility of hazardous situations that could result in serious injury or even death.
---	---


	<b>DANGER!</b> Dangerous Electrical Voltage!
--	---

	<b>CAUTION</b> Warns of the possibility of hazardous situations that can cause injury.
---	---


Property damage warning

<i>NOTICE</i> Warns about the possibility of material damage.
--


	Prohibited uses, actions, etc. Explains the prohibition
---	--

	Bid Explains the instruction
---	---------------------------------

#### Notes


	Indicates useful tips.
---	------------------------

► Indicates instructions to be followed

	Additional information, background information, information worth knowing, useful additional information
---	--

## 0.1 About this documentation


### Additional user information

Documents (such as manuals) are listed after the  icon together with the corresponding name and Eaton number.



Publication title

For identifying the Eaton publication code

External Internet addresses. They will be shown after the  icon.



Destination address

## 0.1 About this documentation

## 1. Description

Both the Standard and Advanced versions of the easyE Remote Touch Display (RTD) provide advanced visualization solutions for the easyE4 control relay.

The display and operating elements of the easyE4 base device are displayed in color on the full-color display of the RTD. With more than 65,000 possible colors, texts, values, parameters or even graphics are displayed. This enables the status of the device to be established quickly.

The RTD can be installed in a control panel door or directly on systems, among other locations. In addition, RTDs require little space and are intended for front flush mounting, meaning that they are inserted into the corresponding enclosure from the front.

The touch display is connected to the base device of the easyE4 by means of a Plug&Play solution with a standard RJ45 Ethernet cable. Setting up of the RTD is assisted by an Assistant (Setup Wizard). The Remote Touch Display provides menu navigation in various languages.

Access permissions can be set up for specific user groups – Watchers, Operators, and Administrators. In addition, password-protected access for all three user groups prevents third-party access.

### easyE RTD Standard - EASY-RTD-DC-43-03B1-00

The display and operating elements of the easyE4 base device are mirrored on the Standard Remote Touch Display. Programming of the easyE RTD Standard is not required. The status of the easyE4 connected to the RTD is displayed and parameters can be adapted directly using the operating elements mirrored in the RTD.

### easyE RTD Advanced - EASY-RTD-DC-43-03B2-00

The Remote Touch Display Advanced provides a way of obtaining an individual visualization easySoft. This enables user-defined texts, graphics and operating elements to be recorded. It is possible to visualize data from several easyE4 devices at the same time.

From easySoft it is possible to obtain the visualization using the easySoft editor and to transmit the visualization project file using Ethernet/easySoft or USB. easySoft supports the use of graphics and other simple visualization elements as well as remote access to the device menu of the connected easyE4. It is possible to edit timer function blocks using the easyE RTD Advanced.

In addition to a visualization project file on the easyE RTD Advanced, this visualization requires an easyE4 control relay Generation 08 or higher with firmware  $\geq$  V2.10 that supports the visualization.

# 1. Description

## Engineering information

The easyE RTD Standard can only be used to mirror the display of a connected easyE4 at the same time.

It is possible to switch back and forth between several easyE4 basic devices.

The easyE RTD Advanced can only mirror the display of a connected easyE4 in the easyE4 mirroring device menu.

The visualization project makes it possible to have the easyE4 visualization device menu on the easyE RTD Advanced.

In an easySoft project, a maximum of four easyE RTD Advanced per easyE4 device and a maximum of eight easyE4 devices can be configured and stored as a visualization project.

The visualization project for the easyE RTD Advanced needs to be created with easySoft.

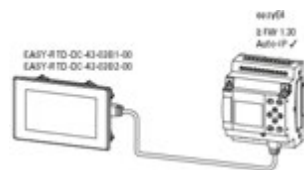
In addition, a series of password-protected permissions can be used in the visualization project so that the easyE RTD Advanced can only be used by authorized personnel to display and operate the easyE4.

In addition to the configuration for the RTD, the \*.rtd visualization project contains the visualization project for the easyE RTD Advanced. Both parts can be imported independently of each other.

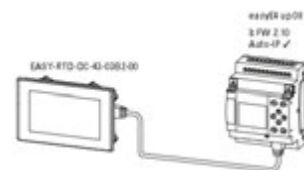


The previous \*.conf RTD configuration file on EASY-RTD-DC-43-03B1-00 devices is being replaced by an \*.rtd visualization project file with firmware update FW  $\geq$  1.0.

If you need to convert a \*.conf file to an \*.rtd file, please contact Eaton Service.



easyE RTD Standard and easyE RTD Advanced:  
easyE4 mirroring (formerly Remote easyE4)



Only easyE RTD Advanced:  
easyE4 visualization and easyE4 mirroring

Fig. 1: Availability of device menu on RTD as a function of the easyE4

The required RJ45 Ethernet cable is not included as standard.



## 1.1 Use as intended

easyE Remote Touch Display are primarily intended for use in machine and system building applications. More specifically, they are intended exclusively for monitoring and operating easyE4 control relays. Use cases with remote access are not part of the intended applications for the easyE RTD. However, the easyE4 control relay can be remotely accessed using the actual control relay's functions, such as the web server feature.

Any other use must be discussed and agreed upon with the manufacturer in advance.

The RTD devices are approved for use in closed spaces.



**Bid**

The easyE RTD must be used only in locations for which the easyE4 is approved. Make sure to read and follow the information and labels on the nameplate for the RTD, as well as section Approvals and declarations in the appendix.



**Prohibited uses, actions, etc.**

It is strictly prohibited to use the device in order to implement safety-relevant functions (in the sense of personal and machine protection).

## 1. Description

### 1.2 Configuration easyE RTD

### 1.2 Configuration easyE RTD

1. Industrial Resistive Touch Display
2. Color display, TFT, 65536 colors
3. Screen diagonal: 4.3", visible screen area 95 mm x 54 mm
4. Touch function for menu navigation and user interaction
5. **easyE RTD Standard**  
Remote Touch Display - for mirroring the display and the control elements of an easyE4 control relay
- easyE RTD Advanced**  
Remote Touch Display - application with choice between easyE4 mirroring mirroring and easyE4 visualization.
6. The RTD comes with the following integrated interfaces as standard:
  - One Ethernet port (10/100 Mbit/s) for use as a communication or field bus interface;  
the Ethernet protocol is only supported between easyE4 and RTD
  - One USB 2.0 host port for firmware updates and exporting log information, as well as the visualization project file for the easyE RTD Advanced.

### 1.3 Operating and indication elements

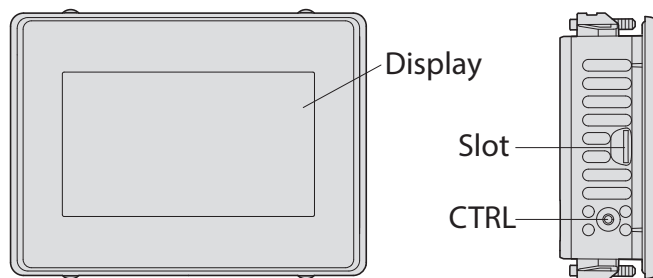


Fig. 2: easyE RTD

Display	Resistive Touch Display Color display, TFT Standard front with standard membrane (fully enclosed)
Slot	For microSD cards (for Eaton Service only). Not intended for use by customers.
CTRL	Pushbutton - → Section "Resetting the device to factory settings - Factory Settings", page 98 Available with FW $\geq$ 1.0 on EASY-RTD-DC-43-03B1-00.

#### Resistive-Single-Touch

In order for this functionality to work properly, you must press on the display with a finger or stylus. You can wear work gloves while doing so.

## 1. Description

### 1.4 Connections and interfaces to peripheral devices

#### 1.4 Connections and interfaces to peripheral devices

The nameplate will indicate which specific interfaces are included with the unit.

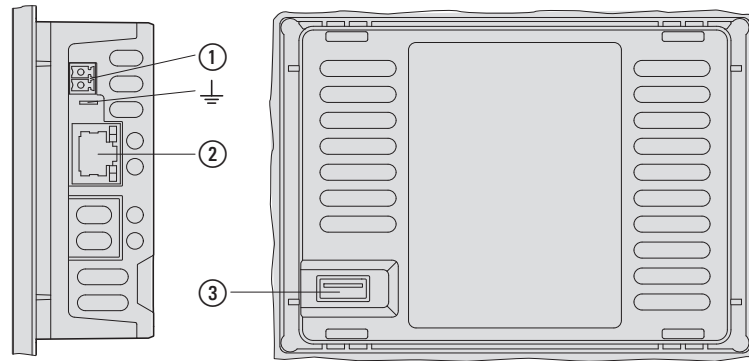


Fig. 3: Interfaces

#### Interfaces equipment

- |   |              |   |
|---|--------------|---|
| ① | Power Supply | 24 VDC power supply (-20%/+25%)                           |
| ⏏ |              | Grounding option Connection lug 4.8 x 0.8 mm              |
| ② | Ethernet     | RJ-45 socket, 8-pole, 2 LEDs (CAT5e/6), LAN1, 10/100 Mbps |
| ③ | USB host     | USB 2.0, not galvanically isolated, plug type A           |

1.5 What the different parts of the part number mean

1.5 What the different parts of the part number mean

The part number includes information that specifies the version and model of the specific Eaton device being used.

The Part number can be found on the nameplate of the RTD. The versions have an identical design and cannot be distinguished from each other externally.

Tab. 1: Part number

EASY-RTD	Version	Display size	Interfaces, Software	Version
	DC	43	03B1	00
	DC vol- tage	4.3" screen diagonal	1 x Ether- net, 1x USB host easyE RTD Standard	
			03B2	
			1 x Ether- net, 1x USB host easyE RTD Advanced	

1.6 Accessory devices

A variety of accessories are available for RTDs.

**ATTENTION**  
Only use original accessories.



Order accessories through your supplier or through the Eaton online catalog



[Eaton.com/ecat](http://Eaton.com/ecat)

article no.	Catalog Number
139808	ACCESSORIES-Res-Touch-Pen-10 Ten styli for using a resistive operator panel

# 1. Description

## 1.7 Nameplate

## 1.7 Nameplate

The device has a nameplate on rear.

This nameplate includes the following information:

- Manufacturer
- Part number
- Part-No.
- Version
- EPAS code (digital nameplate)
- Power supply requirement
- Serial-No.
- MAC address
- Type approval and certification marks and information
- Layout of ports/interfaces and controls
- Installation orientation



Fig. 4: Example for a nameplate

## **1.8 Support**

To get fast and effective support, make sure to provide Customer Service with the following information from the nameplate:

- Part-No.
- Serial-No

For service and support, please contact your local sales team.

Contact info. [Eaton.com/contact](https://www.eaton.com/contact)

Service page: [Eaton.com/aftersales](https://www.eaton.com/aftersales)

## 1. Description

### 1.9 UL listing

### 1.9 UL listing



The RTD has been UL listed in conformity with UL 61010-2-201, UL61010-1 by Underwriters Laboratories Inc., UL-File no. E205091.

#### **Use of the device**

Using the device in a way not specified by the manufacturer may negatively affect the protection provided by the device.

The device is intended to be flush mounted in control cabinets, control panels, or control consoles. The device can be installed in a horizontal or vertical position.

When selecting a suitable installation position, the following requirements must be met:

- a. The inclination angle for vertical installation without forced ventilation can be up to 90°.
- b. Adequate ventilation must be ensured by maintaining a clearance of at least 3 cm from the ventilation slots.

The following conditions must be met in order for the certification of RTD as per UL 61010-2-201, UL61010-1 to apply:

- Ambient temperature 0°C to 50°C
- Mounting height up to 2000 m
- Overvoltage category II
- Pollution Degree 2
- Permissible voltage range 20%/+25% of rated operating voltage
- Type rating  
Use in type 4X or type 12 enclosures, use indoors only, at dry locations only
- Maximum relative humidity of 95% for temperatures of up to 50 °C, derated linearly to a relative humidity of 50% at 40 °C.
- Suitable power supply for class III (SELV or PELV)
- The devices must be installed in a suitable fire protection enclosure that provides protection against the spread of fire.

The torque used to tighten the screw terminals on the plug-in connection for the power supply must not exceed 0.22 ... 0.25 Nm.



## **1.10 Marine approvals**

The easyE RTD has been certified by Det Norsk Veritas.

### **Obtained type approvals**

The RTD has the shipping classification for Det Norsk Veritas (DNV).

- Tests performed according to DNV-CG-0339, Edition August 2021  
"Environmental test specification for electrical, electronic and programmable equipment and systems"  
Certificate No.: TAA0000366

### **Location classes**

Temperature D

Humidity B - Relative humidity up to 100 % at all relevant temperatures.

Vibration A - Bulkheads, beams, deck, bridge, acceleration amplitude: 0.7 g

EMC B - All locations (including bridge and open deck)

Appendix A (front IP65, rear IP20)

**1. Description**  
**1.10 Marine approvals**

## 2. Safety regulations

### 2.1 Basics

The device has been designed according to the state of the art and all generally accepted safety rules and standards. However, this alone cannot eliminate all potential hazards, which is why it is necessary for you to be aware of all hazards and residual risks.

Do not run the device unless it is in perfect technical condition. Make sure to always operate it as specified in this document and for the intended purpose.



**Follow the safety instructions for the easyE RTD!**

The section on safety instructions must be read and understood by everyone who will be working with the RTD before the actual work is performed RTD.

