SIEMENS

FC72x / FT724

Fire control panel / Fire terminal

Operation

MP1XS

Building Technologies

Fire Safety & Security Products

Technical specifications and availability subject to change without notice.

Table of contents

1 About this document

Goal and purpose

This document describes the operation of fire control panels and fire terminals in the fire detection system FS720. The reader shall understand the structure of a fire detection installation, the PMI setup and the functions in the overall system. This understanding makes an adequate behaviour possible in the event of fire or fault.

Scope

The document applies to the fire control panels and the fire terminal of the type Fx72x, market package MP1XS.

Target groups

The information in this document is intended for the following target groups:

Target group	Activity	Qualification
Operating personnel	● Carries out procedures to correctly operate the product.	● No particular basic training is needed. ● Has been instructed by the commissioning personnel.
Commissioning personnel	● Configures the product at the place of installation according to customer-specific requirements. ● Checks the product operability and releases the product for use by the operator. ● Searches for and corrects malfunctions.	● Has obtained suitable specialist training for the function and for the products. ● Has attended the training courses for commissioning personnel.
Maintenance personnel	● Carries out all maintenance work. ● Checks that the products are in perfect working order. ● Searches for and corrects malfunctions.	● Has obtained suitable specialist training for the function and for the products.

Conventions for text marking

Markups

Special markups are shown in this document as follows:

▷	Requirement for a behavior instruction
⇨	Intermediate result of a behavior instruction
⇨	End result of a behavior instruction
'Text'	Quotation, reproduced identically
<Key>	Identification of keys

Supplementary information

The  symbol identifies supplementary information such as a tip for an easier way of working.

Supplementary information is labelled with the 'i' symbol.

Reference document

The reference version of this document is the international version in English. The international version is not localized.

The reference document has the following designation:

ID_x_en_--

x = modification index, en = English, -- = international

Document identification

Position	Information
Title page	• Product type • Product designation • Document type
Last page, bottom left	• Document ID ID_ModificationIndex_Language_COUNTRY • Edition date
Last page, bottom right-hand side	• Manual • Register

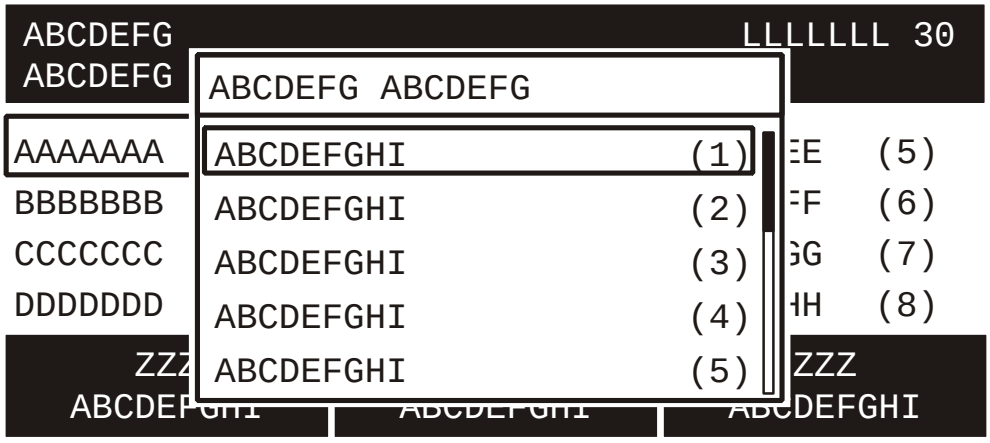
History of changes

Document ID	Edition date	Brief description
A6V10211076_b_en_--	05.2009	Edition MP1XS Commands revised, Tamper alarm, new
A6V10211076_a_en_--	07.2008	First edition

1.1 Display indication in the document

The display of the fire control panels and fire terminals is indicated in tables in this document, with a few exceptions.

Deviations between the original and the table are indicated exemplary in the figures below:



Display with window and bar

Main menu Exit with <C>			Access level 3
Message summary	(1)	Element search	(5)
Functions	(2)	Event memory	(6)
Favorites	(3)	Login/logout	(7)
Topology	(4)	Settings/administration	(8)
Function On/Off		Function All	Test LED

Table representation: Display without window

Selecting element category	
Zone	(1)
Section	(2)
Area	(3)
Sounder	(4)
Physical channel	(5)

Table representation: 'Select element category' window without bar

The table representation has the following key deviations from the original:

- Font and representation (not inverted)
- Windows are indicated separately without display background
- No bars to indicate the position and list length
- No frame around selection

2 Safety

2.1 Safety notices

The safety notices must be observed in order to protect people and property.

The safety notices in this document contain the following elements:

- Symbol for danger
- Signal word
- Nature and origin of the danger
- Consequences if the danger occurs
- Measures or prohibitions for danger avoidance

Symbol for danger

	This is the symbol for danger. It warns of **risks of injury**. Follow all measures identified by this symbol to avoid injury or death.

Additional danger symbols

These symbols indicate general dangers, the type of danger or possible consequences, measures and prohibitions, examples of which are shown in the following table:

 General danger

 Explosive atmosphere

 Voltage/electric shock

 Laser light

 Battery

 Heat

Signal word

The signal word classifies the danger as defined in the following table:

Signal word	Danger level
DANGER	DANGER identifies a dangerous situation, which **will result directly in death or serious injury** if you do not avoid this situation.
WARNING	WARNING identifies a dangerous situation, which **may result in death or serious injury** if you do not avoid this situation.
CAUTION	CAUTION identifies a dangerous situation, which **could result in slight to moderately serious injury** if you do not avoid this situation.
NOTICE	*NOTICE* identifies possible damage to property that may result from non-observance.

How risk of injury of presented

Information about the risk of injury is shown as follows:

⚠ WARNING
Nature and origin of the danger Consequences if the danger occurs ● Measures / prohibitions for danger avoidance

How possible damage to property is presented

Information about possible damage to property is shown as follows:

NOTICE
Nature and origin of the danger Consequences if the danger occurs ● Measures / prohibitions for danger avoidance

2.2 Safety regulations for the method of operation

National standards, regulations and legislation

Siemens products are developed and produced in compliance with the relevant European and international safety standards. Should additional national or local safety standards or legislation concerning the planning, assembly, installation, operation or disposal of the product apply at the place of operation, then these must also be taken into account together with the safety regulations in the product documentation.

Electrical installations

⚠ WARNING

Electrical voltage

Electric shock

- Work on electrical installations may only be carried out by qualified electricians or by instructed persons working under the guidance and supervision of a qualified electrician, in accordance with the electrotechnical regulations.

- Wherever possible disconnect products from the power supply when carrying out commissioning, maintenance or repair work on them.
- Lock volt-free areas to prevent them being switched back on again by mistake.
- Label the connection terminals with external external voltage using a 'DANGER External voltage' sign.
- Route mains connections to products separately and fuse them with their own, clearly marked fuse.
- Fit an easily accessible disconnecting device in accordance with IEC 60950-1 outside of installation.
- Produce earthing as stated in local safety regulations.

Assembly, installation, commissioning and maintenance

- If you require tools such as a ladder, these must be safe and must be intended for the work in hand.
- When starting the fire control panel ensure that unstable conditions cannot arise.
- Ensure that all points listed in the 'Testing the product operability' section below are observed.
- You may only set controls to normal function when the product operability has been completely tested and the system has been handed over to the customer.

Testing the product operability

- Prevent the remote transmission from triggering erroneously.
- If testing building installations or activating devices from third-party companies, you must collaborate with the people appointed.
- The activation of fire control installations for test purposes must not cause injury to anyone or damage to the building installations. The following instructions must be observed:
  - Use the correct potential for activation; this is generally the potential of the building installation.
  - Only check controls up to the interface (relay with blocking option).
  - Make sure that only the controls to be tested are activated.
- Inform people before testing the alarming control devices and allow for possible panic responses.
- Inform people about any noise or mist which may be produced.
- Before testing the remote transmission, inform the corresponding alarm and fault signal receiving stations.

Modifications to the system layout and products

Modifications to the system and to individual products may lead to faults, malfunctioning and safety risks. Written confirmation must be obtained from Siemens and the corresponding safety bodies for modifications or additions.

Modules and spare parts

- Components and spare parts must comply with the technical specifications defined by Siemens. Only use products specified or recommended by Siemens.
- Only use fuses with the specified fuse characteristics.
- Wrong battery types and improper battery changing lead to a risk of explosion. Only use the same battery type or an equivalent battery type recommended by Siemens.
- Batteries must be disposed of in an environmentally friendly manner. Observe national guidelines and regulations.

