



NCU 700, RCU 900 FidesNet

Technical documentation

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1 Overview

The content of this document reflects the technical status of the product at the time of publication. The manufacturer reserves the right to make changes. Product illustrations may differ from the delivered product due to continuous development.

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1.1 Validity of this document

This document applies to NCU 900 and RCU 700 with production version as of 010726 and firmware version as of 1.4.0.

1.2 Abbreviations and terms

Abbreviation	Term	Definition
AMB	ASD main board	Main board of the ASD aspirating smoke detector
ASD	Aspirating smoke detector	Aspirating smoke detector with smoke sensors and fan, which checks the ambient air via a sampling pipe tube network
FAS	Fire alarm system	Fire detection system installed in a building. A fire alarm system consists of at least the following elements: detectors, fire alarm control panel, power supply, alarm transmission.
FACP	Fire alarm control panel	Component of a fire alarm system that can be used to supply other components with power. Designed to record and evaluate signals from the detectors and to indicate alarms and faults audibly and optically, also monitors and controls other measures.
NCU	Network Communication Unit	Communication unit
NCU Config	Network Communication Unit Config	Web application configuring the system
NMB	NCU main board	Main board of the NCU 900
RCU	Remote Control Unit	Remote control unit of the system
RMB	RCU main board	Main board of the RCU 700
RMF	RCU mounting frame	Mounting frame for RCU 700

Abbreviation	Term	Definition
RWH	RCU wall housing	Wall housing for RCU 700
SIM	Serial interface module	Serial interface module
SLM	SecuriLine module	Line module
SSD	Scattered light smoke detector	Highly sensitive smoke sensor for detecting the smoke concentration in the aspirating smoke detector
UMS	Universal Management System	Monitoring and operating system for all important areas of the alarm systems and security technology.
XLM 35	SecuriLine eXtended module	SecuriLine eXtended module for special fire detectors

1.3

Other documents

Document	T-number
Technical description ASD 532	T 140 421
Technical description ASD 533	T 140 287
Technical description ASD 535	T 131 192
Data sheet NCU 900	T 140 743
Data sheet RCU 700	T 140 743
Data sheet ASD 532	T 140 422
Data sheet ASD 533	T 140 288
Data sheet ASD 535	T 131 193
Data sheet SIM 35	T 140 011
Data sheet REK 511	T 135 422
Modbus integration description	T 140 750
Modbus address list partition (EN)	T 140 749
SNMP integration description	T 140 748

2 Safety

2.1 Icons in this document

Particularly important notices are indicated by the following icons in this document:

Icon	Explanation
	General information.
	Caution. Failure to comply may result in property damage.
	Environmental notice for the EU and Switzerland. Electrical and electronic devices are not to be disposed of with household waste. As the end user you are legally obliged to return them. After use, electrical and electronic devices can be returned free of charge to the seller or to the designated collection points (e.g., municipal collection points or retailers). Correct disposal protects the environment. For more detailed information, please contact your waste disposal services.

2.2 Intended use

The NCU 900 is intended for networking multiple ASDs via RS-485 and Ethernet.

The RCU 700 is intended for the decentralised control and visualisation of the parameters of the networked ASDs.

The user must comply with the safety guidelines, operating instructions and maintenance instructions described in this document. The user must comply with the applicable country-specific laws, regulations and guidelines. Use outside the applicable regulations requires the explicit approval of the manufacturer.

See also

 [► Requirements for installers and end users](#)

2.3 Product changes

No changes may be made to the NCU 900 and RCU 700. In the event of product changes, all warranty claims and the approval issued to the manufacturer are void.

Software

For security reasons, the NCU 900 and RCU 700 only accept software updates officially approved by the manufacturer. This ensures the authenticity and integrity of the software. Unauthorised or modified firmware versions are automatically rejected.

2.4 Requirements for installers and end users

The NCU 900 and RCU 700 may only be used by installers and end users who

- ▶ have been trained directly by the manufacturer

or

- ▶ have been trained by third parties authorised by the manufacturer.

3 System description

3.1 Intended use

NCU 900

The NCU 900 is used for networking multiple ASDs as well as for connecting external systems.

RCU 700

The RCU 700 is used for visualising the values measured by the ASDs and the signals reported.

Use cases

Typical use cases include areas that are difficult to access for users, such as security zones in airports, laboratories or IT environments.

The central visualisation and operation of several ASDs from a security control station are also a typical application.

When external systems are connected, current measurement data can be forwarded to management systems in data centres.

3.2 Compatibility

The following ASD types can be used with NCU 900 and RCU 700:

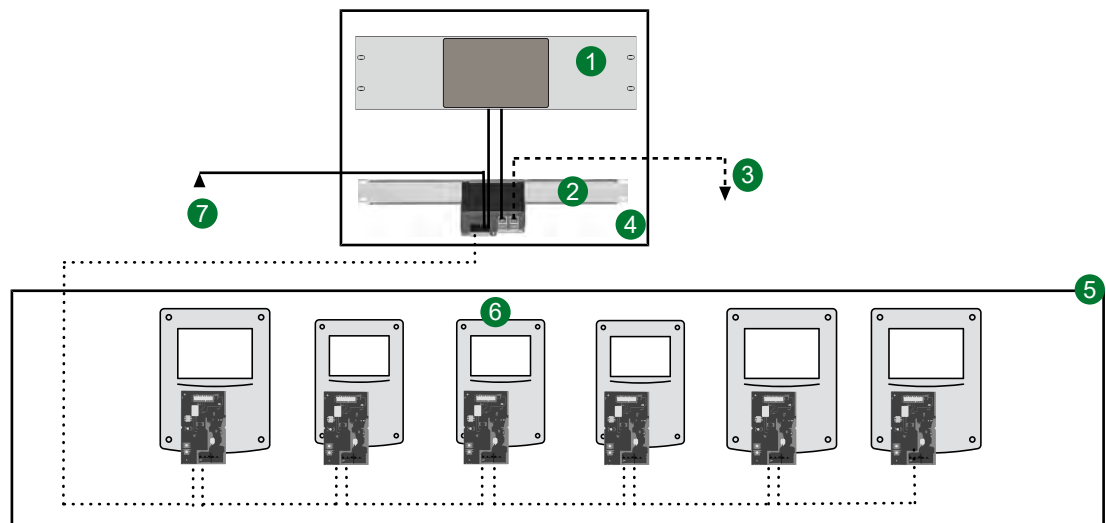
- ▶ ASD 535-x with firmware $\geq$ 01.08.03
 - ▶ ASD 532 with firmware $\geq$ 01.02.08
 - ▶ ASD 533 with firmware $\geq$ 01.11.00
-

3.3 System structure

A maximum of 100 ASDs can be operated on a maximum of 50 RCU 700s within one system.

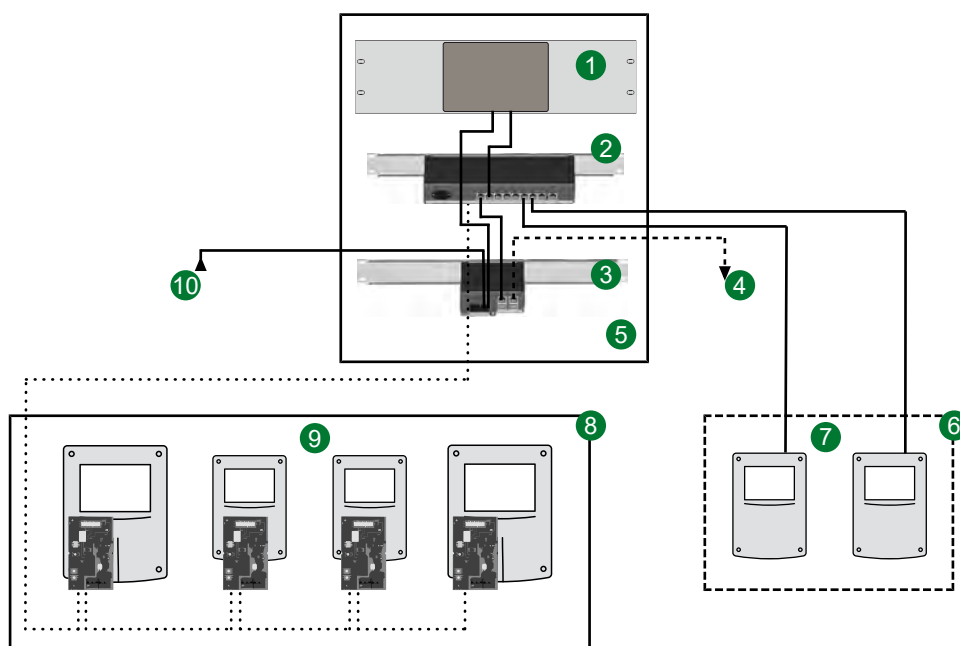
3.3.1 FidesNet with 1 RCU 700

- ▶ The NCU 900 and RCU 700 are connected via Ethernet.
- ▶ The NCU 900 and the company subnet are connected via Ethernet.
- ▶ PoE power supply possible.
- ▶ Equipotential bonding on 19-inch rack.

ASD connection via RS-485 with SIM 35

①	RCU 700
②	NCU 900
③	Ethernet connection to the company network
④	19-inch rack
⑤	RS-485
⑥	ASDs
⑦	24 VDC

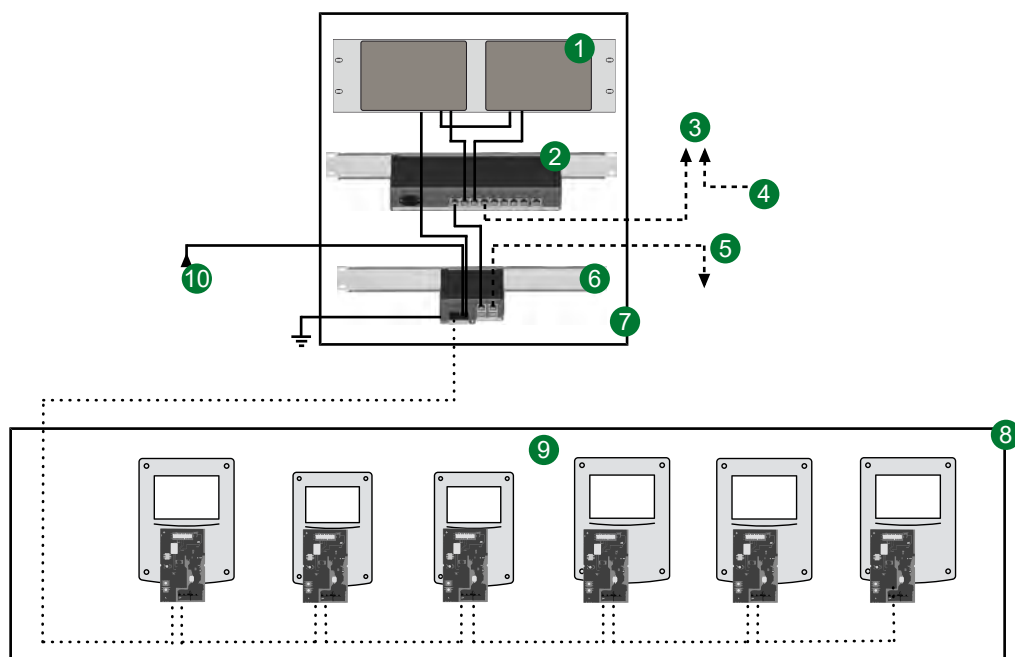
ASD connection via RS-485 with SIM 35 and via Ethernet with a switch



1	RCU 700
2	Switch
3	NCU 900
4	Ethernet connection to the company network
5	19-inch rack
6	Ethernet
7	ASD 532
8	RS-485
9	ASDs with SIM 35
10	24 VDC

3.3.2 FidesNet with 2 RCU 700s

- ▶ The NCU 900 and the 2 RCU 700s are connected via Ethernet switch.
- ▶ The NCU 900 and the company subnet are connected via Ethernet.
- ▶ The power supply is applied in loops. Local or decentralised.
- ▶ PoE power supply possible.
- ▶ Equipotential bonding on 19-inch rack.



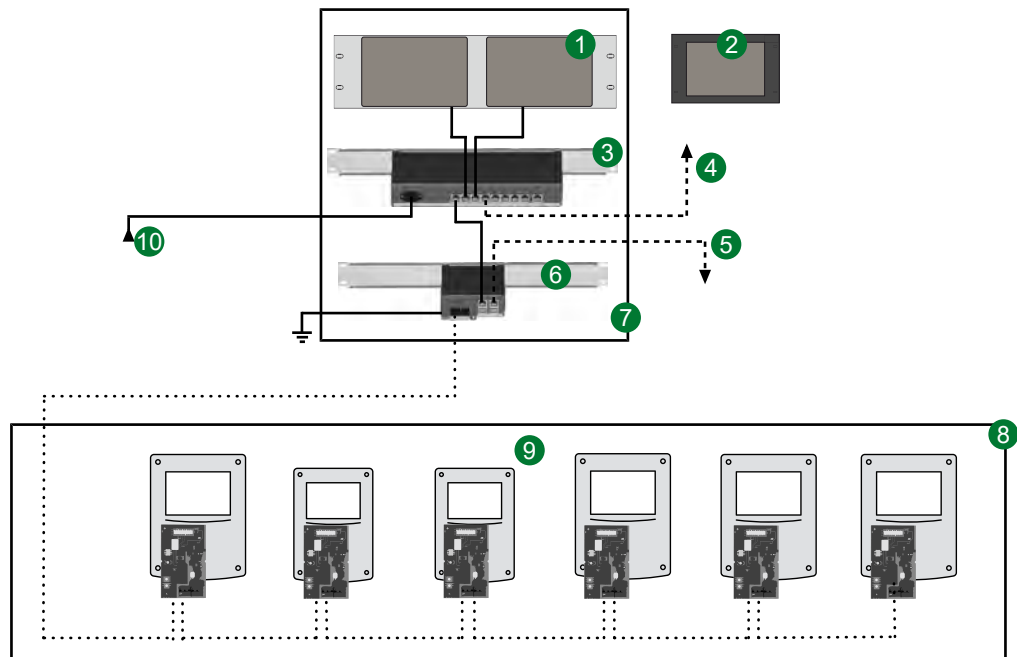
1	RCU 700
2	Switch
3	Ethernet connection to other RCUs
4	24 VDC
5	Ethernet connection to the company network
6	NCU 900
7	19-inch rack
8	RS-485
9	ASDs with SIM 35
10	24 VDC

3.3.3 FidesNet with more than 2 RCU 700s

- Pay attention to switch capacity: one Ethernet connection is required for each RCU.
- For other RCUs more than 100 metres away, another switch is required.

3.3.4 Power supply via PoE switch

- For systems with an Ethernet switch, a 19-inch rack format PoE performance class 3 switch can be used for the power supply.



1	2 RCU 700s
2	RCU in the RWH
3	PoE switch
4	Ethernet connection to other RCUs
5	Ethernet connection to the company network
6	NCU 900
7	19-inch rack
8	RS-485
9	ASDs
10	230 V AC

4 Components

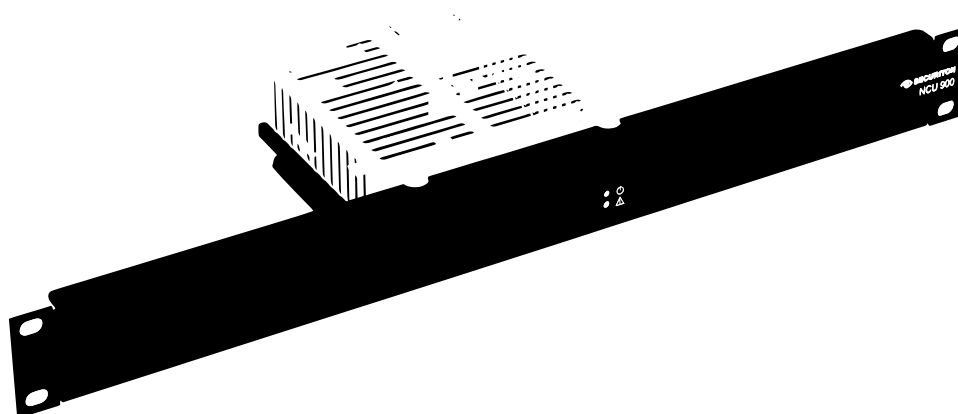
Component	Purpose and role
NCU 900	Connection of the RS-485 field bus on the ASD side, master, connection of the Ethernet network on the RCU 700 side
RCU 700	Control unit, networked with the NCU 900 via Ethernet
RMF 19-1	Mounting frame for 1 RCU 700
RMF 19-2	Mounting frame for 2 RCU 700s
RWH	Housing for fastening the RCU 700 to a wall

External components

Component	Purpose and role
ASD	Aspirating smoke detector
SIM 35	Serial interface module, integrated in ASD
REK 511	Individual identification box

4.1 NCU 900

The NCU 900 is used for the connection of the RS-485 field bus on the ASD side and the Ethernet network on the RCU 700 side.