#### *CAUTION*

Pay attention to the hazard severity levels used throughout this documentation whenever a hazard is indicated. The hazard symbol and signal word used and the corresponding text will provide information regarding the specific hazard and how to avoid or prevent it.

## 2.2 Mandatory requirements, personnel requirements

### 2.2.1 Occupational safety

All generally accepted occupational health and safety rules and standards (internal and national) must be complied with, as must be all applicable laws and regulations in the relevant country.

### 2.2.2 Personnel qualifications

The personnel responsible for installation, operation, maintenance, and repairs must have the necessary qualifications for the work they will be performing. They must be appropriately trained and/or briefed and be informed of all hazards and risks associated with the device.

## 2. Safety regulations

### 2.2 Mandatory requirements, personnel requirements

#### 2.2.3 Device documentation

This manual is considered an integral part of the easyE RTD and must always be readily available in the device's close proximity so that users have access to it.

Make sure that every person who will be working with the RTD, regardless of the life-cycle stage involved, has read and understood the relevant parts of the documentation for the RTD.

For more information on how to use the RTD, including the corresponding installation instructions, please visit the Eaton Download Center and the relevant product pages.



#### **WARNING**

##### **Incomplete operator manual copies**

Working with individual pages taken out from the operator manual may lead to bodily injury and property damage due to failure to observe relevant safety information.

▶ Always work with the latest and full document.

#### 2.2.4 Installation, maintenance, and disposal

Make sure that the RTD is connected, installed, serviced, and disposed of professionally and in line with all relevant standards and safety rules.



#### **CAUTION**

Installation requires qualified electrician



**Dispose of recyclables as required by your local recycling regulations.**

Dispose of recyclables as required by your local recycling regulations.

RTD no longer being used must be professionally disposed of as per local standards or returned to the manufacturer or relevant sales department.

## 2. Safety regulations

### 2.2 Mandatory requirements, personnel requirements

#### 2.2.5 Prerequisites for proper operation

In order to ensure proper operation, the following requirements must be met:

- Only qualified personnel should be allowed to work with the RTD.
- The personnel working with the RTD must have read the manual and must follow all the instructions in it.
- The required ambient conditions must be met.
- Maintenance work must be carried out correctly.



Make sure to read the → "Legal disclaimer", page 11.

We assume no liability for damages, consequential damages, and/or accidents caused by the following:

- Failure to follow any applicable occupational health and safety rules, standards, and/or regulations
- Device failures or function disturbances
- Improper use and/or handling
- Not following the instructions or observing the information in the documentation for the RTD
- Alterations, changes, and repairs to the RTD

## 2. Safety regulations

### 2.3 Device-specific hazards

#### 2.3 Device-specific hazards



##### **EXPLOSION HAZARD**

Death, serious injury, and property damage may occur if the device is being used in a potentially explosive (classified) location and, during operation, an electrical plug-in connection is disconnected or the device is exposed to dangerous impacts or other types of dangerous mechanical shock.

- ▶ Do not use the RTD in hazardous locations



##### **CAUTION**

Installation requires qualified electrician



##### **CAUTION DESTRUCTION**

The RTD should only be opened by the manufacturer or by an authorized center. Operate the Resistive Touch Display until only with the enclosure fully closed and sealed.



##### **CAUTION ELECTROSTATIC DISCHARGE**

Do not touch components (e.g., connector pins) that are electrostatic-sensitive.

- ▶ Discharge any static electricity from your body before touching the RTD (e.g., by touching an earthed metal object).

Electrostatic discharges may damage or ruin assembly parts.

Because of this, it is necessary to take precautions whenever handling the cards.

Please refer to the guidelines for electrostatic-sensitive components for more information (ESD guidelines).

## 2. Safety regulations

### 2.3 Device-specific hazards



#### **CAUTION INTERFERENCES**

The values specified in the technical data, as well as the device's electromagnetic compatibility (EMC), cannot be guaranteed if the following are used: unsuitable cables, improperly assembled and terminated cables, and/or wiring that does not conform to the applicable standards.

Only use cables assembled and terminated by professionals.

The cables being used must be assembled and terminated as required by the port/interface description in this document.

When wiring the RTD, follow all instructions regarding how to wire the corresponding port/interface.

All general Directives and standards must be complied with.



#### **CAUTION INTERFERENCES**

Screw all plug-in connections or lock them into place in order to improve screening.

Signal cables must not be routed in the same cable duct with power cables.

Before putting the system into operation, check all cable connections to make sure that everything has been wired properly.

Make sure that all voltages and signals have the required values as per the specification.



#### **CAUTION**

24 VDC power supply for integrated DC-to-DC converter.

The voltage being applied must meet the requirements for safety extra-low voltages (SELV) set forth in IEC 60950 and the requirements for protected extra-low voltages (PELV) set forth in IEC/UL 61010-2-201.

Pay attention to the polarity.



#### **DANGER STRAY CURRENTS**

Large equalizing currents between the functional earthing system and the ground system of different devices may result in fire or in malfunctions due to signal interference.

- ▶ If necessary, route an equipotential bonding conductor, with a cross-sectional area that is several times larger than that of the cable shielding, parallel to the cable.

## 2. Safety regulations

### 2.3 Device-specific hazards



#### CAUTION

##### NON-GALVANICALLY-ISOLATED INTERFACES

The RTD may be damaged by potential differences.

- ▶ Do not connect the connector to the RTD or disconnect it without first de-energizing the system.



#### CAUTION

##### SHORT-CIRCUIT HAZARD

If the Resistive Touch Display is or has been exposed to environmental fluctuations (ambient temperature, air humidity), condensation may form on or inside RTD. As long as this condensation is present, there will be a short-circuit hazard.

Do not switch on the device when it has condensation in or on it.

If the Resistive Touch Display has condensation in or on it, or if it has been exposed to environmental fluctuations, let the RTD settle into the existing ambient temperature before switching it on. Do not expose the device to direct thermal radiation from heating appliances.



#### CAUTION

##### UV LIGHT

Plastics will become brittle when exposed to UV light. This artificial aging will reduce the RTD unit's lifespan.

Protect the Resistive Touch Display unit from direct sunlight and other sources of UV radiation.



#### CAUTION

##### POINTY, SHARP OBJECTS AND CORROSIVE LIQUIDS

When cleaning the Resistive Touch Display:

- Do not use any pointy or sharp objects (e.g., knives).
- Do not use aggressive or abrasive cleaning products or solvents.

Make sure that no liquids get into the device (short-circuit hazard) and that the RTD is not damaged in any way.



#### CAUTION

##### INSTALLATION CUT-OUT

The mounting cutout must be located in a position that will not defeat the purpose of stabilizing webs or other reinforcing elements in the control panel. If necessary, reinforcing elements must be installed/added.

An IP65 degree of protection will only be ensured if there is sufficient



## 2. Safety regulations

### 2.3 Device-specific hazards

stiffness and the device is properly mounted.

- Minimum sheet thickness of control cabinet where the device will be flush mounted:  
2 mm (0.08")  $\leq d \leq$  5 mm (0.2")



#### CAUTION

When using commercially available peripheral devices (e.g., with the USB port), it is important to keep in mind that their EMC interference immunity parameters may render them unsuitable for use in industrial environments.

Do not use the USB port on the RTD for any purposes other than those intended by the manufacturer.



#### CAUTION

##### FORCES ON THE ETHERNET INTERFACE

Communications may be affected, and the connection's mechanical components may be damaged, if the Ethernet interface is subjected to strong vibrations or the RJ45 plug-in connection is subjected to pulling.

- Protect the RJ45 plug-in connection from strong vibrations.
- Protect the RJ45 plug-in connection from tensile forces at the socket.



#### WARNING

RTD units are products designed for use in industrial environments as defined in ICE/EN 6100-6-4. These products can cause radio interference in domestic environments. In this case, the party operating the products must implement appropriate radio interference suppression measures.

## **2. Safety regulations**

### **2.3 Device-specific hazards**

### 3. Installation



**CAUTION**

Installation requires qualified electrician



**EXPLOSION HAZARD**

Death, serious injury, and property damage may occur if the device is being used in a potentially explosive (classified) location and, during operation, an electrical plug-in connection is disconnected or the device is exposed to dangerous impacts or other types of dangerous mechanical shock.

- ▶ Do not use the RTD in hazardous locations



**CAUTION**

**ELECTROSTATIC DISCHARGE**

Do not touch components (e.g., connector pins) that are electrostatic-sensitive.

- ▶ Discharge any static electricity from your body before touching the RTD (e.g., by touching an earthed metal object).

Electrostatic discharges may damage or ruin assembly parts.

Because of this, it is necessary to take precautions whenever handling the cards.

Please refer to the guidelines for electrostatic-sensitive components for more information (ESD guidelines).

### 3. Installation

#### 3.1 Prerequisites for the location of use

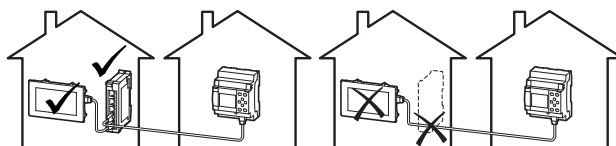
#### 3.1 Prerequisites for the location of use

The RTD must be used as intended and exclusively in locations for which the RTD has been approved/certified.

A 24 VDC power supply (-20%/+25%) must be ensured as per the specifications.

RTD units are intended to be flush mounted in control cabinets, control panels, or control consoles.

- If the Ethernet connection is routed out of the building at one point, a network isolator (switch, for example) must be used without fail.



- The devices can only be installed in landscape mode. Please make sure that the

↑  
TOP

top side is on top



- Do not use the RTD in hazardous locations.

#### See also

→ "Use as intended", page 17

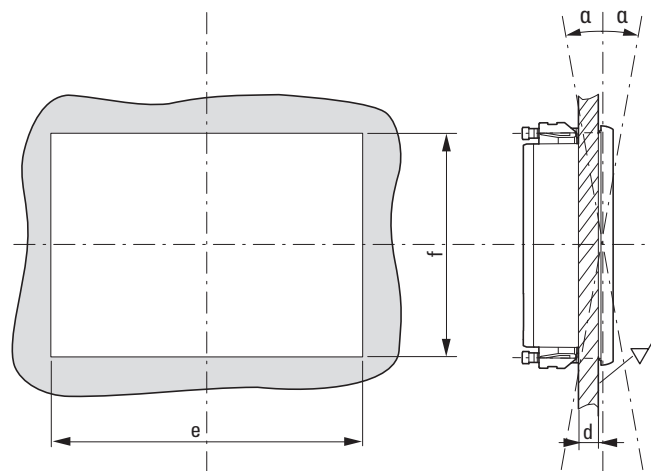
Label on the → "Nameplate", page 22

The specifications in → "The environmental ambient conditions for operation must not exceed the specified values:", page 38.

**3.1.1 Installation position**

The following must be taken into account when selecting the installation position:

- The size of the installation cutout depends on the device type:  
 EASY-RTD-DC-43-...:  $e = 123 \text{ mm (4.84") } \pm 0,5 \text{ mm (0.02")}$ ,  $f = 87 \text{ mm (3.43") } \pm 0,5 \text{ mm (0.02")}$



- Make sure that the material at the installation location is sufficiently thick  
 Material thickness of  $2 \text{ mm (0.08") } \leq d \leq 5 \text{ mm (0.2")}$   
 and flatness of  $\square \leq 0.5 \text{ mm (0.02")}$  at the installation cutout with a surface roughness  $\checkmark R_z \leq 120$ ; IP 65  $\rightarrow$  DIN ISO 2768-2 (K)
- The controls and connectors must remain accessible even after the device has been installed.
- If no forced ventilation is being used, the device must not be mounted at an angle exceeding  $\alpha \text{ max. } \pm 90^\circ$ .
- No direct sunlight on the device.



**CAUTION  
 UV LIGHT**

Plastics will become brittle when exposed to UV light. This artificial aging will reduce the RTD unit's lifespan.  
 Protect the Resistive Touch Display unit from direct sunlight and other sources of UV radiation.

- Make sure that the RTD does not overheat.
- The minimum clearance to components that radiate heat, such as transformers under heavy loads, is 15 cm.

### 3. Installation

#### 3.1 Prerequisites for the location of use

##### 3.1.1.1 Temperatures

The environmental ambient conditions for operation must not exceed the specified values:

Air pressure (in operation)	795 - 1080 hPa
	Max. 2000 m above sea level
Temperature	
Operation	± 0 – +50 °C (+32 – +122 °F)
Storage / Transport	-20 – + 60 °C (-4 – +140 °F)
Humidity	Relative humidity 10 - 95 %
Condensation	non-condensing

#### 3.1 Prerequisites for the location of use

##### 3.1.1.2 Aeration and de-aeration

- Do not block the ventilation openings when mounting the RTD:  
They are designed to allow air to circulate in order to cool the device.
- The RTD uses natural convection-based passive cooling, i.e., it does not use fans.

