EMI-One SE

User Manual

v.2.0

for software version 2.0.0 or later

Retrieved 02.07.2024

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1. Safety Rules

EMI-One SE is an information management system and according to current regulations, it is not a security system. It cannot be used in applications requiring property security certificates.

This device may only be operated by qualified personnel and after careful consideration of the following user manual.

Do not interfere with the design of the device or carry out repairs by yourself.

Sensors and actuators should only be connected to the designated places. Incorrect connection will cause permanent damage to the system and the sensors.

The manufacturer is not liable for any loss due to improper use or operation of the system.

The manufacturer grants certification and warranty for the device only if powered by the original power supply included in the set.

If you have any problems or concerns, please contact us:

apra-optinet sp. z o.o.

www.apra-optinet.pl

sales@apra-optinet.pl Phone: +48 77 415 0 107

ul. Technologiczna 4/6 45-839 Opole, Poland

2. Legal Notice

The contents of this manual are for informational purposes only and the manufacturer is not liable for any damages resulting, or arising out of the use of the EMI-One SE system in accordance with, or not in accordance with the contents of this manual, and in particular for damages of devices other than EMI-One SE system. In other cases, the manufacturer's liability is limited to the sum insured by the manufacturer in the business liability insurance. The information provided and made available in this manual is not a complete description for the use and operation of the EMI-One SE system. In any case, people interested in obtaining additional information regarding the use of the EMI-One SE device should consult the manufacturer. Any content contained in this manual, as presented for informational purposes, is up to date at the time of publication and the manufacturer cannot guarantee its relevance or suitability in all situations, at all times. Any and all content contained in this manual may only be used for non-commercial private use. The content and materials provided in this manual may not be used for public or commercial purposes without the written permission of the manufacturer.

Both the way EMI-One SE device way of functioning, and the content of this manual may change, for development purposes without notifying its users. The most up-to-date manual can be downloaded from:

https://www.apra.de/produkte/schrankueberwachung-zutrittskontrolle-emi-one/ (in the Documents & Downloads tab).

3. Introduction

EMI-One Second **E**dition is a device that integrates the functionality of monitoring of environmental parameters with access control.

3.1 Basic features

- 2 power supply sockets that allow to power the device from 2 separate power sources for power redundancy,
- 4 independent 12V output channels for controlling terminal devices (e.g. an electromagnetic lock, LED lighting or ventilation system),
- 4 independent binary inputs with additional parameterisation function to handle fire, gas, flood, motion, power failure, sensors, etc.
- 2 door handle connectors dedicated for electronic handles from the apra EMI-Lock family, EMKA Agent E and other, external manufacturers that are intended for access control usage with built-in RFID readers suitable for : Wiegand 26-bit, Wiegand 32-bit, Wiegand 34-bit and Wiegand 37-bit standards.
- support of external RFID readers suitable for : apra UNIQUE, apra MIFARE, apra HID (Proxx, iClass), HITAG and LEGIC standards,
- possibility to connect up to 2 sensors of the following types : temperature, temperature and humidity. This functionality enables measurement in 2 places of the server cabinet,
- support of EMI-POWER SR-Link PDUs by power measurement data aggregation,
- extended section of alarms triggered by the status of: electronic locks, analogue inputs, temperature sensor readings, humidity sensor readings as well as power parameters,
- controlling, reading, and configuring the device settings using a transparent interface via a web browser (built-in HTTP and HTTPS web-server).

- Simple Network Management Protocol (SNMP) support with Trap notifications,
- Simple Mail Transfer Protocol (SMTP) support (the ability to send e-mail notifications in the event of an alarm),

Optionally:

- text message and email notifications (with SSL support) via GSM (additional module required),
- buffered power supply,
- additional power supply for redundancy,
- dedicated *Rack display* modules equipped with touchscreen LCD panel,
- external fan speed control module for ventilation control inside cabinets,
- dedicated multi-device management software for long-term recording and parameter analysis.

4. Hardware

The EMI-One SE controller has a compact, plastic housing with dimensions of 242x71x31mm. Input, output, power outlets and dedicated handle sockets are located on the rear panel, and vary according to function and application.

All sensors and actuators supplied by the apra-optinet company are provided with special plugs matching the appropriate socket type.

There is also a possibility to connect your own sensors and devices. Only trained and qualified personnel can connect the system, and only after contacting apra-optinet representative.

4.1 EMI-One SE Connectors

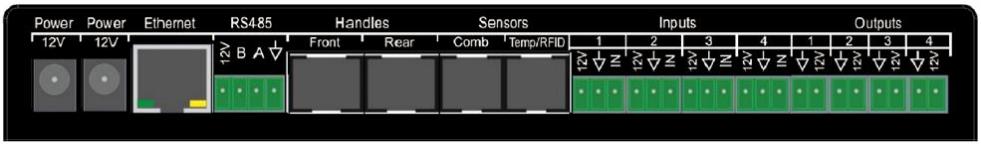


Fig. 1

- Power 12V – 2 power sockets intended for connecting 2 pieces of 12V-stabilised power supplies (1 piece included in set, other available upon request). In cases where maintaining the action of the device during losses of line voltage is necessary, it is recommended to connect a second power supply to a separate power source or use a dedicated buffered power supply (sold separately).

NOTE : The socket is galvanically connected to the 12V input and output terminals !

- Ethernet – used to connect to the network. Meets the 100BASE-T standard (10/100MBit/s).
- RS485 – RS485 bus connector used for communication with apra-optinet peripherals, e.g. *Rack Display* panel, external fan speed controller, EMI-POWER SR-Link PDUs etc.

- Handles – RJ45 sockets used to connect electronic handles also with built-in RFID readers from the apra EMI-Lock family as well as EMKA Agent E handles and third-party manufacturers.
    - Front – intended for connecting a handle mounted on the front doors of a server rack,
    - Rear – intended for connecting a handle mounted on the rear doors of a server rack,
- Sensors – RJ12 connectors used for communication with microprocessor sensors and readers:
    - Comb – used to connect the combo sensor (temperature and humidity) of standard and high accuracy,
    - Temp/RFID – used to connect: temperature sensor, combo sensor of high accuracy, pressure sensor and external RFID readers.

Connect the sensors and the readers only with the original cables provided by apra-optinet !

- Inputs – 3-pin connectors in this group numbered from 1 to 4 are used to connect any device with no voltage contact (NC/NO).

  Sample applications:
    - Door sensor,
    - Flood sensor,
    - Smoke sensor,
    - Alarm contact with UPS,
    - Alarm contact from the fire extinguishing system.

Make sure the detachable contacts of the device are connected to the contacts marked as „ IN ” and „ ↓ ” when connecting.

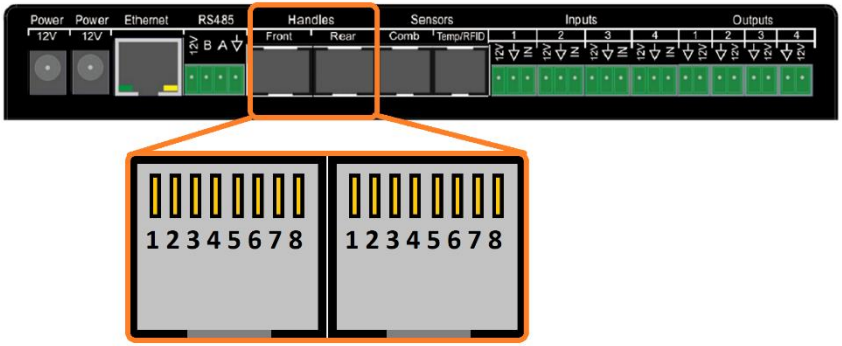
The „ 12V ” contact is galvanically connected to the supply voltage and can be used for terminal devices requiring additional external power supply.

- Outputs – 2-pin connectors marked with numbers 1 to 4 are used to connect the final actuators such as:
    - Electromagnetic locks,
    - Lighting,
    - Ventilation system,
    - Acoustic indicator.

The contact marked with the „ 12V ” symbol is permanently galvanically connected to the supply voltage of the device, while the „ ↓ ” contact, depending on the logic state, connects or disconnects from the ground.

The maximum continuous current consumption for a single output cannot exceed 500 mA and the sum of the currents for outputs 1 to 4 cannot exceed 700 mA.
If there is a need to control devices with a supply voltage greater than 12V or with increased current consumption, it is recommended to use a dedicated relay.
Never connect a voltage above 12V to the device connectors !
Only 4, 3 or 2-pin dedicated TBW connectors should be used for the RS485, output and input connectors.

4.1.1 Handle sockets pinout



No.	Colour **		Signal
1	white		EMI Module Line 3	Connect only with dedicated lanes of apra EMI-Lock family handles or EMKA Agent E. In other cases, leave unconnected! Failing to do so may result in permanent damage of EMI-One SE controller.
2	green		EMI Module Line 1 / D0*	Connect only with dedicated lanes of apra EMI-Lock family handles or EMKA Agent E. In other cases, leave unconnected! Failing to do so may result in permanent damage of EMI-One SE controller.
3	brown		Ground (GND)	
4	yellow		Control signal (opening)	Pulled to ground signal (GND) when handle unlock request is active. In other case, this signal is unconnected (left floating).
5	blue		Power suppply	Constant power supply 12V. Max 250mA.
6	grey		Handle position sensor	Two-state binary input for handle position sensor. Internal pull-up to 5V via 2.2k Ohm resistor. Detection by means of connecting and disconnecting to ground signal. Do not connect to any external voltage source – this may result in permanent damage of EMI-One SE controller!
7	pink		EMI Module Line 2 / D1*	Connect only with dedicated lanes of apra EMI-Lock family handles or EMKA Agent E. In other cases, leave unconnected! Failing to do so may result in permanent damage of EMI-One SE controller.
8	----		------	------

*Custom (special) variants only. For further information, please contact us at the following address: service@apra-optinet.pl

**colours as for standard EMI-Lock harness

4.2 LED Indication

The device is equipped with LEDs illuminating the logo on the front panel of the device, and on the top of the housing which, depending on the state of the device, means:

- Continuous blue – the device is in normal mode, no alarms active,
- Flashing red – the device reached in alert threshold,
- Quick flashing red – an internal failure of the device, please contact apra-optinet.

4.3 Restoring factory settings

To restore the device's default settings, hold down the button for about 6 seconds, until you hear three beeps.

5. System configuration for first startup

Before you start to configure your settings, you must first connect your device properly:

- Connect the RJ45 power cord to the Ethernet port (use a straight cable for a network switch, or a crossover cable for direct connection to the network card of the computer),
- Connect input- and output devices and sensors (optional),
- Connect the power supply to the unit using the 12V power supply included in the set.