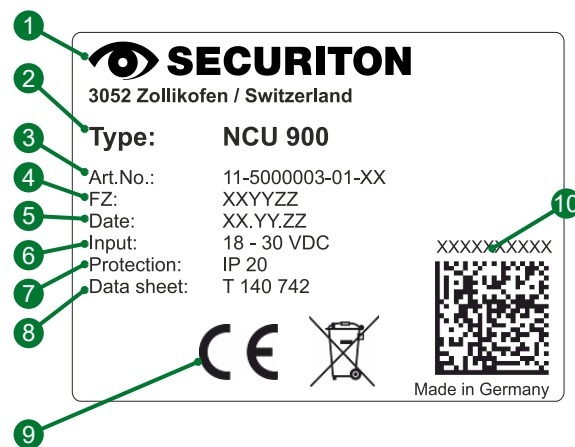
Design

- ▶ 19-inch front panel
- ▶ NMB 90 main board
- ▶ 5-pin terminal block with screwless spring terminals for the RS-485 interface

- ▶ 2 2-pin terminal blocks with screwless spring terminals for the power supply line of the NCU 900, input and continuance
- ▶ Connection for the screen of the incoming RS-485 line for connection of the customer-side equipotential bonding of the 19-inch rack
- ▶ 2 Ethernet interfaces for access to 2 independent subnets
- ▶ 2 USB-A interfaces for connection of dongles or storage media for configuration
- ▶ 2 LEDs for the status display of the NMB 90
- ▶ 2 keys for triggering software updates, resetting the network configuration or resetting the software and hardware

4.1.1

NCU 900 rating plate



1	Manufacturer
2	Type designation
3	Article number
4	Production version (day/month/year)
5	Production date (day.month.year)
6	Operating voltage
7	Protection type
8	Data sheet document number
9	Approval mark
10	ID



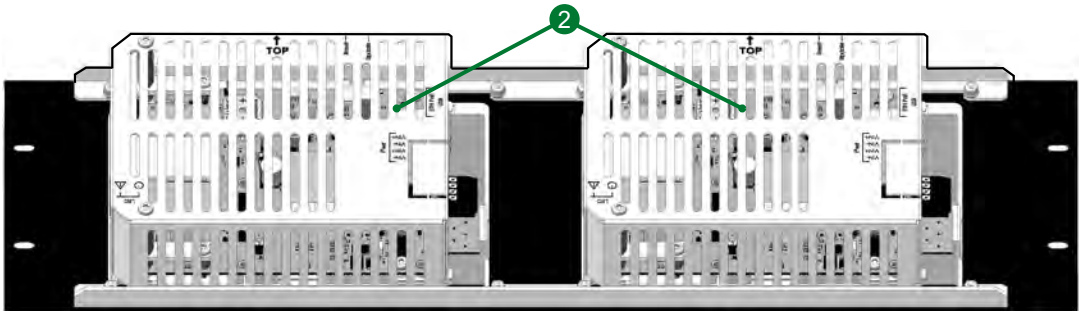
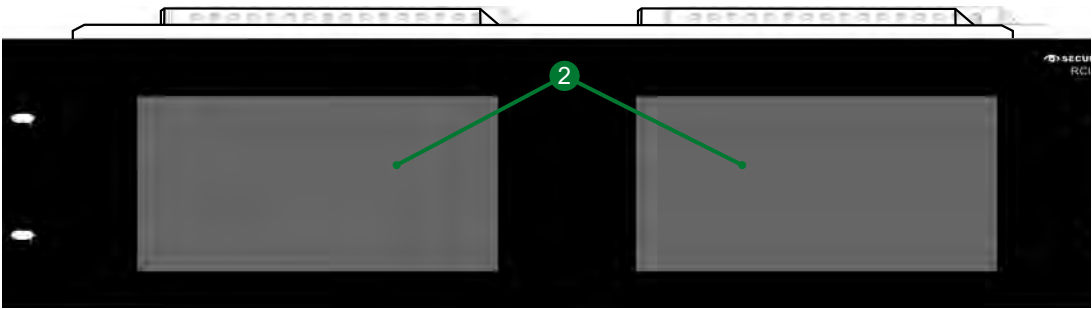
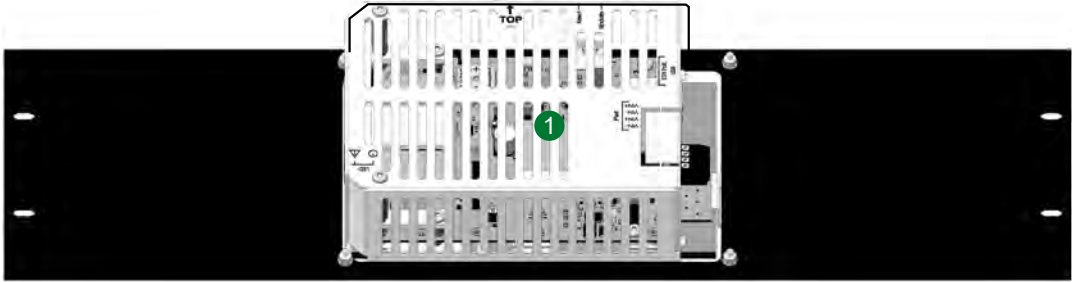
NOTICE

Rating plates and other markings on devices and printed circuit boards must not be removed, overwritten or otherwise rendered unrecognisable.

4.2 RCU 700

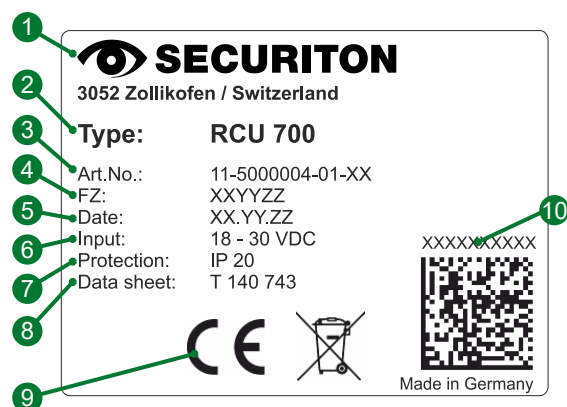
Design

- ▶ 7-inch capacitive touchscreen display with a resolution of 1024 × 600 pixels
- ▶ Main board RMB 70
- ▶ 2 2-pin terminal blocks with screwless spring terminals for the power supply line of the NCU 900, input and continuance
- ▶ Ethernet interface for accessing subnets
- ▶ USB-A interface
- ▶ 2 LEDs for the status display of the RMB 70
- ▶ 2 keys for triggering software updates, resetting the network configuration or resetting the software and hardware
- ▶ Buzzer for audible alarm



1	RCU 700 in the RMF 19-1
2	2 RCU 700s in the RMF 19-2

4.2.1 RCU 700 rating plate



1	Manufacturer
2	Type designation
3	Article number
4	Production version (day/month/year)
5	Production date (day.month.year)
6	Power supply
7	Protection class
8	Data sheet document number
9	Approval mark
10	ID



NOTICE

Rating plates and other markings on devices and printed circuit boards must not be removed, overwritten or otherwise rendered unrecognisable.

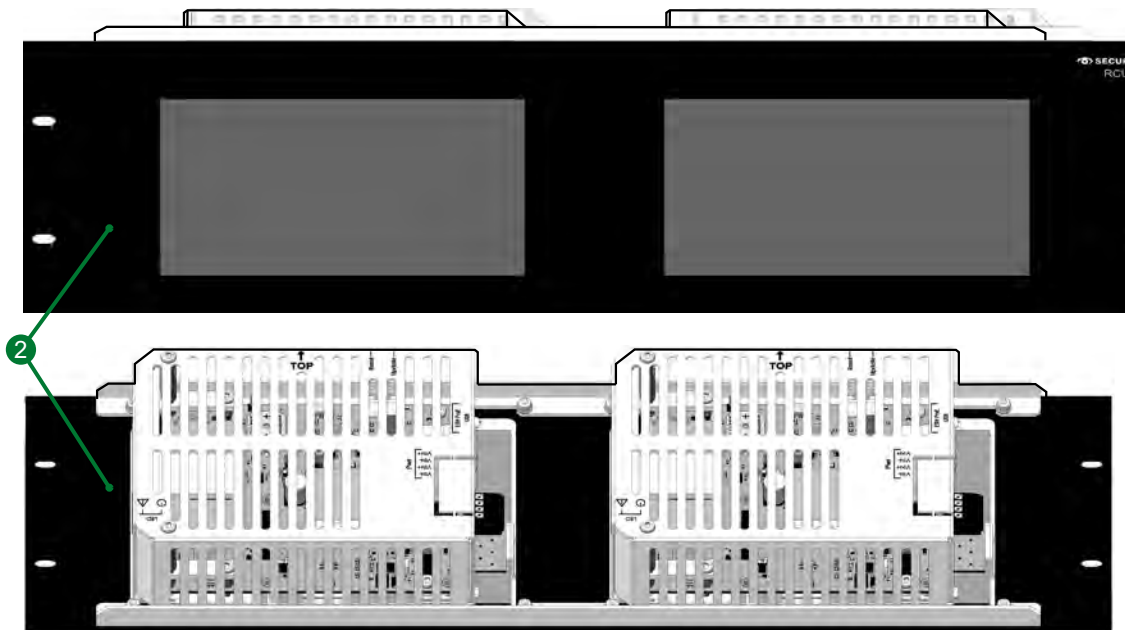
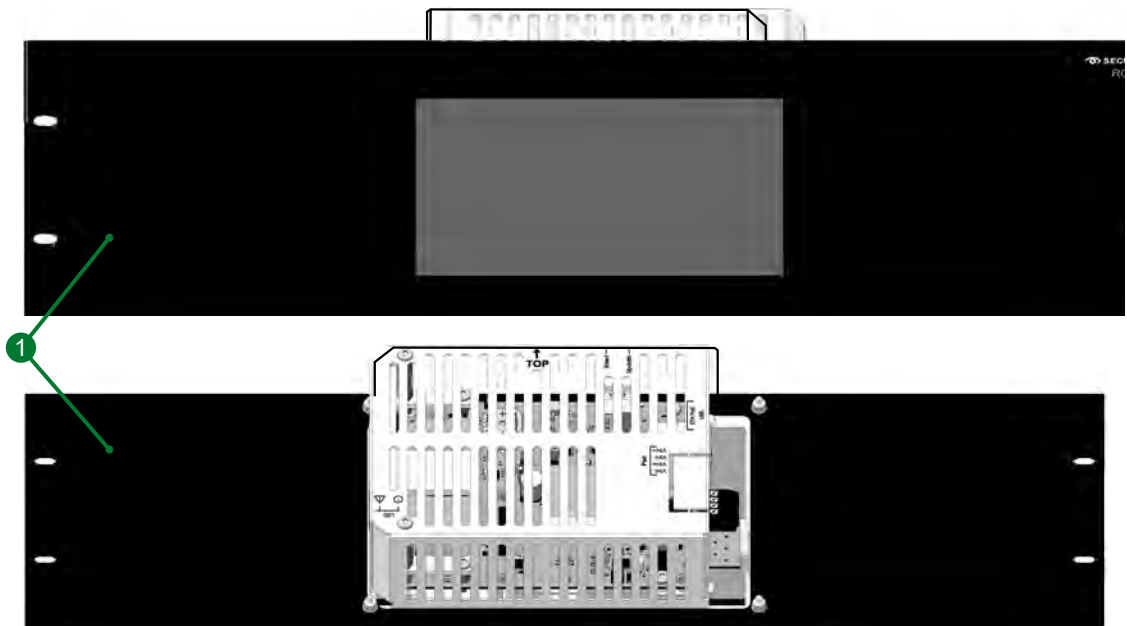
4.3 RMF 19-1, RMF 19-2

RMF 19-1

19-inch mounting frame for 1 RCU 700

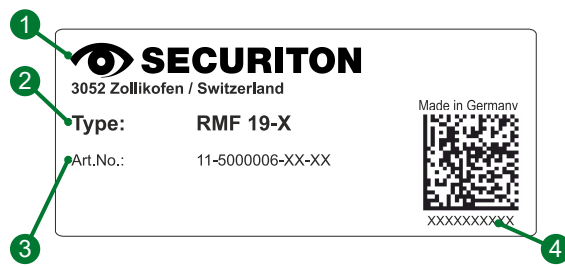
RMF 19-2

19-inch mounting frame for 2 RCU 700s



1	RMF-1
2	RMF-2

4.3.1 RMF 19-1, RMF 19-2 rating plate



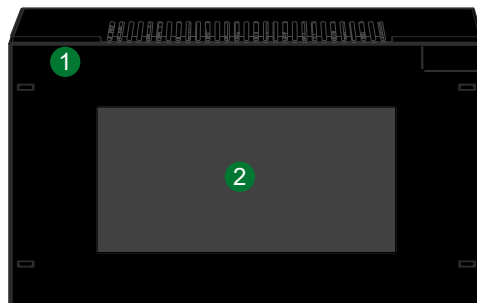
1	Manufacturer
2	Type designation
3	Article number
4	ID



NOTICE

Rating plates and other markings on devices and printed circuit boards must not be removed, overwritten or otherwise rendered unrecognisable.

4.4 RWH

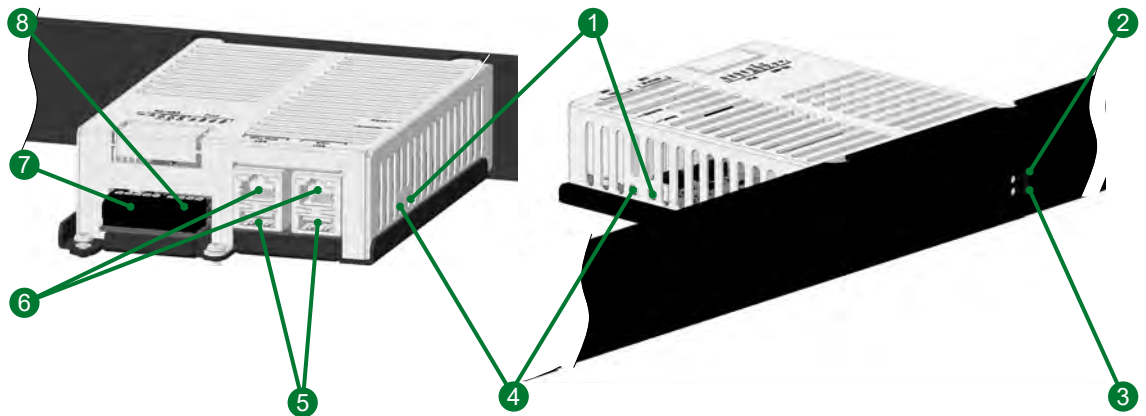


1	RWH
2	NCU 700 in the RWH

The RWH is a housing that can be used to fasten the RCU 700 to a wall.

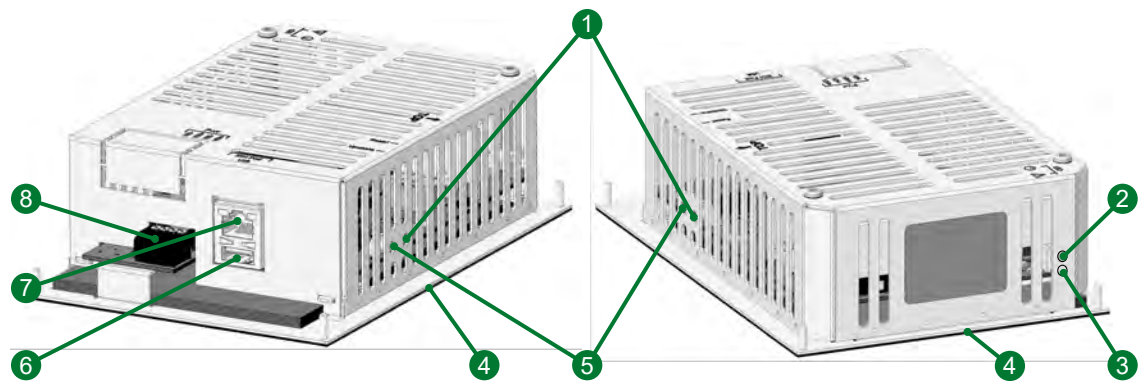
4.5 Display and control elements

4.5.1 NCU 900 display and control elements



1	Reset key
2	"Operation" LED
3	"Fault" LED
4	Update key
5	USB connection
6	Ethernet connection
7	RS-485 connection
8	Power supply

4.5.2 RCU 700 display and control elements



①	Reset key
②	"Operation" LED
③	"Fault" LED
④	Operating panel
⑤	Update key
⑥	USB connection
⑦	Ethernet connection
⑧	Power supply connection

4.5.3 Reset and Update pushbuttons

Component	Pushbutton	Action	Function
NCU 900	Reset	Press ≤ 3 seconds	Software reset
		Press ≥ 3 seconds	Hardware reset
	Update	Press ≤ 3 seconds	Software update is started from USB stick
		Press ≥ 3 seconds	Factory reset of the IP configuration
	Reset and Update	Press simultaneously ≤ 3 seconds	Reset the NCU Config password
RCU 700	Reset	Press ≥ 3 seconds	Hardware reset
	Update	Press ≤ 3 seconds	Software update is started from USB stick

Component	Pushbutton	Action	Function
		Press ≥ 3 seconds	Factory reset of the IP configuration

4.5.4

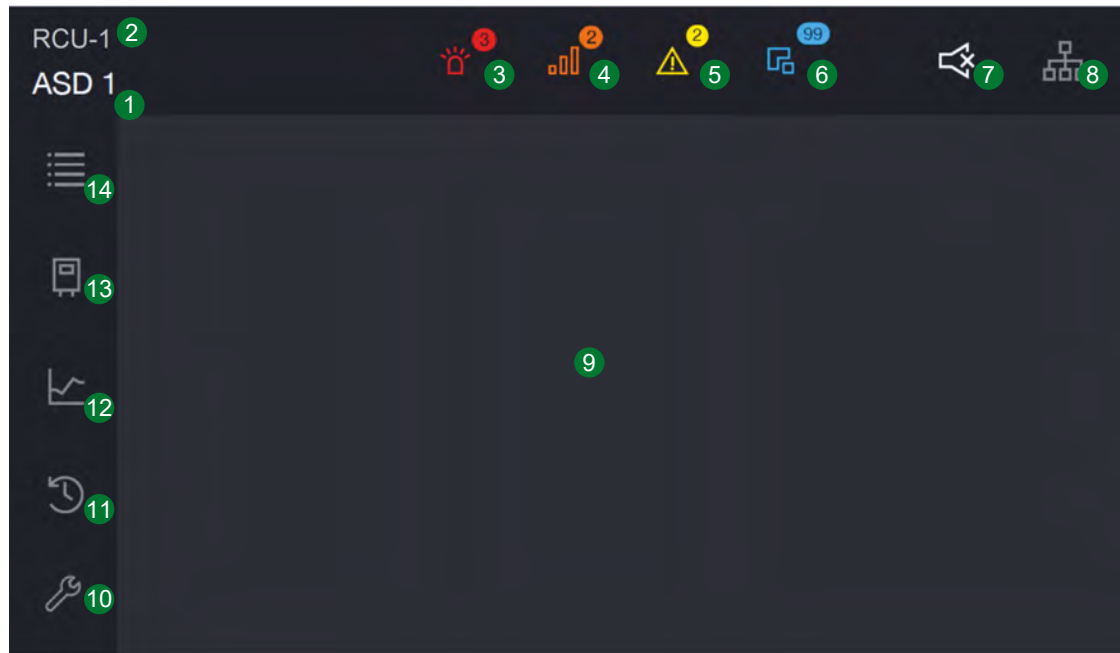
Status LEDs

Component	LED	State	Meaning
NCU 900, RCU 700	Operation LED, green	off	No power supply
		Flashes	Boot process or software update
		Lights up	Normal operation
	Fault LED, yellow	off	Normal operation, no fault
		Lights up	Fault on NCU 900: no communication with RCU 700 or ASD