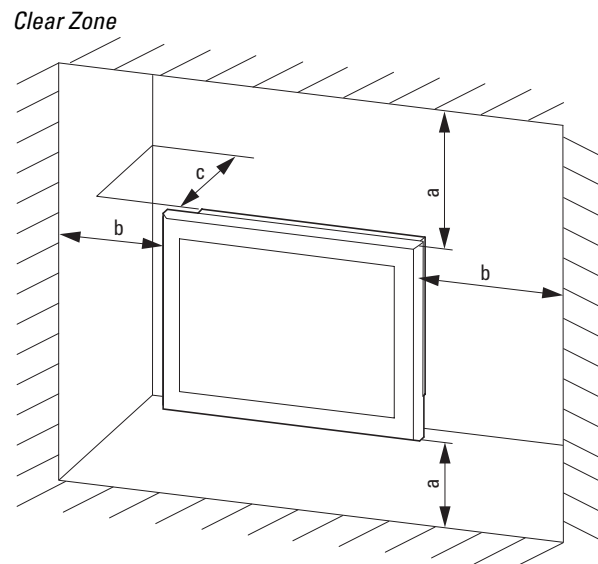


Fig. 5: Mounting distance

- Make sure that there will be enough volume for air changes inside the control cabinet, etc.

The specified clearance around the RTD is:  $a, b, c \geq 30 \text{ mm (1.18")}$

- If you will be installing the RTD in complex systems together with other assemblies, you must ensure that there will be enough air circulation in order to prevent overheating.

Ambient temperature with natural convection:  $\theta: 0^{\circ}\text{C (32}^{\circ}\text{F)} \leq T \leq 50^{\circ}\text{C (122}^{\circ}\text{F)}$

The panel builder is responsible for the temperature rise calculation.

Eaton will provide heat dissipation data as necessary for design verification in conformity with IEC EN 61439 – please refer to the data sheet for the RTD in the online catalog at [Eaton.com/ecat](http://Eaton.com/ecat).

## 3. Installation

### 3.1 Prerequisites for the location of use

#### 3.1.2 Technical conditions for acceptance by Underwriters Laboratories Inc. (UL)



The following conditions must be met in order for the certification of RTD as per UL 61010-2-201, UL61010-1 to apply:

- Ambient temperature 0°C to 50°C
- Mounting height up to 2000 m
- Overvoltage category II
- Pollution Degree 2
- Permissible voltage range 20%/+25% of rated operating voltage
- Type rating  
Use in type 4X or type 12 enclosures, use indoors only, at dry locations only
- Maximum relative humidity of 95% for temperatures of up to 50 °C, derated linearly to a relative humidity of 50% at 40 °C.
- Suitable power supply for class III (SELV or PELV)
- The devices must be installed in a suitable fire protection enclosure that provides protection against the spread of fire.

The torque used to tighten the screw terminals on the plug-in connection for the power supply must not exceed 0.22 ... 0.25 Nm.



3.2 Unpacking and checking the equipment supplied

3.2 Unpacking and checking the equipment supplied

- ▶ Check the RTD's packaging for transit damage.
- ▶ Carefully remove the packaging in order to avoid damaging the device.
- ▶ Check the package contents for visible transit damage.
- ▶ Use the information in the → "Std. pack ", page 41 table to make sure that the contents are complete.



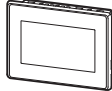
Keep the original packaging so that you will be able to use it in the future if you need to transport or ship the RTD.  
 Make sure to also keep the documents enclosed with the device and/or to give them to the end customer.

**Missing parts or damage**

If you notice anything wrong, please contact your distributor or Eaton Service +1 877-386-2273 (en) / 877-ETN-CARE (877-386-2273)

The package for the RTD device comes with:

Tab. 2: Std. pack

Unit	Description
1 x 	easyE RTD
1 x	Installation instructions ILO48015ZU
1 x	Plug connector MC 1.5/ 2-ST-3.5 BK Phoenix Contact (1916384)
4 x	Holding bracket with set screw with Internal hexagon M4x25, galvanized, S2

The Resistive Touch Display is sturdily built, but the components inside it are sensitive to excessively strong vibrations and/or mechanical shock.

Accordingly, make sure to protect the RTD from mechanical loads that exceed the scope of the unit's intended use.

### 3. Installation

#### 3.3 Mounting

#### 3.3 Mounting

**CAUTION**

Arrange for a professional technician to mount the device.



**CAUTION**  
**INSTALLATION CUT-OUT**

The mounting cutout must be located in a position that will not defeat the purpose of stabilizing webs or other reinforcing elements in the control panel. If necessary, reinforcing elements must be installed/added.

An IP65 degree of protection will only be ensured if there is sufficient stiffness and the device is properly mounted.

- Minimum sheet thickness of control cabinet where the device will be flush mounted:  
 $2 \text{ mm (0.08")} \leq d \leq 5 \text{ mm (0.2")}$

**List of tools:**

- M2 Allen key, hex width across flats: 2 mm
- PZ2 Pozidriv screwdriver
- Torque wrench with Newton meter scale

## 3.4 Preparations

1. Select the installation location you want for the device.  
Make sure that all the requirements for the installation location are met → page 36.
2. Make a cutout with the right size for the RTD at the location you selected.
3. Make sure that the mounting cutout has the right size.



**CAUTION**  
**POOR SEALING**

If the gasket cord is twisted when placed inside the groove or does not provide adequate sealing all around, the degree of protection will not be achieved.  
The join of the sealing strip must be positioned on the bottom of the device.

4. Pre-assemble the holding brackets with the set screws.  
Screw the Internal hexagon M4x25, galvanized, S2 set screws into the holding brackets.

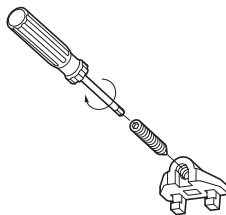


Fig. 6: Pre-installing the holding brackets

Four holding brackets are included as accessories with the RTD.



All four holding brackets need to be installed in order to get an IP65 degree of protection.



Together with the gasket, the holding brackets are the main element required for achieving an IP65 (at front) degree of protection.

The purpose of the holding brackets is to secure the RTD in the installation cutout, e.g., on the control panel door.

To this end, the brackets must be hooked into the enclosure and screwed against the control panel door, etc.

### 3. Installation

#### 3.4 Preparations

##### Positions of the holding brackets

- On the top and bottom sides of the device:  
One holding bracket each at the left and right outer fixing positions

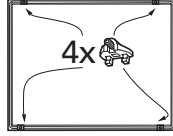


Fig. 7: Position of holding brackets on RTD

##### IP rating

If the device is installed properly, the following IP degrees of protection will be ensured:

- In the front: IP65 (at front) - not UL tested
- In the back: IP20 (at rear) - not UL tested

### 3.5 easyE RTD mounting

- ▶ 1. Insert the RTD into the mounting cutout from the front.

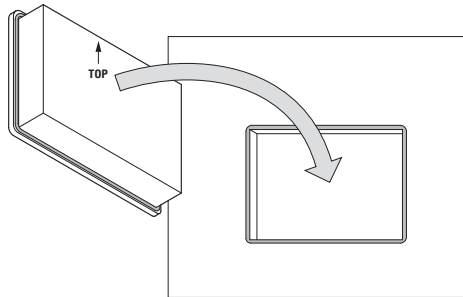


Fig. 8: Mounting in the installation cutout

- ▶ 2. As long as the device has not been secured with all holding brackets, make sure to secure it so that it will not fall down.
- ▶ 3. Insert the holding brackets into the first device cutout intended for this purpose.

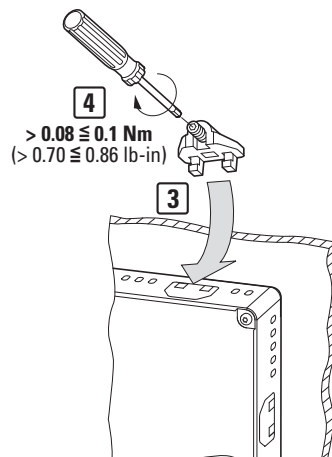


Fig. 9: Installing the holding brackets

- ▶ 4. Tighten the set screw until it comes into contact with the installation surface.
- ▶ 5. Follow steps 3 and 4 to insert the next holding bracket at a 90° angle to the last one you inserted.
- ▶ 6. Repeat steps 3 and 4 until all necessary holding brackets are installed.
- ▶ 7. Check that the device is in its correct, centered position and that the gasket is in contact all around; adjust if necessary
- ▶ 8. Tighten the set screws in a criss-cross sequence with a max. torque of  $>0.08 \leq 0.1 \text{ Nm}$  ( $>0.70 \leq 0.86 \text{ lb-in}$ ).

### 3. Installation

#### 3.6 Preparing the device for operation

#### 3.6 Preparing the device for operation



##### **CAUTION INTERFERENCES**

Screw all plug-in connections or lock them into place in order to improve screening.

Signal cables must not be routed in the same cable duct with power cables.

Before putting the system into operation, check all cable connections to make sure that everything has been wired properly.

Make sure that all voltages and signals have the required values as per the specification.



##### **CAUTION SHORT-CIRCUIT HAZARD**

If the Resistive Touch Display is or has been exposed to environmental fluctuations (ambient temperature, air humidity), condensation may form on or inside RTD. As long as this condensation is present, there will be a short-circuit hazard.

Do not switch on the device when it has condensation in or on it.

If the Resistive Touch Display has condensation in or on it, or if it has been exposed to environmental fluctuations, let the RTD settle into the existing ambient temperature before switching it on. Do not expose the device to direct thermal radiation from heating appliances.

#### **Before connecting the power supply**



##### **CAUTION**

24 VDC power supply for integrated DC-to-DC converter.

The voltage being applied must meet the requirements for safety extra-low voltages (SELV) set forth in IEC 60950 and the requirements for protected extra-low voltages (PELV) set forth in IEC/UL 61010-2-201.

Pay attention to the polarity.



##### **WARNING**

The device should only be run with safety extra-low voltage (functional extra-low voltage with protective separation).

The power transformer must conform to the relevant standards.

### 3. Installation

#### 3.6 Preparing the device for operation



#### WARNING

RTD units are products designed for use in industrial environments as defined in ICE/EN 6100-6-4. These products can cause radio interference in domestic environments. In this case, the party operating the products must implement appropriate radio interference suppression measures.



#### CAUTION

Installation requires qualified electrician  
Arrange for an electrician to install and connect the power supply.

#### 3.6.1 Power supply – electrical connection

The RTD features an internal fuse and protection against polarity reversal. The housing is made of plastic and serves as an insulator.

The power supply for the device is **not** galvanically isolated.

The RTD requires a rated operating voltage of 24 V<sub>DC</sub> from a DC-to-DC converter with safe isolation (SELV/PELV).

Rated operating voltage 24 V DC (-20%/+25%)

Permissible voltage range Effective: 19.2-30.0 V DC (rated operating voltage -20%/+25%)

Absolute with ripple: 18.0-31.2 V DC

Battery powered: 18.0-31.2 V DC (rated operating voltage -25%/+30%)

Power consumption max. 7.2 W

Current consumption at 24 V DC: 4.7 W for basic device + 2.5 W for USB module

Fuse Yes (fuse not accessible)

Potential isolation no


Electrical current

$I_e$   $\leq 0.3$  A

$I_{TH}$  2.5 A<sup>2</sup>s

The required MC 1.5/ 2-ST-3.5 BK connector is included as standard.


Tab. 3: Plug connection configuration MC 1.5/ 2-ST-3.5 BK

	signal	Configuration
	+ 24VDC	Power supply + 24 VDC SELV (safety extra low voltage)/PELV (protective extra low voltage)
	0V	0 V power supply

### 3. Installation

#### 3.6 Preparing the device for operation

##### Grounding option

 If required due to the installation environment, this Connection lug 4.8 x 0.8 mm can be used as a protective earth connection.

One compatible cable lug option would be the Phoenix Contact C-SCFFI 1.5/4.8X0.8 slip-on sleeve with part No. 3240537 (not included).

##### Specifications for connection to 24 VDC power supply (-20%/+25%):





Copper conductor Use copper wire only, designed for a temperature of at least 65 °C

Tightening torque 0.22 ... 0.25 Nm for the screws on the MC 1.5/ 2-ST-3.5 BK

Strip length 7 mm (0.28")

##### ▶ Connect the individual conductors.

Tab. 4: Terminal capacities

	solid	0.14 to 1.5 mm <sup>2</sup>
	Flexible	0.14 to 1.5 mm <sup>2</sup>
	Insulated ferrule	0.25 to 0.5 mm <sup>2</sup>
	Non-insulated ferrule	0.25 to 1.5 mm <sup>2</sup>
	Conductor cross section AWG	min 28 - max 16

##### Power Supply

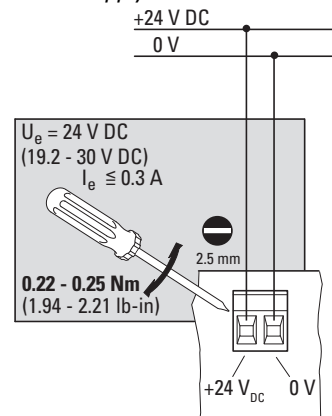


Fig. 10: Connecting the screw terminals on the plug connector



### 3. Installation

#### 3.6 Preparing the device for operation

##### Electrical connection

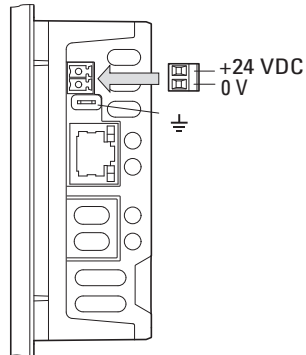


Fig. 11: Power supplied via plug connector

- ▶ Use the plug-in connection to terminate the connection cable for the power supply in advance.
- ▶ Plug the pre-assembled plug connector into the socket on the enclosure.
- ▶ Pay attention to the polarity "+24V" and "0V".
- ▶ Connect the power supply cable to a 24 VDC power supply (-20%/+25%) that meets the requirements for safety extra-low voltages (SELV) set forth in IEC 60950 and – in connection with the UL listing – the requirements for a low-voltage source set forth in UL 61010-2-201, UL61010-1.