Proper first startup of the device is signalled by steady blue light of the logo, situated on the front panel and on top of the housing.

5.1 Connecting with dedicated webserver interface

System configuration is performed using a web browser installed on a computer connected to the device through a network.

The web interface was designed to work with the current version of the following browsers, with JavaScript enabled: Google Chrome, Microsoft Edge, Mozilla Firefox, Microsoft IE.

It is possible to get access to the embedded webserver interface via HTTP or HTTPS.

Switching between HTTP and HTTPS connection types is possible by modifying Webserver Connection Mode setting in the BASIC SETTINGS section.

5.1.1 Connection via HTTP (factory setting – by default)

In the address field of your web-browser, enter the address of the device as shown below: http://*IP_address_of_the_device*

To get access to a device with the following IP address **192.168.1.10** (default IP address), enter:
http://192.168.1.10
The first time you log in, you should use the following data:

User Name: admin
Password: admin

It is recommended to change the default password for the administrator account.

5.1.2 Connection via HTTPS

To gain access to the webserver interface via HTTPS, it is required to first enable this functionality in Webserver Connection Mode setting in the BASIC SETTINGS section (refer to page 31).

In the address field of your web-browser, enter the address of the device as shown below: http**s**://*IP_address_of_the_device*

For example, to get access to the device with HTTPS enabled and IP address **192.168.1.10** (default IP address), enter:

http**s**://*192.168.1.10*

After entering the following request in the web browser's URL tab, a security warning communicate pops up, as shown on the examples in Figures 2, 3 and 4.

This communicate is correct, because the EMI-One SE controller uses a private domain. This means, that the web-browser recognizes the EMI-One SE's webserver page as a website with an unknown certificate.

Although the web-browser displays warnings, there are no security risks. The whole log-in process and data flow process between the client (web-browser) and EMI-One SE controller is fully encrypted which makes it secured and safe to use.

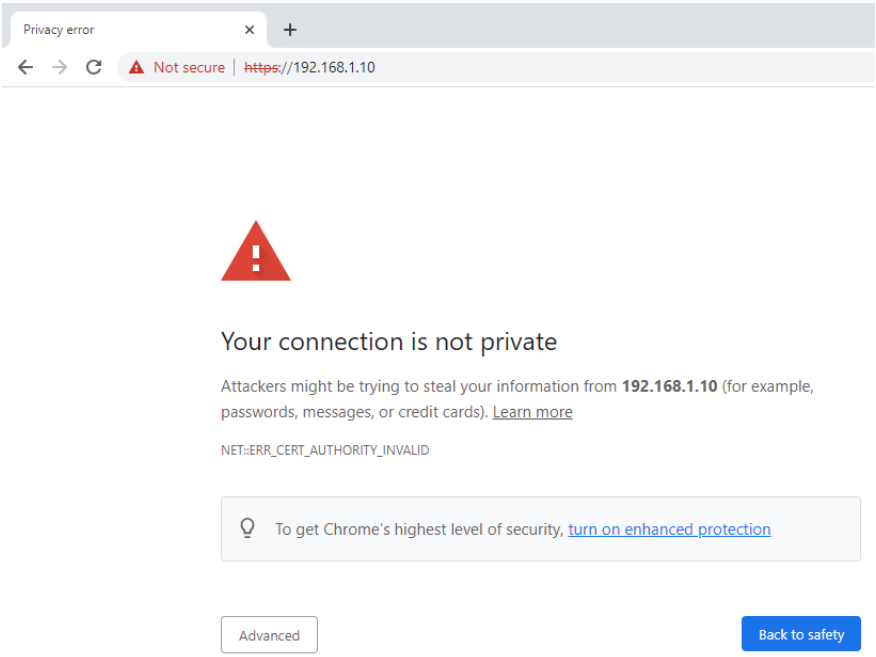


Fig. 2

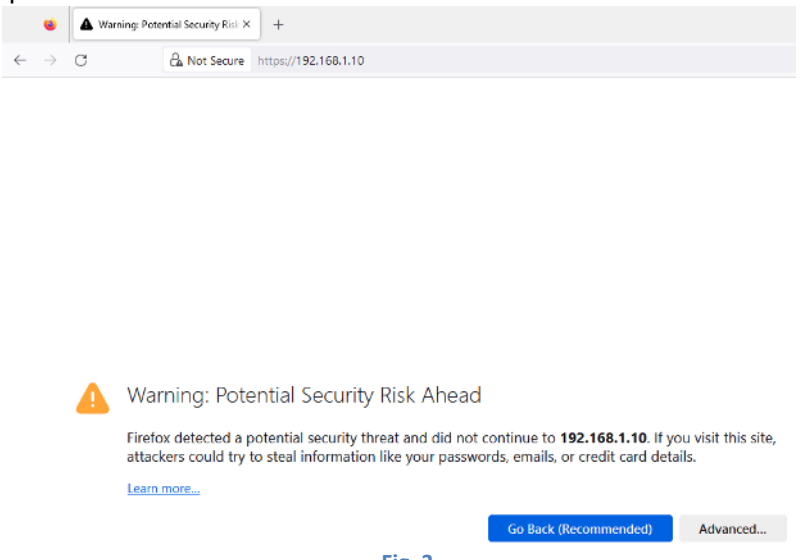

Warning: Potential Security Risk Ahead
Not Secure
https://192.168.1.10
Warning: Potential Security Risk Ahead
Firefox detected a potential security threat and did not continue to 192.168.1.10. If you visit this site, attackers could try to steal information like your passwords, emails, or credit card details.
Learn more...
Go Back (Recommended)
Advanced...

Fig. 3

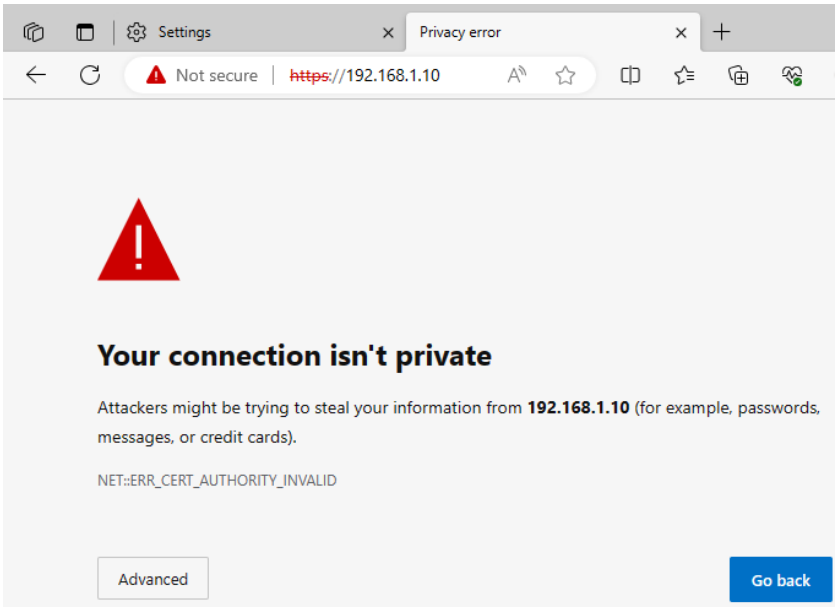

Settings
Privacy error
Not secure
https://192.168.1.10
Your connection isn't private
Attackers might be trying to steal your information from 192.168.1.10 (for example, passwords, messages, or credit cards).
NET::ERR_CERT_AUTHORITY_INVALID
Advanced
Go back

Fig. 4

To access the EMI-One SE webserver interface, depending on the used web-browser, select the **Advanced** option and then confirm by clicking **Proceed** as shown below in Figure 5.

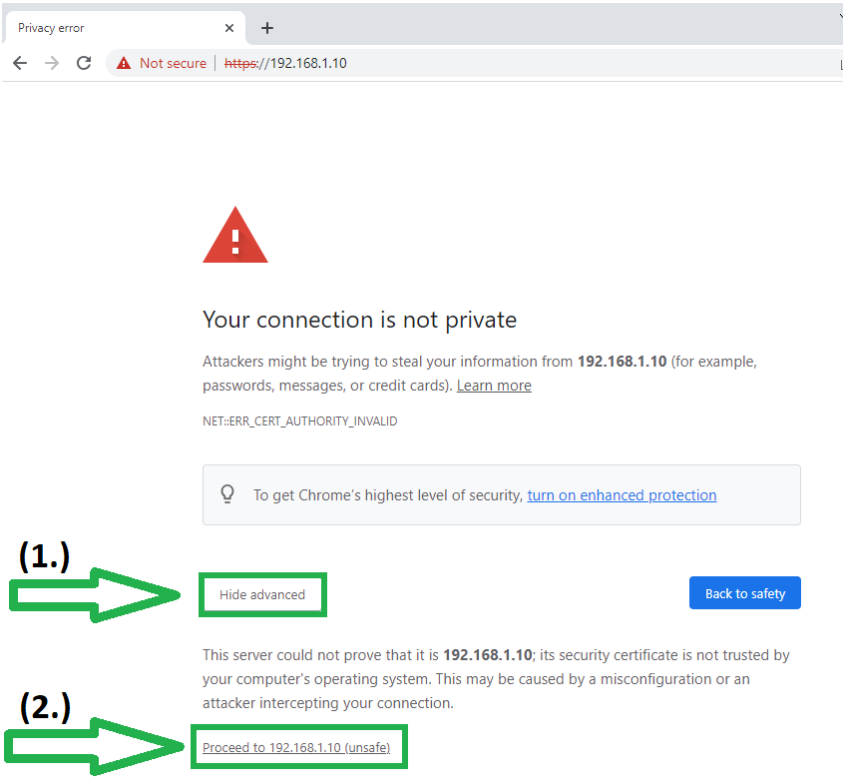


Fig. 5

After taking these steps, the log in screen shows up. The first time you log in, you should use the following data:

User Name: admin

Password: admin

It is recommended to change the default password for the administrator account.

6. Support for embedded web server

Upon successful login, the user has access to the device's interface, which consists of the following parts:

- Status – status page of the device, displayed by default,
- Settings – pull-down menu with sub-pages for network, handles, outputs, inputs, sensors, alerts, time, text, e-mail and SNMP notifications settings,
- Users – user configuration section,
- Log – history of system events,
- Logout – allows the logged in user to sign out; terminates the current session.