Disregard of the safety regulations

Before they are delivered, Siemens products are tested to ensure they function correctly when used properly. Siemens disclaims all liability for damage or injuries caused by the incorrect application of the instructions or the disregard of danger warnings contained in the documentation. This applies in particular to the following damage:

- Personal injuries or damage to property caused by improper use and incorrect application
- Personal injuries or damage to property caused by disregarding safety instructions in the documentation or on the product
- Personal injury or damage to property caused by poor maintenance or lack of maintenance

Disclaimer

We have checked that the content of this document matches the hardware and software described. Despite this, we cannot rule out deviations and cannot therefore assume liability for them matching completely. The details in this document are checked regularly and any corrections needed included in subsequent editions.

We are grateful for any suggestions for improvement.

2.3 Standards and directives complied with

A list of the standards and directives complied with is available from your Siemens contact.

2.4 Release Notes

Limitations to the configuration or use of devices in a fire detection installation with a particular firmware version are possible.

⚠ WARNING

Limited or non-existent fire detection

Personal injury and damage to property in the event of a fire.

- Read the 'Release Notes' before you plan and/or configure a fire detection installation.
- Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

NOTICE

Incorrect planning and/or configuration

Important standards and specifications are not satisfied.

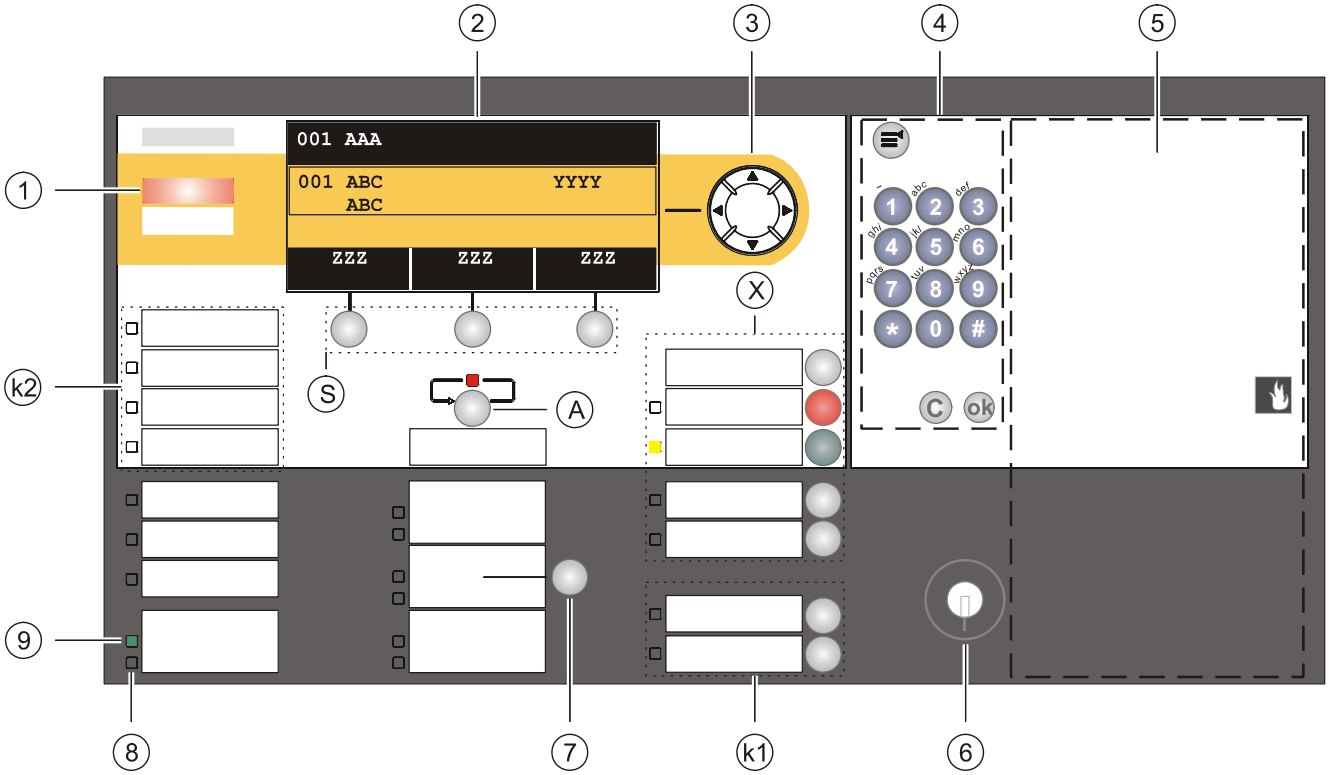
Fire detection installation is not accepted for commissioning.

Additional expense resulting from necessary new planning and/or configuration.

- Read the 'Release Notes' before you plan and/or configure a fire detection installation.
- Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

3 PMI

The following figure shows the PMI (fire control panel or fire terminal).



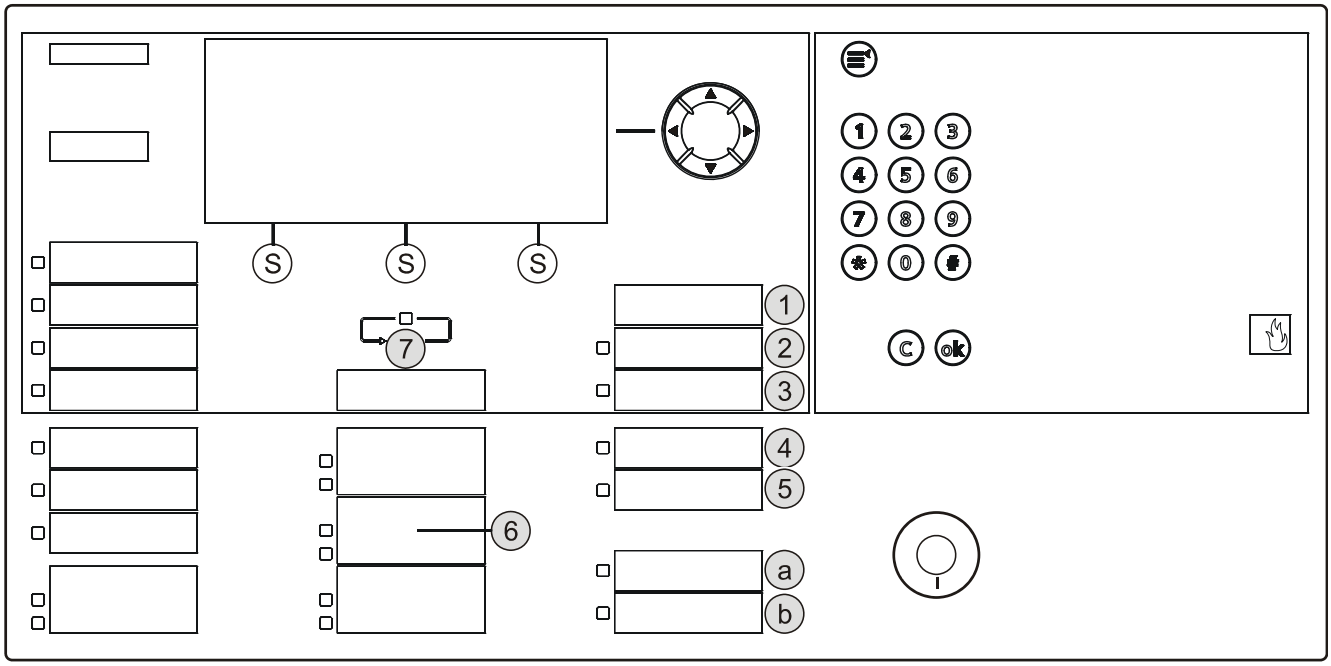
PMI Station

1 ALARM LEDs
2 Display
3 Navigation buttons
4 Keypad with Menu key, ok key and Cancel key
5 Area for fitting options
6 Key switch (optional)
7 'Alarm device' button
8 System fault LED (yellow)
9 Operation LED (green)
A 'More alarms' button
S Soft keys 1 – 3
X 'Silence buzzer', 'Acknowledge', 'Reset', 'Alarm delay off', 'Premises manned' standard buttons
k1 Configurable buttons with LEDs (can be configured independently)
k2 Configurable LEDs

You can use inscription strips to inscribe the PMI. There is a template for this in document A6V10217440, inscription strips.