The easyE Remote Touch Display is now ready to run on 24 VDC.

### **3. Installation**

#### **3.6 Preparing the device for operation**

### 4. External connections

With its ports, Eaton's RTD makes it possible to connect a variety of peripheral devices and components.



#### **DANGER STRAY CURRENTS**

Large equalizing currents between the functional earthing system and the ground system of different devices may result in fire or in malfunctions due to signal interference.

- ▶ If necessary, route an equipotential bonding conductor, with a cross-sectional area that is several times larger than that of the cable shielding, parallel to the cable.



#### **CAUTION INTERFERENCES**

The values specified in the technical data, as well as the device's electromagnetic compatibility (EMC), cannot be guaranteed if the following are used: unsuitable cables, improperly assembled and terminated cables, and/or wiring that does not conform to the applicable standards.

Only use cables assembled and terminated by professionals.

The cables being used must be assembled and terminated as required by the port/interface description in this document.

When wiring the RTD, follow all instructions regarding how to wire the corresponding port/interface.

All general Directives and standards must be complied with.

## 4. External connections

### 4.1 USB interface

#### 4.1 USB interface

This interface can be used to run an RTD firmware update → Section " Update menu", page 78 or import or export the visualization project → Section " Import / Export menu", page 86.

In addition, it can be used to export log files → Section " Device Info menu", page 67



#### CAUTION

When using commercially available peripheral devices (e.g., with the USB port), it is important to keep in mind that their EMC interference immunity parameters may render them unsuitable for use in industrial environments.

Do not use the USB port on the RTD for any purposes other than those intended by the manufacturer.



#### CAUTION

#### NON-GALVANICALLY-ISOLATED INTERFACES

The RTD may be damaged by potential differences.

- ▶ Do not connect the connector to the RTD or disconnect it without first de-energizing the system.



Only use standard USB cables with a shield.  
Max. cable length: 5 m.

#### USB host



Fig. 12: USB 2.0, not galvanically isolated, plug type A

## 4.2 Ethernet

Every RTD features an Ethernet port. This Ethernet port is a Cat 5e/6 port. Make sure to use compatible standard RJ45 Ethernet cables only. The Ethernet port on the RTD serves as a communication interface to the easyE4 control relay. The Ethernet controllers support transfer rates of 10 Mbit/s and 100 Mbit/s. The default IP setting is: Auto IP

When the green LED lights up, this means that an active network has been detected and a link to it has been established. When the yellow LED flashes, this means that data is being transferred.

**CAUTION**

If the Ethernet connection is routed out of the building at one point, a network isolator (switch, for example) must be used without fail.



Fig. 13: RJ-45 socket, 8-pole, 2 LEDs (CAT5e/6), LAN1, 10/100 Mbps



For the network, use shielded twisted-pair (STP) cables only.  
For connecting the RTD to a easyE4 control relay (directory) or RTD to a switch:

- Use a patch cable (1:1).

Maximum cable length: 100 m without switch



**CAUTION**

**FORCES ON THE ETHERNET INTERFACE**

Communications may be affected, and the connection's mechanical components may be damaged, if the Ethernet interface is subjected to strong vibrations or the RJ45 plug-in connection is subjected to pulling.

- Protect the RJ45 plug-in connection from strong vibrations.
- Protect the RJ45 plug-in connection from tensile forces at the socket.

Eaton recommends implementing measures for protecting against cyberattacks.



Eaton cyber security

[Eaton.com/us/en-us/company/news-insights/cybersecurity.html](https://Eaton.com/us/en-us/company/news-insights/cybersecurity.html)



[Eaton.com/cybersecurity](https://Eaton.com/cybersecurity)

## 4. External connections

### 4.2 Ethernet

## 5. Commissioning

When the easyE RTDs are used as intended, they will often be installed in a machine or system to function as controls and will be wired accordingly.

In this case, the RTDs will need to be switched on and off using the corresponding machine controller.



### **DANGER!**

Electric shock hazard!

When setting up and testing the visualization interface, make sure to use a test environment that is fused as per the state of the art and in accordance with all applicable standards in order to power the devices.

The RTD will boot up as soon as it is energized.

If the RTD will not start, or if an error message appears, consult the → Section "Faults", page 97 section.

The RTD will be shut down as soon as it is not being powered.



### **CAUTION**

#### **SHORT-CIRCUIT HAZARD**

If the Resistive Touch Display is or has been exposed to environmental fluctuations (ambient temperature, air humidity), condensation may form on or inside RTD. As long as this condensation is present, there will be a short-circuit hazard.

Do not switch on the device when it has condensation in or on it.

If the Resistive Touch Display has condensation in or on it, or if it has been exposed to environmental fluctuations, let the RTD settle into the existing ambient temperature before switching it on. Do not expose the device to direct thermal radiation from heating appliances.

- ▶ Power the RTD with 24 VDC.

The RTD unit will boot up. As soon as the operating system loads, the easyE Remote Touch Display application will start.

In the case of brand new devices, the Setup Wizard will start directly.

## 5. Commissioning

### 5.1 Setup Wizard – Setting up the easyE Remote Touch Display

#### 5.1 Setup Wizard – Setting up the easyE Remote Touch Display

In order to make it easier to set up the RTD, there is a Setup Wizard available that can take you through the individual steps required for commissioning. This wizard will ask for all the relevant settings for device operation.

When the Setup Wizard begins, you will have the option of importing an \*.rtd visualization project.

The configuration for the RTD and the visualization project for the easyE RTD Advanced can be imported independently of each other.

In the case of brand new devices, this Setup Wizard will start directly by asking you to select the menu language you want.

On all other devices, the Administration user group can start the Setup Wizard separately in the device menu.

Familiarize yourself with how to use the RTD first → Section "Handling easyE Remote Touch Display", page 63.

Recommendation: If you connect the RTD to an easyE4 device in advance, the wizard will directly search for available easyE4 devices so that they will be available for selection. → Section "Connecting to the RTD", page 89

The Setup Wizard process is described in detail in the Operation section, → Section " Setup Wizard menu", page 80



## 5.2 Initial commissioning

During initial commissioning, as well as after resetting the device to factory settings, you will need to define the passwords for three types of user:

- Watch,
- Operate
- Administrate

Please note that the RTD cannot be used until these user group passwords have been defined.

➔ Define the passwords for each user group in order to protect your device.



For more instructions, please refer to the "Operation" section → page 63


### 5.2.1 Setting passwords

The password must be made up of exactly six characters (uppercase letters and numbers only), and you will need to enter it again for confirmation.

- ▶ Tap the input field.
- ▶ The keyboard will appear.



- ▶ Enter the password for Watch password.
- ▶ Confirm by tapping the  button.
- ▶ Enter the password again to confirm it
- ▶ Confirm by tapping the  button.
- ▶ Repeat the steps above for the Operate password
- ▶ Repeat the steps above for the Administrate password

After you set up the passwords, the  Device information menu will appear. None of the user groups will be logged in at this point.

## 5. Commissioning

### 5.2 Initial commissioning

#### 5.2.2 Setting a language

As soon as the RTD is ready, you can select one of the available menu navigation languages.

- ▶ Press the  button.

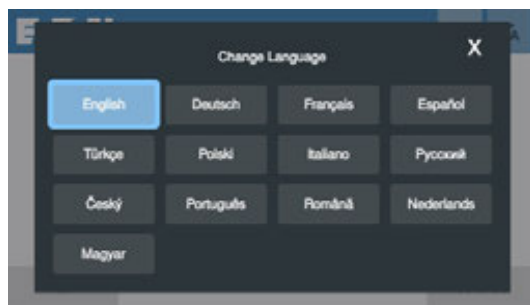




Fig. 14: Changing the language

- ▶ To select the language you want, tap the corresponding button.
- ▶ Close the menu by pressing .

After logging in, you can use the main menu (  ) to configure the remaining RTD system settings in the language you selected. You can save this RTD configuration in the \*.rtd visualization project file → Section " Import / Export menu", page 86.

**5.2.3 Access restrictions for the user groups**

- **Watcher**

The device will only show the display content from the easyE4 display.  
 No permissions for changing parameters or accessing the easyE4 device menu.

Menu	Page			
	1	2	3	4
Login/Logout				
Device Info	Addresses	Version	RTD information	

- **operation**

The same permissions that the operator would have when in front of the actual easyE4 device. Makes it possible to use the P device buttons and change parameters if this is allowed in the easySoftprogram itself.

Menu	Page			
	1	2	3	4
Login/Logout				
Device Info	Addresses	Version	RTD information	
easyE4 mirroring				
easyE4 visualization				
Display	Brightness	Brightness when dimmed	Display Timeout	easyE4 monochrome mode

- **Administer**

This user group has no access restrictions and can access all device menus.  
 → "Device menus ", page 65

## **5. Commissioning**

### **5.2 Initial commissioning**

## 6. Running the RTD

Once the easyE Remote Touch Display has been initially commissioned, it will run whenever it is connected to the power supply.

In other words, it does not have to be separately switched on and off.

➔ Reducing the level of brightness will increase the display backlight's lifespan.  
→ Section " Display menu", page 76

➔ Follow the instructions in the following section if your RTD until will not boot up and/or if an error message appears → Section "Faults", page 97

To display and operate the connected easyE4 device, select the easyE4 mirroring device menu.

You can set up the configuration in such a way that the easyE4 mirroring device menu will be automatically opened when the display is activated.

## 6.1 Visualization

available only for easyE RTD Advanced EASY-RTD-DC-43-03B2-00

To open the visualization project on the easyE RTD Advanced, select the easyE4 visualization device menu.

Access to the visualization will be password-protected. The displays and controls available on the RTD will depend on the specific user group that is logged in – Watchers, Operators, or Administrators.

➔ To import the visualization project, the Administrators group needs to be logged in.  
→ Section " Import / Export menu", page 86

### 6.1.1 easyE RTD Advanced – loading the visualization project through the USB port

In addition to transferring the project through the Ethernet connection (with the Communication tab in easySoft), the visualization project can be imported or exported through the USB port on the RTD.

➔ A function key for returning to the easyE RTD Advanced device menu needs to be configured in the visualization project.


➔ The visualization project can also be imported with the Setup Wizard.  
➔ Only one visualization project is allowed per RTD.  
Importing a project through the USB port or a transfer via Ethernet will overwrite the existing visualization project on the RTD.

## 6. Running the RTD

### 6.1 Visualization

- ▶ Store the visualization project file from easySoft on a USB flash drive.
- ▶ Insert the USB storage device into the EASY-RTD-DC-43-03B2-00 USB port.

The USB port will be disabled by default. It can be enabled while setting up the RTD with the Setup Wizard or in the Import / Export configuration page menu (the Security menu is where it is specifically enabled).

- ▶ Open the  Import / Export menu.
- ▶ Select the Import page.
- ▶ Select the file you want from the list of available \*.rtd files on the USB storage device.
- ▶ Press the  button.

As soon as the visualization project file parts have been loaded in the easyE RTD Advanced, the corresponding settings will be applied and a message will be shown.

# 7. Operation

## 7.1 Handling easyE Remote Touch Display

To navigate on the easyE Remote Touch Display, operators can:

- ▶ Tap the button icons in order to open menus (e.g., ☰ )
- ▶ Tap the arrows to move through pages within a menu.  
Dots above the status bar will be used to show the number of pages in the menu and the page that is currently active.



- ▶ Tap fields in order to carry out actions or open subpages.



For example,

- ▶ Tap fields to enable input.



- ▶ Tap and hold input fields in order to get input assistance.



- ▶ Tap and hold the RTDRTD display in order to switch between the display in an RTD RTD window with control elements and full screen mode.
- ▶ ◀ Will take you back to the menu for a menu page opened with a button.