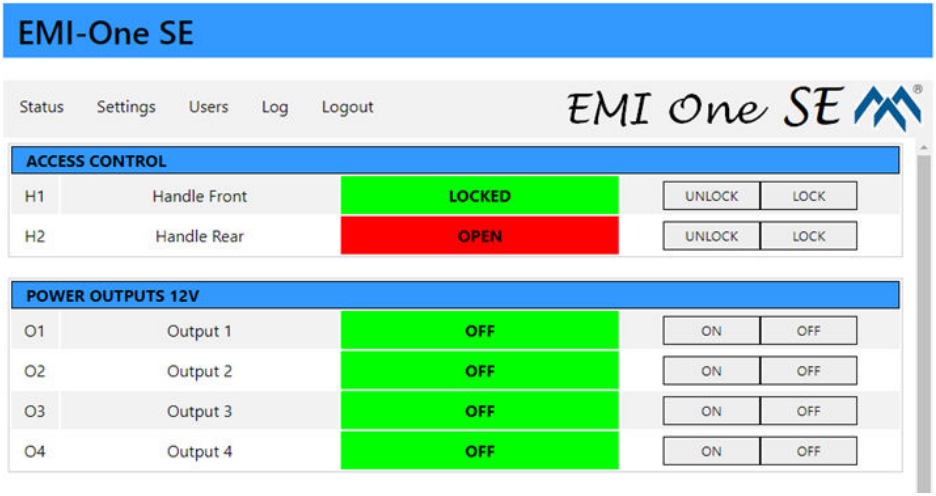


Fig. 6

6.1 Status tab

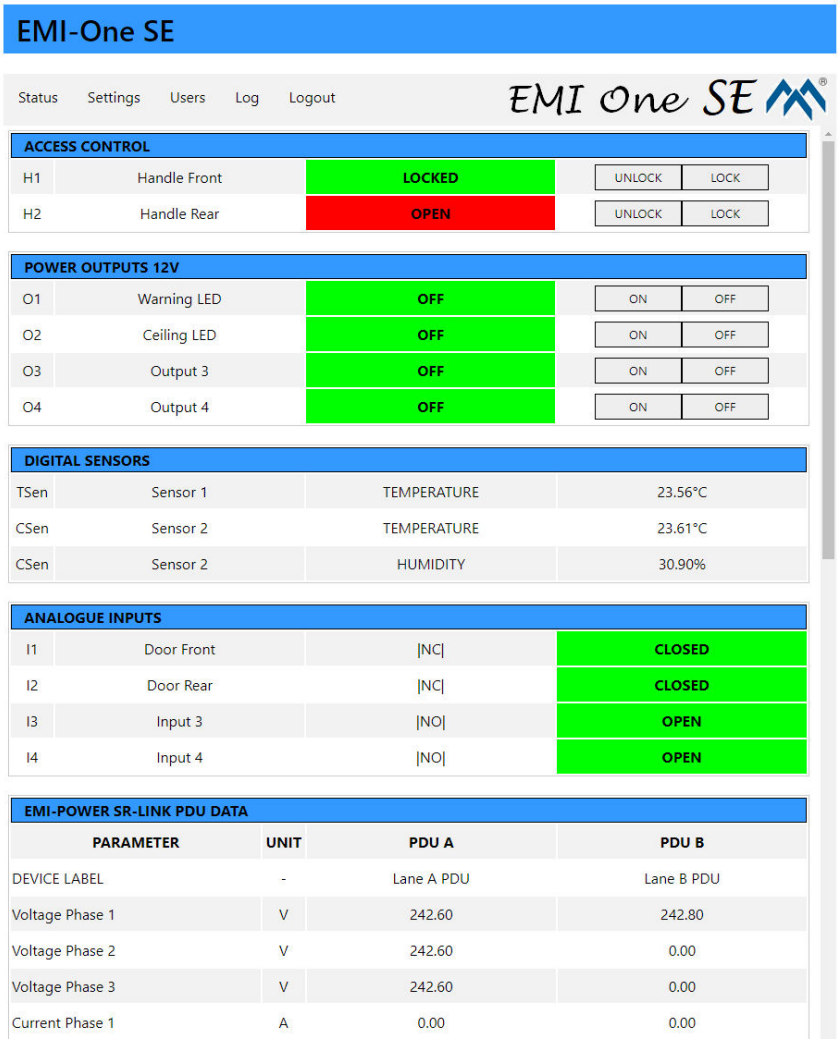


Fig. 7

The status page shown in Figure 7 consists of 5 sections which correspond to the parameters of access control, outputs, digital sensors, analogue inputs and data acquired from PDUs form the EMI-POWER SR-Link series.

The color scheme of the status page can be modified in GENERAL SETTINGS in the BASIC SETTINGS section - see page 32. The **Default** colour scheme setting includes the following colour logic:

In the **ACCESS CONTROL** section, for each door handle, the following data is shown:

- User-defined door handle label,
- Current door handle status :
    - **LOCKED** (green) if the handle is physically closed and there is no active opening request coming from the system,
    - **UNLOCKED** – (blue) if the handle has been unlocked by the controller via webserver, authorisation via RFID or by entering PIN number in *Rack Display* interface,
    - **OPEN** – (red) if the handle is left open after expiration of unlocking request coming from the EMI-One SE controller or in case of sabotage, internal failure or emergency key opening.
- buttons for sending signals from the controller to **LOCK** and **UNLOCK** door handle mechanism.

For each of the **POWER OUTPUTS 12V**, the following data is shown:

- output name, customisable by the user,
- current output state indication :
    - **Green** if an output remains inactive (OFF),
    - **Red** if the output is activated (ON).
- buttons to change the output state.

Parameters of the measuring part of the **DIGITAL SENSORS** are:

- custom name for the output, customisable by the user,
- determination of the measured volume,
- the result is accurate to 2 decimal places.

The size of this section is automatically upscaled depending on the amount and type of connected sensors (temperature, pressure or combo).

The section for **ANALOGUE INPUTS** includes:

- input name, customisable by the user,
- input mode – **NC/NO** (Normally Closed / Normally Open), optionally in addition parametric,
- current input status – **Open** or **Closed**, and after selecting the parametrisation function: **Error**.

The background colour of analogue inputs window indicates the state of a given input, and depends on whether its predefined (normal) status is at the moment identical with the current state. Possible colours are:

  - **Green** if the input is normal (proper),
  - **Red** if the input is in the opposite status to normal (e.g. an open contact for NC type),
  - **Orange** only if the sensor supports the parameterisation function, and has been enabled in the setting section, the system can also detect the tamper status,

Values on the status page are updated by refreshing the content at a frequency of 30 seconds.

In case of triggering an alarm or exceed the set threshold, the colour of the corresponding cell in the first column of the table turns red.

The **EMI-POWER SR-LINK DATA** section, includes for each PDU the following:

- custom name for each PDU, customisable by the user,
- unit of the measured volume,
- measurement results (accurate to 2 decimal places).

For **1-phase PDUs** the following parameters are displayed:

- voltage, current, active power, reactive power, apparent power, power factor, active power consumption, reactive power consumption and mains frequency.

EMI-POWER SR-LINK PDU DATA			
PARAMETER	**UNIT**	**PDU A**	**PDU B**
DEVICE LABEL	-		
Voltage	V	240.50	220.30
Current	A	0.54	12.57
Active Power	kW	43.65	0.55
Reactive Power	kVar	0.54	14.55
Apparent Power	kVA	10.00	10.00
Power Factor	-	0.50	0.99
Active Energy	kWh	4294967.29	10435.32
Reactive Energy	kVarh	3124324.35	3440513.74
Frequency	Hz	50.54	50.20

Fig. 8

For **3-phase PDUs**, the status section includes the following parameters:

- for each phase: voltage, current, active power, reactive power, apparent power, power factor, active power consumption, reactive power consumption,
- summarized values of: active power consumption, reactive power consumption, power factor,
- additionally: three phase imbalance degree, neutral current and mains frequency.

EMI-POWER SR-LINK PDU DATA			
PARAMETER	**UNIT**	**PDU A**	**PDU B**
DEVICE LABEL	-	Lane A PDU	Lane B PDU
Voltage Phase 1	V	242.50	242.80
Voltage Phase 2	V	242.40	0.00
Voltage Phase 3	V	242.50	0.00
Current Phase 1	A	0.00	0.00
Current Phase 2	A	0.00	0.00
Current Phase 3	A	0.00	0.00
Active Power Phase 1	kW	0.00	0.00
Active Power Phase 2	kW	0.00	0.00
Active Power Phase 3	kW	0.00	0.00
Reactive Power Phase 1	kVar	0.00	0.00
Reactive Power Phase 2	kVar	0.00	0.00
Reactive Power Phase 3	kVar	0.00	0.00
Apparent Power Phase 1	kVA	0.00	0.00
Apparent Power Phase 2	kVA	0.00	0.00
Apparent Power Phase 3	kVA	0.00	0.00
Power Factor Phase 1	-	1.00	1.00
Power Factor Phase 2	-	1.00	0.00
Power Factor Phase 3	-	1.00	0.00
Active Energy Phase 1	kWh	0.08	0.20
Active Energy Phase 2	kWh	0.00	0.00
Active Energy Phase 3	kWh	0.00	0.00
Reactive Energy Phase 1	kVarh	0.00	0.00
Reactive Energy Phase 2	kVarh	0.00	0.00
Reactive Energy Phase 3	kVarh	0.00	0.00
Combined Active Power	kW	0.00	0.00
Combined Reactive Power	kVar	0.00	0.00
Combined Apparent Power	kVA	0.00	0.00
Combined Power Factor	-	1.00	0.00
Combined Active Energy	kWh	0.08	0.20
Combined Reactive Energy	kVarh	0.00	0.00
Neutral Current	A	0.00	0.00
Three Phase Imbalance Degree	%	0.00	0.00
Frequency	Hz	49.98	49.99

Fig. 9

When the Color Scheme for Status setting (refer to page 32) is set on **Default**, the status page looks as the following example shown in Figure 10:

ACCESS CONTROL			
H1	Handle Front	LOCKED	UNLOCK LOCK
H2	Handle Rear	OPEN	UNLOCK LOCK

POWER OUTPUTS 12V			
O1	Warning LED	OFF	ON OFF
O2	Ceiling LED	OFF	ON OFF
O3	Output 3	OFF	ON OFF
O4	Output 4	OFF	ON OFF

DIGITAL SENSORS			
TSen	Sensor 1	TEMPERATURE	27.93°C
CSen	Sensor 2	TEMPERATURE	28.00°C
CSen	Sensor 2	HUMIDITY	50.40%

ANALOGUE INPUTS			
I1	Contact Front	|NC|	CLOSED
I2	Contact Rear	|NC|	OPEN
I3	Flood sensor	|NC|	OPEN
I4	Fire Sensor	|NC|	OPEN

EMI-POWER SR-LINK PDU DATA			
PARAMETER	UNIT	PDU A	PDU B
DEVICE LABEL	-	Lane A PDU	Lane B PDU
Voltage	V	239.30	239.40
Current	A	0.00	0.00
Active Power	kW	0.00	0.00
Reactive Power	kVar	0.00	0.00

Fig. 10

The **reversed** colour scheme setting includes the following colour logic:

The **ACCESS CONTROL** status includes the following color scheme:

- **LOCKED** (red) if the handle is physically closed and there is no active opening request coming from the system,
- **UNLOCKED** – (blue) if the handle has been unlocked by the controller via webserver, authorisation via RFID or by entering PIN number in *Rack Display* interface,
- **OPEN** – (green) if the handle is left open after expiration of unlocking request coming from the EMI-One SE controller or in case of sabotage, internal failure or emergency key opening.

