483 mm

169,5 mm 169,5 mm

7"

54 mm

133 mm

483 mm

116 mm

169 mm

44 mm

FidesNet makes it possible to connect multiple SecuriRAS aspirating smoke detectors in a network while also enabling decentralised access via one or more FidesControl RCU 700 units. The performance scope includes RS-485 networking plus the visualisation and operation of all connected ASDs on the FidesControl RCUs linked in the network. Various other functions can be implemented in addition to visualisation and operation. The FidesNet networking solution offers the possibility of connecting the special fire detectors on the field level to superordinate systems via the FidesPort NCU 900.

FidesNet
Fire Detection System Network

Networking of Securiton special fire detectors

Function

Using FidesNet, multiple ASDs are connected to each other via serial RS-485 interface. The SIM 35 module is used as serial interface module in the SecuriRAS ASD. The FidesPort NCU 900 regulates the communication in the network and integrates it into the superordinate system. In order to forward data from the field level, the FidesPort NCU 900 supports standard interfaces (such as Modbus TCP/RTU or SNMP) for connecting to hierarchically superordinate systems such as a BMS building management system.

Networking

The ASDs on the RS-485 field bus can be connected with the FidesControl RCU 700 displays as required. All combinations are possible here – one ASD to one RCU 700, one ASD to multiple RCU 700 units and up to 100 ASDs to one or more RCU 700 units.

Applications

The FidesNet network solution is typically used wherever remote visualisation and operation are required. This may be due to difficult to access areas – such as high-security areas at airports, laboratories, IT environments etc – where aspirating smoke detectors are installed but where a technician cannot always gain access (or where access is difficult). Another possible application is central visualisation and operation in a safety management system in order to monitor the entire installation from a single location. In addition to remote visualisation and operation, the connection to other systems via standardised interfaces is another important area of application. For example, forwarding the relevant measurement data to a measurement system at a data centre allows an operating company to gain an overview of the current system status.

Operation

Operation is made via the 7-inch touchscreen on the FidesControl unit. All data from the net-

worked special fire detectors is available on this display. Each detector in the network can be accessed via the FidesControl unit in order to call up detailed information, such as for pending maintenance work. The detectors can be isolated by channel and also reset in the event of errors or alarms.

- The networked ASDs can be divided up between various FidesControl units as required (e.g. 1 ASD : 1 RCU; 1 ASD : 50 RCUs; 100 ASDs : 1 RCU; 100 ASDs : 50 RCUs etc.). Up to 100 ASDs are possible on one RCU.
- The elegant 7-inch touchscreen display sets new standards when it comes to the user experience.
- Various interfaces are available on the FidesPort, such as Modbus TCP, Modbus RTU and SNMP. These can be used to integrate the data from the networked ASDs directly into other systems, such as building management systems.
- The FidesControl displays can be operated via Power over Ethernet (PoE).
- Individual customer-specific configuration of the display (measuring value units in percent and/or absolute, default screen, screensaver, acoustics etc.)
- Configuration of display language (German, English, simplified Chinese etc.)
- Protection against unauthorised operation (isolation protected via PIN entry)
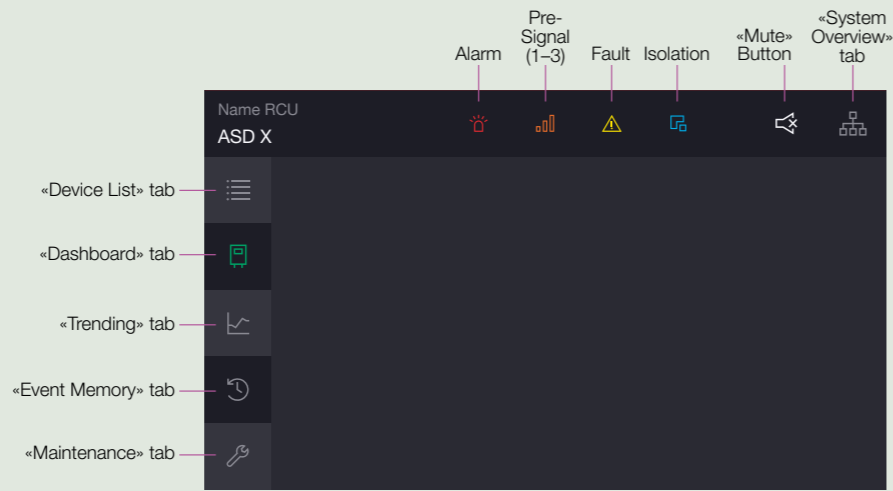
Technical data	FidesControl RCU 700	FidesPort NCU 900
Supply voltage	14–30 VDC	14–30 VDC
Interfaces	RJ45 (Ethernet)	2 × RJ45 (Ethernet)
	USB	2 × USB
		1 × RS-485
Standards/approvals	CE (EMC, RoHS)	CE (EMC, RoHS)
	WEEE, REACH	WEEE, REACH
	EN 50130-4 (for declaration of conformity)	EN 50130-4 (for declaration of conformity)
	EN 61000-6-3 (for declaration of conformity)	EN 61000-6-3 (for declaration of conformity)
Housing	19-inch frame	19-inch frame
Colour	Black anodised	Black coated
Packaging	Cardboard	Cardboard
Dimensions (L × W × H)	483 × 44 × 169 mm	483 × 44 × 169 mm
Operating temperature/humidity	0–50 °C; 95%	0–50 °C; 95%
Technical documentation	T 140 741	T 140 741