## 7. Operation

### 7.1 Handling easyE Remote Touch Display

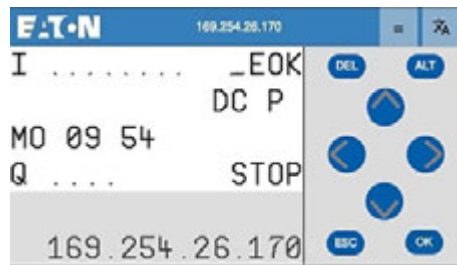


Fig. 15: Display in the RTD window

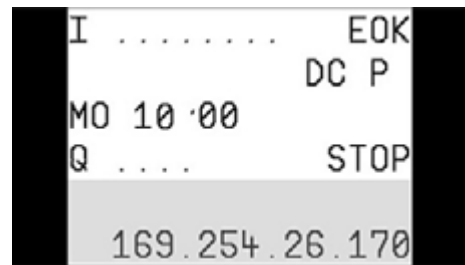

















Fig. 16: Full screen mode



## 7.2 Device menus

The following menus can be accessed from the  main menu after logging in, with the specific menus that are available depending on the user group:

 To access menu options that are not available, move the visible menu

	Menu	Page 			
		1	2	3	4
	Login/Logout				
	Device Info	Addresses	Version	RTD information	
	easyE4 mirroring				
	easyE4 visualization				
	Network				
	Automatic Start				
	Display	Brightness	Brightness when dimmed	Display Timeout	easyE4 monochrome mode
	Update	USB			
	Security	Auto Logout	Enable USB	Enable USB autostart	
	Setup Wizard				
	Import / Export	Import	Export		

## 7. Operation

### 7.2 Device menus

#### 7.2.1 / Login/Logout menu

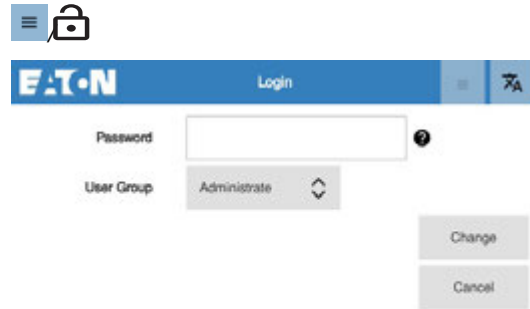


Fig. 17: Login

Used to log in / log out with a user group.



No other menus will be available unless a user group is logged in.

Password

Input Field

Enable the field by tapping on it and enter the six-character password for the user group you selected.



User group

Selection:  
Watch  
Operate  
Administrate



#### **Change** button

You can change the password for the selected user group by tapping the **Change** button

**7.2.2  Device Info menu**



Fig. 18: Device Info

Page 1	Address information	Network
		MAC address
Page 2	Version information	Image name
		Image version
		Bootloader Version
Page 3	RTD information	OS Version
		easyE RTD Version
		Host Name
Page 4	RTD information	Serial Number
		Panel Name

## 7. Operation

### 7.2 Device menus

#### Log button

This menu page can be used to see the various logins into the device and export them through the USB port.

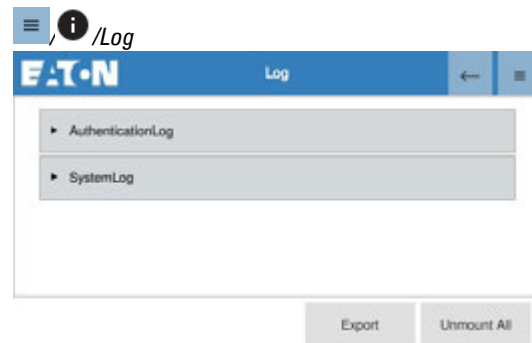


Fig. 19: Log

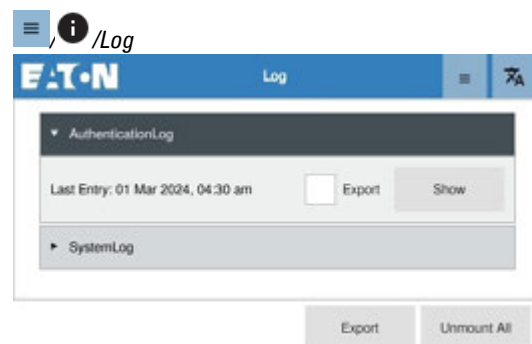


Fig. 20: Selecting a log for **Export**

It is recommended to export the information, as some logs are extremely long and it will take a long while for the information to be shown on the RTD with the **Show** button.

The following are available:


Authentication Log: Log for authentication at the operating system level

SystemLog: Comprehensive log for all other system messages, including mounting external USB drives, hardware driver messages, and network events.

#### Unmount button

- ▶ Tapping the button will complete all pending read and write operations and will safely unmount the filesystem.

To export the logs:


- ▶ Plug a USB drive into the RTD's USB port.
- ▶ Select the logs you want by enabling the corresponding checkboxes: .
- ▶ Tap **Export** to start exporting the logs you selected.
- ▶ Tap  to exit the menu page.

#### Legal information button

This menu lists all the open-source licenses used.



Fig. 21: Open-source licenses used

- ▶ To scroll, move through the page by sliding your finger along the right edge
- ▶ Tap  to exit the menu page.

#### Factory reset button

After confirming the security prompt, the RTD settings will be reset as follows:

1. All settings and passwords will be reset.
2. The firmware version will be restored to the next-to-last update.
  - ➔ You will need to update to the latest firmware version again.
  - ➔ The visualization project will be deleted when this happens.

#### Reboot device button

- ▶ Tapping this button will restart the RTD.  
None of the user groups will be logged in.

## 7. Operation

### 7.2 Device menus

#### 7.2.3 easyE4 mirroring menu (formerly Remote easyE4)

The connection to the easyE4 can be established in this menu.

The blocks for entering and showing IP addresses are available here.



Fig. 22: easyE4 mirroring

You can enter the IP address in blocks using the arrow buttons.



If you tap and hold a field, an input field will appear.

Set the connection as the default so that a connection will be established directly to this easyE4 with the next access operation.

#### **Search** button

- ▶ Tapping this button will start the search for easyE4 devices.

#### **Buttons in the Search window**

Tapping the **SEL** button will select the IP address that is currently highlighted in the list and exit the page. The selected IP address will then be found in the address field.

Tapping and holding a list entry will have the same effect as the **SEL** button.

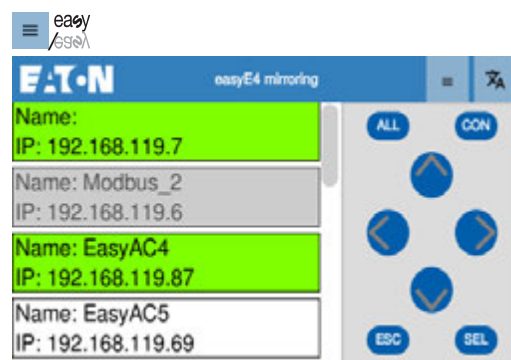


Fig. 23: easyE4 mirroring/Search


Tapping the **ALL** button will add all the entries in the list to the list of favorites.


Tapping and holding the **ALL** button will remove all the entries in the list from the list of favorites.


Tapping the **CON** button will directly establish a connection to the highlighted easyE4

Tapping the **ESC** button will exit the page.

If an easyE4 is connected, the corresponding screen will be shown.

If not, the  easyE4 mirroring menu with the connection options will be shown instead.

Tapping the  left arrow will remove the highlighted entry from the list of favorites.

Tapping the  right arrow will add the highlighted entry to the list of favorites.

All the entries in the list of search results that are currently in the list of favorites as well will be highlighted green.

Depending on the user group that is logged in, certain menus and input may not be available.

#### **Select button**

- ▶ Tapping this button will set the IP address selected in the list of favorites.

#### **Connect button**

- ▶ Tapping this button will start a connection to the selected IP address (easyE4 device).

#### **Disconnect button**

- ▶ Tapping this button will terminate the connection to the easyE4 device.

#### **Back to previous default IP button**

- ▶ Tapping the green button will enter the last IP address set as the default into the address field.

You can then establish a connection to the easyE4 device by tapping the **Connect** button.

## 7. Operation

### 7.2 Device menus

#### Set as default button

- ▶ Tapping the yellow button will save the set IP address as the default address.



Fig. 24: easyE4 mirroring/Set as default

#### Tap and hold to add IP from below to favorites list button

- ▶ Tapping the button will save the configured IP address in the list of favorites.

This list of favorites can be shown by tapping  and can be scrolled through

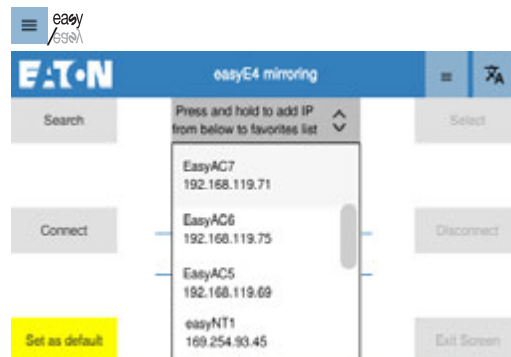


Fig. 25: easyE4 mirroring

#### Exit screen button

- ▶ Tap the button to exit the menu page.  
Enabled only if there is a connection to the easyE4 device.

#### See also

→ Section " Automatic Start", page 76



### 7.2.4 easyE4 visualization menu

available only for easyE RTD Advanced EASY-RTD-DC-43-03B2-00

This menu is used to start and display the visualization project.

A connection will be established to the easyE4 configured in the visualization project.

Access to the visualization can be optionally password-protected on top of the device Login/Logout. If you implement this option (e.g., with a login button on the visualization start page), the users created in the visualization project will be available with the usernames and passwords assigned there.

The screens configured for these users in the visualization project will be available on the RTD. Please note that the language may be different from the language selected for the RTD. For additional information, please refer to the documentation in easySoft (visualization devices).

The available displays and input fields should be used the same way as when operating the device.

In order to be able to get back to the device menu from the easyE4 visualization menu, a universal button with the "switch to device menu" function must have been created in the visualization project.



Only one visualization project is allowed per RTD.

Importing a project through the USB port or a transfer via Ethernet will overwrite the existing visualization project on the RTD.



If there are no visualization projects available, a message to this effect will appear on the display.

The RTD device menu will remain active.



If there is no universal button with the "switch to device menu" function in the visualization project, you will need to abort the process manually in order to exit the menu. To do this, either:

Resetting the device to → Section "Resetting the device to factory settings - Factory Settings", page 98 -

or

Stop the project with easySoft

or

Cut the power to the RTD

If the visualization is set up to start automatically in the Automatic Start menu in the RTD device configuration, the visualization will start directly when the RTD is turned on.

## 7. Operation

### 7.2 Device menus

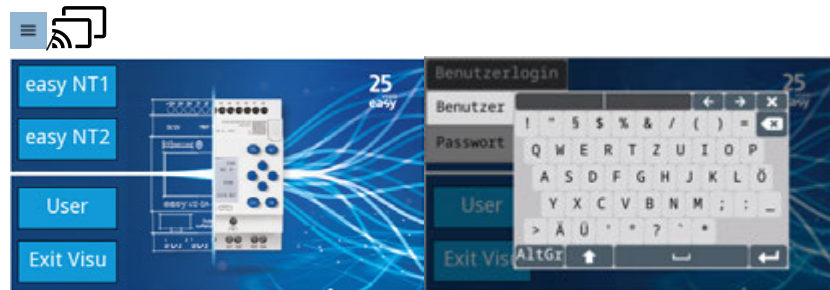


Fig. 26: easyE4 visualization example

#### See also

→ Section " Automatic Start", page 76

**7.2.5  Network menu**

This menu shows network settings and can be used to configure the RTD for the network.



Fig. 27: Network

Page 1	Display of	IP Address Subnet Mask IP Assignment
Page 2	Display of	MAC Gateway DNS – not active, no web browser application
Page 3	Modus IP address	The following are available: <ul style="list-style-type: none"> <li>• Static</li> <li>• Auto IP</li> <li>• DHCP</li> </ul> DHCP will only be available if a router is detected on the network.
Page 4	IP address (available only if IP address: Static)	To enter: Tap one of the number groups until the input assistance opens or use the arrow buttons above and below the number groups to change the value.
Page 5	SubnetMask (available only if IP address: Static)	To enter: Tap one of the number groups until the input assistance opens or use the arrow buttons above and below the number groups to change the value.
Page 6	Gateway	To enter: Tap one of the number groups until the input assistance opens or use the arrow buttons above and below the number groups to change the

## 7. Operation

### 7.2 Device menus

Page 7 Primary DNS

value.

To enter:

Tap one of the number groups until the input assistance opens

or

use the arrow buttons above and below the number groups to change the value.

#### 7.2.6 Automatic Start

This menu can be used to define which application will be opened after booting up. A connection to the easyE4 IP address set as the default address will be established → "Set as default button", page 72.

For easyE4 mirroring, the Watcher or Operator user group can be logged in for this purpose for all RTDs.

In addition, the easyE4 visualization device menu is available for the easyE RTD Advanced. For this selection, logging in requires the passwords that were assigned for the visualization project.

The Auto Start-function will be disabled by default.

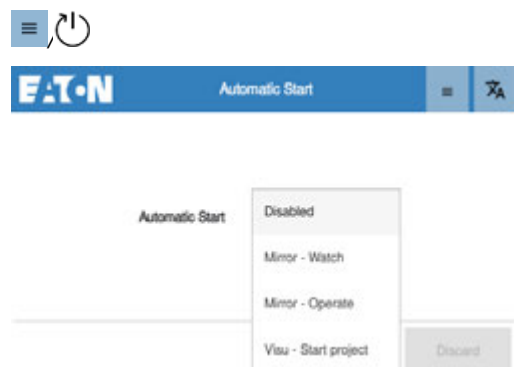






Fig. 28: Auto Start

#### 7.2.7 Display menu

This menu can be used to configure the display.