The **POWER OUTPUTS 12V** status includes the following color scheme:

- **Red** if an output remains inactive (OFF),
- **Green** if an output is activated (ON).

The section for **ANALOGUE INPUTS** status includes the following color scheme:

- **Red** if the input is normal (proper),
- **Green** if the input is in the opposite status to normal (e.g. an open contact for NC type),
- **Orange** only if the sensor supports the parameterisation function, and has been enabled in the setting section, the system can also detect the tamper status.

In case of triggering an alarm or exceed the set threshold, the colour of the corresponding cell in the first column of the table turns red.

When the Color Scheme for Status setting (refer to page 32), is set on **Reversed,** the status page looks as the following example shown in Figure 11:

ACCESS CONTROL				
H1	Handle Front	LOCKED	UNLOCK	LOCK
H2	Handle Rear	OPEN	UNLOCK	LOCK

POWER OUTPUTS 12V				
O1	Warning LED	OFF	ON	OFF
O2	Ceiling LED	OFF	ON	OFF
O3	Output 3	OFF	ON	OFF
O4	Output 4	OFF	ON	OFF

DIGITAL SENSORS			
TSen	Sensor 1	TEMPERATURE	27.93°C
CSen	Sensor 2	TEMPERATURE	28.50°C
CSen	Sensor 2	HUMIDITY	49.60%

ANALOGUE INPUTS			
I1	Contact Front	|NC|	CLOSED
I2	Contact Rear	|NC|	OPEN
I3	Flood sensor	|NC|	OPEN
I4	Fire Sensor	|NC|	OPEN

EMI-POWER SR-LINK PDU DATA			
PARAMETER	UNIT	PDU A	PDU B
DEVICE LABEL	-	Lane A PDU	Lane B PDU
Voltage	V	239.10	238.90
Current	A	0.00	0.00
Active Power	kW	0.00	0.00
Reactive Power	kVar	0.00	0.00

Fig. 11

6.2 Settings tab

When you select the SETTINGS button, an additional menu is displayed containing the following options:

- General – general device settings, network parameters, time, and SNMP,
- I/O – configuration of input and output properties,
- Sensors – configuration for a temperature sensor and a temperature and humidity sensor,
- PDU – configuration of EMI-POWER SR-Link PDUs,
- Notifications – configuration for text and e-mail notifications.

6.2.1 General Settings

Basic Settings

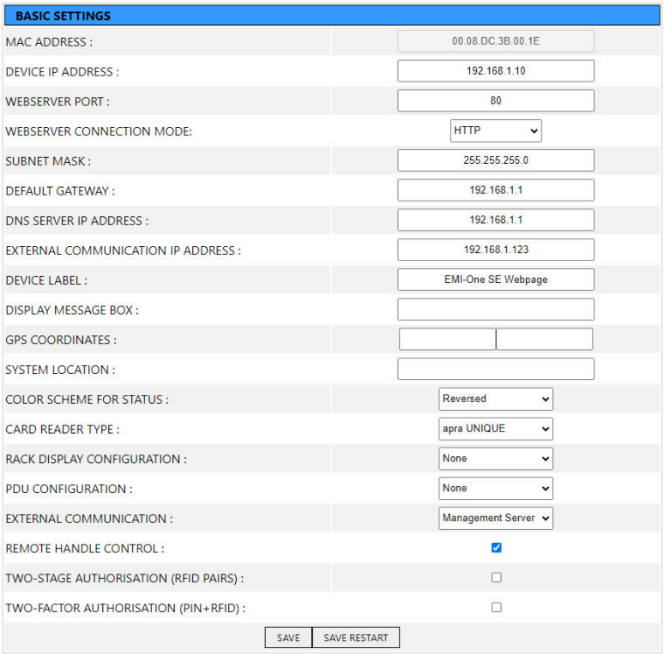


Fig. 12

This section, shown in Figure 8, gives the following basic settings of the device:

- MAC Address – shows the address assigned to the device, an information value,
- Device IP Address – IP address that is used by the system, assigned by the administrator,
- Webserver Port – the port number used to connect to the web server, assigned by the administrator,
- Webserver Connection Mode – determines connection type to EMI-One SE webserver interface via HTTPS or HTTP. This option allows to switch from an unencrypted HTTP connection (by default) to encrypted HTTPS communication. Refer to Connection via HTTPS section.

Warning : Changing webserver connection settings causes automatic change of IP Port number setting !

- Subnet Mask – the subnet mask in which the module works, assigned by the administrator,
- Default Gateway – the default gateway IP address for the network in which the device is running,
- DNS Server IP address – the DNS server address required for proper NTP and SMTP protocols,
- External Communication IP Address – the server address where the dedicated software will run, and at the same time an update server,
- Device Label – the device name displayed in the title of the main page, and in the description of the browser window. It allows you to differentiate between many EMI-One SE devices working in the same network. The maximum length of the name is 20 characters.
- Display Message Box – contains a message for users. It will be displayed on a dedicated *Rack Display* panel (if present in the system) every time the user logs on.
- GPS Coordinates – this field enables to provide geographical coordinates of the installed controller in order from the left : latitude and longitude

entered as decimal degrees. The maximal length of each field is 10 characters.

- System Location – this field allows to provide the name of device location. It allows to distinguish several EMI-One SE controllers that operate in the same network. The containment of this variable can be read via SNMP. The maximal length of this field is 30 characters.
- Color Scheme for Status – this field allows to modify the status color logic that is displayed in the status section of the controller and external devices such as: *Rack Display* LCD panels and electronic handles from the EMI-lock series (if connected). Examples of the status page window depending on this setting have been presented on Figure 10 and Figure 11.
- Card Reader Type – RFID reader type configuration (valid for external RFID readers and built-into handles). In case of operation with electronic handles manufactured by apra-optinet (EMI-Lock series), it is required to select a setting option that starts with “apra”.

  NOTE : Select and save the type of the reader before connecting it ! Selecting the wrong option may cause malfunction of the system !

- Rack Display Configuration – this field allows to specify the amount of *Rack Display* modules connected to the controller,

  NOTE : Before connecting a new *Rack Display* to the controller, this setting has to be modified !

- PDU Configuration – this field allows to specify the amount and type of EMI-POWER SR-Links PDUs connected to the controller.

  NOTE : The refresh rate of data acquired from the PDUs depends on the fact whether the controller is linked with *Rack Display* modules (a readout request is sent every 30 seconds for one after another PDU) or there is only a link between the PDUs (the request is sent every 1 second)

- External Communication – activates communication with an external device e. g. GSM network gateway or server of a dedicated apra intrapp management application,

- Remote Handle Control – if this box is checked, the system will allow you to remotely control (via a website) electronic handles connected to **,,Handles" connectors**. If the device, for safety reasons, needs to allow only local handle openings, (only by using RFID card or entering PIN number on external *Rack Display* interface) leave this field unchecked. This setting does not affect the outputs configured as other types (RFID controlled, Fan, Light, Flasher, Buzzer, Pulse 200ms, Custom).
- Two-Stage Authorisation (RFID pairs) – 2-stage authorisation activation – recommended for areas requiring special protection. With this function enabled; in order to activate the output data (e.g. open the door) **a pair of identifiers must be used in a given moment, one after another in no more than 10 seconds.** In addition, a given pair of users must have permission to activate the given output (fields checked for the corresponding output for both IDs).
- Two-Stage Authorisation (PIN+RFID) - With this function enabled, in order to login or activate the output data (e.g. open the door) **the access PIN has to be entered and an identifier must be used in a given moment, one after another in no more than 20 seconds.** The EMI-One SE controller has to be connected to an external *Rack Display* module, as well as RFID identifier and PIN number are required to be assigned to the specified user.

Save settings using 2 buttons:

- Save – saves the parameters without restarting the device, changes made only after manual restart (by disconnecting the system power supply),
- Save & Restart – saves the parameters and then automatically restarts the device with the newly entered settings.

If you change the IP address, port number or connection type (HTTP/HTTPS) of the system, it is necessary to manually update the URL address in the browser address field !

Time Settings

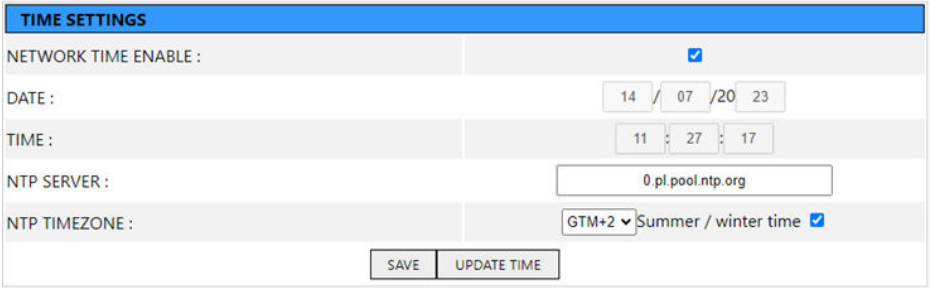


Fig. 11

The section shown in Figure 11 is used to set the time in the system clock used when saving events to the system log.

In the case of unchecked auto-synchronisation with network time, enter the date in the day/month/year format, and the current time in hh:mm:ss format.

If the Network Time Enable option is checked, the manually entered values are not taken into account, and the time synchronisation with the selected server is done every full hour.

The NTP server setting can be filled in with the IP address or name of the server but in that case, to ensure its proper work, it is required to configure the DNS server address in the BASIC SETTIGS section, correctly.