5 Functions of NCU 900 and RCU 700

5.1 RCU 700 software interface

5.1.1 Main window



1	Name of the active ASD
2	Name of the RCU 700
3	Alarm status indicator
4	Pre-signal 1, 2, 3 status indicator
5	Fault status indicator
6	Isolation status indicator
7	Buzzer status indicator
8	System overview tab
9	Screen shows the device list when quiescent
10	Programmer tab
11	Event memory tab
12	History tab
13	Device overview tab
14	Device list tab

Behaviour of the status displays

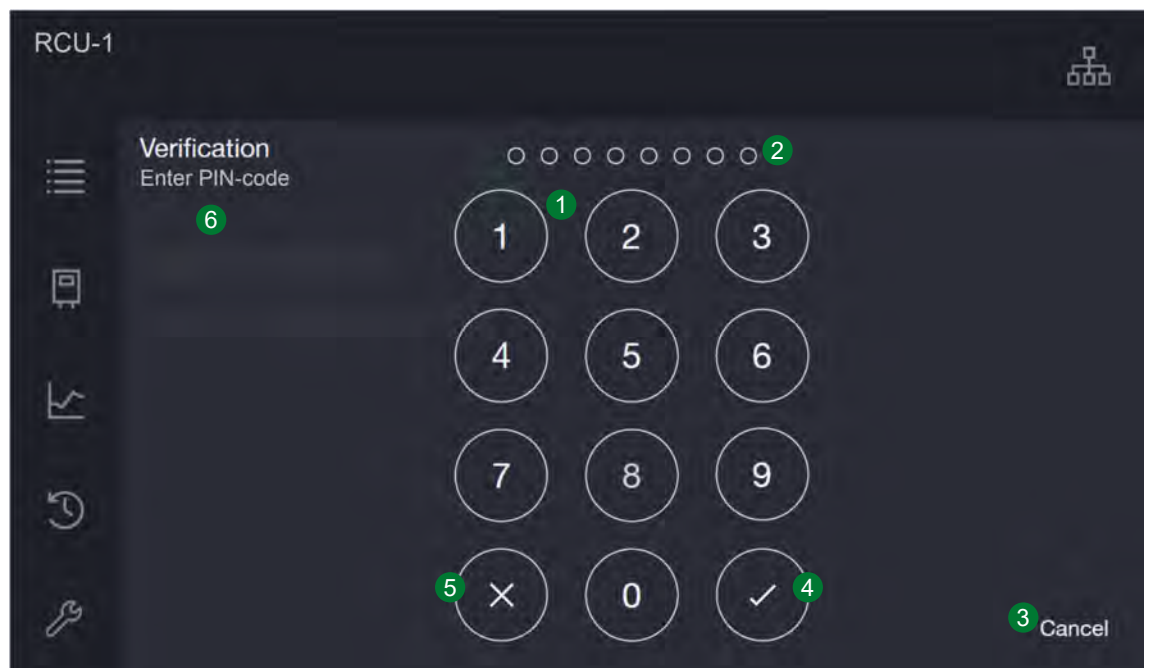
The status displays ③ to ⑥ appear in all tabs. Tapping a status display takes you to the device list ⑭.

The number of identical statuses of multiple ASDs is displayed to the right of the corresponding status display.

The buzzer status display ⑦ is lit if the buzzer signal is triggered by the alarm of an ASD. Tapping the status display resets the buzzer.

5.1.2

PIN



①	Numeric keypad
②	Display of the number of digits entered
③	Cancel
④	Confirm input
⑤	Delete input
⑥	Message if incorrect PIN input

5.1.3

Device list

When the RCU 700 is in the quiescent state, the device list with the assigned ASDs is displayed.

When configuring the NCU 900, the arrangement and sequence of the ASDs can be defined. The following display types can be configured:

Static display

- ▶ Display of a maximum of 10 ASDs.
- ▶ Sequence corresponds to the setting in NCU Config under [Assignment of ASDs to RCU 700s](#).
- ▶ Events such as alarms or faults have no influence on the arrangement.

Select dynamic display if more than 10 ASDs are to be displayed.

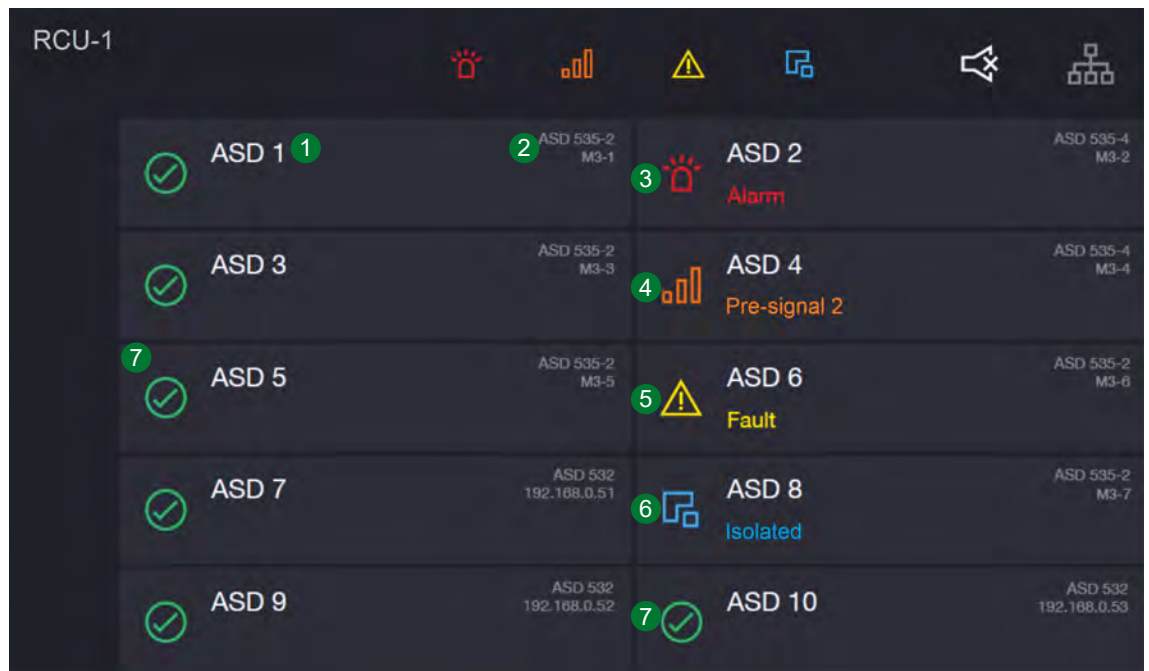
Dynamic display

- ▶ Displays up to 100 ASDs; from 10 ASDs a scroll bar appears.
- ▶ When events such as alarms or faults occur, the affected ASD moves to the first position.

If several events are present on an ASD, the most important one is displayed based on the following priority:

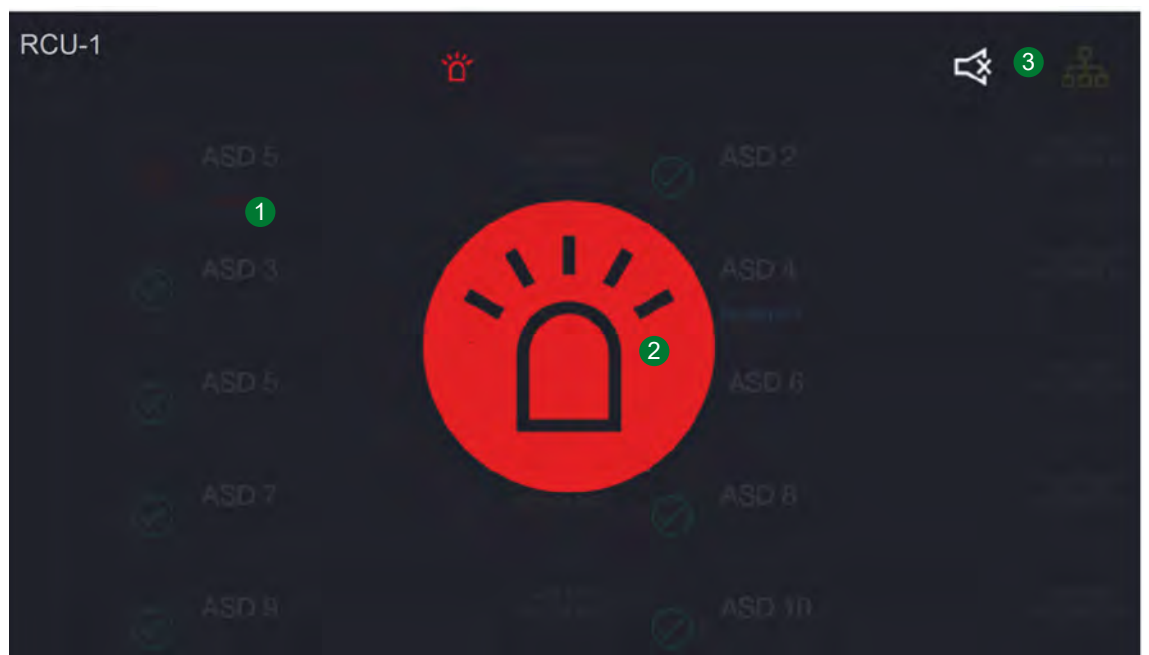
- ▶ Channel is in operation: alarm, pre-signal, faults.
- ▶ Channel is isolated: isolation, alarm, pre-signal, faults.
- ▶ One channel is isolated, the other channel is in operation. The ASD is displayed as isolated. If an alarm, pre-signal or fault occurs on the non-isolated channel, the respective signal is displayed instead of the isolation.

Tapping the desired ASD instance switches to the respective device overview. If the user is on a subpage, the device list appears again after a timeout of 300 seconds if no entry is made.



1	Name of the ASD defined during the system configuration
2	Connected device type and slave address
3	ASD with alarm
4	ASD with pre-signal
5	ASD with fault
6	Isolated ASD
7	ASD in quiescent state

5.1.4 Alarm window



In the event of an alarm, the alarm window **1** is superimposed on the device list.

The alarm icon **2** flashes. Touching the display closes the alarm window and the device list appears again.

If configured, tapping the buzzer icon deactivates the internal buzzer. This closes the alarm window.

5.1.5 Device overview



NOTICE

Changing NCU 900 settings

The sensitivity unit can be set in the NCU 900 system configuration: relative (%) or absolute (%/m). Sensor activation, smoke sensor operation mode and airflow threshold values can be set in ASD Config. The changes are active after restarting the NCU 900 and displayed on the RCU 700.



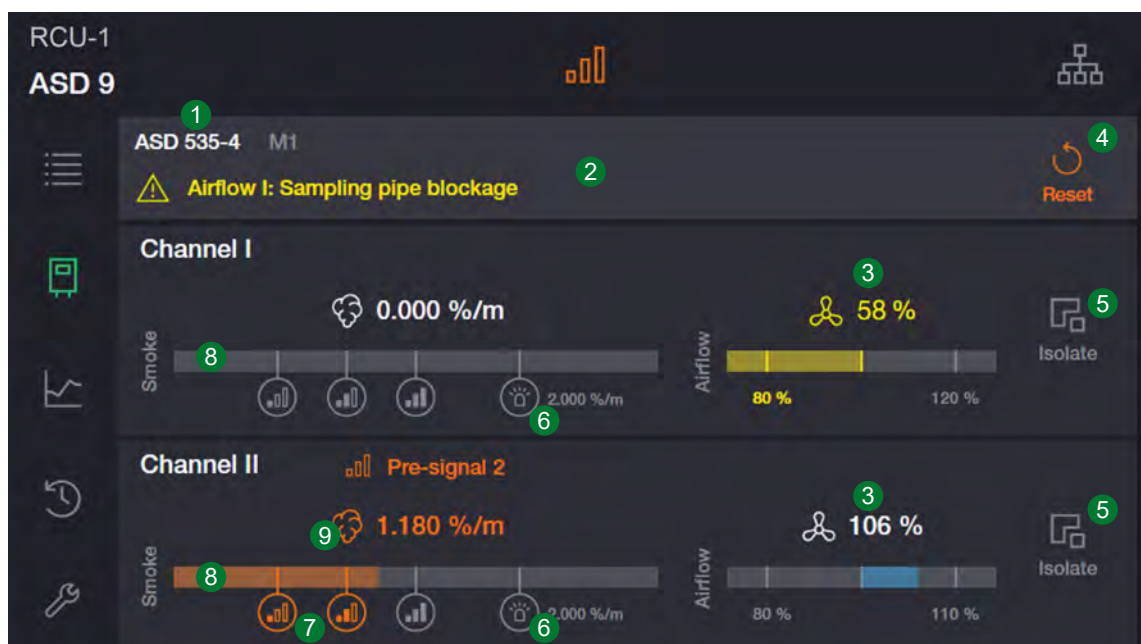
NOTICE

Timeout and automatic switch to device list

After the timeout has elapsed without entry, the view switches from the device overview back to the device list.

The following figure shows the device overview of an ASD 535-4 with the following messages:

- ▶ Channel I: *Fault airflow I: Sampling pipe blockage*
- ▶ Channel II: *Pre-signal 2*
- ▶ Channel II: *positive airflow deviation*



① Shows the connected device type ASD 535-4.

② Fault airflow I: Sampling pipe blockage.

If multiple faults are present, the most recent one is displayed.

③ Channel I: Currently measured airflow of 58% of the commissioning value. The airflow is outside the tolerance window of 80 to 120% configured on the ASD. The value and bars are shown in yellow. If the airflow is again within the tolerance window but the fault has not yet been reset, the threshold mark and the threshold remain yellow. The bar turns grey.

Channel II: Currently measured airflow of 106% of the initial reset value from commissioning. The airflow has a deviation but is within the tolerance window of 110% configured on the ASD. The bar turns blue.

④ Reset key. Reset affects the entire device. Triggering is possible only if no event is present. Red = alarm, orange = pre-signal, yellow = fault.

⑤ Isolate key per channel, is shown blue in the active state. A deactivation is possible only when no event is pending. The Isolate function can be blocked with a PIN.

⑥ Alarm threshold configured on the ASD as absolute value of 2% per metre

⑦ Triggered pre-signals 1 and 2. The value of the pre-signal is represented in the pre-signal icon with the number of full bars. Here: delay time expired.

⑧ Smoke level indicator. Light grey = without trigger, orange = pre-signal threshold reached, red = alarm threshold reached.

⑨ Currently measured smoke level as an absolute value of 1.18% per metre. As soon as the smoke level exceeds the pre-signal threshold, the value and smoke level indicator appear in orange.

The following figure shows the device overview of an ASD 535-4 with the following messages:

► Channel I: *Isolation*

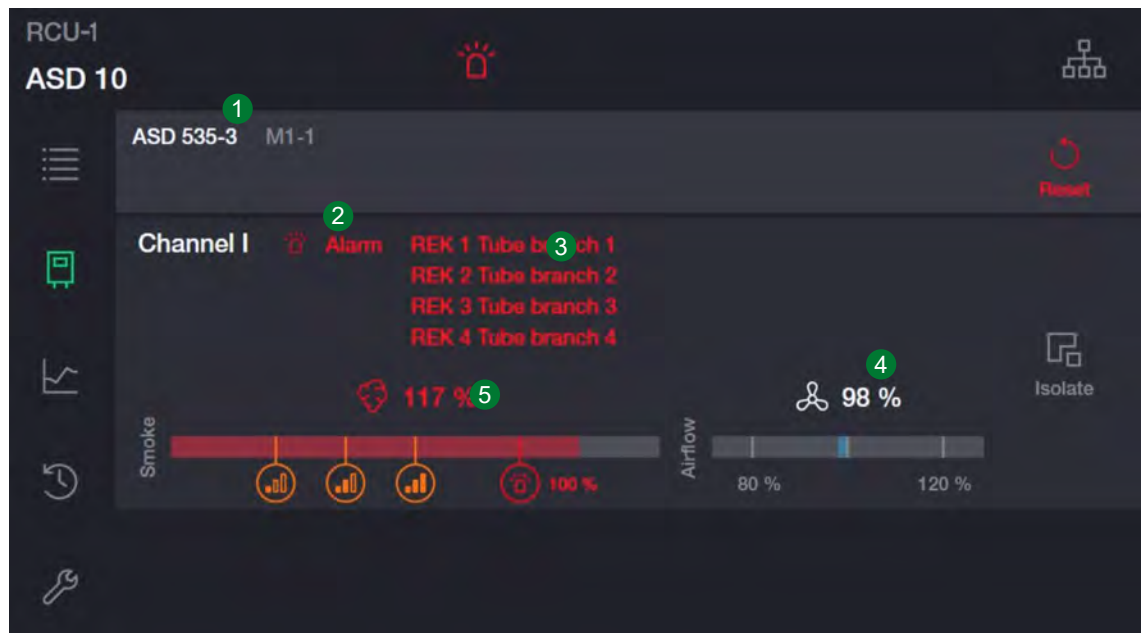
► Channel II: *Alarm*



- ① Shows the connected device type, here ASD 535-4.
- ② Indicates that Channel I is isolated.
- ③ Reset key. Reset affects the entire ASD. Triggering is possible only if no event is present. Red = alarm, orange = pre-signal, yellow = fault.
- ④ Isolate key = blue. The Isolate function can be blocked with a PIN. Deactivating is only possible if no event is pending.
- ⑤ Alarm threshold configured on the ASD is displayed as an absolute value of 2% per metre.
- ⑥ Triggered alarm.
- ⑦ Currently measured smoke level is displayed as an absolute value of 2.2% per metre. As soon as the smoke level exceeds the alarm threshold, the value and alarm indicator appear in red.
- ⑧ Triggered pre-signals 1 and 2. The value of the pre-signal is represented in the pre-signal icon with the number of full bars; delay time expired. Here: triggered alarm.
- ⑨ Smoke level indicator. Light grey = without trigger, orange = pre-signal threshold reached, red = alarm threshold reached.