3.1 Buttons on the PMI

The figure below shows the PMI with the standard buttons and the 'More alarms' button:



PMI of the station

1 'Silence buzzer'
2 'Acknowledge'
3 'Reset'
4 'Alarm delay off'
5 'Premises manned'
6 'Alarm device' button
7 'More alarms' button
a Configurable standard button 1
b Configurable standard button 2
S Soft keys 1 - 3

3.1.1 Standard keys

With the standard buttons, functions can be performed at the push of a button.

<Silence buzzer>

Switches the 'Station' buzzer off.

<Acknowledge>

- Acknowledges all events that can be acknowledged.
- Confirms presence ('AVC', 'IC')
- Switches the buzzer off

<Reset>

Resets all events that can be reset (password required).

<Reset>

- Switches off the alarm delay for all events.
- In the event of an alarm, the remote transmission or global alarming is activated immediately.

<Premises manned>

- Switches between 'Manned operation' and 'Unmanned operation' operation modes (password required).
- Opens the event list in case of a "mixed" condition (i.e., visibility on several 'Areas' with different 'Manned operation' and 'Unmanned operation' settings)

<Alarm device>

Deactivates the alarm devices in the event of alarm (password required).

Configurable buttons

The two buttons a and b in the figure above are configurable standard buttons.

You can, for example, configure these two buttons with the following functions:

- 'Poll RT counter'
- 'Non-MCP zones OFF'

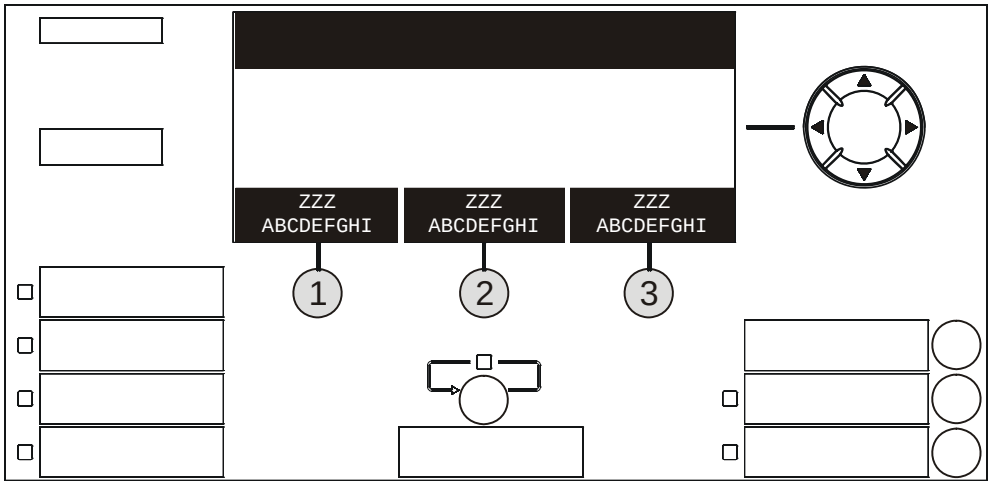
3.1.2 Other alarms

Pressing the 'More alarms' button opens the 'ALARMS' event list.

If the 'ALARMS' event list is already open, <More alarms> assumes the function of the button <▾>, changing to the next alarm event upon activation.

3.1.3 Softkeys

The figure below shows the part of the PMI including the softkeys.



1 Softkey 1
2 Softkey 2
3 Softkey 3

Softkeys are buttons which you can use to carry out functions that are displayed in the three fields of the softkey line on the display. These three black fields contain the names of the functions in white font.

The functions of the softkeys change dynamically depending on the situation and the contents of the display.

Always the most important functions are assigned to the softkeys 1 and 2.

When the user navigates through the topology, the softkey allocation does not change depending on the context; the assignment is fix. If a softkey function cannot be executed at a point in the topology, the inscription in the field is hidden.

The table below lists an exemplary softkey assignment.

Softkey / Option	Function
'Show intervention text' [1]	Shows the intervention text of the selected event.
'Jump back'	Displays the list the selected event has been taken from. Back from the view Intervention text or Details.
'Execute command'	Opens the 'Select command' window.
'More options'	Opens the 'Select option' window.
'Show details' [2]	Shows details of the selected event or element.
'Lower level'	Changes to the next lower hierarchy level.
'Upper level '	Changes to the next higher hierarchy level.
'Jump to begin' / 'Jump to end'	Within a list, jumps to the top or end of the list
'Show topology ' [3]	Jumps to the selected element in the topology
'Show active detectors'	Shows a list of all active detector, corresponding to an event list

[1] Softkey / Option is only displayed when intervention text is available at this point

[2] Softkey / Option only available in 'Access level 3'

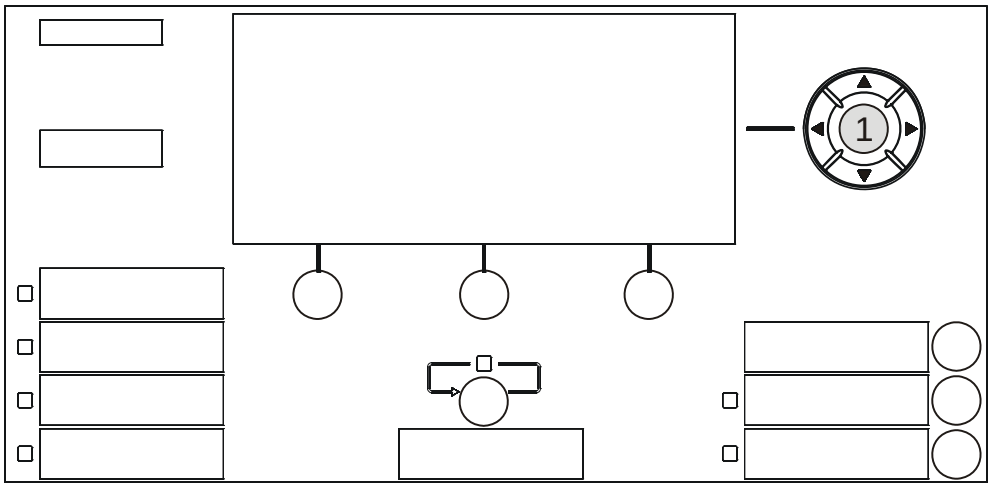
[3] Softkey / Option only available as of 'Access level 2.1'

See also

Normal view [→ 25]

3.1.4 Navigation buttons

The figure below shows the part of the PMI including the navigation buttons:



Navigation buttons on the PMI

1 Navigation buttons

The navigation buttons work in the same way as the arrow keys on a PC keyboard.

With the buttons **<▲>** and **<▼>** the next entry in a list can be highlighted.

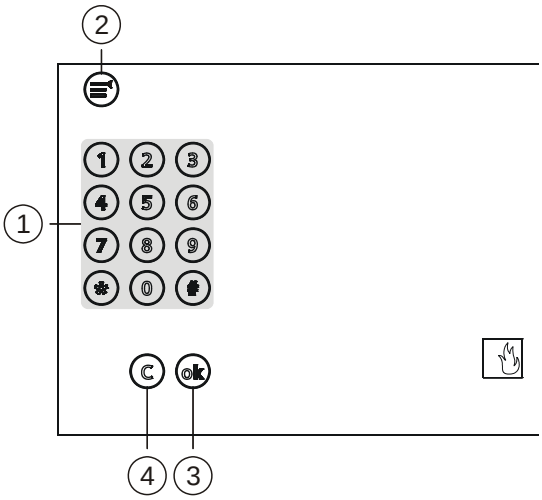
Changing to a higher or lower hierarchy level is possible with the buttons **<◄>** and **<►>**.

In a command list, the highlighted command may be executed with the button **<►>**.

When characters are entered, the character to the left of the cursor position is deleted by pressing the button **<▲>**.

3.1.5 Keypad

The following figure shows the keyboard and <MENU>, <ok> and <C> (Cancel) buttons:



1 Keypad
2 <MENU>
3 <ok>
4 <C> (Cancel button)

The key panel serves for numeric and alphanumeric entries.

Numeric entry

Numeric entry is applicable in the following cases:

- PIN entry (password)
- Shortcuts (Menus)
- Address entry (Element ID)
- Parameter entry

Alphanumeric entry

Alphanumeric entry is applicable in the following case:

- Entering customer texts

3.1.6 Menu button

= <MENU> button

The <MENU> button opens the main menu.