External fan Settings

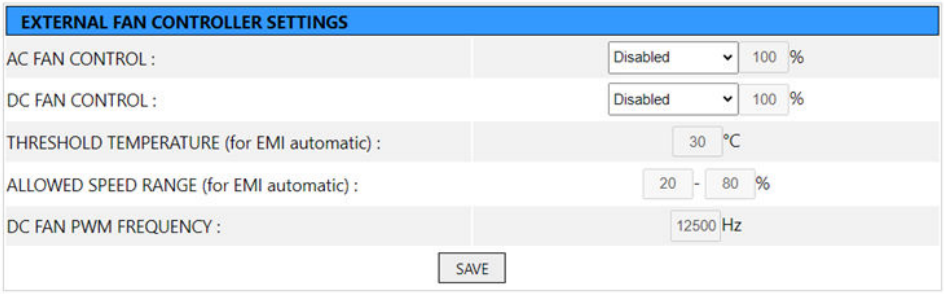


Fig. 12

The settings in the section shown in Figure 12 allow to specify settings of the external fan speed controller provided by apra-optinet.

- AC Fan control – allows to specify regulation type of AC powered fan units,
- DC Fan control – allows to specify regulation type of DC powered fan units,

It is possible to set the following operating modes of the fan controller, separately for both AC and DC outputs:

- Disabled – the fan controller disables all of the connected fan units,
- Constant – fan units are operating at a constant, user-defined rotation speed,
- EMI automatic – fan speed is continuously regulated, dependent on the conditions specified by the following settings:
    - Threshold temperature – specifies a threshold based on the lowest temperature value that has been measured by any temperature or combo sensor that is connected to the controller. Exceeding this threshold results in increasing of fan ventilation system rotation speed,
    - Allowed speed range – acceptable percentage range of regulated fan rotation speed.

If the EMI automatic regulation mode is used, when the temperature inside a server cabinet is lower than the defined threshold value, then the fan units work at the lowest value of user-specified speed range. This enables to lower energy consumption of the ventilation unit, as well as decrease the amount of generated noise.

When the temperature inside a rack increases above the specified threshold value, the rotation speed of the fan ventilation system increases until reaching the highest value inside the user-defined speed range.

For DC powered fans, it is required to specify the PWM frequency in the *DC Fan PWM frequency* field, since there is a wide variety of PWM controlled fans on the market which can have different acceptable PWM frequency range. For most cases, this information is provided by the fan manufacturer in datasheet that corresponds to a specific fan model.

SNMP Settings

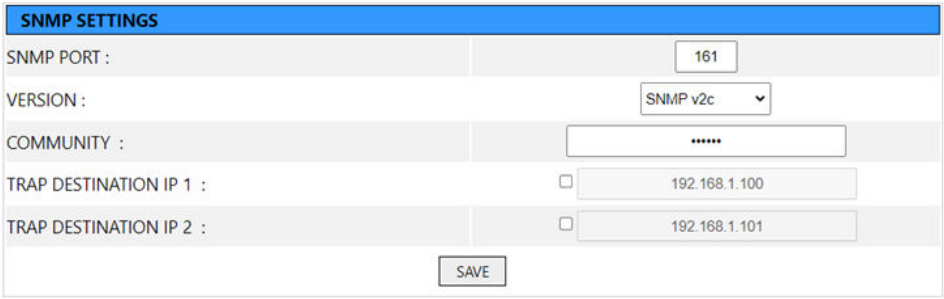


Fig. 13

The settings in the section shown in Figure 13 apply to the SNMP agent built into the device.

- SNMP Port – the port used for SNMP Get queries,
- Version – specifies SNMP protocol version,
- Community – the SNMP community name used to communicate with EMI-One,

- Trap Destination 1 & 2 – IP addresses of devices on the network to which SNMP Trap messages will be sent. By default, sending SNMP Trap messages is disabled. To enable them, select the control and then enter the SNMP Trap Manager IP address.

If the entered address does not exist in a given subnet, this may cause a slowdown in the system !

System information

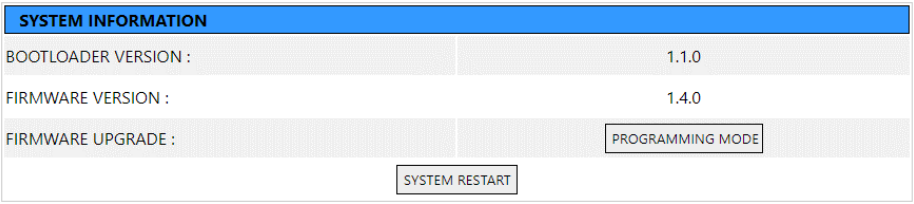


Fig. 14

This section shown in Figure 14 contains information about current bootloader and embedded software version of the EMI-One SE main module.

- Programming mode – clicking this button puts the device into programming mode that allows to install firmware upgrades,
- System restart – clicking this button results in an instant system restart.

Detailed description of how to upgrade the EMI-One SE embedded firmware is included in a separate file under the name *EMI-One SE firmware upgrade instruction* !

6.2.2 I/O Settings

Access control settings

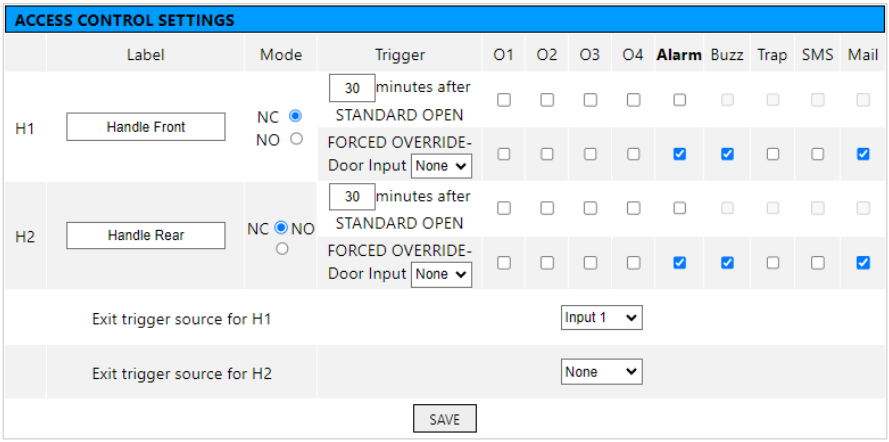


Fig. 15

The section shown in Figure 15 contains access control settings for electronic handles connected to the controller :

- Label – the name of each handle connected to the **Handles** inputs. H1 and H2 labelling corresponds to physical sockets on the front panel of the device. H1 is assigned to the **FRONT** socket, while H2 – to the **REAR** socket. Handle names are displayed on the status page, used in the system log and sent with notifications. The maximum length of the handle name is 14 characters.
- Mode – operation logic of the handle open state sensor, available options:
    - NC (normally closed) – normal status occurs when the input is closed. The handle maintains signal as long as it stays closed (set by default, recommended),
    - NO (normally opened) – normal status occurs when input is opened. The handle maintains signal as long as it stays opened (not recommended),

- Trigger – this section includes a list of conditions based on door handle and door contact status that can trigger certain actions. 2 cases are considered:
    - STANDARD OPEN – door handle has been opened via the EMI-One SE controller: authorisation via RFID, PIN number or by sending an opening request via webserver interface. After a specified period of time (defined in minutes) when the handle still remains open, an action will be triggered based on the marked O1 ÷ O4 and alarm fields.
    - FORCED OVERRIDE – door handle/doors have been opened by an emergency key or by tampering (without any active request coming from the controller). It is possible to assign an analogue input I1 ÷ I4, that corresponds to a reed relay that is mounted on the monitored passage. After the controller detects door handle opening or corresponding analogue input (door contact) status change, an action will be triggered immediately, based on the marked O1 ÷ O4 and alarm fields.

The system starts to monitor for FORCED OVERRIDE events 5 seconds after the doors have been closed correctly, which means that handle opening sensor (configured in handle input settings), as well as the door contact assigned to the monitored passage, have returned to their normal state.

Trigger source – this section allows to assign an analogue input whose status will allow to externally trigger opening of a corresponding handle e. g. by an exit button. If this function is not used, it is recommended to leave this field set by default as *"None"*.

- O1 ÷ O4 – the selection will switch the output into high status when the logical condition is fulfilled and to a low status after its completion.
- Alarm – checking this option activates the alarm function triggered by input status,

Checking this function is required for Buzzer/Trap/SMS and Mail notifications !

- Buzz – checking this option activates a built-in sound alert in case of an alarm,
- Trap – checking this option activates automatic SMTP Trap notification when an alarm occurs and ends. For proper operation, it is necessary to correctly configure destination addresses for SNMP Trap notifications in the SNMP Settings section,
- SMS – checking this option activates text notifications to defined recipients, when an alarm occurs and ends. An additional GSM module is required for this function,
- Mail – checking this option activates e-mail notifications to defined recipients when an alarm occurs and ends. An additional GSM module is required for this function.

Outputs Settings

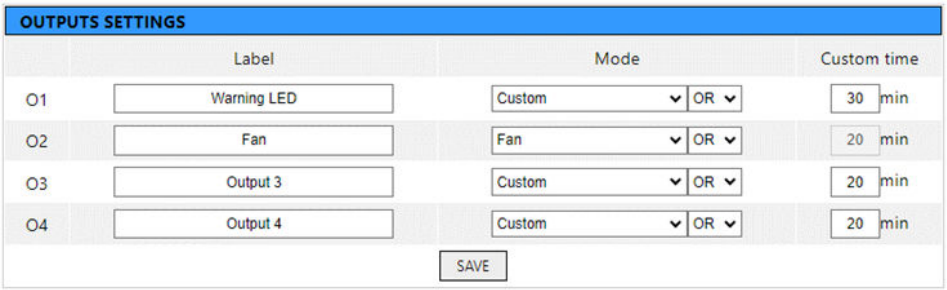


Fig. 16

The section shown in Figure 16 contains the basic settings for the system outputs:

- Label – the name of the output, allowing you to easily distinguish which device is connected to it. This name is displayed on the status page, and is used in the system log, and sent with notifications. The maximum length of the name is 14 characters,
- Mode – a dropdown list defining the type of device connected to the given output. The options include:

- Access control related – setting an output into active mode (*ON*) occurs when RFID access is granted. This functionality requires assigning an RFID tag number into a user account with this output control permission,
- Fan – a fan, after switching to high status remains in it until a manual change,
- Light – lighting, after switching to high status remains in it until a manual change,
- Flasher – an optical signal, after switching to high status remains in it until a manual change,
- Buzzer – a sound signal, after switching to high status remains in it until a manual change,
- Pulse 200 ms – a single trigger pulse, when the output is in high status, it is maintained for 200 ms, and then automatically changes to low status,
- Custom – With this setting enabled, after triggering the high status (*ON*) of an output, it is maintained upon a determined in the *Custom time* section period of time (20 minutes by default) and then automatically changes to low status (*OFF*). This type of setting is used e.g. to uphold the lighting of a cold corridor.