Fig. 29: Display

- |        |  |   |
|--------|--|---|
| Page 1 |  Brightness              | Tap the slider to adjust  |
| Page 2 |  Brightness when dimmed  | Tap the slider to adjust<br>As soon as a time has been entered and enabled for Display Timeout, the display will be dimmed to the value configured here once the configured time elapses.<br>You can have the display be turned off with the off setting<br>In addition, you can disable dimming with the max setting   |
| Page 3 | Display Timeout  | Used to set a time after which the display will be automatically turned off in order to save electricity if there is no user activity<br>The function will be disabled by default, the display will always be on.<br><br>Enable – Slider The timeout setting will be enabled  |
| Page 4 | easyE4 monochrome mode   | You can configure font and background colors for the text display function blocks (D) in easySoft. These colors will then be used on the web server and the RTD.<br>To disable this color setting and use a black-and-white configuration like the one on the easyE4 device display instead, you can use monochrome mode.<br>If you do this, the base device's selectable backlight (white/red/green) will also be mirrored on the RTD.<br><br>Enable – The easyE4's background color will be kept monochrome in order to make it easier to see LED colors. |

## 7. Operation

### 7.2 Device menus

#### 7.2.8 Update menu

This menu can be used to load a different firmware onto the RTD.

Updates can only be carried out using the USB port.

##### Prerequisites

The RTD settings in the Security menu must be configured in such a way that updates are allowed.

- ▶ Plug the USB drive with the update bundle into the RTD device's USB host.

The latest update will be entered automatically. If an update bundle is not found, a message to this effect will appear.

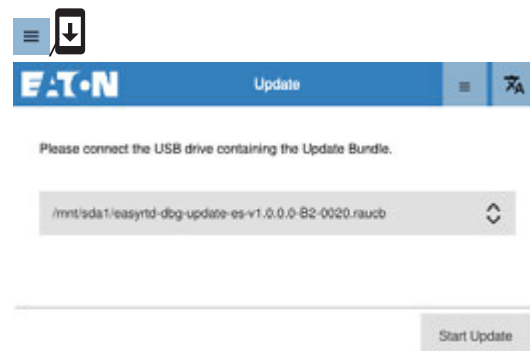


Fig. 30: Update

- ▶ Start update.
- ▶ A firmware update security prompt will appear. Confirm by tapping "Start update."

You will need to restart the RTD after the update.

- ▶ Restart the device.

**7.2.9**  **Security menu**

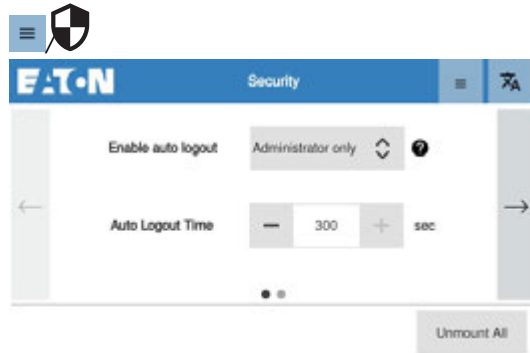


Fig. 31: Security

Page 1 Enable auto logout

**CAUTION**

Disclaimer. If you disable the auto logout function, you do so at your own risk. Please read the instructions for setting up a secure configuration. Refer to the "Secure Hardening Configuration Guidance".

You can select between the following options for the auto logout function:

- Administrate only (default setting)
- Always (all user groups)
- Never

Auto Logout Time

Time, in seconds, after which the user will be automatically logged out.  
Limit: 10-300

Page 2 Enable USB

Used to enable and disable USB access  
This security setting can be used to protect the device from cyberattacks via the USB port.  
Default factory setting: Disabled

**Unmount All button**

- ▶ Tapping this button will make the operating system cut access to all the partitions on the USB drive that is plugged in.

## 7. Operation

### 7.2 Device menus

#### 7.2.10 Setup Wizard menu

To make it easier to set up the RTD, there is a Setup Wizard available that will ask you for all the relevant settings for the device's operation and then give you the option of saving the corresponding \*.rtd visualization project file. The Setup Wizard will start after you select the menu language you want.

Recommendation: If you connect the RTD to an easyE4 device in advance, the wizard will directly search for available easyE4 devices so that they will be available for selection. → Section "Connecting to the RTD", page 89

Familiarize yourself with how to use the RTD → Section "Handling easyE Remote Touch Display", page 63.

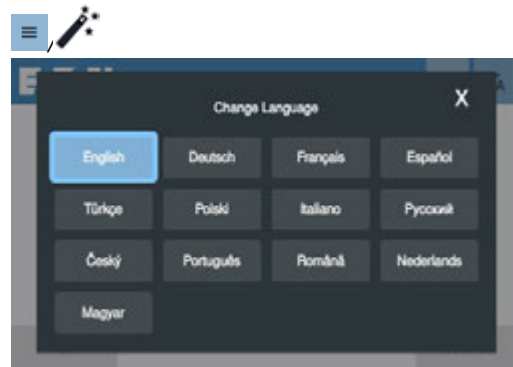


Fig. 32: Selecting a language for the wizard

Recommendation: If you have already connected the easyE4, tapping **Next** will make the device search for available devices so that they will be available for selection.

▶ Connect the RTD to an easyE4, → Section "Connecting to the RTD", page 89



Fig. 33: Setup step 1

Tap **Back** to exit the Setup Wizard.

To load an existing \*.rtd visualization project file through the USB port, tap **Next**.



If USB access has not been enabled in the  Security → page 79 yet, you can enable it now.

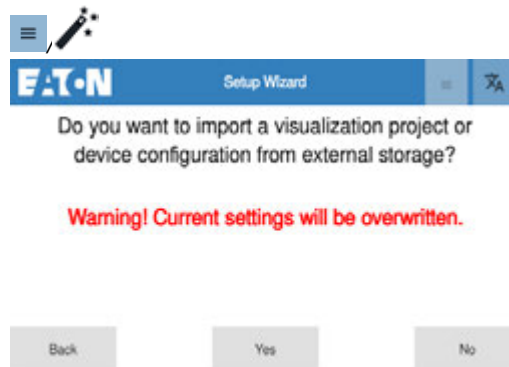


Fig. 34: Setup step 2

The \*.rtd file must have been stored in a subdirectory of mnt/sda1/.

If the visualization project file has been saved from easySoft, it will be found in the VPROGRAM subdirectory by default.

- ▶ Tapping **Yes** will access the USB host directly.
- ▶ If you tap **No** you will be taken directly to Setup step 4.

If there are multiple files available for selection, scroll until you get to the one you want.

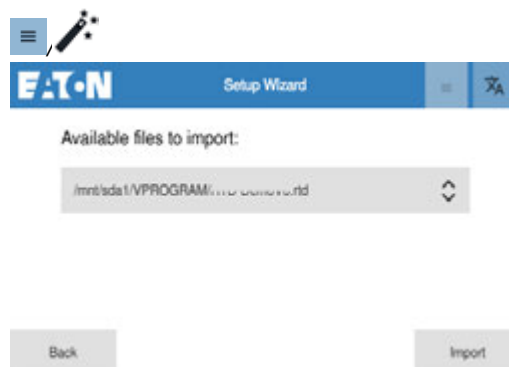


Fig. 35: Setup step 2 - selecting an existing visualization project file



If a USB drive is not detected, a message to this effect will appear.

As soon as the visualization project file parts have been loaded in the easyE RTD Advanced, the corresponding settings will be applied and a message will be shown.

The following steps will have you configure additional settings.

The six-character password for the Watchers user group needs to be entered and confirmed first.

This is then followed by the passwords for the Operators and Administrators group.

## 7. Operation

### 7.2 Device menus



Fig. 36: Setup step 4 - setting passwords

You will then have the option to have a user group be auto start in. For more information, please refer to: Login menu, → page 66

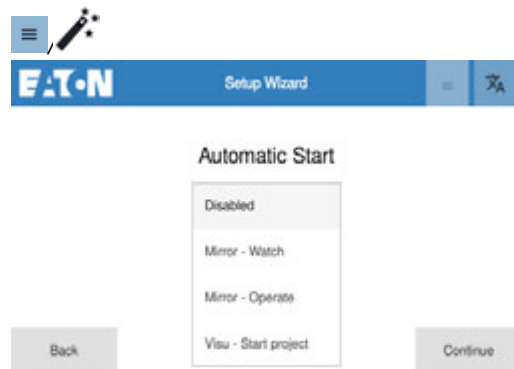


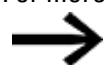
Fig. 37: Setup step 4 - setting auto-start behaviour

After this, the IP address assignment mode needs to be set.



Fig. 38: Setup step 5 - IP address configuration

For more information, please refer to: Network menu, → page 75.



Select Auto-IP if the easyE4 is set up that way as well.

Tapping the **Next** button will apply the network setting



Fig. 39: Setup step 5 -transferring the setting

Once this setting is configured, the system will immediately start searching for available easyE4 devices that are already connected.

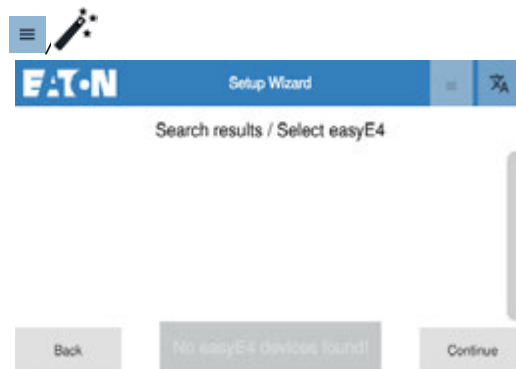


Fig. 40: Setup step 5 - search

If no devices are found, a message to this effect will appear.

The list with the easyE4 devices found will be offered for selection.

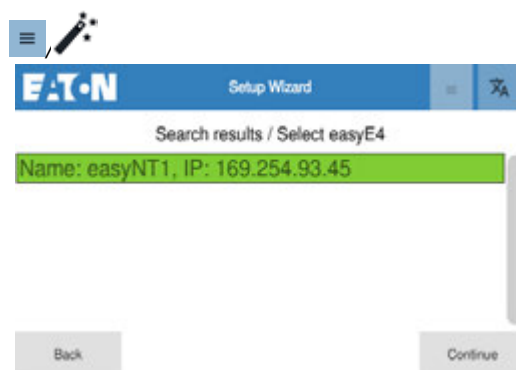


Fig. 41: Setup step 5 - selecting an easyE4

If a name has been assigned to the easyE4 with easySoft, the name will be shown before the comma.

## 7. Operation

### 7.2 Device menus

➔ If multiple easyE4 devices are found when the Setup Wizard starts, the device selected at that point will be shown highlighted in gray here.

Tapping **Next** will complete the configuration steps in the Setup Wizard.

The selected easyE4 device will be used as the default connection together with the set passwords, the network settings for the RTD, and the auto login setting in the visualization project file.

In the next step, you can save the resulting visualization project file (RTD config) on a USB drive.

➔ If you choose to save the file, it will be saved in the root directory (saving the file in subdirectories is not possible).

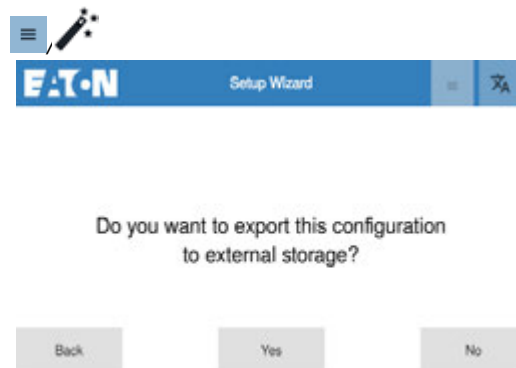


Fig. 42: Setup step 6 - saving the setup configuration as an \*.rtd file

After this, you can connect the RTD directly to the easyE4.

In order for this to work, the setting on the easyE4 in *System Options, Ethernet, easyE RTD* must allow this access.

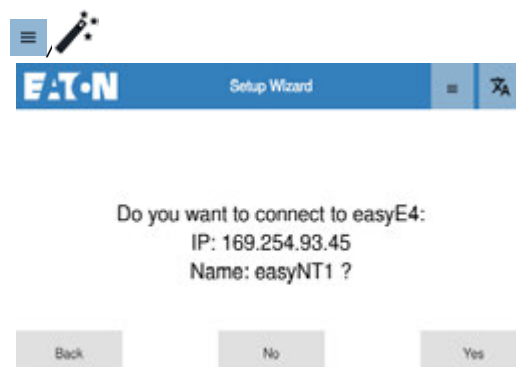


Fig. 43: Setup step 7 - directly establishing a connection

You can then connect to the easyE4 set as a default in the visualization project file.

## 7. Operation

### 7.2 Device menus



Fig. 44: Example Connection is being established

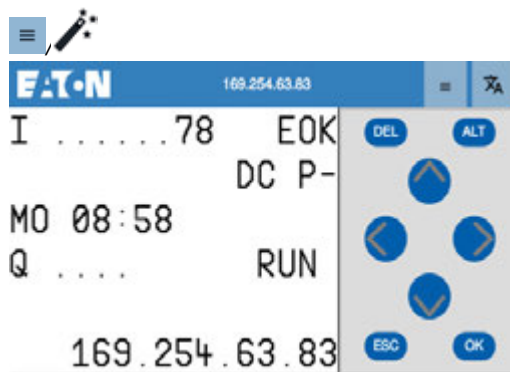


Fig. 45: Example showing what happens once a connection has been established.



Access to the device may change depending on the imported visualization project file!



Fig. 46: Example easyE RTD Advanced connection has been established.