The figure below shows an ASD 535-3 with the following messages:

- ▶ Channel I: *Alarm*
- ▶ Channel I: *REK 1 tube branch 1*
- ▶ Channel I: *REK 2 tube branch 2*
- ▶ Channel I: *REK 3 tube branch 3*
- ▶ Channel I: *REK 4 tube branch 4*



①	Type of the connected ASD
②	Alarm message
③	Triggered REK alarms with REK designations assigned in NCU Config
④	Current airflow value
⑤	Smoke level and pre-signals

5.1.6

History



- ① Colour assignment of the curves for the smoke concentration of Channel I and Channel II. Clicking the individual channel numbers hides or shows the respective channel. A hidden curve is indicated by means of the black and white representation of the channel number.
 - ② Colour assignment of the curves for the airflow of Channel I and Channel II. Clicking the individual colour markings hides or shows the respective channel. A hidden curve is indicated by means of the black and white representation of the channel number.
 - ③ Light blue curve of the airflow of Channel II.
 - ④ Broken red line for 100% alarm threshold. Also the airflow value after an initial reset.
 - ⑤ Dark blue curve of the airflow of Channel I.
 - ⑥ Broken orange line for trigger threshold pre-signal 3, here at 70% smoke concentration of the alarm threshold.
 - ⑦ Broken orange line for trigger threshold pre-signal 2, here at 50% smoke concentration of the alarm threshold.
 - ⑧ Orange curve of the smoke concentration of Channel II.
 - ⑨ Broken orange line for trigger threshold pre-signal 1, here at 30% smoke concentration of the alarm threshold.
 - ⑩ Red curve of the smoke concentration of Channel I.
 - ⑪ You can zoom the display in or out by spreading or moving together two fingers on the touchscreen.
 - ⑫ Scale for the Y-axis: Time in seconds.
 - ⑬ Scale for the Y-axis: Smoke concentration in percent of the pre-signals/alarm trigger thresholds configured in the ASD for Channel I and Channel II, airflow in percent of the commissioning value after initial reset.
-

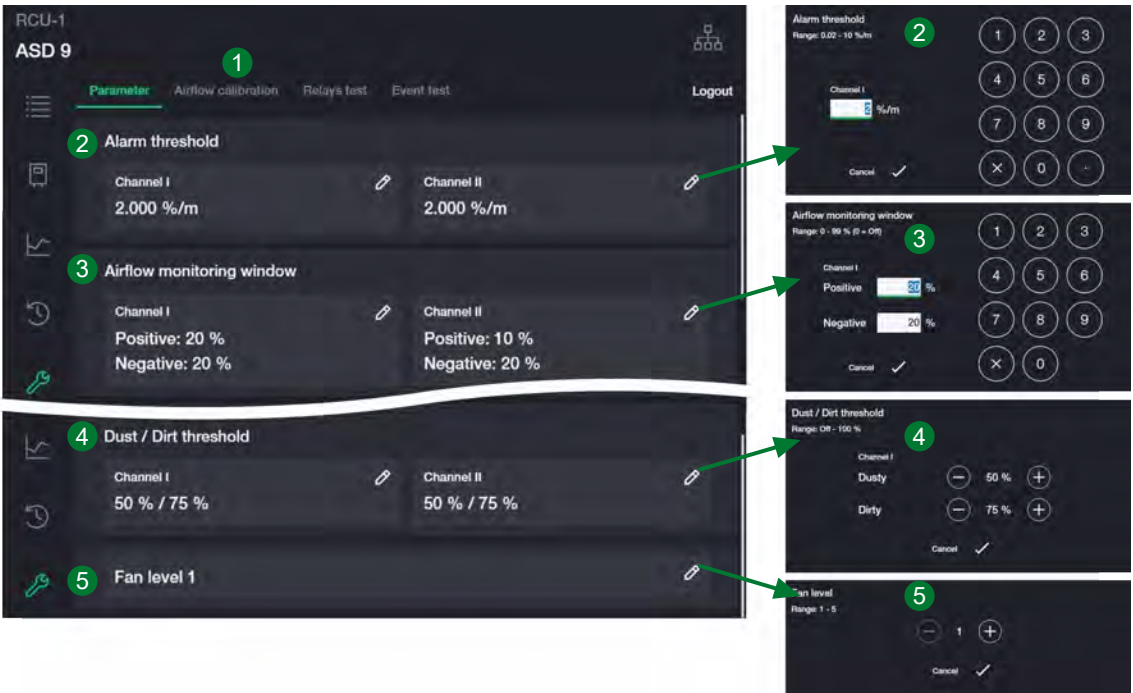
5.1.7 Event memory

RCU-1
ASD 1

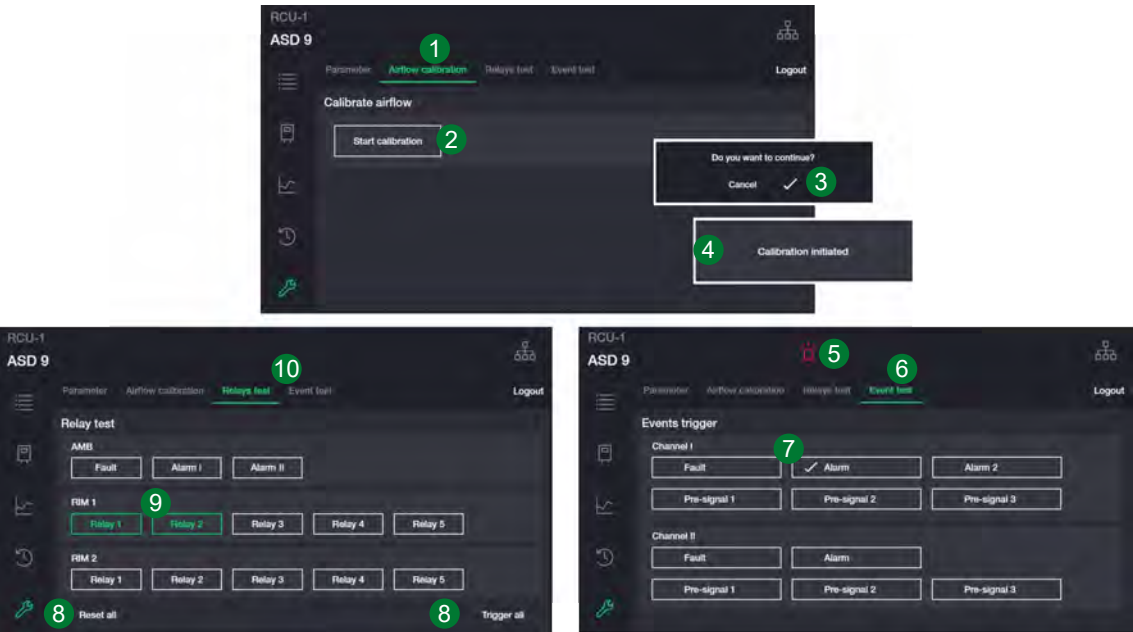
Type	Date	Time	Origin	Event
	12/04/2019	16:36:01	System	Fan: Tacho signal lacking
	12/04/2019	16:35:32	System	Test triggering via PC program Channel I: Test pre-signal 2
	12/04/2019	11:22:37	Channel I	Smoke sensor I: Pre-signal 2
	12/04/2019	11:22:01	Channel I	Smoke sensor I: Pre-signal 1
	12/04/2019	11:17:16	Channel I	Smoke sensor I: Isolate switched off
	12/04/2019	11:15:19	Channel I	Smoke sensor I: Isolate switched on
	11/03/2019	16:31:48	Channel I	Test triggering via PC program Channel I: Test pre-signal 1
	11/03/2019	14:02:16	Channel I	Smoke sensor I: Isolate switched off

1	Event type
2	Date of event trigger
3	Time of event trigger
4	Origin of the event
5	Event description

5.1.8 Programmer



1	Tabs
2	Alarm threshold parameters
3	Airflow monitoring window parameters
4	Dust/soiling source parameters
5	Fan level parameters



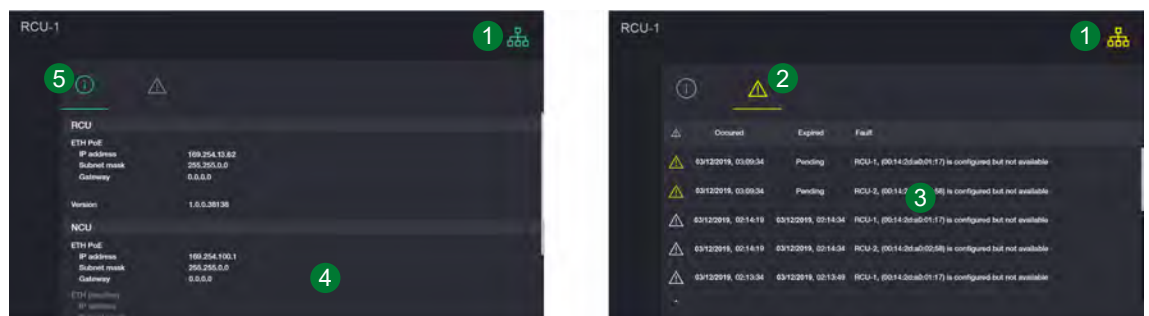
- 1 Access to airflow calibration.
- 2 Start of calibration.

- ③ Confirmation of start of calibration.
- ④ Airflow calibration initialised.
- ⑤ Status display of the triggered event. If there are multiple events of different types, the most important one is always displayed: 1. Alarm 2. Pre-signal, 3. Faults.
- ⑥ Event test.
- ⑦ The displayed events can be triggered by tapping them. The tick icon indicates the triggered state. Pre-signals 1 to 3 and alarm 2 are available for selection only if they have been programmed in ASD Config. REK alarms cannot be triggered via Event test.
- ⑧ All relays can be triggered or reset at the same time. After 10 seconds at the latest, the triggered relays are automatically reset.
- ⑨ Individual or multiple relays can be triggered separately by tapping them. The corresponding button is shown in green. Tapping them again resets the relays. After 10 seconds at the latest, the triggered relays are automatically reset.
- ⑩ Access to Relay test.

5.1.9

System overview

System-related information, faults and states that do not relate to an ASD are displayed in the system overview.



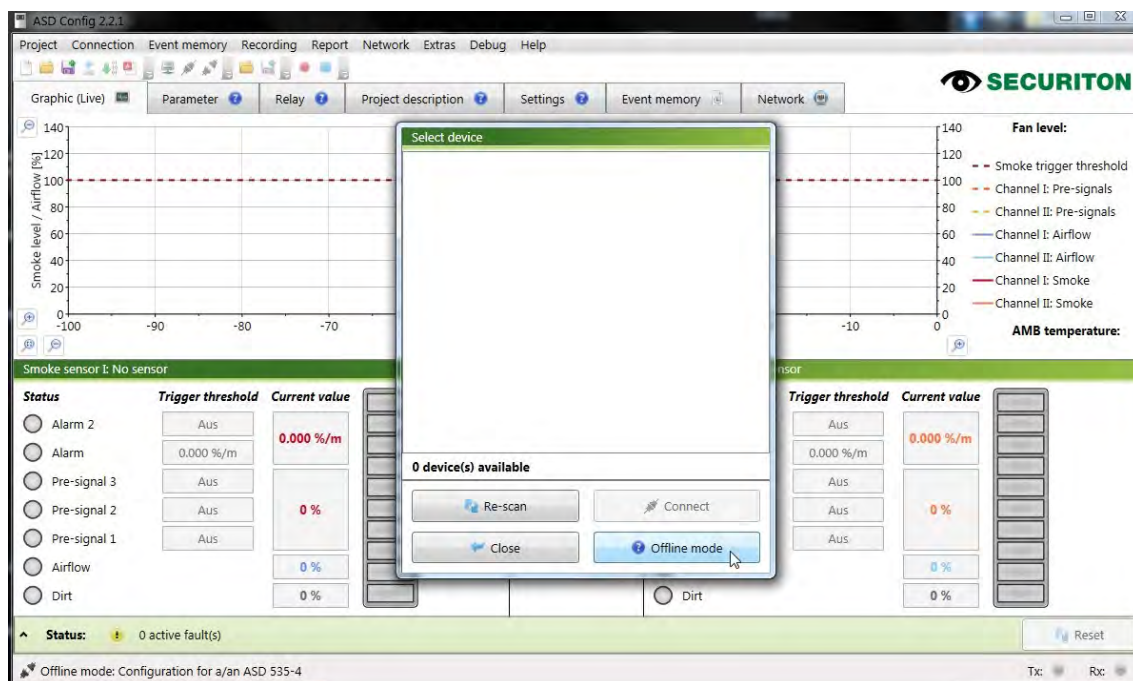
- ① Grey system overview icon. When tapped, it turns green and the *Information* sub-tab ⑤ appears. If a system fault is present, the icon turns yellow and the *Fault* sub-tab ② is opened.
- ② *Fault* sub-tab; if no fault is present, the icon remains green.
- ③ List of all system-related faults with time stamp of occurrence and expiry. The specified time may vary by 1 hour due to summer and winter time.
- ④ Division into RCU, NCU and network areas. Tapping **Version** lists information about the software versions used for RCU and NCU.
- ⑤ *Information* sub-tab.

5.2 ASD Config software interface

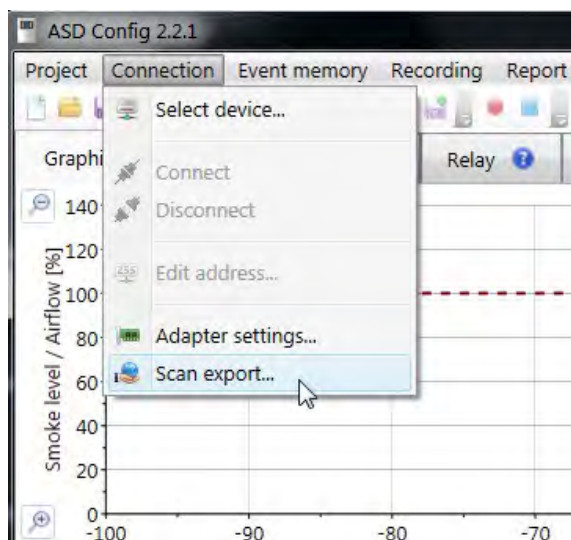
5.2.1 Using ASD Config on NCU 900

► Scan ASDs

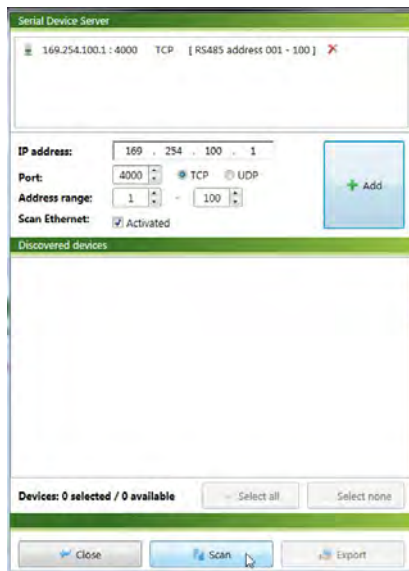
1. Start ASD Config in offline mode.



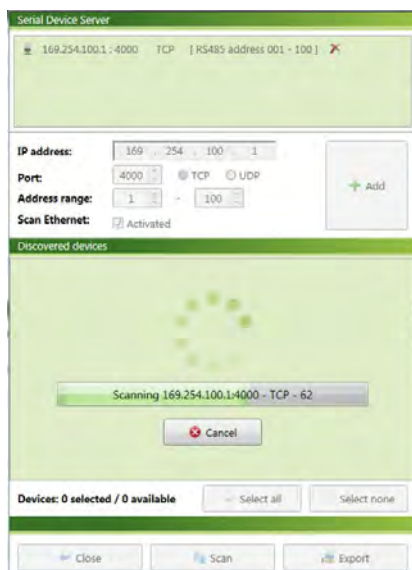
2. Start **Connections > Scan Export**.



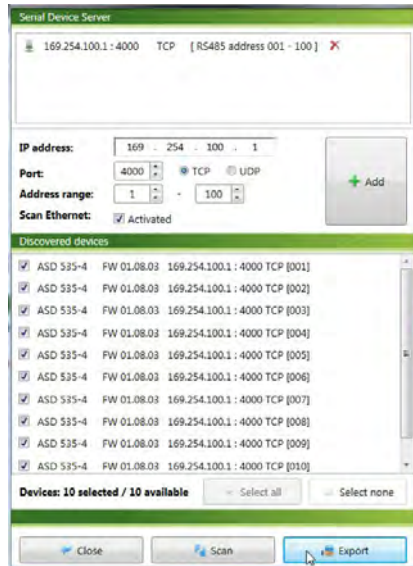
3. In the **Serial Device Server** window enter the IP address of the factory settings:
169.254.100.1. **NOTICE! The IP address may have been changed by a user beforehand.**
4. Select port 4000 and TCP.
5. Set address range 1 to 100.
6. Activate **Add** and **Scan**.



⇒ The scan is in progress.



7. Click **Select all**.
8. Click **Export**.
9. Select **User\My Documents\Securiton\ASD Config** in the **Save as** window. Save the file as *ScanExport.xml*.



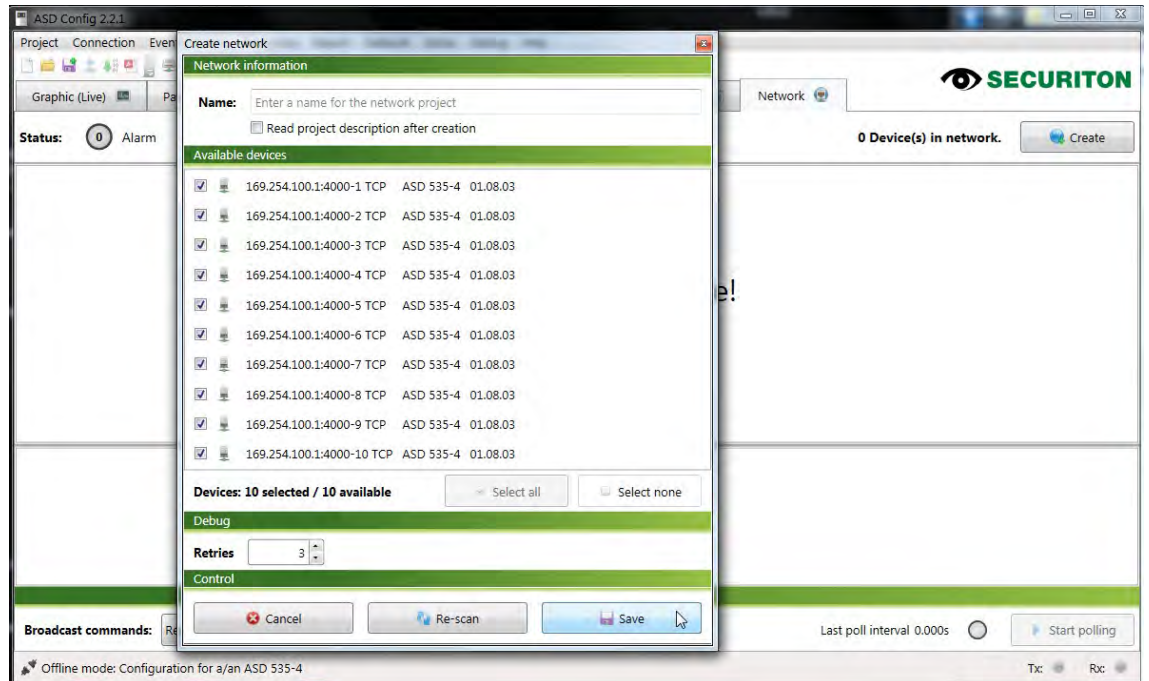
10. Click **No** in the *Export created* message window.