Opening the main menu is independent from the current display contents.

3.1.7 Button 'ok'

= Button <ok>

With <ok> a selected entry or menu item can be executed or opened, respectively.

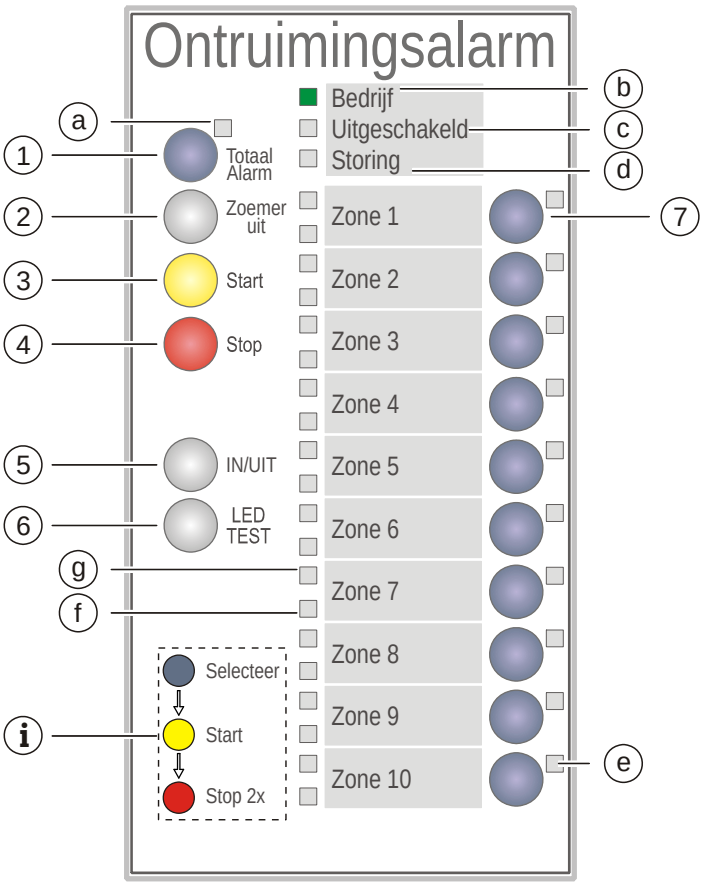
In windows with an entry field, the button <ok> moves the cursor to the next entry.

3.1.8 Button 'C'

= Cancel button <C>

With <C> any operation sequence can be cancelled, and any open list or dialog can be closed.

3.2 EVAC NL



PMI Evacuation alarm

Button		LED		
1	Totaal alarm	a	Totaal alarm	(red)
2	Zoemer uit	b	Bedrijf	(green)
3	Start	c	Uitgeschakeld	(yellow)
4	Stop	d	Storing	(yellow)
5	IN/UIT	e	EVAC zone selection	(yellow)
6	LED TEST	f	Fault/Isolation	(yellow)
7	Selecteer	g	Alarm	(red)
i	Information about using the keys			

3.2.1 Functions on the EVAC PMI

Button		Function
1	Totaal alarm	Pressing the button selects all EVAC zones.
2	Zoemer uit	Silences the buzzer of the EVAC PMI.
3	Start	Activates selected EVAC zones.
4	Stop	Deactivates selected EVAC zones.
5	IN/UIT	Switches selected EVAC zones on or off.
6	LED TEST	Activates the LED test on the EVAC PMI.
7	Selecteer	Selects an EVAC zone for the issuing of additional commands (Start, Stop, ON/OFF)

LED		Function
a	Totaal alarm	Indicates that Overall Alarm has been activated.
b	Bedrijf	Active as long as power supply is available.
c	Uitgeschakeld	Active when at minimum one EVAC zone is switched off.
d	Storing	• Active when at least one fault is present in an EVAC zone. • Active (flashing) when the connection to the fire control panel is faulty
e	EVAC zone selection	Active when the zone has been selected.
f	Fault/Isolation	Active when an EVAC zone has been switched off or a fault is present.
g	Alarm	Active when all EVAC zones are activated.

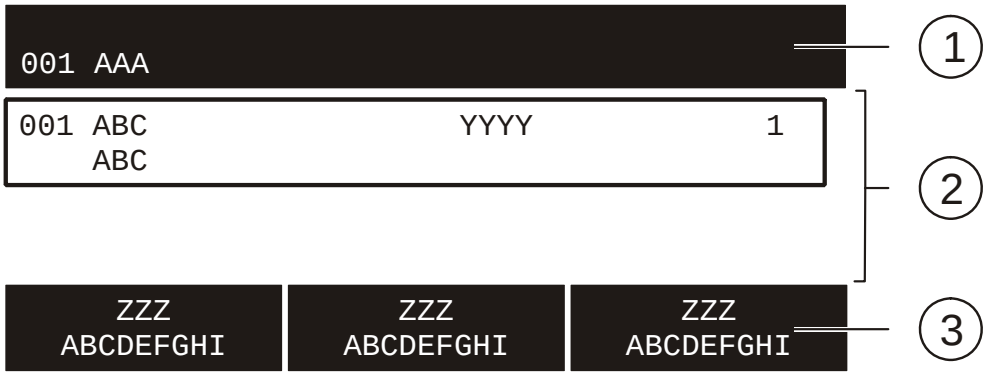
3.3 Display

The display of the station has two displaying variants:

- Display without window
  - Normal view
  - Expanded visibility
  - Fire department view
- Display with window for following representations
  - Lists
  - Input fields
  - Command responses

3.3.1 Normal view

The display of the fire control panel in normal view has three different areas.



Display in normal view

Position	Designation	Function
1	Header	● Status indication and system time ● Information and titles for the working area ● Instructions for the operator ● Information for the operator
2	Working area	● Indication of lists ● Selection of list items ● Indication of windows
3	Softkey bar	● Indication of the three functions that can be directly executed with the softkey buttons

Identification of messages

Events occurring in the fire detection installation are indicated on the display. A special identification informs on the status of an event.

Details on the identification can be found in the chapter Event status identification.

See also

Event status identification [→ 152]

3.3.2 Extended view

The display of events, elements, etc., comprises two lines in normal view.

The extended view shows a 4-line indication of the selection. Additional information such as e.g. additional customer texts can be displayed this way.

In the extended view there is a frame around four lines.

Display with extended view

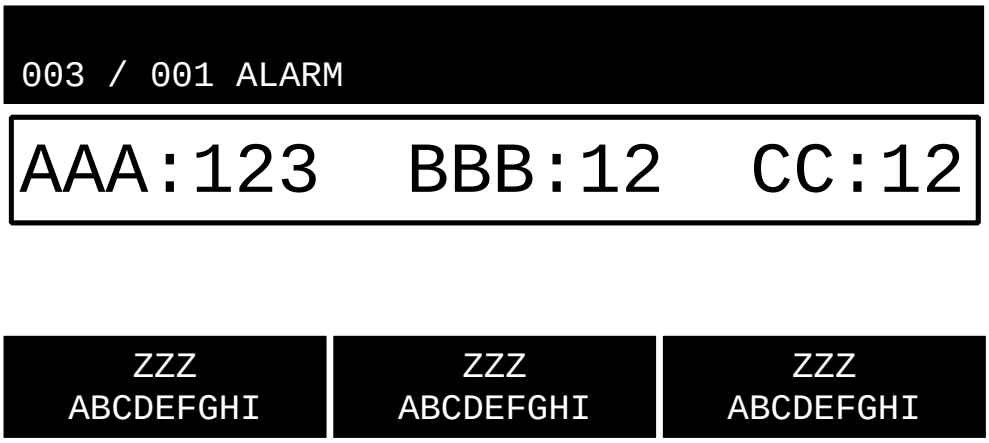
With the <Switch to Extended view> and <Switch to Standard view> softkeys, you can switch from normal view to extended view and vice-versa.

Alternatively, the navigation buttons **<►>** and **<◄>** can be used to switch over.

3.3.3 Fire brigade view

For 'ALARM' events, the 'Fire Brigade message view' can be configured in the Engineering tool.

An 'ALARM' event is displayed in double font size in the 'Fire Brigade message view'.