- Logic Condition – a condition used by the logic of the automatic control system triggered by the input status and the measured values of temperature and humidity. Depending on the setting:
  - OR – any condition fulfilled in which the control has been defined for the output will change the status of the output,
  - AND – all conditions fulfilled in which the control has been defined for the output will change the status of the output.
- Custom time – determines for how long (defined in minutes) should the output status remain high *(ON)*. The available value range is between 0 ÷ 99. This setting can only be used if the Mode setting of an output has been previously set as '*Custom'.*

Analogue Inputs Settings

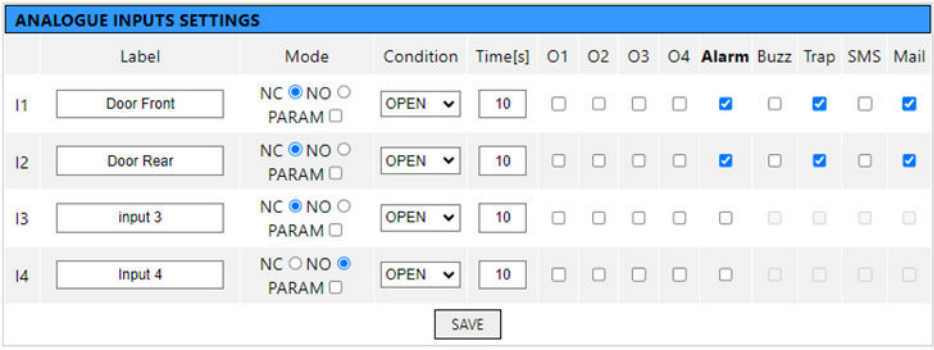


Fig. 17

The section shown in Figure 17 contains the basic settings for the system inputs:

- Label – the name of the input, allowing to easily distinguish which sensor is connected to it. This name is displayed on the status page, is used in the system log and sent with notifications. The maximum length of the name is 14 characters.
- Mode – operation logic of the sensor, available options:
    - NC (normally closed) – normal status occurs when the input is closed,
    - NO (normally opened) – normal status occurs when input is opened.

    If a sensor is equipped with a parameter, it is possible to use the additional PARAM option, which detects sensor tampering (ERROR input status).

- Condition – condition which is fulfilled for the action to be performed, the options available are OPEN (contacts open), CLOSED (contacts closed) and ERROR (tampering detected only after activating this function beforehand),

- Time – parameter defines how much time (in seconds) the device will wait before taking any action (O1 ÷ O4 and alarm fields) when state of Input will change after the specified condition is met.
- O1 ÷ O4 – the selection will switch the output into high status when the logical condition is fulfilled and to a low status after its completion. The control condition of the output is influenced by the setting of the logical condition in the Output Settings,
- Alarm – checking this option activates the alarm function triggered by input status,

Checking this function is required for Buzzer/Trap/SMS and Mail notifications !

- Buzz – checking this option activates a built-in sound alert in case of an alarm,
- Trap – checking this option activates automatic SMTP Trap notification when an alarm occurs and ends. For proper operation, it is necessary to correctly configure destination addresses for SNMP Trap notifications in the SNMP Settings section,
- SMS – checking this option activates text notifications to defined recipients, when an alarm occurs and ends. An additional GSM module is required for this function,
- Mail – checking this option activates e-mail notifications to defined recipients when an alarm occurs and ends. An additional GSM module is required for this function.

6.2.3 Sensors Settings

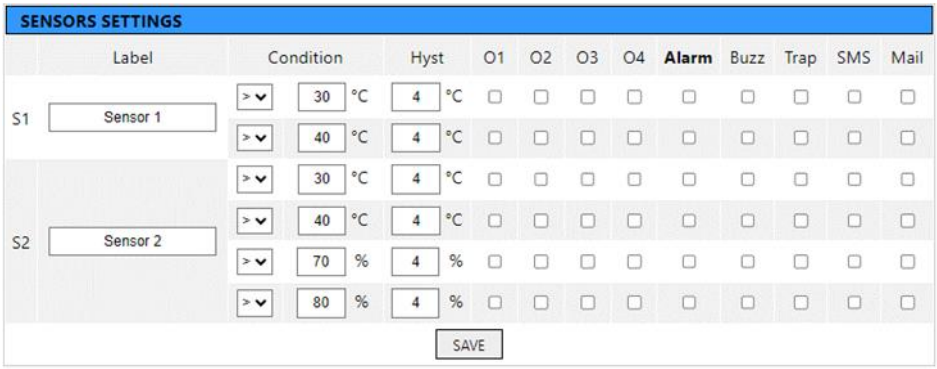


Fig. 18

The section shown in Figure 18 contains the basic settings for temperature and combo (temperature/humidity) sensors. For each measured value, it is possible to configure 2 independent alarm thresholds. The following fields define :

- Label – a proprietary name of the sensor, which allows for easy identification of its position in the cabinet. This name is displayed on the status page, is used in the system log and sent with notifications. The maximum length of the name is 14 characters,
- Condition – a condition when met triggers an action, the setting contains a threshold above or below which, depending on the selected character (majority or minority), the alarm will be triggered,
- Hyst – the hysteresis value for a given alarm threshold, the recommended value is 4°C,
- O1 ÷ O4 – the selection will switch the output into high status when the condition is fulfilled, and to a low status after its completion. The control condition of the output is influenced by the setting of the logical condition in the Output Settings section.
- Alarm – checking this option activates the alarm function triggered by the result of the given measurement,

Checking this function is required for Buzzer/Trap/SMS and Mail notifications !

- Buzz – checking this option activates a built-in sound alert for the alarm,
- Trap – checking this option activates automatic SMTP Trap notification if an alarm occurs and ends. For proper operation it is necessary to correctly configure destination addresses for SNMP Trap notifications in the SNMP Settings section,
- SMS – checking this option activates text notifications to defined recipients if an alarm occurs and ends. An additional GSM module is required for this function,
- Mail – checking this option activates e-mail notifications to defined recipients if an alarm occurs and ends. An additional GSM module is required for this function.

6.2.4 PDU Settings

The EMI-One SE system, despite access control functionality, allows to monitor power parameters. This requires establishing a link between the controller and **EMI-POWER S**mart-**R**eady PDUs and configuration of the *PDU configuration* parameter in the *Basic settings* section (refer to page 29.)

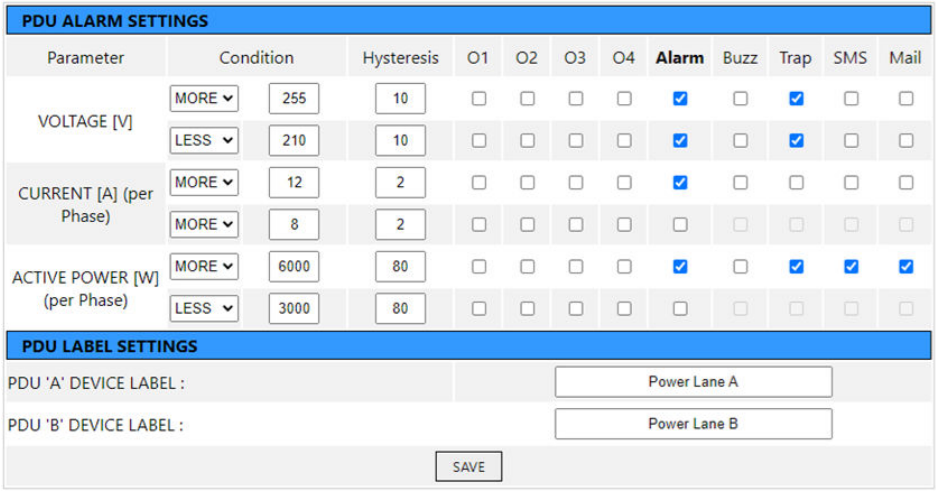


Fig. 19

The section shown in Figure 19 allows to specify actions taken by the controller, as well as alarm conditions which are based on measured values from the EMI-POWER SR-Link PDUs. It is possible to configure 2 independent alarm thresholds for measured values of: voltage, current and active power. The following fields allow to define :

- Condition – the setting contains thresholds above or below which, depending on the selected character (majority or minority), an action will be triggered, for example: an output will be activated or a notification will be sent,
- Hysteresis – the hysteresis value for a given alarm threshold,

- O1 ÷ O4 – the selection will switch the output into high status when the condition is fulfilled, and to a low status after its completion. The control condition of the output is influenced by the setting of the logical condition in the Output Settings section.
- Alarm – checking this option activates the alarm function triggered by the result of the given measurement,

Checking this function is required for Buzzer/Trap/SMS and Mail notifications !

- Buzz – checking this option activates a built-in sound alert for the alarm,
- Trap – checking this option activates automatic SMTP Trap notification if an alarm occurs and ends. For proper operation it is necessary to correctly configure destination addresses for SNMP Trap notifications in the SNMP Settings section,
- SMS – checking this option activates text notifications to defined recipients if an alarm occurs and ends. An additional GSM module is required for this function,
- Mail – checking this option activates e-mail notifications to defined recipients if an alarm occurs and ends. An additional GSM module is required for this function.
- PDU device label – a proprietary name of the PDU, which allows for easy identification of its position in the cabinet. This name is displayed on the status page, on a *Rack Display* and sent with notifications. The maximum length of the name is 15 characters.

6.2.5 Notification Settings

The EMI-One SE monitoring and access control system can also be equipped with an external GSM module, which enables sending text message and e-mail (SMTP SSL) notifications. With the use of a GSM network, the user can be assured important information will reach him regardless of potential problems on the Ethernet connector.

Detailed description of EMI-One SE settings that allows to use an external GSM module is included in technical documentation of the GSM modules that are currently offered by the apra-optinet company.

SMS Notification Settings

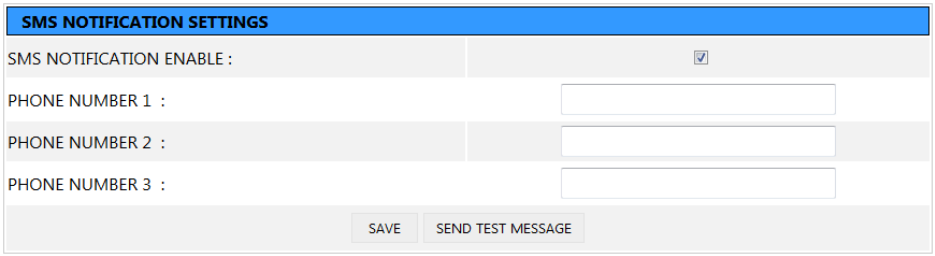


Fig. 20

The section shown in Figure 20 contains the basic parameters related to text message notification:

- SMS Notification Enable – activation of the text message notification function – NOTE : this requires the presence of an external GSM module in the system !
- Phone Number 1÷3 – phone numbers to be sent in the xxxxxxxxx format, or with area code 0048xxxxxxxxxx (without spaces, hyphens etc.)
- Send Test Message – a button to test the settings by sending a test message to the previously saved telephone numbers.