Order numbers		
11-5000004-01-xx	RCU 700	Remote control unit
11-5000003-01-xx	NCU 900	Network communication unit
11-5000006-01-xx	RMF 19-1	RCU 700 mounting frame 19-1
11-5000006-02-xx	RMF 19-2	RCU 700 mounting frame 19-2

Supported devices	
ASD 535	Aspirating smoke detector for 1 or 2 SSD 535 smoke sensors
ASD 532	Aspirating smoke detector for 1 SSD 532 smoke sensor
SIM 35	Serial interface module

Specifications subject to change without notice. Delivery subject to availability.

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SECURITON

SECURITON

Overview of the visualisation interface

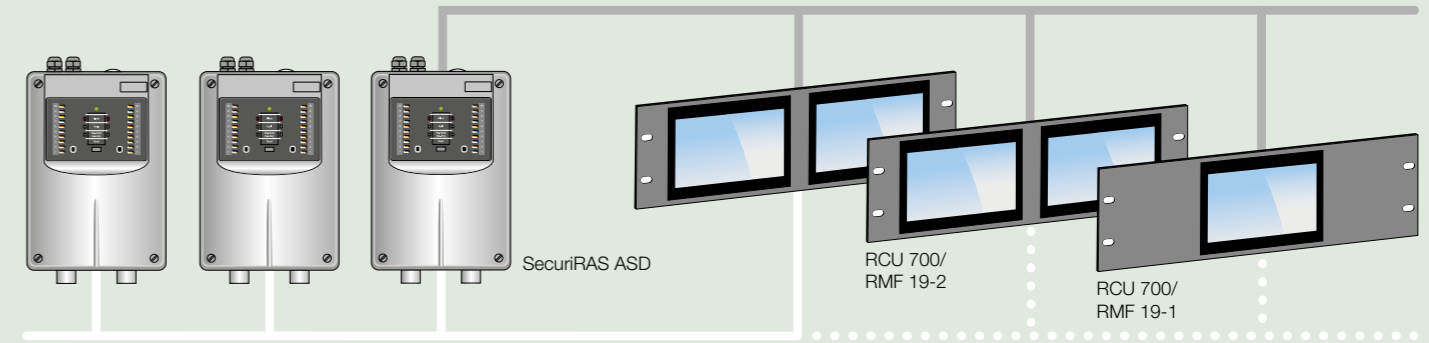The graphic interface is divided up into the areas navigation, header and page content.

Navigation: For switching views.