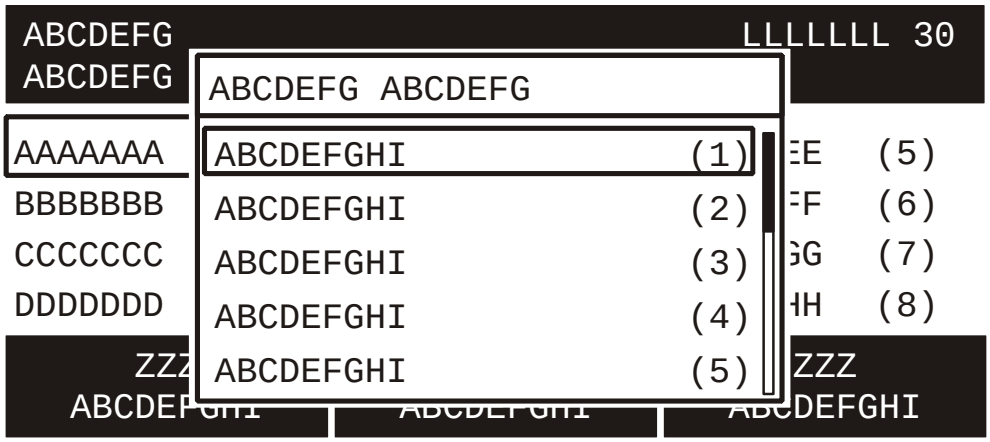


Display with fire brigade view

3.3.4 Display with window and list

The display with window and list is for the selection of a list item, which corresponds to a submenu.

the figure below shows the display with an exemplary list:

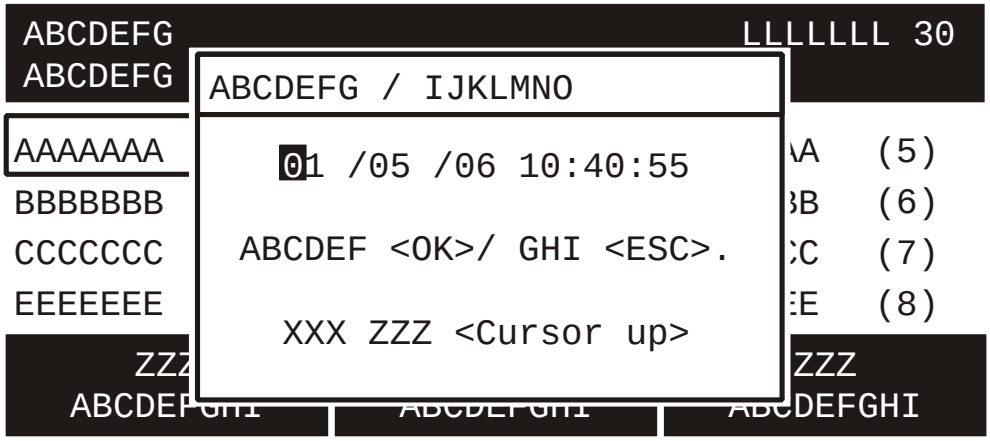


Example of the display with window and list

3.3.5 Display with window and input field

The display with window and input field has one or several input fields for entering e.g. the PIN, an address or customer text.

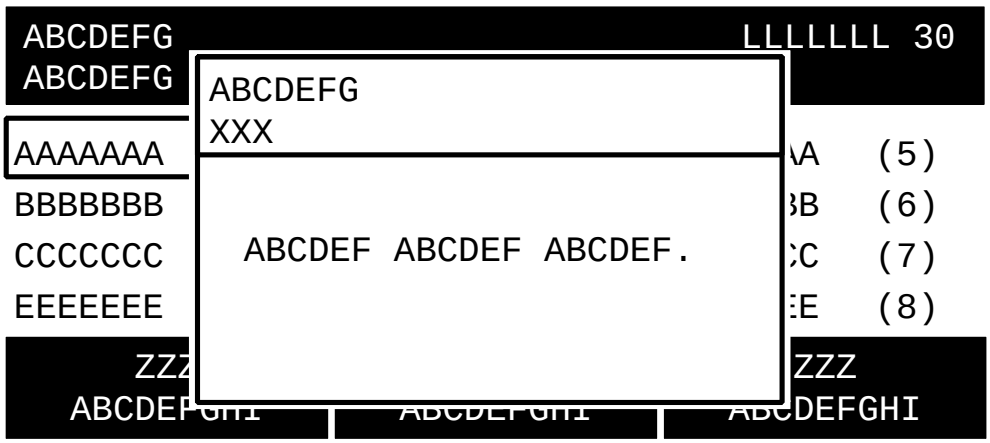
The following figure shows the display with an exemplary window with input field:



Example of the display with window and input field

3.3.6 Display with window and command response

The display with window and command response is open after a command has been entered. The operator thus receives a confirmation message of the command.



Example of the display with window and command response

3.4 LEDs

The LEDs on the Person Machine Interface signal 'Events' and conditions. In addition, the LEDs support the operator's orientation.

In general, the colors of the LEDs signal the following information:

Red	● 'ALARM' ● Activation of the remote transmission
Yellow / green	● 'Fault' ● Status confirmation ● Configured event categories

Additional information on the conditions of the LEDs (permanently on, permanently off or flashing) can be found in the chapter in account.

3.5 Key switch (optional)

You can use the key switch to release an access level. The access level that can be achieved can be configured.

The key switch has 2 positions:

- On (horizontal position)
- Off (vertical position)

See also

Logout timeout [→ 102]

3.6 Menu structure

MAIN MENU	Menu items / Functions	Selection / Dialog box	For more information see page
'Message summary'	'Message summary'	Message category	- [→ 153]
'Functions'	'On / Off'	Sel. EC	- [→ 39]
	'Test'	Sel. EC	- [→ 67]
	'Activate / deactivate'	Sel. EC	- [→ 71]
	'Information'	Sel. EC	- [→ 81]
	'Configuration'	Sel. EC	- [→ 82]
	'Maintenance'	Sel. EC	- [→ 158]
	'All functions'	Sel. EC	- [→ 56]
'Favorites' [1]	e.g. 'Function On/off'	Sel. EC	- [→ 34]
	e.g. 'All functions'	Sel. EC	- [→ 34]
	e.g. 'LED test'	LED test	- [→ 34]
'Topology'	'Detection tree'	'Area'	- [→ 63]
	'Hardware tree'	Station / Module	- [→ 63]
	'Control tree'	'Alarming control group' / e.g. 'Evac' [1] / e.g. 'ALARM' [1] / e.g. 'Fire' [1]	- [→ 63]
'Element search'	'Start with category'	Sel. EC / Enter address	- [→ 64]
	'Start with address'	Enter address	- [→ 64]
'Event memory'	'Select station'	Events	- [→ 153]
'Login/logout'	Input dialog		- [→ 51]
'Settings/administration'	'Change PIN'	Input dialog	- [→ 90]
	'Create PIN'	Input dialog	- [→ 90]
	'Delete PIN'	Input dialog	- [→ 90]
	'LED test'	'LED test'	- [→ 91]
	'Set buzzer volume'	'Set buzzer volume'	- [→ 92]
	'Display settings'	'Change display brightness' 'Change display contrast'	- [→ 92]
	'System commands'	'Enter date / time' 'Activate expanded visibility' 'Deactivate expanded visibility'	- [→ 92]

Sel. EC Selection of Element category

[1] Configurable

3.7 Cerberus Remote

Cerberus-Remote is software for the PC which can be used to display the Person Machine Interface of a 'Station' on the PC. For example it can be used to access the fire detection system remotely for maintenance purposes.

Depending on the operating mode, Cerberus-Remote can either be used for display purposes or for display and operation purposes.

The link between Cerberus-Remote and a 'Station' can be structured as follows:

- Local connection via any 'Station' in the fire detection system
- Connection via the Central Access Point ('CAP')
  - Local
  - Via remote access

Cerberus-Remote is an integrated part of Cerberus-Engineering-Tool but may also be installed on a PC as a stand-alone application 'FX7220'.

You will need an installed licence key (at least L1) and appropriate approval for the 'Station' in order to use Cerberus-Remote. The licence key need only be installed in the 'Station' whose PMI is to be displayed in Cerberus-Remote.

The connection to a 'Station' with a licence key is also possible via a 'Station' without a license key.

Cerberus-Remote receives the visibility which is configured on the 'Station' displayed using Cerberus-Remote.
You can use Cerberus-Remote in a fire detection installation with networked 'Stations' to gain global visibility. Just one licence key is needed for this per network if the licence key is installed in a 'Station' with global visibility.