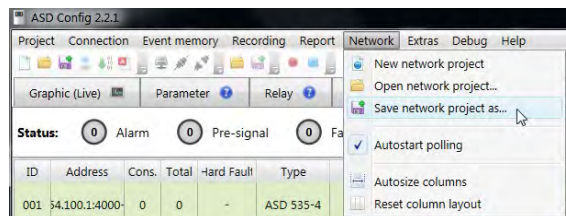
11. Close the **Serial Device Server** window.
⇒ After restarting ASD Config, the connected ASDs appear in the start window of the NCU 900 under **Select device**.

► **Create network project.**

1. In ASD Config, open the **Network** tab and click **Create**.
2. In the **Create network** window, click **Select all**.
3. Click **Save**.



4. Click **Network > Save network project as....**



⇒ The path *User\My Documents\Securiton\ASD Config\Network Projects* is opened.

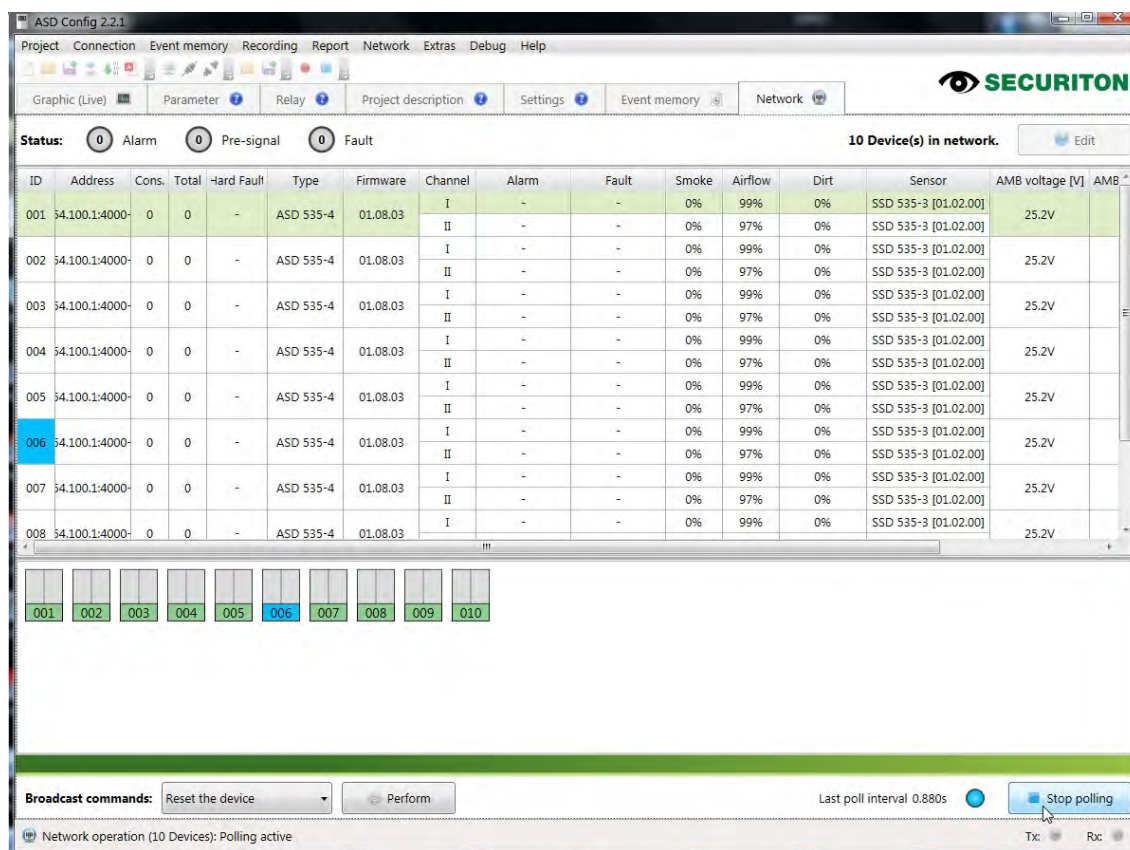
5. Save the network project under the desired name.

⇒ All ASDs are listed.

6. Access an ASD by double-clicking the appropriate row.

7. Click **Start Polling**.

⇒ The states and values of the ASDs are polled and updated in the list. **NOTICE! Active polling can slow down the system response.**



⇒ After restarting ASD Config, all available ASDs appear in the start window under **Select device**.

8. To display the network view under **Select device**, select **Offline mode**.
9. Click **Network > Open network project**.

6 Planning and project planning

The following section is a guideline for planning and project management for special fire detector systems with the ASD for standards-compliant room monitoring and equipment monitoring.

6.1 Influencing factors in planning and project planning

- ▶ Number and type of ASDs used
 - ▶ Interface to the ASDs
 - ▶ Number of required RCU 700s
 - ▶ Locations of the RCU 700s
 - ▶ Assignment of the ASDs to the RCU 700s
 - ▶ Naming of the participants based on the location, room names, DZ
 - ▶ Placement of the RCU 700s: 19-inch rack or located in different places
 - ▶ Type of power supply: local or via PoE
 - ▶ NCU 900 and RCU 700 emergency power supply in the case of power supply via 24 VDC and 230 VAC, PoE
 - ▶ Use of Modbus
 - ▶ Connection to a company network
-

6.2 System limits

	System limit
Number of aspirating smoke detectors	100
Number of RCU 700s	50
Overall length of the RS-485 network, SIM 35, ASD side (m)	1000
Ethernet distance between NCU 900, switch and RCU 700 (m)	100

Use switches or fibre-optic cables to bridge distances over 100 metres.

6.3 Naming and address assignment

The following parameters must be defined in a system with NCU 900 and RCU 700:

- ▶ RS-485 or IP address
- ▶ Participant name

► Assignment of ASD - RCU

► Network ports

The following issues must be clarified with the customer's IT department:

- IP addresses intended for the system participants: VLAN, subnet, specific IP addresses in existing structure
- Required ports for firewall or router configuration adjustments, see table below
- Assignment of ASD - RCU
- Maximum network traffic, the system induces a maximum of 10 Mbit/s

NCU port	Direction	Protocol	Service	Description
80	In	TCP	http	Web server hosting ASD Config
123	Out	UDP	NTP	NTP time server
161	In	UDP	SNMP	Simple network monitoring protocol
162	Out	UDP	SNMP	Traps of the simple network monitoring protocol
502	In	TCP	Modbus	Modbus TCP
4000 (optional)	In	TCP		Moxa serial device, used with UMS, Netsoft, ASD Config
5353	In and Out	UDP	mDNS	Avahi
9000	In	TCP	http	RCU communication, Web API

NCU port	Direction	Protocol	Service	Description
11116 (optional)	Out	TCP		SSP interface to the ASDs, ASD 532 via Ethernet
11115 (optional)	Out	UDP		SSP interface to the ASDs, ASD 532 via Ethernet

RCU port	Protocol	Service	Description
5353	UDP	mDNS	Avahi

6.4 Planning the electrical installation

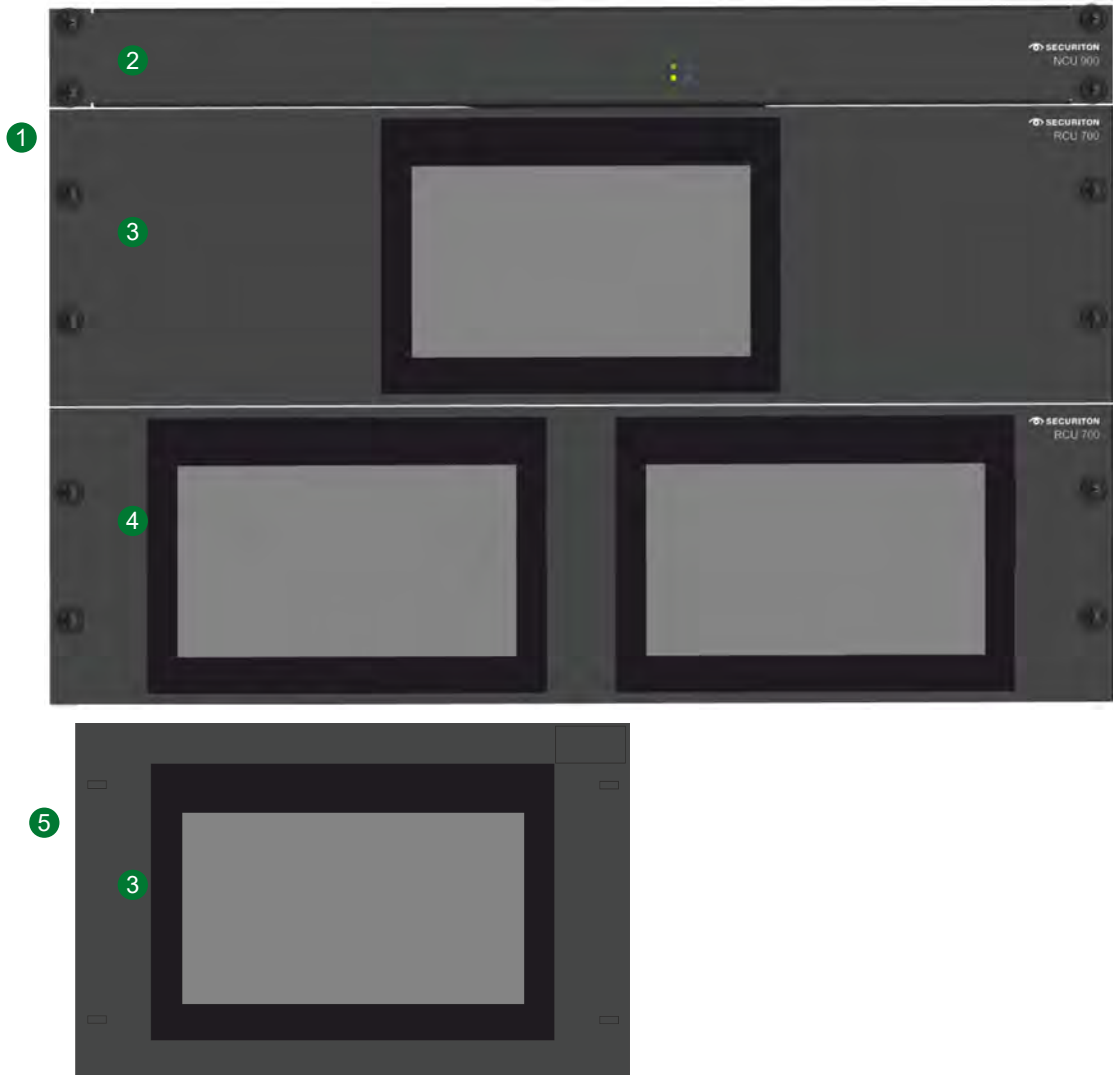
Country-specific regulations, standards and guidelines apply.

6.4.1 Requirements for installation cables

Connection	Requirements for the cables used
RS-485: SIM 35 for NCU 900	▶ 4 wires twisted in pairs ▶ Screened ▶ Impedance $\geq 120 \text{ Ohm}$ ▶ Cross-section 0.2 mm^2
Ethernet	▶ Type $\geq$ Category 5e ▶ Screening type S/FTP or equivalent

7 Mounting

RCU and NCU are designed for installation in a 19-inch rack.



1	19-inch rack
2	NCU 900
3	RCU 700
4	2 RCU 700s
5	RWH

7.1 Aids for mounting

The following aids are required for mounting:

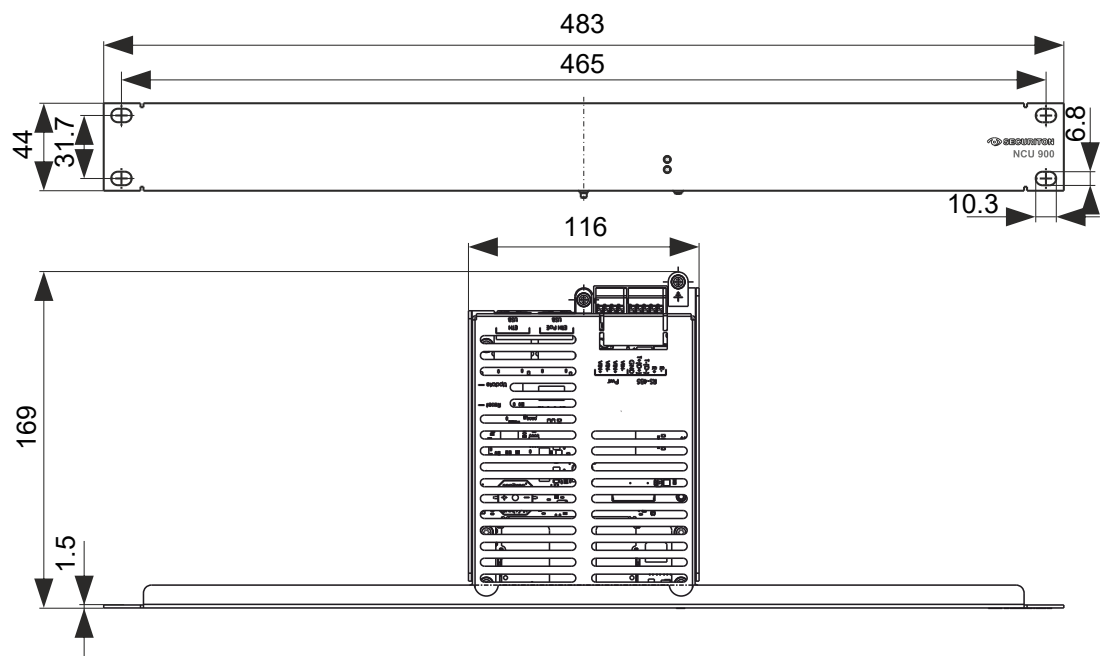
Aids	Assembly step
Socket spanner/no. 5.5 fork wrench	▶ Lock the RCU 700 in the RMF ▶ Lock the RCU 700 in the RWH
No. 3 flat-blade screwdriver	▶ Lock the RCU 700 in the RWH

Mounting equipment

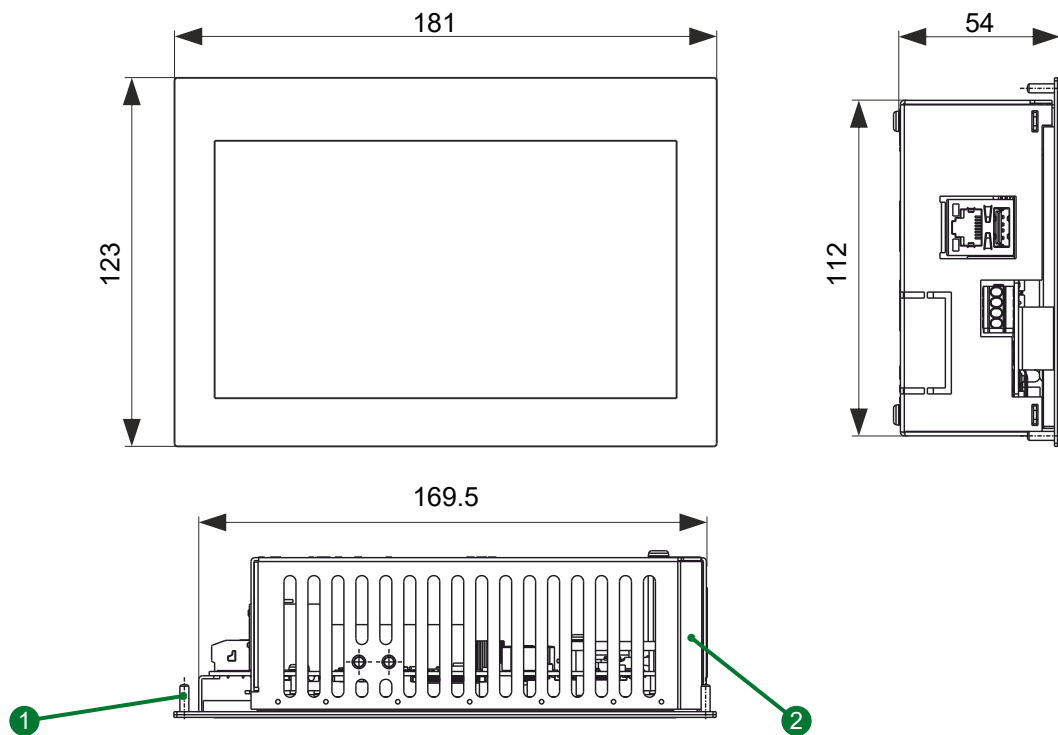
Supplied mounting equipment	Assembly step
Mounting set with 4 M6 cage nuts, 4 M6 plastic washers, 4 M6 x 16 mm Phillips-head screws	▶ Lock the NCU 900 in the 19-inch rack ▶ Lock the RMF 19-x in the 19-inch rack
2 angle profiles	▶ For reinforcing the RMF 19-2 when installing 2 RCU 700s

7.2 Dimensions

7.2.1 NCU 900 dimensions



7.2.2 RCU 700 dimensions

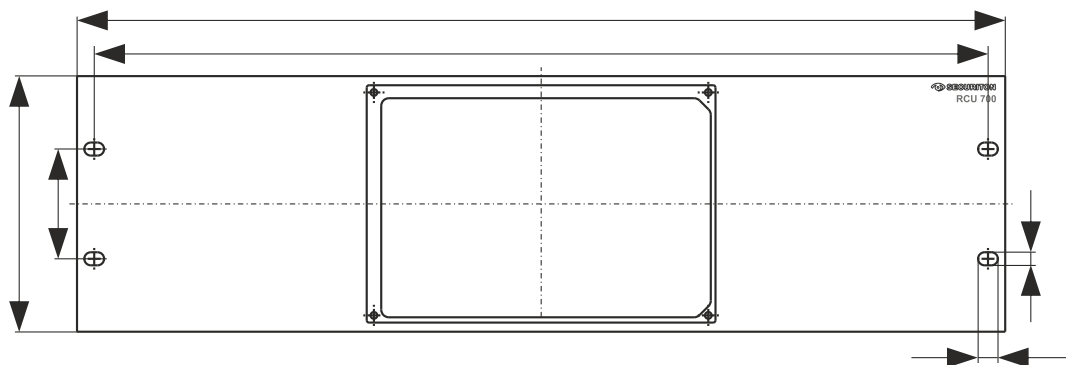


Dimensions in mm

1	4 M3 threaded bolts for locking in the RMF or RWH
2	Anti-twist protection for mounting