## 7. Operation

### 7.2 Device menus

#### 7.2.11 Import / Export menu

The \*.rtd visualization project file can be imported and exported directly to a USB drive with this menu.

Page 1 Import For imports, you can select the specific part of the \*.rtd file that you want to transfer to the RTD through the USB port.

Page 2 Export For exports, all the information for the RTD's configuration and for the visualization, as well as the information specifying which easyE4 devices are part of the visualization, will be grouped together in an \*.rtd file.  
As a result, the \*.e80 project can be reconstructed in easySoft.

#### Import

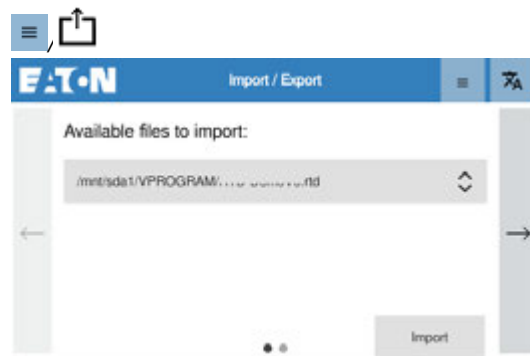


Fig. 47: Import / Export

When importing a file, the file will be the visualization project file for the RTD.


The system will search through all the directories on the USB drive and list all files with the \*.rtd extension.

➔ The previous \*.conf RTD configuration file on EASY-RTD-DC-43-03B1-00 devices is being replaced by an \*.rtd visualization project file with firmware update FW  $\geq$  1.0.

If you need to convert a \*.conf file to an \*.rtd file, please contact Eaton Service.

➔ Only one visualization project is allowed per RTD.  
Importing a project through the USB port or a transfer via Ethernet will overwrite the existing visualization project on the RTD.

▶ Plug a USB drive into the USB port.

➔ Firmware files for the RTD can be loaded with the  Update menu.

After the import is completed, a message to this effect will appear on the RTD.

- ▶ Select the Import page.
- ▶ Select the file you want from the list of available \*.rtd files on the USB storage device.
- ▶ Press the **Import** button.

As soon as the visualization project file parts have been loaded in the easyE RTD Advanced, the corresponding settings will be applied and a message will be shown.

### **Export**

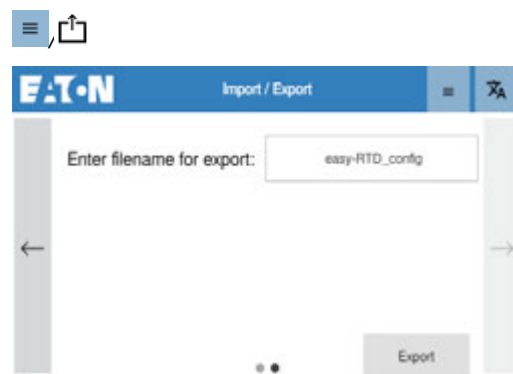


Fig. 48: Export configuration

- ▶ Plug a USB drive into the USB port.
- ▶ Select the page for export.
- ▶ Enter a filename.
  - ➔ Select a name that you want to be shown in the selection list in the event that you re-import the filename.
- ▶ Tap the **Export** button to start exporting the configuration.

Once the \*.rtd file is exported successfully, a message to this effect will appear on the display.

## **7. Operation**

### **7.2 Device menus**



## 8. Connecting to the RTD

### 8.1 easyE4 with the RTD

#### Prerequisites

- A standard RJ45 Ethernet cable, not included.
- User permissions for the RTD
- Remote control permissions set up on the easyE4.
- Existing separate power supply for:
  - easyE4
  - RTD

#### Standard: Auto IP

1. Establish a physical connection between the easyE4 and the RTD with an Ethernet cable with RJ45 connectors.
2. Open the <sup>easy</sup> <sub>ESSE</sub> easyE4 mirroring menu
3. Search for and select the easyE4 (it may already have been pre-selected in the Setup Wizard configuration)
4. Set as default configuration



easyE4 provides an auto IP functionality for the connection

The easyE4 control relay and the RTD both feature the Auto IP functionality.

#### 8.1.1 Steps for establishing a connection

1. Establish a physical connection between the easyE4 and the RTD with an Ethernet cable with RJ45 connectors.

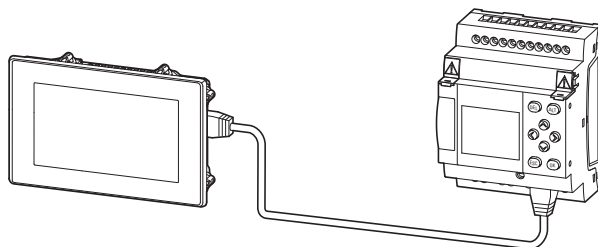



Fig. 49: Ethernet connection using the ports on the RTD and easyE4

2. Power the devices
3.  Log in to the RTD
4. Open the <sup>easy</sup> <sub>ESSE</sub> easyE4 mirroring menu (formerly Remote easyE4)

## 8. Connecting to the RTD

### 8.1 easyE4 with the RTD

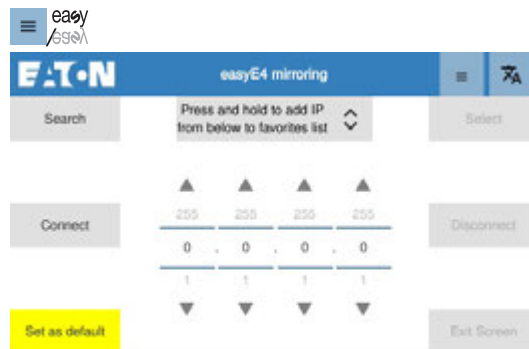


Fig. 50: easyE4 mirroring

#### 5. Find RTD

The connected will be detected automatically if the easyE4 is using the auto IP functionality

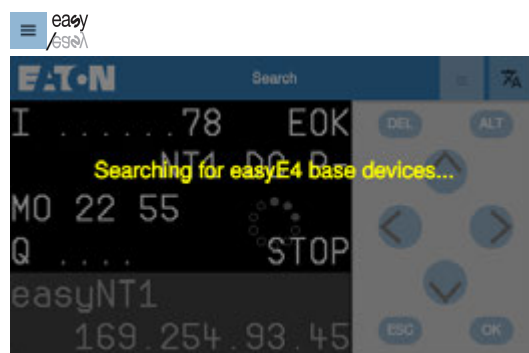


Fig. 51: easyE4 mirroring

#### 6. Select easyE4



Fig. 52: easyE4 mirroring

Tapping the **SEL** button will select the IP address that is currently highlighted in the list and exit the page.

The selected IP address will now be in the address field.

#### 7. Tap the **Connect** button to establish a connection to the selected easyE4

## 8. Connecting to the RTD

### 8.1 easyE4 with the RTD



Fig. 53: easyE4 mirroring

The content of the easyE4 display and its controls will be automatically duplicated on the RTD.

The easyE4 can be controlled from this view, provided that remote display access permissions are configured correctly in the easyE4. → "Remote Display -access inhibit", page 92

In addition, you can tap and hold the display to switch between the view with control buttons and full screen mode.



If you tap and hold 3 seconds on the gray background around the control buttons, a popup with the list of favorites will appear. You can use this to quickly switch between various easyE4 devices without having to go through the <sup>easy</sup> easyE4 mirroring menu every time.

8. Set it as the default configuration or store it in the list of favorites so that you will not have to run a search again when establishing this connection.

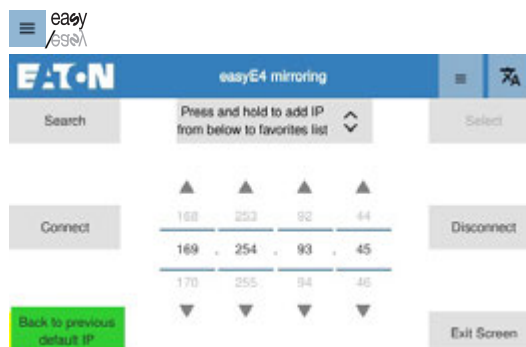


Fig. 54: easyE4 mirroring

You can also enter the IP address directly in the input fields with the arrow buttons or the input assistance. After doing this, tap the **Connect** button to establish the connection.

## 8. Connecting to the RTD

### 8.1 easyE4 with the RTD

#### 8.1.2 easyE4 settings



If you are using an easyE4 with a display, the remote control permissions can be configured directly on the easyE4 itself and in easySoft.

If you are using an easyE4 without a display, the remote control permissions can only be configured with easySoft.

New easyE4 base devices will come with the Auto IP setting configured by default. In order to configure the settings differently on the EASY-E4-...-12...C1(P), use the menu structure and go to *System Options\Ethernet*

Tab. 5: Display EASY-E4-...-12...C1(P)

Tab. 6: *Main Menu*

STOP ✓ RUN
PARAMETER
SET CLOCK
CARD
INFORMATION
SYSTEM OPTIONS
PROGRAM

Tab. 7: *System options*

SECURITY
SYSTEM
MENU LANGUAGE
DELETE Progr.
NET
ETHERNET
UPDATE

Tab. 8: *System option-s\Ethernet*

ADDRESS MODE
IP ADDRESS
SUBNET MASK
GATEWAY ADDRESS
DNS SERVER
easyE RTD
Email Test

- ▶ Select the network setting you want.  
Standard: Auto IP

Tab. 9: *System Option-s\Ethernet\Address mode*

AUTO IP ✓
DHCP
STATIC IP

Remote Display -access inhibit  
Used to manage remote control permissions for controlling the easyE4 with the RTD.

- ▶ Set up access permissions for each user group.

Tab. 10: *System option-s\Ethernet\easyE RTD*

ACCESS INHIBIT
----------------

Tab. 11: *System option-s\Ethernet\easyE RTD\access inhibit*

NO ACCESS ✓
WATCH
OPERATE
ADMINISTRATE

## 8. Connecting to the RTD

### 8.1 easyE4 with the RTD

Access permissions for each user group that define which easyE4 functions can be used from the RTD.

NO ACCESS	No access, i.e., no display either.
WATCH	Display only (i.e., no control).
OPERATE	The P buttons programmed in the *.e80 program can be used.
ADMINISTRATE	All available functions, including the easyE4 device menu, can be transmitted by the RTD to the easyE4.



For more information on how to establish an Ethernet connection with the easyE4 itself, please refer to manual MN050009, application note AP0050013, and the easySoft programming software program.

#### See also

→ Section " easyE4 visualization menu ", page 73

## 8. Connecting to the RTD

### 8.2 easyE4 connection with the RTD through an Ethernet switch

#### 8.2 easyE4 connection with the RTD through an Ethernet switch

If the Ethernet connection is routed out of the building at one point, a network isolator (switch, for example) must be used without fail.

If you want to connect more than one easyE4 base device or more than one network station to the RTD, a properly sized Ethernet switch must be placed in between.

##### Prerequisites

- Standard Ethernet switch with at least two ports (not included)
- Two standard RJ45 Ethernet cables (not included)
- Existing separate power supply for:
  - easyE4
  - RTD
  - Ethernet switch

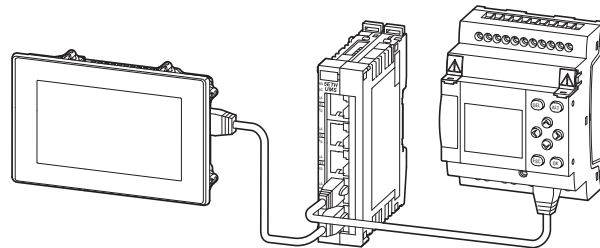


Fig. 55: Ethernet connection between the RTD and easyE4 devices through an Ethernet switch

When using auto IP, the procedure is the same as for establishing a connection without an Ethernet switch.

As soon as the Ethernet switch is connected between the existing connection between easyE4 and RTD, the Ethernet connection will be disconnected and will then be automatically re-established with auto IP.



### 8.3 easyE4, easySoft connection with the RTD

For project configuration applications, you can add a PC with the easySoft programming software to the network as an additional network station.

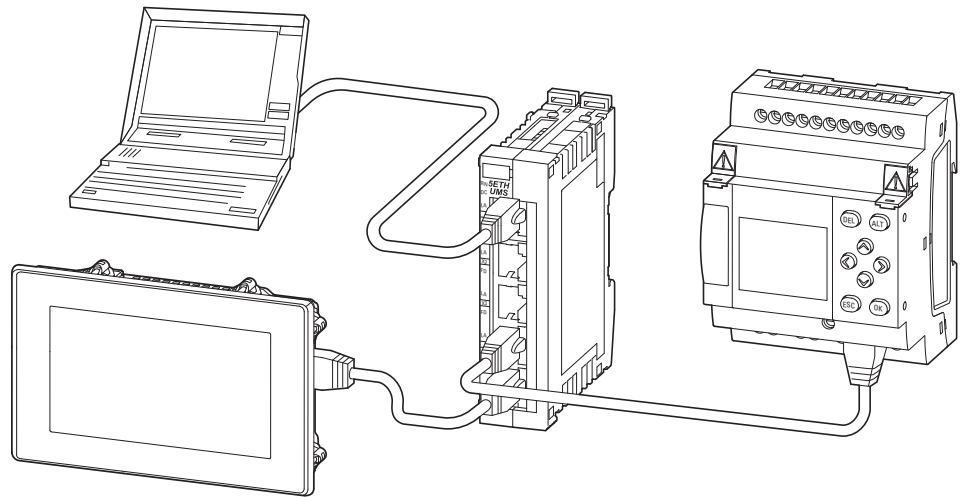


Fig. 56: Ethernet connection between the RTD and easyE4 devices through a switch with access to easySoft (PC)

Make sure to configure the required parameters in the easySoft program:

- Under the Ethernet tab in the Project view
- The connection to the easyE4 device in the Communication view.