NOTE: The SIM card used in an external GSM module cannot have a PIN code enabled!

E-mail Notification Settings

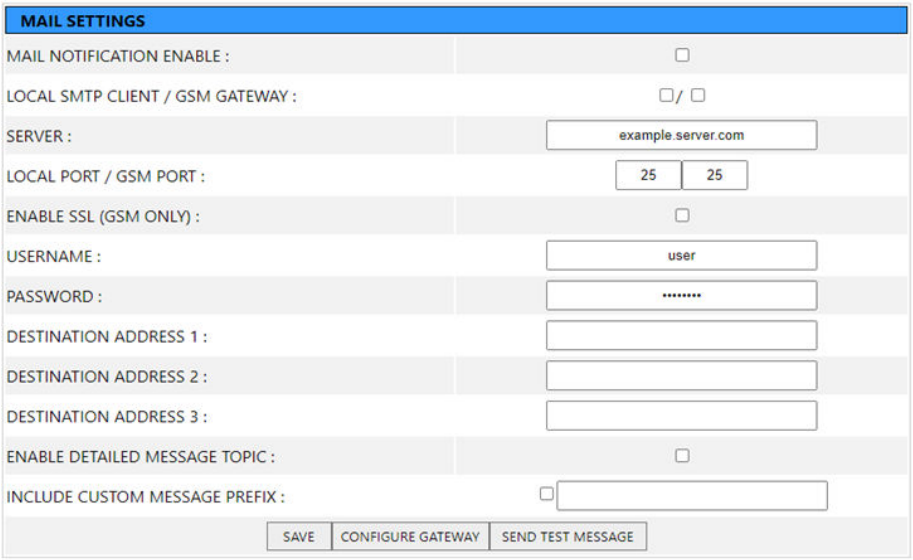


Fig. 21

The section shown in Figure 21 includes settings related to e-mail notification:

- Mail Notification Enable – activates the e-mail notification feature,
- Local SMTP Client – activates the built-in SMTP client of the EMI-One SE device to send e-mail notifications to non-encrypted servers,
- GSM Gateway – activates the SMTP client in the GSM gateway for sending e-mail notifications, also supports servers requiring encryption (SSL),

NOTE: An external GSM module (local or remote) is required for operation !

- Server – the address of the SMTP mail server from which you want to send messages. This field can be filled in with the IP address or name of the server but in that case, to ensure its proper work, it is required to configure the DNS server address in the *Basic settings* section, correctly.
- Local Port/GSM Port – the SMTP mail server ports of the account from which the messages will be sent. The value from the left field is used by the customer built into the EMI-One SE device, while the right-hand value by the GSM module. Standard is 25 / 587 for unencrypted connections, and 465 for encrypted connections.
- Enable SMTPS – activates encrypted connection – only with GSM (if required by client server, details in configuration descriptions of given e-mail account type),
- Username/Password – username and password for the e-mail account. The maximal length of each field is 25 characters.
- Destination address 1÷3 – destination addresses to which notifications have to be sent,
- Enable detailed message topic – expands the topic section (email notifications) by additional details,
- Include custom message prefix – enables adding to the message or optionally (depending on the selected configuration) to the message topic, an additional, user defined string entered by the user in the field nearby. The maximal length of the entered custom prefix is 50 characters.
- Configure Gateway – a button for entering the work parameters for the external GSM module, which should be used after saving the settings with the *SAVE* button,
- Send Test Message – a button to test the settings by sending a test e-mail.

Settings required to send e-mail notifications via EMI-One SE

To use the functionality of sending e-mail notifications via built-in SMTP agent of the EMI-One SE main module, following configuration has to be set:

- Mark the Mail Notification Enable,
- Mark the Local SMTP Client,
- Fill in the Server field the address of SMTP mail server from which you want to send messages,
- In the Local Port field, Enter the SMTP mail server port of the account from which the messages will be sent,
- In the Username/Password fields, enter the required user credentials from which the e-mail notifications have to be sent
- Enter destination addresses to which notifications have to be sent in Destination address 1÷3 section,
- Save the changes and then validate by clicking the Configure Gateway button,
- Check if notifications are sent properly by clicking the Send Test Message button.

If the device is working properly, the following message will be sent to the specified e-mail addresses: [EMI_device_name]: Test Mail Message.

Remember to save the final settings with the *Save* button and then validate with the *Configure Gateway* button.

Examples of e-mail notifications

Depending on the chosen configuration, the sent messages (e-mail notifications) can include the following **topic :**

- Function *Detailed message topic* disabled – the message is sent with a short syntax topic :

EMI-One *(the entered Device Label)* Notification

- Function *Detailed message topic* enabled – the message topic includes additional information :

The content of custom message prefix – latitude longitude – the entered Device Label - Environment sensor : *name of the input / sensor that triggered the alarm*

Depending on the chosen configuration, the message (e-mail notification) can contain the following **content** :

The content of custom message prefix – latitude longitude. – the entered Device Label - Environment sensor : *name of the input/sensor that triggered the alarm* - State : *depending on the alarm source : Open/Closed/Error or environmental data Temperature / Temperature and Humidity*

The fields marked with grey colour contain data that is assigned automatically when an alarm is triggered, depending on the data that has been entered by the user during configuration.

In case of ending an alarm, the notification syntax contains the following information:

- Function *Detailed message topic* disabled – the message is sent with a short syntax topic :

EMI-One *(the entered Device Label)* Notification

- Function *Detailed message topic* enabled – the message topic includes additional information :

The content of custom message prefix – latitude longitude – the entered Device Label - Environment sensor : *name of the input / sensor that triggered the alarm*

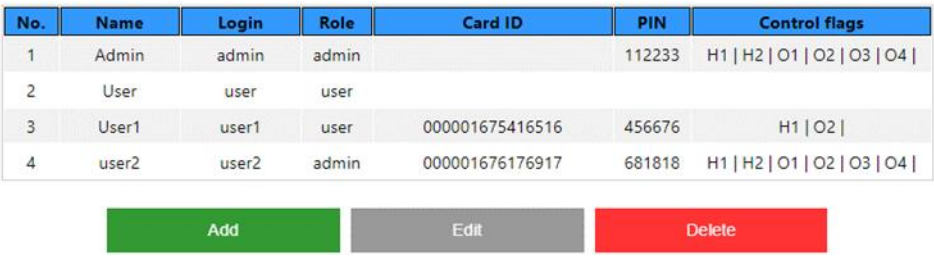
Depending on the chosen configuration, the message (e-mail notification) can contain the following **content** :

The content of custom message prefix – latitude longitude. – the entered Device Label - Environment sensor : *name of the input/sensor that triggered the alarm* - State : Normal Alarm Inactive

6.3 Access Control Tab

The EMI-One SE system provides the ability to create individual accounts for each user : both using remote (web-server) and local access (RFID cards, PIN codes for apra *Rack Display* panels).

The Access Control tab, shown in Figure 22, presents a table with the current configuration of user accounts containing information such as: name, login and password for the web server, RFID card ID, PIN code and permission flags for the given device outputs and connected electronic handles. Settings are edited from the additional section available after selecting one of the buttons on the bottom.

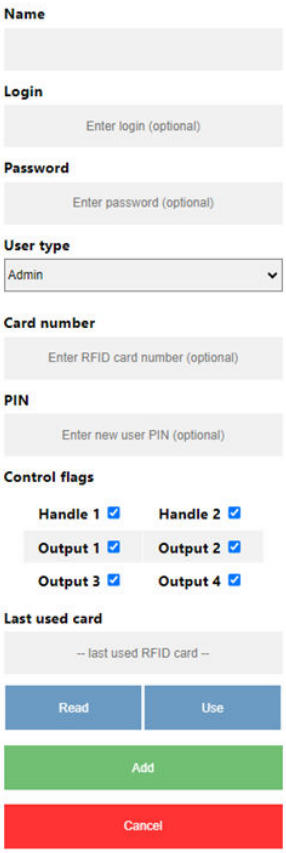


No.	Name	Login	Role	Card ID	PIN	Control flags
1	Admin	admin	admin		112233	H1 | H2 | O1 | O2 | O3 | O4 |
2	User	user	user			
3	User1	user1	user	000001675416516	456676	H1 | O2 |
4	user2	user2	admin	000001676176917	681818	H1 | H2 | O1 | O2 | O3 | O4 |

Add Edit Delete

Fig. 22

6.3.1 Add User



Rys. 23

Adding a new user entry is reduced to filling the following fields, shown in Figure 23:

- Name – user's own name, it is used when logging events in the system log and sent with SNMP Trap notifications. The length of the name section is 3-10 characters. This field can be entered with letters, digits, space bars for example:“ “ or “_”. No special signs are allowed.

- User Login/Password – (optional) login and password used to authenticate the user at the login stage to the web server. If the user is not using the web server, leave these fields blank.
  - The User Login field can include maximal 3-10 characters and can be filled with letters and digits. No special signs are allowed.
  - The Password field can include maximal 0-20 characters and can be filled with letters and digits. The following special signs are allowed: “ ? ! @ # $ % ^ &*( ) _ + - = “.

The username and login/password pair must be unique within the system !

- User type – permission level, there are two levels available:
  - User – a standard user who only has access to the status page and the system log. It is not possible to view and edit system settings, remote users and local users.
  - Admin – a system administrator who has the ability to view and edit all system parameters, however you must first activate the

configuration mode (hardware-controlled) – explained in the Hardware section.

- Card Number – (optional) unique identification number for the access card assigned to the user. The device allows to control chosen outputs with the use of an additional reader (RFID UNIQUE/MIFARE/HID/HITAG tags e.g. proximity cards, key rings). This field can contain 5-15 digits.

NOTE : It is not possible to set two identic RFID card numbers for more than one user account !

- PIN – (optional) custom code used for authentication of the user with an additional EMI-One SE's dedicated element – *Rack Display*. This field can contain 4-6 digits.

NOTE : It is not possible to set two identic PIN numbers for more than one user account !