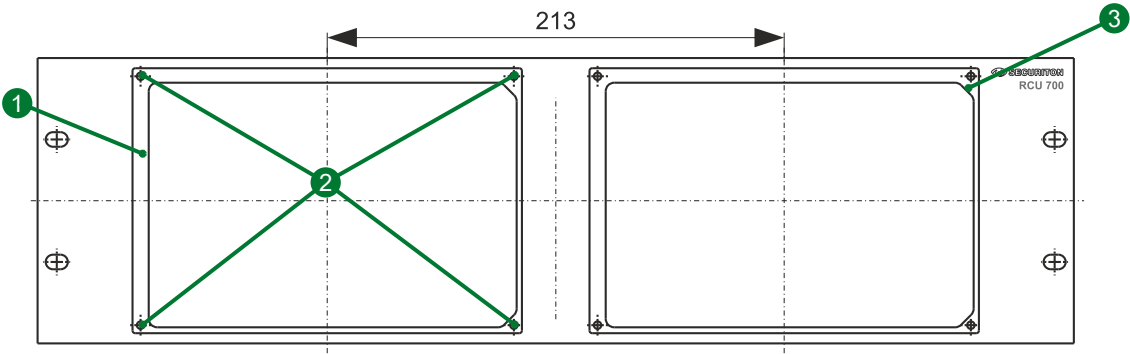
7.2.3 RMF 19-1, RMF 19-2 dimensions

RMF 19-1



Dimensions in mm

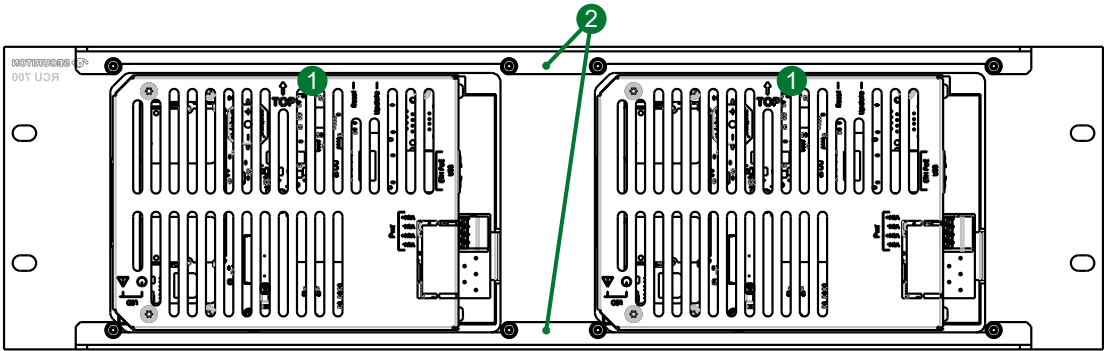
RMF 19-2



Dimensions in mm, material thickness: 4 mm

1	Recess for RCU front
2	Fastening holes for RCU 700
3	Anti-twist protection for RCU mounting

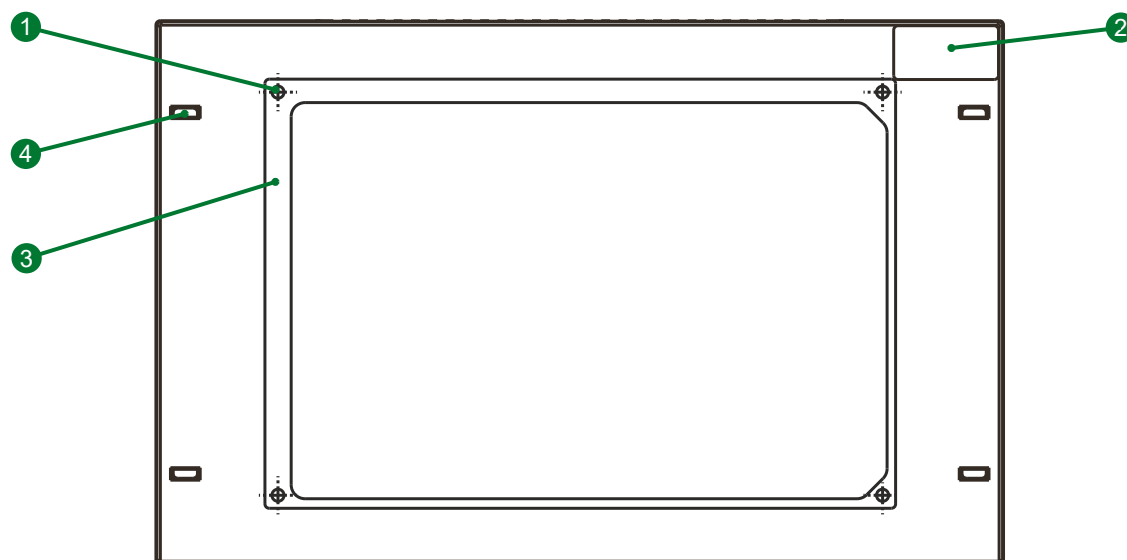
Rear view



1	RCU 700
2	Angle profiles

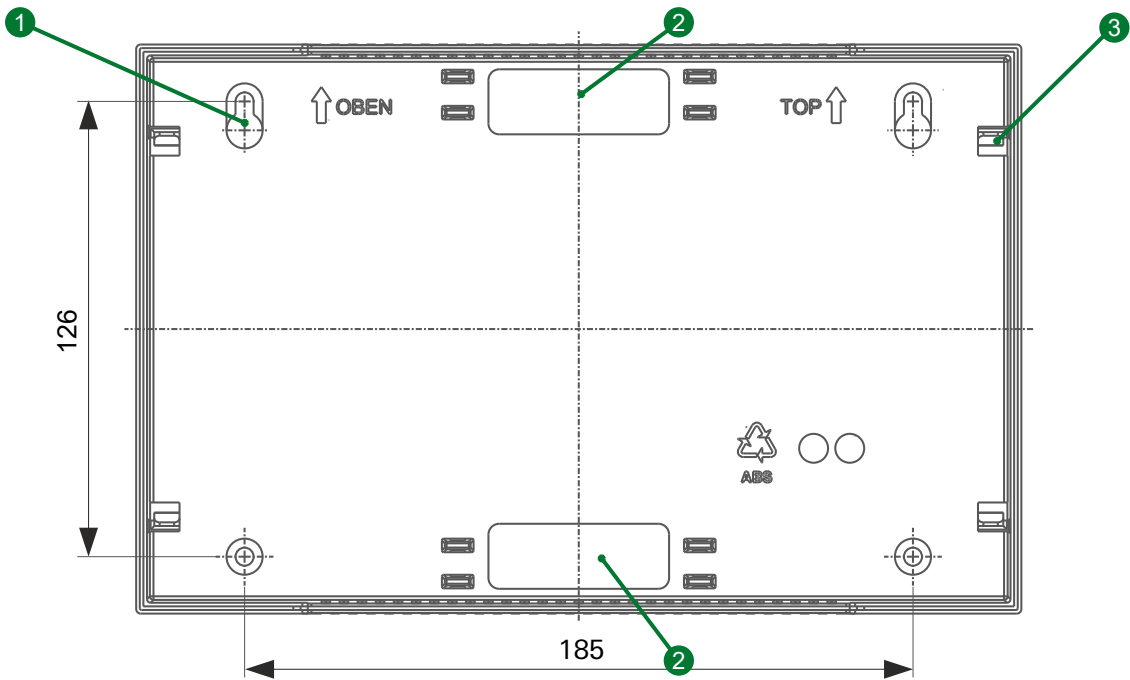
7.2.4 RWH dimensions

Cover



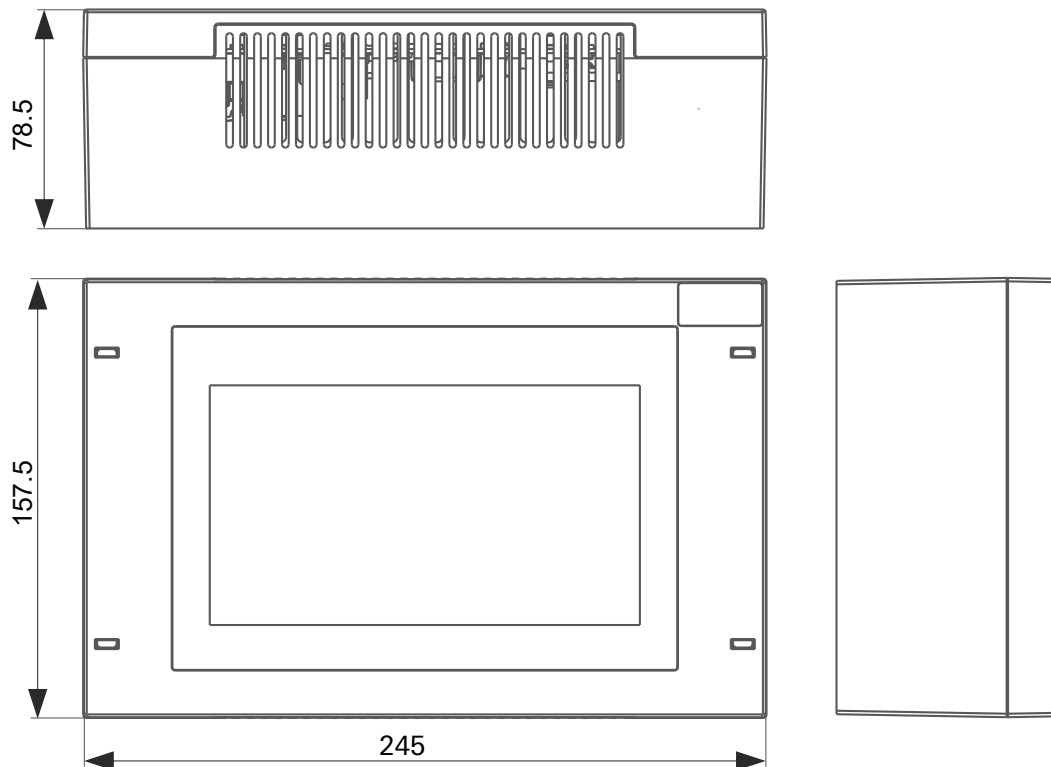
1	4 fastenings for RCU 700
2	Recess for company name plate
3	Recess for RCU front
4	4 unlocking openings

Base, interior view



Dimensions in mm

1	Openings for wall fastening
2	Cable entry
3	4 locking tabs

RWH

Dimensions in mm

7.3**Mounting the RCU 700 in the RMF 19-x****► Mount the RCU 700 in the RMF 19-x:**

1. Remove the RCU 700 from the packaging.
 2. Place the front of the RCU 700 on a flat surface. Pay attention to the installation direction and position of the anti-twist protection.
 3. Remove the RMF 19-x from the packaging.
 4. Guide the front of the RMF 19-x over the RCU 700. Pay attention to the position of the anti-twist protection.
 5. Position the threaded bolts of the RCU 700 in the fastening holes of the RMF 19-x.
 6. When mounting an RMF 19-2, fasten the angle profiles.
 7. Fasten the RCU 700 with the enclosed spring rings and M3 hexagonal nuts on the threaded bolts. Tighten with a socket spanner or a no. 5.5 fork wrench.
- ⇒ Mounting is concluded. The display protection film can be removed.

7.4 Mounting the RCU 700 in the RWH

► Mount the RCU 700 in the RWH 19-x:

1. Remove the RCU 700 from the packaging.
 2. Place the front of the RCU 700 on a flat surface. Pay attention to the installation direction and position of the anti-twist protection.
 3. Remove the RWH from the packaging.
 4. Carefully open the cover of the RWH using a no. 3 flat-blade screwdriver.
 5. Guide the front of the RWH 19-x over the RCU 700. Pay attention to the position of the anti-twist protection.
 6. Position the threaded bolts of the RCU 700 in the fastening holes of the cover of the RWH.
 7. Fasten the RCU 700 with the enclosed spring rings and M3 hexagonal nuts on the threaded bolts. Tighten with a socket spanner or a no. 5.5 fork wrench.
- ⇒ Mounting is concluded. The RWH can be fastened to a wall, see [Fastening the RWH to the wall](#).
-

7.5 Fastening the RWH to the wall

► Fasten the RWH to the wall:

1. Fasten the RWH to the wall using the enclosed Torx wood screws Ø 4.5 x 50 mm.
 2. Feed the installation cables through the two rectangular openings on the back.
- ⇒ Mounting is concluded.
-

8 Installation

8.1 Installation aids

Electrical connection

The electrical connection is by means of tool-free push-in terminals for rigid wires.

Ethernet connection

The Ethernet connection is via RJ45 sockets and Ethernet cable or patch cable.

8.2 Establishing the power supply

The power can be supplied centrally or decentrally.

Central power supply

The central power supply of a power supply unit is looped through from device to device via the terminals.

Decentralised power supply

Each device is connected to a separate power supply.

8.3 Emergency power supply

All connected ASDs must have an emergency power supply.

The NCU 900, RCU 700 and Ethernet switch can also be designed with emergency power supply.

8.4 Creating equipotential bonding for the NCU 900

Due to the RS-485 connection, the NCU 900 must be connected to an equipotential bonding contact of the 19-inch rack used for mounting.

► Connect the NCU 900 with equipotential bonding:

Prerequisite

✓ Cross-section of cable used $\geq 2.5 \text{ mm}^2$

1. Connect the earthing screw to the NCU 900 with the earthing bar or other equipotential bonding contact of the 19-inch rack.
-

8.5 SIM 35 terminal assignment

SIM terminal	Signal	Wiring/installation		
1	GND	Input	1st conductor of wire pair 2	twisted
2	D+		1st conductor of wire pair 1	
3	D-		2nd conductor of wire pair 1	
4	GND	Output	1st conductor of wire pair 2	twisted
5	D+		1st conductor of wire pair 1	
6	D-		2nd conductor of wire pair 1	

The input-output assignment is freely selectable.

8.6 NCU 900 terminal assignment

NCU terminal	Signal	Wiring/installation		
R-				
R+				
T-(D-)	D- serial interface RS-485	D- of SIM 35	2nd conductor of wire pair 1	twisted
T+(D+)	D+ serial interface RS-485	D+ of SIM 35	1st conductor of wire pair 1	
GND	GND serial interface RS-485	GND of SIM 35	1st conductor of wire pair 2	
Protective conductor	Equipotential bonding	Shield	Screening	
VIN-	0 V	Power supply line, continuation to RCU 700		
VIN+	+18 to +30 VDC			
VIN-	0 V	Power supply line, input from 24 VDC power supply		
VIN+	+18 to +30 VDC			

No power supply line is required for power supply via PoE switch. Only one type of power supply may be used: PoE or VIN.

The input-continuance assignment is freely selectable.

8.7 RCU 700 terminal assignment

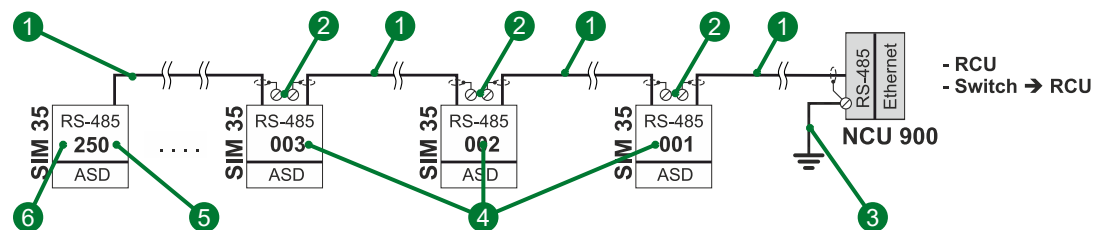
RCU terminal	Signal	Wiring/installation
VIN-	0 V	Power supply line, continuation to next RCU 700
VIN+	+18 to +30 VDC	
VIN-	0 V	Power supply line, input from 24 VDC power supply/NCU 900
VIN+	+18 to +30 VDC	

No power supply line is required for power supply via PoE switch. Only one type of power supply may be used: PoE or VIN.

The input-continuance assignment is freely selectable.

8.8 Connecting RS-485

The RS-485 connection must be made according to the following graphic. The NCU 900 is at the beginning of the installation.



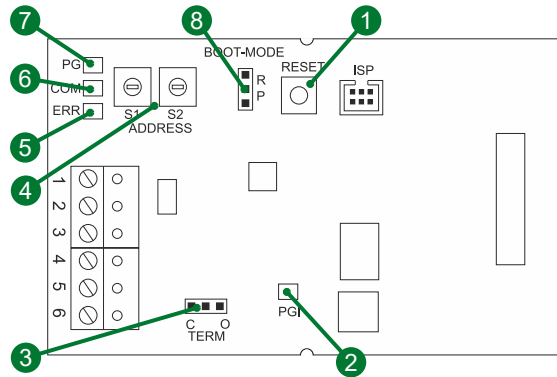
1	Network cable
2	Screen connected to lustr terminal
3	Screen connected to equipotential bonding via housing
4	Reference for address assignment during commissioning
5	Do not connect screen on last SIM 35
6	Bus connection on last SIM 35, jumper TERM in position C

9 Commissioning

See also

 [Requirements for installers and end users](#)

9.1 Configuring SIM 35



1	RESET key
2	PG LED
3	TERM jumper
4	Rotary switch S1, S2
5	ERR LED
6	COM LED
7	PG LED
8	Boot mode jumper

Address assignment

Each SIM 35 must be assigned its own address. The addresses must be selected in ascending order according to the installation diagram, see [Connecting RS-485](#).

The address is set in hexadecimal code using the rotary switches S1 and S2.

Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex
S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2
		32	2 0	64	4 0	96	6 0	128	8 0	160	A 0	192	C 0	224	E 0		
1	0 1	33	2 1	65	4 1	97	6 1	129	8 1	161	A 1	193	C 1	225	E 1		
2	0 2	34	2 2	66	4 2	98	6 2	130	8 2	162	A 2	194	C 2	226	E 2		
3	0 3	35	2 3	67	4 3	99	6 3	131	8 3	163	A 3	195	C 3	227	E 3		
4	0 4	36	2 4	68	4 4	100	6 4	132	8 4	164	A 4	196	C 4	228	E 4		
5	0 5	37	2 5	69	4 5	101	6 5	133	8 5	165	A 5	197	C 5	229	E 5		
6	0 6	38	2 6	70	4 6	102	6 6	134	8 6	166	A 6	198	C 6	230	E 6		
7	0 7	39	2 7	71	4 7	103	6 7	135	8 7	167	A 7	199	C 7	231	E 7		
8	0 8	40	2 8	72	4 8	104	6 8	136	8 8	168	A 8	200	C 8	232	E 8		
9	0 9	41	2 9	73	4 9	105	6 9	137	8 9	169	A 9	201	C 9	233	E 9		
10	0 A	42	2 A	74	4 A	106	6 A	138	8 A	170	A A	202	C A	234	E A		
11	0 B	43	2 B	75	4 B	107	6 B	139	8 B	171	A B	203	C B	235	E B		
12	0 C	44	2 C	76	4 C	108	6 C	140	8 C	172	A C	204	C C	236	E C		
13	0 D	45	2 D	77	4 D	109	6 D	141	8 D	173	A D	205	C D	237	E D		
14	0 E	46	2 E	78	4 E	110	6 E	142	8 E	174	A E	206	C E	238	E E		
15	0 F	47	2 F	79	4 F	111	6 F	143	8 F	175	A F	207	C F	239	E F		
16	1 0	48	3 0	80	5 0	112	7 0	144	9 0	176	B 0	208	D 0	240	F 0		
17	1 1	49	3 1	81	5 1	113	7 1	145	9 1	177	B 1	209	D 1	241	F 1		
18	1 2	50	3 2	82	5 2	114	7 2	146	9 2	178	B 2	210	D 2	242	F 2		
19	1 3	51	3 3	83	5 3	115	7 3	147	9 3	179	B 3	211	D 3	243	F 3		
20	1 4	52	3 4	84	5 4	116	7 4	148	9 4	180	B 4	212	D 4	244	F 4		
21	1 5	53	3 5	85	5 5	117	7 5	149	9 5	181	B 5	213	D 5	245	F 5		
22	1 6	54	3 6	86	5 6	118	7 6	150	9 6	182	B 6	214	D 6	246	F 6		
23	1 7	55	3 7	87	5 7	119	7 7	151	9 7	183	B 7	215	D 7	247	F 7		
24	1 8	56	3 8	88	5 8	120	7 8	152	9 8	184	B 8	216	D 8	248	F 8		
25	1 9	57	3 9	89	5 9	121	7 9	153	9 9	185	B 9	217	D 9	249	F 9		
26	1 A	58	3 A	90	5 A	122	7 A	154	9 A	186	B A	218	D A	250	F A		
27	1 B	59	3 B	91	5 B	123	7 B	155	9 B	187	B B	219	D B				
28	1 C	60	3 C	92	5 C	124	7 C	156	9 C	188	B C	220	D C				
29	1 D	61	3 D	93	5 D	125	7 D	157	9 D	189	B D	221	D D				
30	1 E	62	3 E	94	5 E	126	7 E	158	9 E	190	B E	222	D E				
31	1 F	63	3 F	95	5 F	127	7 F	159	9 F	191	B F	223	D F				

The TERM jumper defines the bus termination on the last SIM 35 installed.

TERM jumper	Bus termination, position C = active
Position O	SIM 35 is not the last module
Position C	SIM 35 is the last module

Status LEDs

Green PG LED	Status
Lights up	Internally active power supply

Green COM LED	Communication status
Lights up	Communication active
ERR LED yellow	SIM 35 status
Flashes	Address in invalid range
Lights up	Fault

Other operating and display elements

RESET key	SIM 35 reset
Pressed	SIM 35 hardware reset
BOOT MODE Jumper	Firmware upgrade, production
Position R	Normal position
Position P	Firmware upgrade locally on SIM 35

9.2

Configuration with NCU Config

The following functions and criteria can be defined during commissioning with NCU Config:

Sector	Parameter	Default setting	Range
System configuration	System name	NCU-1	32 characters
	Password	1234	4 to 64 characters
	PIN protection Isolate	Off, default: Ein1234	off/on, 4 to 8 digits
	PIN protection Programmer	Off, default: Ein1234	off/on, 4 to 8 digits
	Set system time		PC time
	Language	English	English, German, Chinese
NCU 900 configuration	IP configuration Ethernet interface ETH PoE	169.254.100.1	automatic/DHCP/manual
	IP configuration Ethernet interface ETH	automatic	automatic/DHCP/manual
	Modbus and SNMP configuration	off	on/off

Sector	Parameter	Default setting	Range
Assignment of ASDs to NCU 900	ASD name assignment	ASD-1/-2/-n	32 characters
	REK name assignment	- - -	32 characters
	ASD position	1 to n	Free sequence
Assignment of RCU 700 to NCU 900	RCU 700 name assignment	RCU-1/-2/-n	32 characters
RCU 700 configuration	Alarm screen	on	on/off
	Buzzer	off	off/on
	Animated icons	off	off/on
	PIN protection	off	off/on
	Timeout, switchover to device list	on, 300 seconds	10 to 86,400 seconds, 24 hours
	Device list mode	static, maximum 10 ASDs	static/dynamic
	Display of the alarm sensitivity	Relative	Relative (%) / absolute (%/m)
	Adaptive display brightness, event/deployment driven	on	on/off
	Timeout, switchover to inactive display brightness	on, 1 minute	1 to 60 minutes
	Inactive display brightness, quiescent state	B3	B1 to B7
	Active display brightness, during event/operation	B6	inactive display brightness +1 to B6
	IP configuration Ethernet interface ETH PoE	automatic	automatic/DCHP/manual
	Programmer	off	off/on

Sector	Parameter	Default setting	Range
	Timeout Programmer, switchover to device list	on, 60 seconds	20 to 600 seconds
Assignment of RCU 700 to NCU 900	Define the sequence of the display on the RCU 700	1 to n	Free sequence

9.3 Carry out commissioning

► Carry out commissioning:

1. Start system
2. Log in
3. Export/Import
4. Configuring the system
5. Configuring the NCU 900, Modbus/SNMP
6. Assignment of ASDs to NCU 900
7. Assignment of RCU 700 to NCU 900
8. Configuring the RCU 700
9. Assignment of ASDs to RCU 700s

9.3.1 Start system

► Start system:

Prerequisite

- ✓ All SIM 35 wired and programmed.
 - ✓ Ethernet connection and power supply of all NCU 900s and RCU 700s concluded.
 - ✓ All connected ASDs are in operation.
1. Connect PC to the Ethernet switch. Select free port.
 2. Start the web browser and enter IP 169.254.100.1.
 - ⇒ The NCU Config web application is started.
 - ⇒ The default configuration of NCU 900 and RCU 700 can be adapted with NCU Config.



NOTICE

Open only one instance of NCU Config. Clear browser cache in the event of faults.

9.3.2

Log in

► **Log in:**

1. Enter the password in the password field. Default password: 1234.
2. Click **Login**.

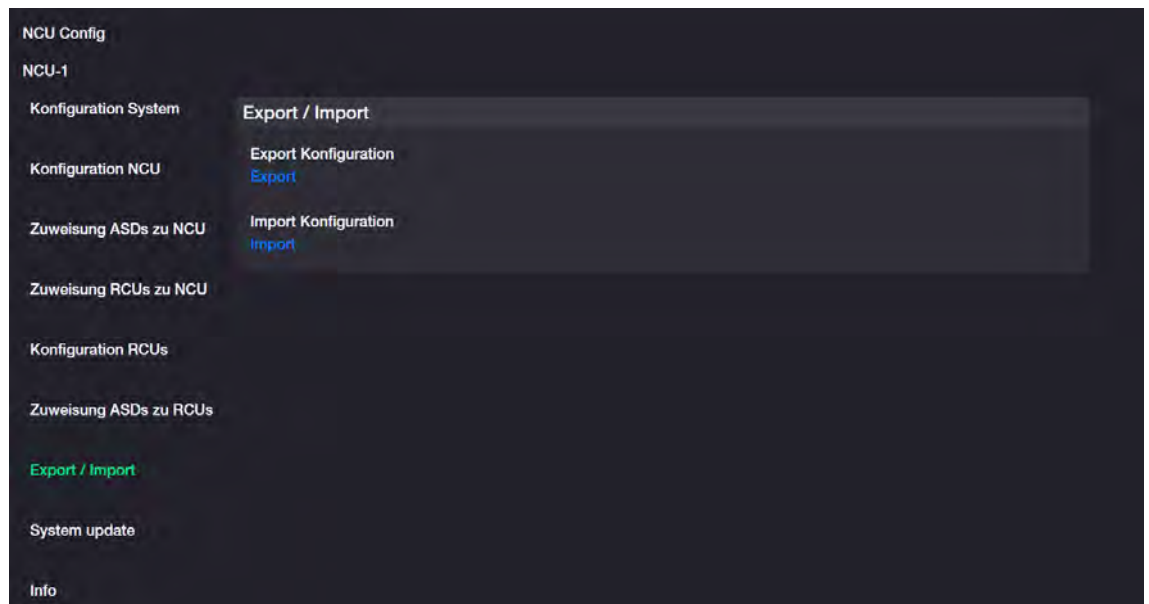


9.3.3

Export/Import

► **Use export/import functions:**

1. To import a configuration file, click **Import**.
2. Click **Export** to save the configuration locally.



9.3.4 Configuring the system

► **Configure the system as required:**

1. Enter the system name and click on the Save icon.
2. Change the default password and click on the Save icon.
3. Change the default PIN for the *Isolate* key and click on the Save icon.
4. Click **Set system time** to apply the PC time.
5. Activate the desired language under **Language**.

The screenshot shows the 'NCU Config' web interface. On the left is a navigation menu with 'Konfiguration System' highlighted. The main area is titled 'Systemkonfiguration' and contains several sections:

- Konfiguration NCU:** 'Systemname' field with 'NCU-1' entered.
- Zuweisung ASDs zu NCU:** 'Passwort zur Anmeldung am NCU Config' section with 'Altes Passwort' and 'Neues Passwort' fields.
- Zuweisung RCU zu NCU:** 'Passwort bestätigen' field.
- Konfiguration RCUs:** 'PIN-Code für Taste "Isolieren" an der RCU' section with 'Alter PIN "Isolieren"', 'Neuer PIN "Isolieren"', and 'PIN "Isolieren" bestätigen' fields.
- Export / Import:** 'PIN-Code für Funktion "Programmer" an der RCU' section with 'Alter PIN "Programmer"', 'Neuer PIN "Programmer"', and 'PIN "Programmer" bestätigen' fields.
- System update:** 'Systemzeit' field with a 'Systemzeit setzen' button.
- Info:** 'Sprache' dropdown menu with 'English', 'Deutsch' (selected), and '簡體中文' options.

9.3.5 Configuring the NCU 900, Modbus/SNMP

Configuring the NCU 900

► Define IP configuration *ETH PoE* and *ETH*:

1. Deactivate *Use DHCP* or *obtain automatically* if desired.
⇒ *IP address*, *Subnet* and *Gateway* can be entered manually.
2. Confirm with **Save**.

► Use Modbus or SNMP:

1. Activate *Use Modbus* or *Use SNMP*.
⇒ A message about the Interface Agreement appears.
2. Download, print, complete and sign the Interface Agreement document under **Info**.
3. Send the signed Interface Agreement document to the address specified in it.
⇒ The copy countersigned by Securiton is returned to the user.
4. Click **Accept**.
5. Enter the desired *IP addresses trap receivers*.
6. Confirm with **Save**.

NCU Config

NCU-1

Konfiguration System

Konfiguration NCU

Konfiguration NCU

IP-Konfiguration ETH PoE

DHCP verwenden oder automatisch beziehen ☐

IP-Adresse

Subnetz

Gateway

Zuweisung ASDs zu NCU

Konfiguration RCU

IP-Konfiguration ETH

DHCP verwenden oder automatisch beziehen ☒

Zuweisung ASDs zu RCUs

Modbus-Konfiguration

Modbus Version

Modbus verwendet ☒

Export / Import

SNMP-Konfiguration

SNMP-Version

SNMP verwenden ☒

System update

IP-Adresse Trap-Empfänger 1

IP-Adresse Trap-Empfänger 2

IP-Adresse Trap-Empfänger 3

Info

Interpreting the Modbus address

The sequence of the ASDs assigned corresponds to the Modbus address; see the following example:

Zugewiesene ASDs	
ASD 532	169.254.1.1
ASD Sym 1-1	M1-1
ASD Sym 1-2	M1-2
ASD Sym 1-3	M1-3
ASD Sym 1-4	M1-4
ASD Sym 1-5	M1-5
ASD Sym 1-6	M1-6
ASD Sym 1-7	M1-7
ASD Sym 1-8	M1-8
ASD 9	M1-9

Alle auswählen

- | | |
|---|---------------------------------|
| 1 | ASD 532 = Modbus slave ID 0 |
| 2 | ASD Sym 1-4 = Modbus slave ID 5 |
| 3 | ASD Sym 1-7 = Modbus slave ID 8 |

9.3.6 Assignment of ASDs to NCU 900

► Assign ASDs to NCU 900:

- Click **Scan**.
 - ⇒ All ASDs connected in the network are listed.
 - ⇒ If there is no response to the scanning for RS-485 addresses, the scan procedure is interrupted.
- As an alternative, tap **Scan all**.
 - ⇒ After a maximum of 90 seconds, all present ASDs are listed.



3. Select the desired ASDs.
4. Click the arrow keys to move selected ASDs to the right in the *Assigned ASDs* view. Click **Select all** to select all ASDs.
5. Change the names of the selected ASDs with the pen icon. 32 characters possible.
 - ⇒ For ASDs with activated REK configuration, *REK* is displayed in the list.
 - ⇒ The pen icon can be used to assign names to the individual REKs. 32 characters possible.
 - ⇒ As many REKs are listed as configured in ASD Config.



ASD bearbeiten

Adresse: M1-9

Name: ASD 9

REK Einstellungen

REK 1 Name: Rohrast 1

REK 2 Name: Rohrast 2

REK 3 Name: Rohrast 3

REK 4 Name: Rohrast 4

Speichern Abbrechen

6. Apply changes by clicking the Save icon.

9.3.7 Assignment of RCU 700 to NCU 900

► Assign RCU 700 to NCU 900:

1. Select the desired RCU 700s and click the arrow keys to move them to the right in the *Assigned ASDs* view. Click **Select all** to select all RCU 700s.

NCU Config

NCU-1

Konfiguration System

Zuweisung RCUs zu NCU

Verfügbare RCUs			Zugeordnete RCUs
RCU-1	00:14:2d:a0:01:17	→	
RCU-2	00:14:2d:a0:02:58	→	

Zuweisung ASDs zu NCU: Alle auswählen

Zuweisung RCUs zu NCU

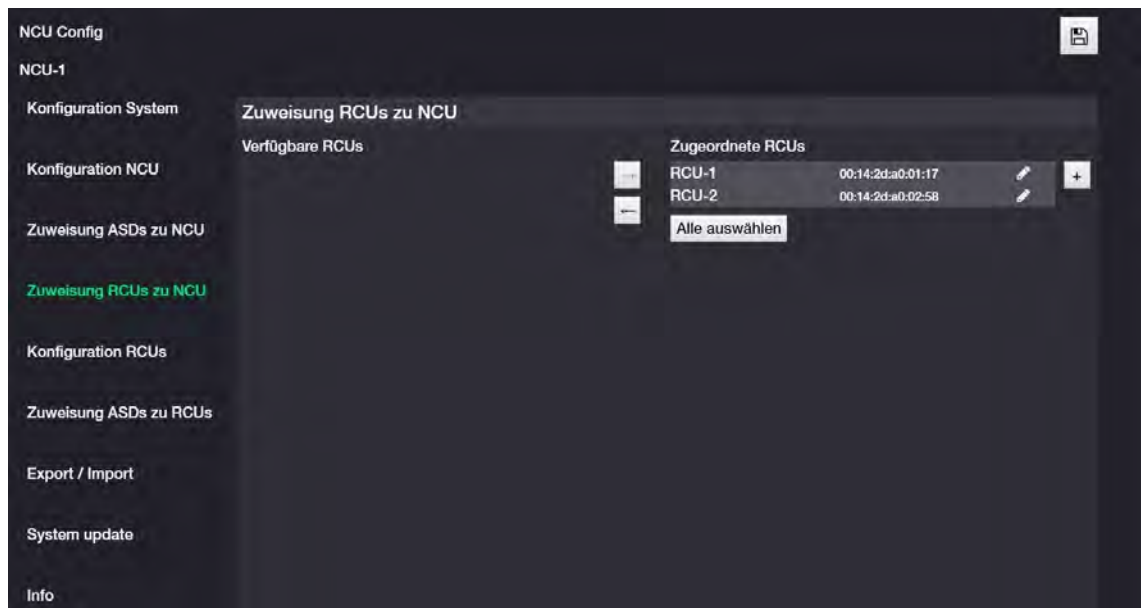
Konfiguration RCUs

Zuweisung ASDs zu RCUs

Export / Import

System update

Info



2. Change the names of the selected RCU 700s with the pen icon. 32 characters possible.



3. Apply changes by clicking the Save icon.

9.3.8 Configuring the RCU 700

► Configure the RCU 700:

1. If desired, click **Default RCU settings**.
⇒ The available options are reset to default values.
2. Activate *Use individual settings* for each RCU 700 for individual settings.
3. Click on the corresponding checkbox to activate or deactivate the desired options.
4. If desired, switch *IP configuration ETH PoE* to *Manual* and adjust the subnet and gateway values.
5. If desired, activate *Programmer*.
6. Enter the desired value under *Timeout in seconds*.
7. Click on the Save icon to apply the changes.