**See also**

Documentation for the easyE4; "Establishing an Ethernet connection and transferring a program or visualization project" section.

## **8. Connecting to the RTD**

### **8.3 easyE4, easySoft connection with the RTD**



## 9. Faults

This section provides troubleshooting information for your easyE Remote Touch Display in case it does not behave as expected.

<b>Fault</b>	<b>Cause</b>	<b>Remedy</b>
RTD will not boot up	No 24 VDC power supply (-20%/+25%)	Check the power cord and power supply
The display stays dark	Brightness is off	Adjust the brightness → "Display menu", page 76
The Resistive-Single-Touch is not responding or is responding incorrectly when used.	The touchscreen display is soiled	Clean the display
	The set screws are too tight	Loosen the set screws → page 45

## 9. Faults

### 9.1 Resetting the device to factory settings - Factory Settings

#### 9.1 Resetting the device to factory settings - Factory Settings

The easyE Remote Touch Display can be reset to its factory settings (in the event that you lost your password, for example).

Resetting the device to factory settings will reset the following:

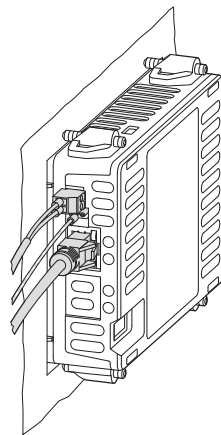
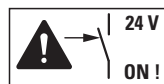
- All network settings  
(RTD IP address; IP addresses and names of the easyE4 devices)
- All display settings
- All security settings (auto logout, USB connection)
- All passwords set on the RTD



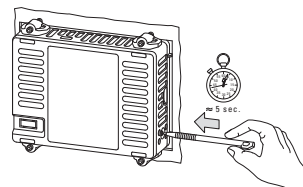
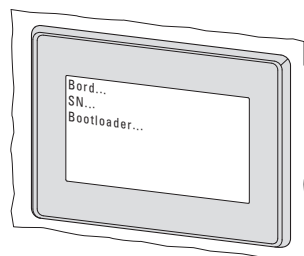
The visualization project file for the easyE RTD Advanced will be deleted.

To reset the device to factory settings, you will need to press the CTRL button.

- ▶ 1. Turn the device on.



- ▶ 2. When the screen shows the system booting up, press and hold down the CTRL button for about 5 seconds.



When you reset the easyE Remote Touch Display back to factory settings, it will restart several times.

Once it is done, the original factory settings will be available again.

## **10. Maintenance**

### **10.1 Cleaning and maintenance**

#### **10.1.1 Cleaning Resistive Touch Display**

The display needs to be cleaned on a regular basis.



**CAUTION**

**POINTY, SHARP OBJECTS AND CORROSIVE LIQUIDS**

When cleaning the Resistive Touch Display:

- Do not use any pointy or sharp objects (e.g., knives).
- Do not use aggressive or abrasive cleaning products or solvents.

Make sure that no liquids get into the device (short-circuit hazard) and that the RTD is not damaged in any way.

- ▶ Clean the frame and the display with a clean, soft, damp cloth.

## 10. Maintenance

### 10.2 Repairs

### 10.2 Repairs

For repairs, please contact your vendor or Eaton's Technical Support.



**CAUTION  
DESTRUCTION**

The RTD should only be opened by the manufacturer or by an authorized center. Operate the Resistive Touch Display until only with the enclosure fully closed and sealed.



**Use the original packaging to ship the device.**

The device should only be transported in its original packaging after being packed properly.

## 10.3 Storage, transport and disposal

### 10.3.1 Storage and transport



**CAUTION**  
**UV LIGHT**

Plastics will become brittle when exposed to UV light. This artificial aging will reduce the RTD unit's lifespan.  
Protect the Resistive Touch Display unit from direct sunlight and other sources of UV radiation.



**CAUTION**  
**SHORT-CIRCUIT HAZARD**

If the Resistive Touch Display is or has been exposed to environmental fluctuations (ambient temperature, air humidity), condensation may form on or inside RTD. As long as this condensation is present, there will be a short-circuit hazard.  
Do not switch on the device when it has condensation in or on it.  
If the Resistive Touch Display has condensation in or on it, or if it has been exposed to environmental fluctuations, let the RTD settle into the existing ambient temperature before switching it on. Do not expose the device to direct thermal radiation from heating appliances.

The ambient conditions must be met when transporting and storing the RTD.

The ambient air temperature for storage and transportation must not exceed the maximum specified limit of: -20 – + 60 °C (-4 – +140 °F).



**CAUTION**  
**SHORT-CIRCUIT HAZARD**

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Do not switch on the device when it has condensation in or on it.  
If the Resistive Touch Display has condensation in or on it, or if it has been exposed to environmental fluctuations, let the RTD settle into the existing ambient temperature before switching it on. Do not expose the device to direct thermal radiation from heating appliances.

## 10. Maintenance

### 10.3 Storage, transport and disposal



#### Before commissioning

If storing/transporting the device in cold weather conditions or in such a way that it will be exposed to extreme differences in temperature, make sure that no condensation forms on or inside the device.

If there is condensation in or on the device, do not switch on the device until it is completely dry.



#### **Use the original packaging to ship the device.**

The device should only be transported in its original packaging after being packed properly.

The Resistive Touch Display is sturdily built, but the components inside it are sensitive to excessively strong vibrations and/or mechanical shock.

Accordingly, make sure to protect the RTD from mechanical loads that exceed the scope of the unit's intended use.

### 10.3.2 Disposal



#### **Dispose of recyclables as required by your local recycling regulations.**

Dispose of recyclables as required by your local recycling regulations.

RTD devices no longer being used must be professionally disposed or returned to the manufacturer or relevant sales department.



Dispose of the RTD unit professionally.

Tab. 12: Materials used RTD

Assembly part	Material
Display	Standard front with standard membrane (fully enclosed)
Back of the housing	Plastic
Display	Insulated material, black

Tab. 13: Materials used in the packaging

Packaging	Material
Outer packaging	Cardboard
Inner packaging	Closed cell polyethylene foam, free of CFCs / plastic bag: polyethylene (PE)
Inner packaging RTD	Cardboard; plastic film and bag: Polyethylene (PE)

## Appendix

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## Appendix

### A.1 Technical data

## A.1 Technical data

### A.1.1 Data sheet

The current specifications for the device can be found in the data sheet for the device in the Eaton online catalog.

**Article no. and type**

[199740 - EASY-RTD-DC-43-03B1-00](#)

**Description**

easyE Remote Touch Display,  
standard,  
24VDC,  
4.3 inches, 480x272 px ,  
TFTcolor, resistive,  
Ethernet

[EP-401057 - EASY-RTD-DC-43-03B2-00](#)

easyE Remote Touch Display,  
Advanced,  
24VDC,  
4.3 inches, 480x272 px ,  
TFTcolor, resistive,  
Ethernet



### A.1.2 Dimension and weight specifications

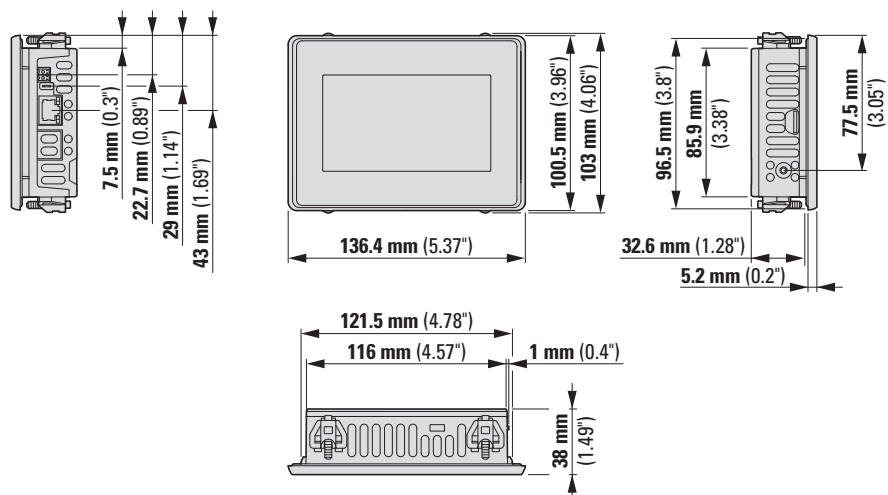
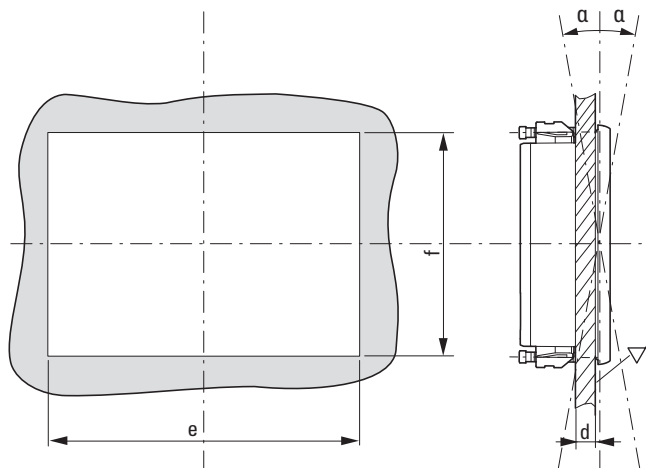


Fig. 57: Dimensions in mm (inches); tolerance:  $\pm 0.2$  mm

Width x Height x Depth (without plug)	136.4 mm x 100.5 mm x 37.8 mm (5.37" x 3.957" x 2.486") +/- 0.2 mm
Built-in depth	33.1 mm
Weight	0.3 kg (0.66 lbs)

#### Hole diameter built-in



- Material thickness of  $2 \text{ mm (0.08")} \leq d \leq 5 \text{ mm (0.2")}$  at the installation cutout  $a$  max.  $\pm 90^\circ$   
and a flatness  $\square \leq 0.5 \text{ mm (0.02")}$  with a surface roughness  $\surd R_z \leq 120$ ; IP 65  $\rightarrow$  DIN ISO 2768-2 (K)
- Hole diameter built-in:  $e = 123 \text{ mm (4.84")} \pm 0.5 \text{ mm (0.02")}$ ,  $f = 87 \text{ mm (3.43")} \pm 0.5 \text{ mm (0.02")}$

## Appendix

### A.1 Technical data

#### A.1.3 Approvals and declarations

The following specifications apply to all easyE Remote Touch Display units.

<b>Approvals and declarations</b>		
CE	RTD complies with all applicable European Union (EU) Directives and features the CE marking.	
UL	UL-File no. E205091	
DNV	DNV-CG-0339, Edition August 2021, TAA0000366	
<b>Applied standards and directives</b>		
EMC (relevant for CE)	2014/30/EU	
	IEC/EN 61000-6-2	Interference immunity for industrial environments
	IEC/EN 61000-6-4	Emitted interference for industrial environments
Security		
	IEC/EN 60950	Safety of Information Technology Equipment
	UL 61010-2-201, UL61010-1	Industrial Control Equipment → Section "Technical conditions for acceptance by Underwriters Laboratories Inc. (UL)", page 40
	DIN EN 60529	Degrees of protection provided by enclosures
Product standards		
	DIN EN 60898-1:2006-03	Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations
	IEC/EN 61131-2	Programmable controllers: Equipment requirements and tests
Mechanical shock resistance	IEC/EN 60068-2-27	15g /11ms
Vibration	IEC/EN 60068-2-6	Displacement amplitude: 5–9 Hz: 3.5 mm; 9–60 Hz: 0.15 mm Acceleration amplitude: 60–150 Hz: 2 g
Free fall, packaged	IEC/EN 60068-2-31	
RoHS	Directive 2011/65/EC	conform
Climatic proofing	Cold to IEC 60068-2-1	
	Damp heat as per EN 60068-2-3	
	Dry heat to IEC60068-2-2	

## A.2 Further usage information

### Documentations

For more information on additional devices and modules, please refer to the following documentation:



Installation instructions RTD

IL048015ZU



Manual easyE4

MN050009EN

### Communication

The RTD can communicate with a variety of easyE4 PLCs. In order to integrate it into your system, you will need to configure additional settings. For more information on what you need to take into account and configure, please refer to the following document:



Application Note easyE4/easySoft

AP0050013

Establishing an Ethernet Connection Between easyE4 and easySoft

### Download Center, Eaton Online Catalog

Enter "easyE4" into the search box and the catalog will take you directly to the corresponding product group in the Automation, Control and visualization section.



[Eaton.com/documentation](http://Eaton.com/documentation)



[Eaton.com/ecat](http://Eaton.com/ecat)

### Product information

For up-to-date information, please consult the product page on the Internet.



[Eaton.com/easy](http://Eaton.com/easy)

**Appendix**  
**A.2 Further usage information**

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By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy sources, helping to solve the world's most urgent power management challenges, and building a more sustainable society for people today and generations to come.

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