The connection with a 'Station' is shown by the Person Machine Interface (display, LEDs, keys) transmitted.
The 'Cerberus-Remote access' operation mode is indicated by a red frame around the Person Machine Interface.
An enable granted for Cerberus-Remote is retained when a 'Station' restarted.

See also

- Cerberus Remote operating modes [→ 35]
- Enabling / disabling Cerberus Remote [→ 86]
- Connecting Cerberus Remote [→ 87]
- Operating Cerberus Remote [→ 88]

4 Operation functions

The following chapters contain descriptions of important functions for directly operating the system.

Information on the system functions can be found in the corresponding chapter.

See also

System functions [→ 97]

4.1 Selection and opening / execution

After calling up the main menu and any other list, the first entry in the list is selected. The selection is indicated by a rectangular frame around the entry.

The opening of a list item or the execution of a list command is performed by moving the cursor to the selected entry and pressing **<ok>**.

Other methods to open or execute a highlighted list entry are given by pressing the following buttons:

- **<►>**
- <Number> on the numerical block (given number in brackets – only in selection lists)

Changing the selection

The selection indicated is changed as follows:

Button	Consequence
<▼>	next entry
<▲>	previous entry
<More alarms>	opens alarm list / jumps to the next entry in the alarm list shown
<Number> + <ok>	Goes to the entry with the number entered – not in selection lists
'More Options' + 'Jump to begin' softkeys	Jump to the top of the list
'More Options' + 'Jump to end' softkeys	Jump to the end of the list

See also

List representation and types of lists [→ 154]

4.2 Scrolling

With the navigation buttons you can scroll through a list indicated on the display.

You can scroll to the start/end of the lists (limited function) and back in the following lists:

- Option lists
- Command lists
- Element category lists

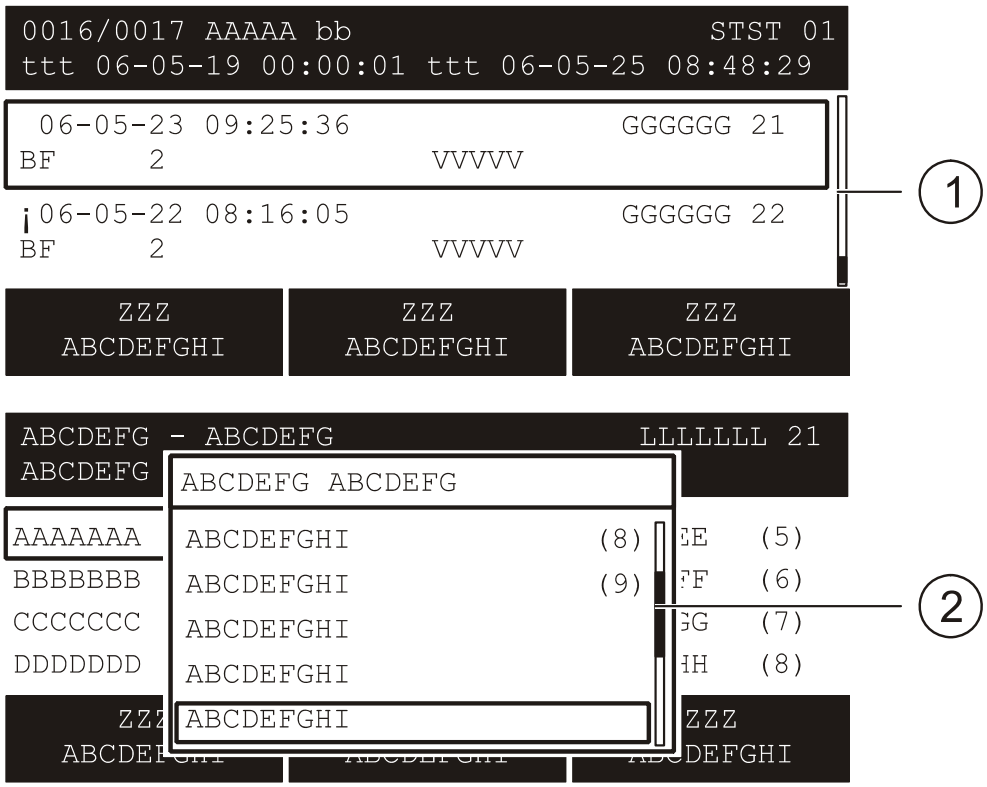
In all other lists, you can scroll beyond the end of the list to the start of the list and back.

4.3 Indication of the position and length of the list

There is a vertical bar along the side of the list when the list is longer than can be indicated on the display.

The black part of the bar indicates the position and length of the visible part in relation to the complete list.

Examples for the representation in different lists:



1 Bar in normal view with list

2 Bar in window with list

See also

Event status identification [→ 152]

4.4 Shortcut

A shortcut serves for the direct execution of an entry in a selection list by pressing a numeric key.

In a command list, for example, you can execute a command directly by entering the corresponding number.

The numbers for the shortcut are shown in the list entry line, on the right and in brackets.

4.5 Favourites

You can perform several operation steps or an operation sequence in one step by means of favorites.

A maximum of 8 favourites are configured and you can select them from the favorite list in the 'Favorites' main menu item.

4.6 Entry of numbers and letters

In input dialogs, you can enter digits and characters on the keypad.

Numeric entry

- The number of underscores corresponds to the number of possible positions for the entry.
- The overwrite mode is set by default; there is no insert mode.
- Horizontal navigation within the input field is possible with the keys **<◂>** and **<▸>**.
- Use **<▴>** to delete the character to the left of the cursor position.
- Use **<ok>** to save the entered value and exit the input field.
  - When there are several input fields in the dialog, the cursor jumps to the next field by pressing **<ok>**.
  - If the cursor position is in the last or only input field, close the input dialog by pressing **<ok>**.
- Use **<C>** to cancel the input and close the dialog without saving.

Alphanumeric entry

- Alphanumeric entries are only possible in particular input fields, e.g. for customer text.
- Letters are entered in the same way as letters on telephones. You can select the corresponding letter by pressing a key several times.
- Switching between lower and upper case letters is possible with the key **<*>** and only applies for the next character.

In input fields with more than one line, you cannot change back to a line above the cursor position.

4.7 Cerberus Remote operating modes

Cerberus-Remote has the following operation modes:

- Indicators
- Indications and operation

For both operation modes, Cerberus-Remote must be enabled on the 'Station'. In addition, a license key (minimum L1) must be installed.

Indicators

In this operation mode Cerberus-Remote indicates the same as the 'Station' connected to it, but you cannot operate the linked 'Station'.

Cerberus-Remote indicates the display with all indicated texts, all LEDs in their current state and all buttons.

Indications and operation

In this operation mode the connected 'Station' is visualised as in the Indications operation mode. Additionally, the 'Station' can be operated with Cerberus-Remote, while operation on the 'Station' itself is limited.

As operation on a 'Station' must have priority, this restriction (blocking) on the 'Station' can be cancelled at any time.

Each time an attempt is made to operate on the 'Station', a dialog is indicated with the option to abort the connection with Cerberus-Remote.

The display test is not performed on Cerberus-Remote.

See also

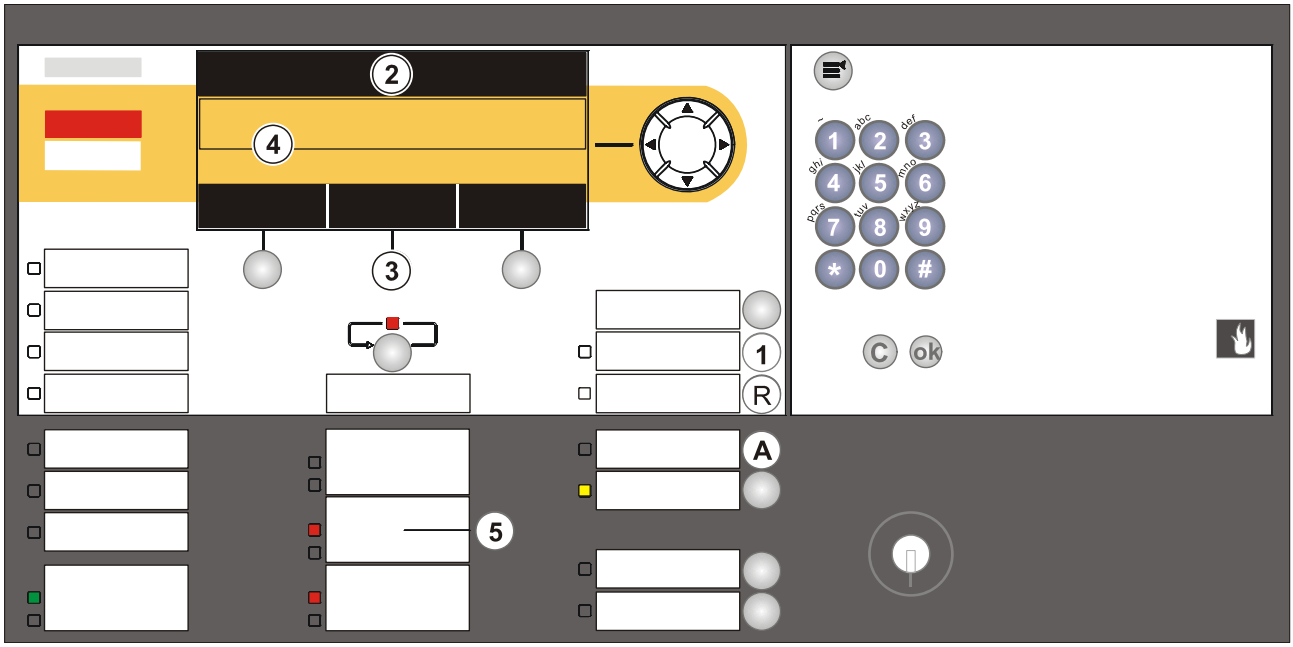
Enabling / disabling Cerberus Remote [→ 86]