Header: For the superordinate presentation of faults, pre-signals, alarms, isolations and name texts.

Page content: Area of application for the various tabs.

Alarm Pre-Signal (1–3) Fault Isolation «Mute» Button «System Overview» tab

Name RCU
ASD X

«Device List» tab
«Dashboard» tab
«Trending» tab
«Event Memory» tab
«Maintenance» tab

A SecuriRAS ASD can be displayed on multiple RCU 700 units (up to 50).

SecuriRAS ASD   RCU 700/RMF 19-2
                       RCU 700/RMF 19-1

Up to 100 SecuriRAS ASDs can be shown on a RCU 700. The assignment can be freely selected according to the customer wishes and project.
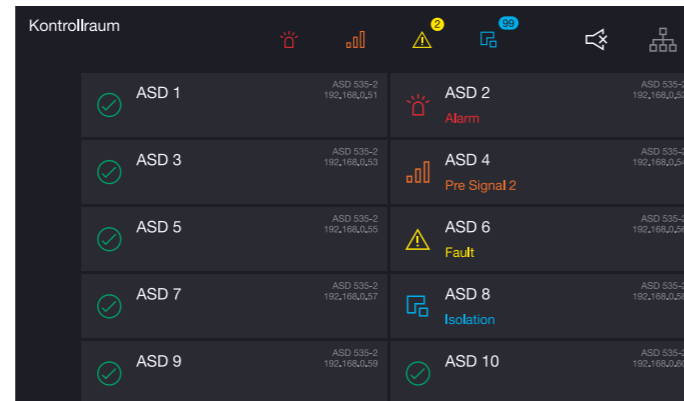

FidesControl RCU 700

Graphic interface of the FidesControl RCU 700 with ASD-relevant views – important information at the right time

The simply designed graphic interface allows for intuitive interaction between the user and all connected network participants. This leads to optimal user guidance and the best possible user experience.
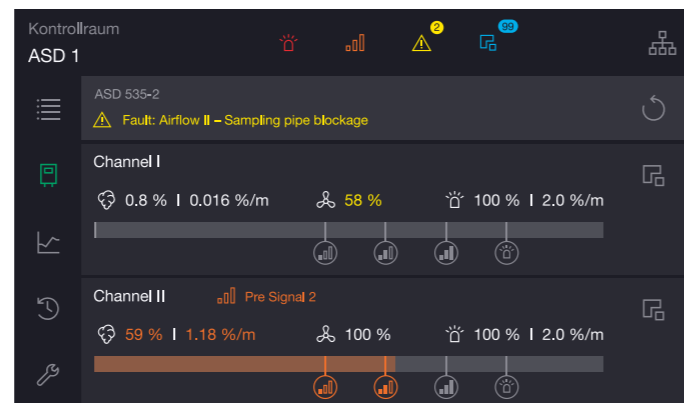
Device List

In the «Device List» view, all or a selection of the devices connected in a system with a FidesPort can be displayed depending on the customer's wishes. In this view, the status of the individual networked devices is highlighted in colour and is thus immediately apparent. If a device is selected, the user switches to the dashboard of the corresponding device.

Kontrollraum

ASD 1	ASD 535-2 192.168.0.51	ASD 2	ASD 535-2 192.168.0.52
		Alarm	
ASD 3	ASD 535-2 192.168.0.53	ASD 4	ASD 535-2 192.168.0.54
		Pre Signal 2	
ASD 5	ASD 535-2 192.168.0.55	ASD 6	ASD 535-2 192.168.0.56
		Fault	
ASD 7	ASD 535-2 192.168.0.57	ASD 8	ASD 535-2 192.168.0.58
		Isolation	
ASD 9	ASD 535-2 192.168.0.59	ASD 10	ASD 535-2 192.168.0.60

Dashboard

The individual channels of the corresponding aspirating smoke detector are shown on the dashboard. In addition to the current measurement values (smoke and airflow in percent and/or absolute value), a level indicator also shows the current smoke value in relation to the pre-signal thresholds and alarm threshold. This leads to a quick and uncomplicated interpretation of the situation. In this view, the individual channels of an ASD can be isolated or the entire device can be reset.