- Control Flags – this fields are used to assign Handle 1÷2 and Output 1÷4 activation permissions to a specific user. The displayed header includes handles' and outputs' names assigned by the administrator. The setting affects both remote and local switching.
- Last used card – the field allows displaying the last used ID (card) for easier assignment to the system.

NOTE : This field does not refresh automatically after reading an RFID card. Use the *Read* button to refresh the displayed card number !

- Read button – use this button to load information from EMI-One SE about the last RFID card used. It is first required to place an RFID card near to an RFID reader connected to the controller.
- Use button – use this button to automatically copy the read number into the Card number field above.

In case of using cards that were not assigned to the system, their correct detection is signalled by a single short beep. The system records all RFID reading attempts in the event log. Even RFID card readings that are not assigned to a specific user account are recorded.

When an RFID card is successfully assigned to the system, the authorisation for the card means holding it for approx. 1 to 2 seconds near the RFID reader until a short double beep is heard.

Warning : the following description is valid for default authorisation settings of the controller. In case where „two factor authentification" or „two stage authorisation" have been enabled, refer to BASIC SETTINGS section of the EMI-One SE controller.

In case of reading an RFID card by using electronic handles (with built-in RFID readers) connected to **H1 (Handle Front)** and **H2 (Handle Rear)** connectors, only the handle, that has been used for authorisation, can be unlocked (under the condition that the user has sufficient permissions).

Every time a card/PIN is used and logged into the system log, a SNMP Trap notification is sent (if enabled) to each managed output (see SNMP Settings).

- Apply – save the changes to device. In some situations it may take a few seconds for the information to be send and update on users' summary table.
- Cancel – close the form without saving any entered information.

6.3.2 Edit User

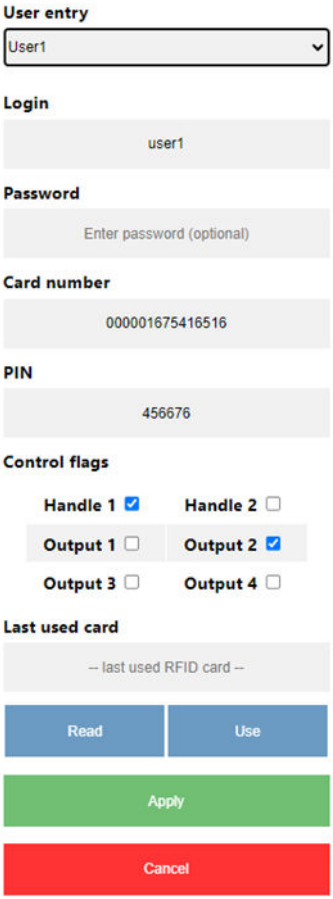


Fig. 24

If there is a need to edit an existing user entry, use the form shown in Figure 24:

- User entry – a list containing the user names currently assigned to the system, select the name to be edited.
- User Login/Password – a new login and password. If the field remains blank, the system will retain the previous data.
  - The User Login field can include maximal 3-10 characters and can be filled with letters and digits. No special signs are allowed.
  - The Password field can include maximal 0-20 characters and can be filled with letters and digits. The following special signs are allowed: " ? ! @ # $ % ^ &*( ) _ + - = ".
- Card Number – a new RFID card number. If the field remains blank, the system will retain the previous data.

NOTE : It is not possible to set two identic RFID card numbers for more than one user account !

- PIN – a new code for authentication using dedicated *Rack Display*. If the field remains blank, the system will retain the previous data.

NOTE : It is not possible to set two identic PIN numbers for more than one user account !

Other fields and buttons have the same function and behaviour as described in section Add User above.

6.3.3 Delete User

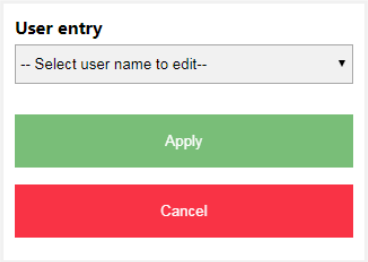


Fig. 25

If there is a need to delete a user entry, select the desired name from the *User Name* field, and execute the *Delete* command.

NOTE : If the account of the currently logged-in user is deleted, it will be automatically logged out !

7. Log

Search for date, type, description or user...

Date	Severity	Description	User type	User name
2023-07-14 11:50:46	settings change	users	remote	Admin
2023-07-14 11:50:20	settings change	users	remote	Admin
2023-07-14 11:50:00	settings change	users	remote	Admin
2023-07-14 11:49:49	settings change	users	remote	Admin
2023-07-14 11:48:42	settings change	users	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:36:40	notification	H1 (Handle Front) UNLOCKED	remote	Admin
2023-07-14 11:34:17	settings change	inputs	remote	Admin
2023-07-14 11:33:58	settings change	inputs	remote	Admin
2023-07-14 11:33:29	settings change	inputs	remote	Admin
2023-07-14 11:33:06	settings change	outputs	remote	Admin
2023-07-14 11:32:48	settings change	inputs	remote	Admin
2023-07-13 15:29:04	notification	H2 (Handle Rear) UNLOCKED	remote	Admin
2023-07-13 15:29:02	notification	H1 (Handle Front) UNLOCKED	remote	Admin

Fig. 26

The card shown in Figure 26 shows the log of system events.

Each entry contains the following data - columns of the table:

- Date – system date and time when an entry has been created,
- Severity – notification type. Following types are available :
    - alarm – indicates alarm has been activated or disactivated,
    - settings change – system settings change with information on exactly what settings were changed and which user is responsible for the change (login),

- notification – system alerts, such as a status change for outputs,
- notification sent – information about sending an e-mail notification request via SMTP client within the EMI-One SE controller framework.

- Description - contains more detailed information about a given event. Depending on the severity type, following options are available:
  - Alarm severity description :
    - In case of standard alarms, it contains user-defined label for the signal which triggered an alarm (Input or sensor label), as well as information whether it was the start or end of the alarm state for this sensor,
    - In case of PDU alarms, it contains the name of a parameter that has triggered an alarm condition, as well as information whether it was the start or end of the alarm state. For example, when voltage readings exceed the user-defined threshold setting, the following alarm description will be displayed: *PDU voltage ACTIVE*.
    - This group includes entry attempts that have not been assigned to a specific user. When using not assigned RFID cards, the alarm description includes: (*RFID ACCESS ATTEMPT*), in case of using a not assigned PIN number: (*PIN LOGIN ATTEMPT*).
    - Unauthorised handle and door opening events (e. g. by using an emergency key) are displayed with additional „FORCED OVERRIDE" description.
  - settings change severity description – information on exactly what settings were changed and which user did the change (login),
  - notification severity description – includes user-defined label of an electronic handle or output which state has been changed and information whether it was switched into:
    - active mode: ON (output) or UNLOCKED (handle),
    - inactive mode OFF (output) or LOCKED (handle).

- notification sent severity description – includes information about the e-mail notification sending status for each of the recipients (*notification settings -> mail settings -> destination address 1/2/3*); by successful status confirmed by the e-mail server, the status will be shown as *success* and by sending error or wrong destination address the status will be shown as *failed.*

- User type – this field contains information about type of the user responsible for an action:
  - remote – remote user (web-server),
  - local – local user: RFID tag or PIN,
  - auto – for actions taken automatically by the EMI-One SE controller.
- User name - contains the name of the user who performed the action, assigned at the stage of creating the given account (only for *settings change* and *notification* events).

The entries in the log are stored in the non-volatile memory of the device.

NOTE : Restoring the default settings deletes all entries in the log !

Restoring the default settings deletes all entries in the log.

After loading all system events, at the top of the event log table - above its header, an additional text field shows up. It is meant to filter listed events depending on the provided keywords. The entered phrase is searched in the following columns: date|severity|description|user type|user name.

The events are saved non-stop with a capacity of 2000 entries, which means that after the limit is reached the oldest entry is replaced by the newest one.

The entries are listed from the newest one.

8. Technical data

Physical parameters

Dimensions	242x71x31 mm
Temperature range	0°C to 50°C
Humidity range	10% to 90%, non-condensing
Protection rating	IP20
Certifications	CE, RoHS

Power

Socket	Power 12V
Voltage	12V DC
Current	Min. 150mA
Pin	DC Jack 2.5x5.5 mm
Amount	2

Network parameters

Interface	RJ45 (100BASE-Tx) – 10/100 Mbps
Supported protocols	ARP, DNS, HTTP, HTTPS, SNMP v1/v2c, SNTP, SMTP
SNMP	SNMP Get, SNMP GetBulk, SNMP Trap

Analogue Inputs

Type	Binary (NO/NC) with additional parameterisation (tampering detection)
Socket	Inputs 1 ÷ 4
Pin	TBW-3.5-3 pin
Amount	4
Power	Additional 12V DC supply for the sensors, galvanically connected to the positive voltage of the device
Voltage limit	on the „ IN ” contact: 5V Do not connect any external voltage source to the 12V contact !

Outputs

Type	Voltage (12V DC constant on the „ 12V ” contact, attached ground)
Socket	Outputs 1 ÷ 4
Pin	TBW-3.5-2 pin
Amount	4
Power	Galvanically connected to the positive voltage of the device
Load limit	For a single socket: 500 mA Sum for sockets 1 ÷ 4: 700 mA Do not connect any external voltage source to the 12V contact !

Sensors

Type	Microprocessor temperature sensors, temperature/humidity sensors, RFID readers,
Socket	Sensors: Temp/RFID, Comb
Pin	RJ12
Amount	2
Power	5V DC
Comments	Connect only the temperature/humidity sensors to the ***Comb*** socket (standard and high accuracy). Connect the temperature, combo (high accuracy only), pressure sensor or external RFID readers to the ***Temp/RFID*** socket.

Indicators

LEDs	Blue and red illuminating the logo on top of the device and the front panel
Buzzer	Built-in sound signal

Handles

Type	Electronic handles apra EMI-Lock, EMKA Agent E and other
Socket	Handles: Front, Rear
Pin	RJ45
Amount	2
Power	12V DC
Comments	Connect handles intended for opening the front doors into the ***Front*** socket. Connect handles intended for opening the rear doors into the ***Rear*** socket. Handle opening control is done by connecting and disconnecting the GND signal ! Each of the sockets is intended to connect a single electronic handle. The usage of splitters or attempts to connect multiple handles in parallel can damage the handles or the EMI-One SE controller !

9. Warranty

Warranty/post-warranty service and repairs

Installer/Service Provider	Action performed	Date

…… ……

Sale date Signature and seal of the seller

NOTE :

Instruction manual is also a service book. Please keep it in a safe place.

10. Notes