5 Operation

This part of the document provides brief descriptions and detailed operation sequences for the important functions of the fire detection installation. In addition, you can find your preferred procedures in the representation of exemplary operation sequences.

5.1 ALARM Procedure

If your fire detection system has no delayed alarm transmission function ('AVC'), the variant –"Fire Brigade in' 'mm:ss' in Step 2 (see below) does not apply.



1 **<**Acknowledge**>**

2 **Top line on the display**

3 **<Softkey 2>** 'Show intervention text' if displayed

4 **Indication of the fire location on the display**

5 **<**Alarm device**>**

A **<**Alarm delay off**>**

R <Reset>

Procedure in the event of alarm

Step	Action / Condition	Consequence / Status
1	Press <Acknowledge> on the Person Machine Interface	⇨ With 'AVC' countdown t2 for examination of the cause of 'ALARM' starts
2	**Read top line** on display	
	– 'Fire Brigade requested'	⇨ 'ALARM' is transmitted to the fire brigade
	– 'Fire Brigade in' mm:ss	⇨ 'ALARM' is transmitted to fire brigade in mm:ss Remaining time is shown as **Countdown**
	– 'Call Fire Brigade !' when: Remote transmission switched off Remote transmission blocked or defective No remote transmission available	⇨ **Fire department must be called by phone!** ⇨ No automatic transmission to fire department
3	Press 'Show intervention text' <softkey 2> if displayed or press <Show intervention text> button Press <Jump back>	⇨ Intervention text is displayed ⇨ Fire location is displayed
4	Read off **fire location** on display	
5	Optional: press <Alarm device> on the Person Machine Interface (password required)	⇨ Deactivates the acoustic alarm devices
6	**Go to the fire location**	
7	**Decide:** MAJOR INCIDENT or minor incident	

Condition	MAJOR INCIDENT	Minor incident
Fire department has been called	**Save people** **Guide the fire department to the fire location** **Fight the fire**	Try to prevent fire department deployment
'Fire Brigade in' mm:ss **Countdown is running**	Trigger the **manual call point** immediately or Press <Alarm delay off>	<Press <Reset> (password required)
'Call Fire Brigade !' No automatic transmission to the fire department	**Call the fire department on the phone!**	<Press <Reset> (password required)

A password is required for resetting.

It may be necessary to air the room before 'Reset' is possible.

You can temporarily switch off elements that cannot be reset.

5.2 Procedure in case of Fault

Step	Action
1	<Press Silence buzzer> on the Person Machine Interface
2	**Read message/fault location** on the display
3	Press **<**Acknowledge**>** on the Person Machine Interface
5	**Go to the fault location**
6	**Eliminate the cause of the fault**

A list of possible 'Faults' and how they are eliminated can be found in the chapter 'Faults / Troubleshooting'. If you cannot eliminate 'Fault', please contact your service provider.

'Fault' and 'Intervention Concept' (IC)

On consideration of 'Intervention Concept', events of the 'Fault' category can be assigned their own sequence. This sequence may be configured differently and depends on the 'Manned operation' / 'Unmanned operation' operation mode.

An exemplary process following 'Fault', taking in account 'Intervention Concept', is graphically shown in the 'Intervention Concept (IC) chapter and is outlined below:

'Fault' has occurred.

- The remote transmission for 'Faults' is activated in 'Unmanned operation' operation mode.
- The remote transmission for 'Faults' is activated in 'Manned operation' operation mode unless 'Fault' is acknowledged within the delay t1.

Acknowledge 'Fault'

1. Press <Acknowledge> before the expiry of t1.
2. Read the 'Fault'location on the display.
3. Go to the 'Fault' location.
4. Rectify 'Fault'.

See also

Intervention concept (IC) [→ 146]
Faults / Troubleshooting [→ 157]

5.3 Switching off / Switching on

To avoid false alarms or fault messages, you can switch off 'Site' parts in certain situations, e.g. for the purpose of maintenance work.

When a part of a system is switched off, the 'ISOLATION' LED is on.

The situations in which part of a 'Site' should be switched off, depends on the detectors used as well as on possible deceptive phenomena such as smoke, dust, heat or vapour.

⚠ WARNING

System parts that have been switched off make it impossible to acquire and process alarms or faults!

Fire may spread unhindered.

- Deploy staff to monitor the deactivated area.
- You must switch deactivated parts of the 'Site' back on as soon as possible.

If a deactivated 'Zone' is the only 'Zone' in a 'Section', the 'Section' is also indicated as deactivated.

In the following chapters switching off and on is exemplary described.

5.3.1 Switching a detector zone off / on

⚠ WARNING

System parts that have been switched off make it impossible to acquire and process alarms or faults!

Fire may spread unhindered.

- Deploy staff to monitor the deactivated area.
- You must switch deactivated parts of the 'Site' back on as soon as possible.

If a deactivated 'Zone' is the only 'Zone' in a 'Section', the 'Section' is also indicated as deactivated.

In which situations a detector zone should be switched off, depends on the detectors used as well as on possible deceptive phenomena such as smoke, dust, heat or vapour.

The fastest method for switching off or on is to enter a known address in the 'Enter address' window.
In the configuration, a standard button can be given the function of directly opening the menu with the 'Enter address' input dialog to select a detector zone.
In the following exemplary operating sequence the process is shown without a known address.

Switching off a detector zone

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' window is open.
2. Select the 'On / Off' menu item.
   ⇨ A list of all element categories on which a command of the 'On / Off' command group can be executed is indicated.
3. Select the 'Element category' 'Zone'.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ All 'Zones' are displayed
5. Select an 'Zone' and press 'Execute Commands' <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select the 'OFF' command and confirm with <ok>.
   ⇨ The window with the command response confirms the selected command.

⇨ 'Zone' is switched off.

Exemplary representation of the aforementioned operation sequence for switching off a detector zone:

Functions Exit with <C>			Access level 2.1
On / Off	(1)	Configuration	(5)
Test	(2)	Maintenance	(6)
Activate / deactivate	(3)	All functions	(7)
Information	(4)		

Function On/Off	Function All	Test LED

- Select 'On / Off', continue with <ok>

Selecting element category	
Zone	(1)
Area	(2)
Section	(3)
Sounder	(4)
Fire control group	(5)

- Select 'Zone', continue with <ok>

Enter address
Zone --------- Confirm with <ok>/Exit with <C> Delete with <Cursor up>

- Continue with <ok> without entering an address

021 Zones		
Zone	10	Power supply room
Zone	11	EDP room, false floor
Zone	12	EDP room
Zone	13	Office 21
Execute Commands		Show Topology

- Select 'Zone 13', continue with 'Execute Commands' <softkey 1>

Select command	
OFF	(2)
OFF/timer	(4)

- Select 'OFF', continue with <ok>

⇨ Command response

Execute command OFF
Command executed

Switching a detector zone on

Proceed as with switching off, but select the 'ON' command.

As an alternative, you can also select the corresponding 'Zone' via the 'Message summary' main menu item and the 'Isolations' message category and switch it back on with the 'Execute Commands' <softkey>.