NCU Config

NCU-1

Konfiguration System

Konfiguration NCU

Zuweisung ASDs zu NCU

Zuweisung RCU zu NCU

Konfiguration RCU

Zuweisung ASDs zu RCU

Export / Import

System update

Info

Konfiguration RCU

■ Individuelle Einstellungen verwenden Default RCU-Einstellungen

Allgemeine Einstellungen

Alarm-Screen ist aktiviert ☒

Summer ist aktiviert ☐

Animationen sind aktiviert ☐

PIN Schutz (Isolation) ist aktiviert ☐

Timeout (Umschaltung auf Geräteliste) ☐

Timeout in Sekunden

Geräteliste Modus

Alarm-Empfindlichkeitseinheit

Konfiguration Display-Helligkeit

Das Verändern der Default Display-Helligkeit kann die Lebensdauer des Displays verkürzen

Inaktive Display-Helligkeit

Die adaptive Display-Helligkeit ist aktiviert ☒

Aktive Display-Helligkeit

Aktive Display-Helligkeit Timeout in Minuten

IP-Konfiguration ETH PoE

DHCP verwenden oder automatisch beziehen ☒

Programmer

Aktiviert ☒

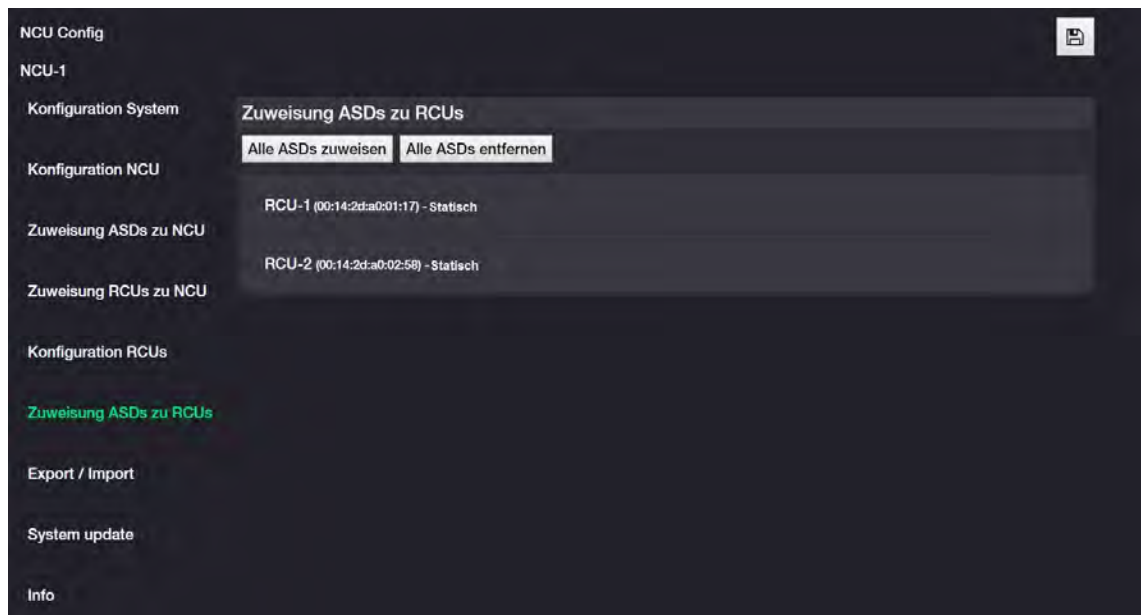
Timeout in Sekunden

9.3.9 Assignment of ASDs to RCU 700s

► Assign all ASDs to all RCU 700s:

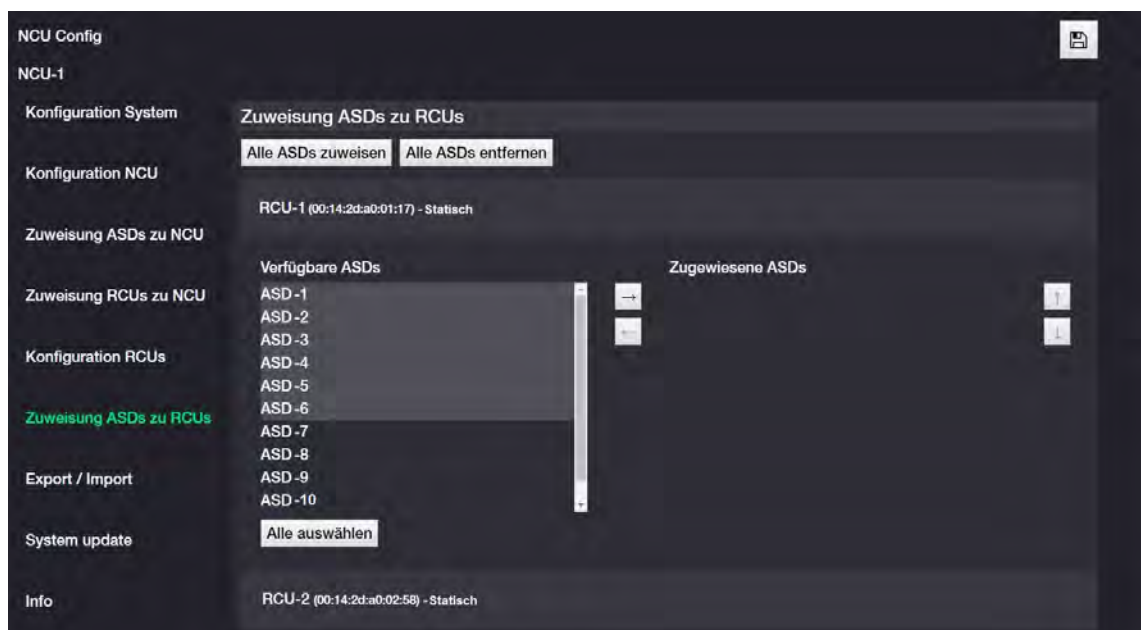
1. Click **Assign all ASDs**.

⇒ All ASDs are displayed identically on all RCU 700s.

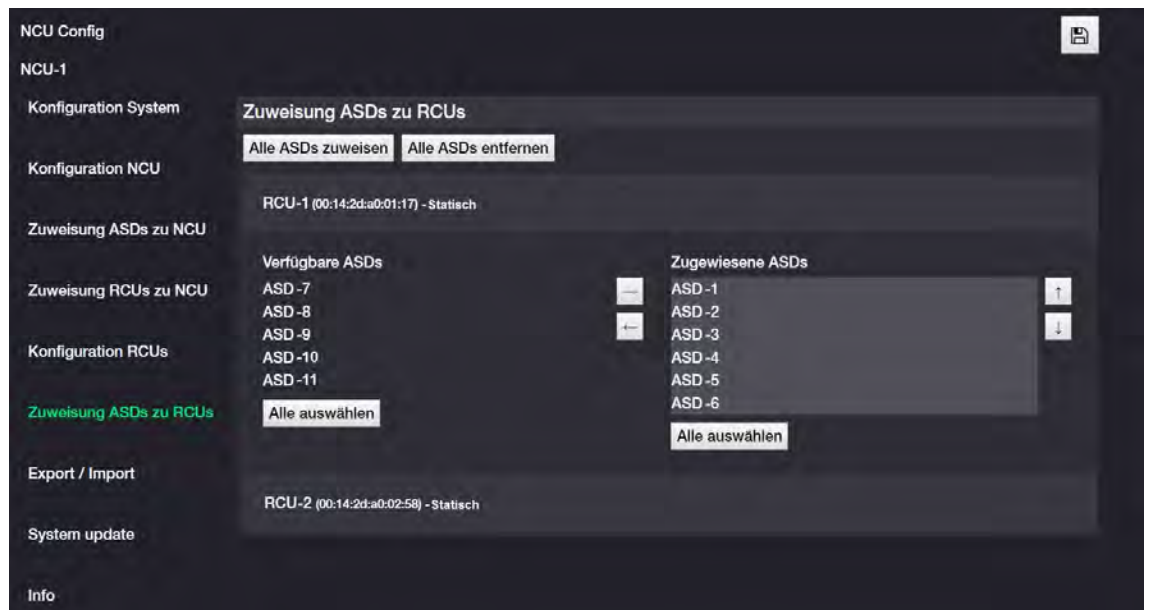


► **Assign ASDs to the RCU 700s individually:**

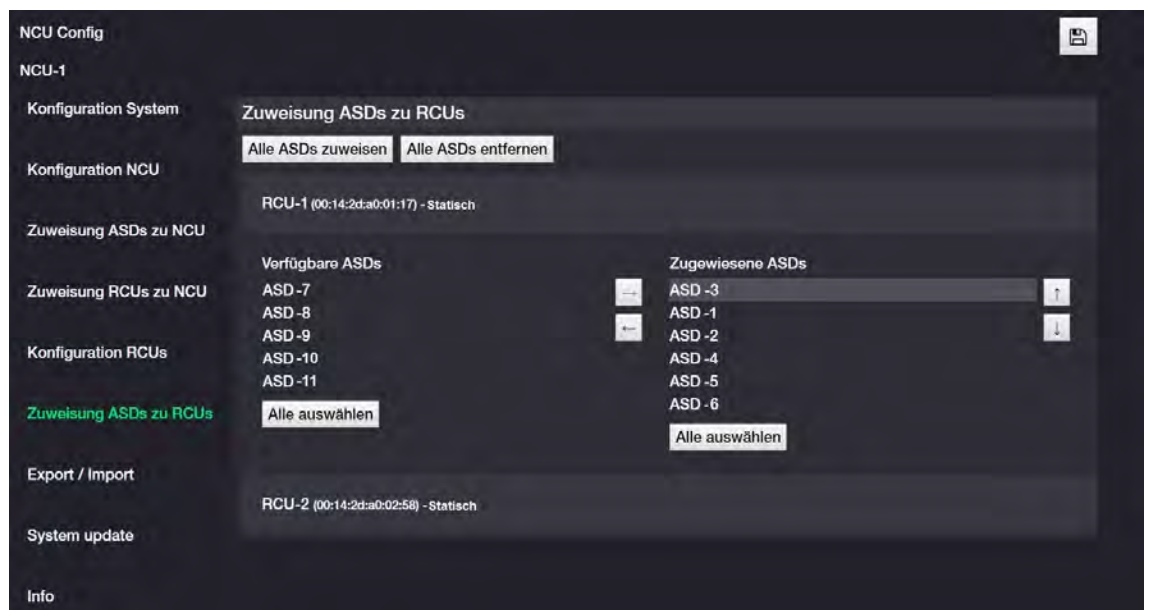
1. Select the desired ASDs under *Available ASDs* **Assign all ASDs**.



- Click the arrow keys to move selected ASDs to the right in the *Assigned ASDs* view.



- Click the arrow keys on the right-hand side to change the position of the ASDs in the device list of the RCU 700.



- Apply changes by clicking the Save icon.

9.4 Updating software

The software for NCU 900 and RCU 700 can be updated in NCU Config or via USB stick. In the event of faults or incompatible software updates, a system restore can only be performed from a USB stick.

Downgrade

The software can also be reset to an older version using the steps listed.



CAUTION

A faulty software update can cause the system configuration to be deleted.

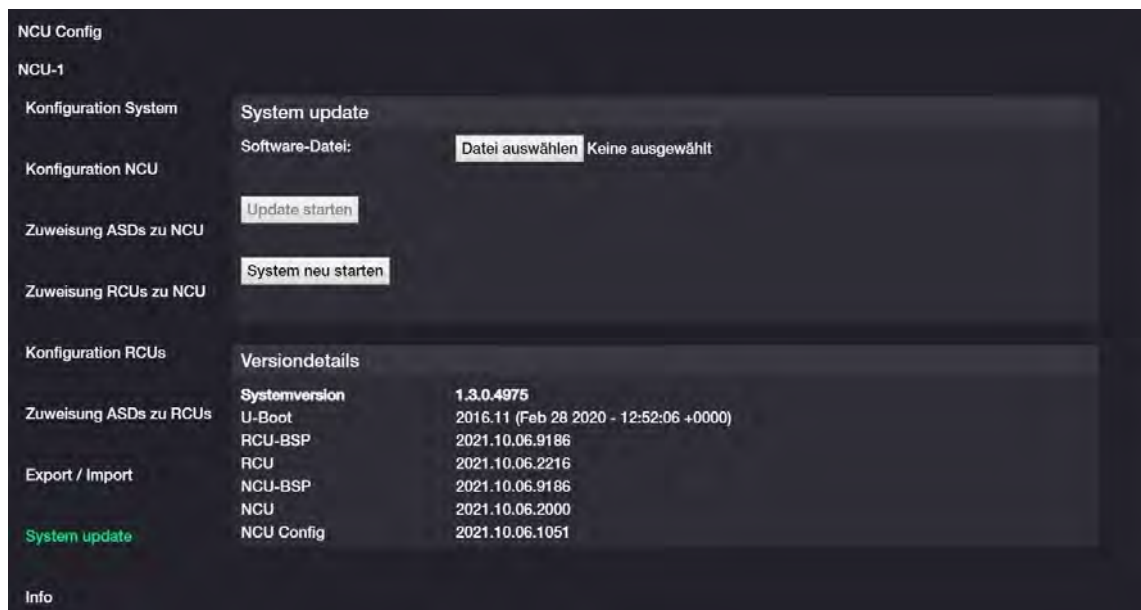
The system configuration file may be lost.

- ▶ Export and back up the system configuration file before updating the software.
- ▶ If the configuration is deleted, re-import the backed up system configuration file.

Software update in NCU Config

▶ Update software in NCU Config:

1. In the **System update** window, click **Select file**. See also [Configuration with NCU Config](#).
2. Select the file with the extension **.swu**.
3. Click **Start update**.
 - ⇒ The software is updated on the NCU 900 and all RCU 700s. The procedure may take several minutes.
4. Once the update is complete, click **Restart system**.
5. Delete the browser cache.
6. Refresh the web browser.



NOTICE

In the event of errors during the software update:

Restart NCU 900 via the power supply. Then restart the software update. In the event of a recurring error, perform a software update from the USB stick.

Software update and system recovery from USB stick on NCU 900 or RCU 700

Use the following file for the software update:

► Example: *NCU900_RCU700_X.X.X.YYYY.swu*

For system recovery, unzip the following ZIP files before copying:

► Example: *NCU900_Factory_Recovery_X.X.X.YYYY.zip*

► Example: *RCU700_Factory_Recovery_X.X.X.YYYY.zip*

Prerequisite

✓ The USB stick is FAT32 formatted.

► Perform software update and system recovery from USB stick:

1. Copy files to USB stick. **NOTICE! The USB stick must only contain the software for the NCU 900 or RCU 700 or the files for system recovery.**
 2. **NOTICE! Perform the following steps separately on each device in the network.** Insert the USB stick into the device.
 3. Press and hold the update key on the device for 1 second.
 - ⇒ The software on the device is updated. The procedure may take several minutes.
 - ⇒ After the update or system recovery has been completed, the device will restart.
 4. Repeat steps 1 to 3 for all other devices.
-

9.5

Interface Agreement, EULA, licences

The following documents can be downloaded in English in NCU Config under **Info**:

- Interface Agreement
 - EULA
 - Information on open source software and licensing terms
-

10 Maintenance

NCU 900 and RCU 700 are maintenance-free.

11 **Replace components**

No components for NCU 900 and RCU 700 can be replaced. In the event of defects, the complete unit must be replaced by the manufacturer.

12 Warning and fault rectification

Display of faults

The status LEDs of the NCU 900 and RCU 700 indicate statuses and faults, see [Status LEDs](#).

The RCU 700 displays the following messages:

Error designation	Explanation/cause	Corrective measure
ASD was configured but not found	ASD deactivated from super-ordinate FACP	ASD voltage supply RS-485/Ethernet connection
ASD has lost the connection	Connection interruption in the power supply line or networking line	
RCU 700 was configured but not found	Connection interruption in the power supply line or networking line, if not PoE-powered	RCU 700 power supply, if not PoE-powered Ethernet connection to RCU 700
Not connected to the NCU 900		NCU 900 power supply, if not PoE-powered Ethernet connection to RCU 700

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Disposal

The ASD is manufactured in accordance with the latest environmental protection and sustainability standards. Disposal must be carried out in accordance with the applicable country-specific guidelines.

The following regulation applies in EU member states as well as in Switzerland:

**Electrical/electronic devices**

Electrical and electronic devices are not to be disposed of with household waste. As the end user you are legally obliged to return them. After use, electrical and electronic devices can be returned free of charge to the seller or to the designated collection points (e.g., municipal collection points or retailers). Correct disposal protects the environment. For more detailed information, please contact your waste disposal services.

14 Items and spare parts

Designation	Article number
NCU 900 Network Communication Unit	11-5000003-01-03
RCU 700 Remote Control Unit	11-5000004-01-03
RCU Mounting Frame RMF 19-1 for 1 RCU 700	11-5000006-01-01
RCU Mounting Frame RMF 19-2 for 2 RCU 700s	11-5000006-02-01
RCU wall housing RWH	11-5000010-01-01
SIM 35 serial interface module with installation set	11-2200000-01-04

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Technical data

Supply voltage range from terminals VIN+/ VIN-		18 to 30	VDC
Requirement for supply via PoE switch	Performance class 3	6.49 to 12.95	W
Wattage maximum NCU 900 without USB load		4.8	
Wattage maximum RCU 700 without USB load		7.0	
Power consumption maximum NCU 900 with 24 VDC without USB load		200	mA
Power consumption maximum RCU 700 with 24 VDC without USB load		290	
Maximum number of aspirating smoke detectors		100	pieces
Maximum number of RCU 700s		50	
Maximum overall length of the RS-485 network SIM 35, ASD side		1000	m
Maximum Ethernet distance between the participants (NCU 900/switch/RCU 700)		100	
Protection type according to IEC 60529/EN 60529		20	IP
Temperature range continuous		0 to +50	°C
Ambient condition humidity detector housing, briefly without condensation		95	% rel. humidity
Ambient condition humidity detector housing sampling pipe continuous		70	% rel. humidity
Terminals, screwless spring terminals	Single-wire/fine-wire conductor	0.2 to 1.5	mm ²
Stripping length for the spring terminals		9 to 10	
Terminal screen/equipotential bonding, screw terminal NCU 900		M3	
Buzzer sound pressure level RCU 700		65	dB (A)
Housing	Material NCU 900, RCU 700	Sheet steel, aluminium	

	NCU 900 colour, front	Black 90 05	RAL
	RCU 700 colour, front	Anodised black	
	Material RWH	PC ABS	
	RWH colour compliant with NCS	S 8005-R80B (anthracite)	
Dimensions	NCU 900	483 × 44 × 169 (W×H×D)	mm
	RCU 700 with RMF	483 × 133 × 54 (W×H×D)	
	RCU 700 with RWH	245 × 157.5 × 1169 (W×H×D)	
Weight	NCU 900	830	g
	RCU 700 with RMF 19-1	1040	
	2 RCU 700s with RMF 19-2	1435	
	RCU 700 with RWH	872	