Kontrollraum
ASD 1

ASD 535-2
⚠ Fault: Airflow II – Sampling pipe blockage

Channel I
0.8 % | 0.016 %/m   58 %   100 % | 2.0 %/m

Channel II   Pre Signal 2
59 % | 1.18 %/m   100 %   100 % | 2.0 %/m

Trending

This view shows the measurement values of the airflow and smoke value as a line diagram. The trend lines show both real-time values and past values. As an additional aid, the curves are also shown in relation to the configured pre-signal and alarm thresholds.

Other views
- Event Memory
- Maintenance view
- System view

Kontrollraum
ASD 1

Smoke Channel 1 2   Airflow Channel 1 2

% 255
   225
   200
   175
   150
   125
   100
    75
    50
    25
     0
     100 90 80 70 60 50 40 30 20 10 0 s

Spread / pinch fingers to zoom in or out

FidesPort NCU 900

FidesPort NCU 900 – the link between normative networking and comfort networking

The FidesPort allows the connection of the RS-485 field bus on the ASD side (master) and the Ethernet side with the comfort networking.

Mechanical design

The FidesPort consists of a 19-inch front panel with a height unit, onto which the NMB 90 main board is fastened on the rear. The 19-inch design allows for installation in a conventional 19-inch rack, in which one or more FidesControl units plus the power supply and switch can also be positioned.

Data availability

The measurement data of the networked aspirating smoke detectors on the RS-485 field level are read out by the FidesPort and prepared for forwarding to the comfort networking. Hierarchically superordinate systems (such as a management system) can obtain the data via Modbus TCP/RTU or IT infrastructure systems via SNMP from the FidesPort NCU 900.

FidesControl units can be connected to the Ethernet network to ensure local visualisation of the individually networked ASDs.
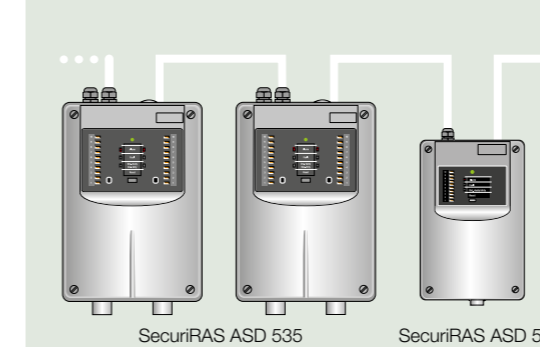
The **ASD Config** tool for specialists can obtain the data directly on the FidesPort. Difficult to access ASDs can then be maintained and configured easily.
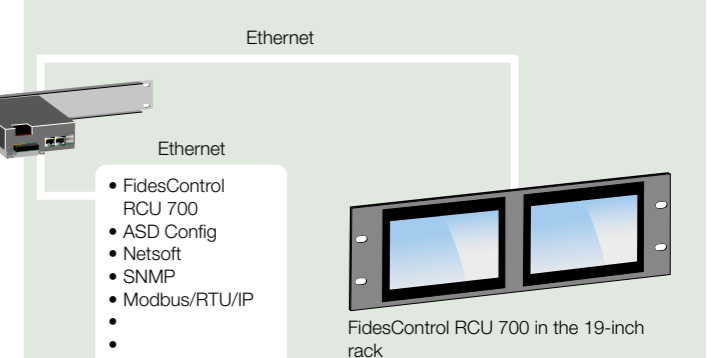
NetSoft is used for the graphic display of entire building plans with the current states of the networked ASDs.

FidesNet

RS-485 connection

SecuriRAS ASD 535   SecuriRAS ASD 532

FidesPort NCU 900

Ethernet connection

Ethernet

Ethernet

- FidesControl RCU 700
- ASD Config
- Netsoft
- SNMP
- Modbus/RTU/IP
-
-
-

FidesControl RCU 700 in the 19-inch rack