See also

Executing commands - object-oriented [→ 58]

5.3.2 Switching a detector off / on

⚠ WARNING

System parts that have been switched off make it impossible to acquire and process alarms or faults!

Fire may spread unhindered.

- Deploy staff to monitor the deactivated area.
- You must switch deactivated parts of the 'Site' back on as soon as possible.

If a deactivated 'Detector' is the only 'Detector' in a 'Zone', the 'Zone' is indicated as deactivated.

'Detector'

1. In the main menu, select the 'Topology' menu item.
   ⇨ The 'Topology' window is open.
2. Select 'Detection tree' and click <ok>.
   ⇨ The elements of 'Detection tree' are displayed.
3. Select the element 'Area 1'.
   ⇨ The elements of 'Area 1' are displayed.
4. Select 'Area 1' and press 'Lower level' <softkey 2>.
   ⇨ All 'Sections' in 'Area 1' are displayed.
5. Select 'Section 1' and press 'Lower level' <softkey 2>.
   ⇨ All 'Zones' in 'Section 1' are displayed.
6. Select 'Zone 1' and press 'Lower level' <softkey 2>.
   ⇨ All detectors of 'Zone 1' are displayed.
7. Select 'Detect. 1' and press 'More Options' <softkey 3>.
   ⇨ The 'Select option' window is open.
8. Select 'Execute commands'.
   ⇨ The 'Select command' window is displayed.
9. Select 'OFF'.
   ⇨ The command is executed.
   ⇨ The window with the command response is open.

⇨ The detector is switched off.

Exemplary representation of the aforementioned operation sequence for switching off a detector:

Topology Exit with <C>		Access level 2.1
Detection tree	(1)	
Hardware tree	(2)	
Control tree	(3)	

Function On/Off	Function All	Test LED

- Select 'Detection tree', continue with <ok>

001 Element			Detection tree
Area	1	Portaphone AG	

	Lower level	Execute Commands

- Select 'Area 1', continue with 'Lower level' <softkey 2>

005	Elements Portaphone AG		Area 1
Section	1	Ground floor	
Section	2	1. floor	
Section	3	1. floor / EDP room	
Section	4	2. floor	

Upper level	Lower level	Execute Commands

- Select 'Section 1', continue with 'Lower level' <softkey 2>

005	Elements Ground floor		Section 1
Zone	1	Reception hall	
Zone	2	Corridor	
Zone	3	Warehouse	
Zone	4	Reception hall	

Upper level	Lower level	Execute Commands

- Select element 'Zone 1', continue with 'Lower level' <softkey 2>

002	Elements Reception hall	Zone 1
Detect.	1	Main entrance
Detect.	2	Reception

Upper level	More Options

- Select 'Detect. 2', continue with 'More Options' <softkey 3>

Selecting option	
Execute commands	**(3)**
Jump to link	(4)
Show details	(5)

- Select 'Execute commands' option, continue with <ok>

Select command	
OFF	**(1)**
Activate alarm indicator	(3)
Deactivate alarm indicator	(4)

- Select 'OFF' command

⇨ Command response

Execute command OFF
Command executed

'Detector'

Proceed in the same way as when switching off 'Detector', but select the 'ON' command as shown below.

Select command	
ON	(2)

- Select 'ON' command

Alternatively you can for example also use the 'Message summary' main menu item and 'Isolations' message category to select the corresponding detector or 'Zone' and use the 'More Options', 'Execute commands' and 'ON' softkeys to switch back on.

5.3.3 Temporary switching-off

⚠ WARNING

System parts that have been switched off make it impossible to acquire and process alarms or faults!

Fire may spread unhindered.

- Deploy staff to monitor the deactivated area.
- You must switch deactivated parts of the 'Site' back on as soon as possible.

You can only carry out temporary switching off at 'Area' or 'Section' level.

With this function, 'Isolation' can be temporary limited. The part of the 'Site' that has been switched off is automatically switched on again after the expiry of the specified period.

The figures below show an exemplary operation sequence to temporarily switch off 'Section':

Selecting element category	
Zone	(1)
Area	(2)
Section	**(3)**
Sounder	(4)
Fire control group	(5)

- Select 'Section', continue with <ok>

Enter address
Section 1--------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Enter address: e.g. 1, continue with <ok

Select command	
All zones ON	(2)
All zones OFF/timer	(3)
MCP zones OFF	(4)
Non-MCP zones ON	(5)
Non-MCP zones OFF	(6)

- Select 'All zones OFF/timer' command continue with <ok>

Enter duration
05:00 (hh:mm) Confirm with <ok>/Exit with <C> Delete with <Cursor up>

- Enter duration: e.g. 5 hours

⇨ Command response

Execute command All zones OFF/timer
Command executed

The adjustable duration may be limited, depending on the country.
The duration of the 'Isolation' may be changed subsequently.
An unlimited 'Isolation' can be temporarily limited, and vice versa.

5.3.4 Switching off / on the remote transmission Fire

⚠ WARNING

When the remote transmission Fire has been switched off, the fire brigade cannot be called up in the event of fire!

Fire may spread unhindered.

- Deploy staff to monitor the 'Site'.
- You must switch the 'RT Fire' back on as soon as possible.

The 'RT Fire' is normally switched on and may only be switched off in particular cases, e.g. for a function check of controls.

Switching off 'RT Fire'

1. In the main menu, select the 'Topology' menu item.
   ⇨ The three partial topology trees are listed.
2. Select 'Control tree'.
   ⇨ The 'Select element category' window is open.
3. Select the 'Alarmg.' list item.
   ⇨ The 'Elements' window is open.
4. Select 'Alarmg. 2' and press 'Execute Commands' <softkey 2>.
   ⇨ The 'Select command' window is open.
5. Select the 'RT FIRE channels OFF' command and press <ok>.

⇨ The command response confirms that the command has been executed.

⇨ The 'RT Fire' is switched off.

⇨ The 'Remote alarm Fault/Off' LED on the Person Machine Interface is on.

LED statuses

- Off
- Permanently on with isolation
- Flashing with fault

Example of switching off 'RT Fire' using 'Topology' main menu item:

Topology Exit with <C>		Access level 2.1
Detection tree	(1)	
Hardware tree	(2)	
Control tree	**(3)**	

Function On/Off	Function All	Test LED

- Select 'Control tree', continue with <ok>

003 Elements		Control tree
Evac	2	Evac control groups
Alarmg.	**2**	Standard alarming controls
Fire	3	Lift control

	Lower level	Execute Commands

- Select 'Alarmg.', continue with <ok>

004 Elements Standard alarming controls			Alarmg. 1
IntS.Ct	1	Internal sounder	
RT fire	**1**	Remote transmission channel FIRE	
ExtS.Ct	2	External sounder	
RTfault	2	Remote transmission channel FAULT	
Upper level		Lower level	Execute Commands

- Select 'RT fire', continue with <ok>

002 Elements Remote transmission channel FIRE		RT fire 1
Effects	**1**	
Causes	1	
Upper level	Lower level	Execute Commands

- Select 'Effects', continue with <ok>

001 ???		Effects
RT ch.	**1**	
Upper level		More Options

- Continue with <More Options>

Selecting option	
Execute commands	**(3)**
Jump to link	(4)
Show details	(5)

- Select 'Execute commands' option, continue with <ok>

Select command	
OFF	(1)
Set customer text	(3)
Activate	(5)
Time limited activation	(6)

- Select 'OFF' command continue with <ok>

⇨ Command response

Execute command OFF
Command executed

Example of switching off 'RT Fire' using 'On / Off' menu item in 'Functions' menu:

Selecting element category	
Zone	(3)
Sounder	(4)
Fire control group	(5)
RT control	(6)
Alarming control group	(7)

- Select 'Alarming control group' element category, continue with <ok>

Enter address
Alarmg. ---------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Do not enter an address, continue with <ok>

Select command	
Sounders OFF	(1)
RT FIRE channels OFF	**(2)**
Sounders ON	(3)
RT FIRE channels ON	(4)

- Select command: 'RT FIRE channels OFF'

Switching on 'RT Fire'

- Proceed as with switching off, but select the 'ON' command.

5.3.5 Switching off alarm activation

⚠ WARNING

System parts that have been switched off make it impossible to acquire and process alarms or faults!

Fire may spread unhindered.

- Deploy staff to monitor the deactivated area.
- You must switch deactivated parts of the 'Site' back on as soon as possible.

You can switch off the fire detection installation alarm activation for specific elements with this function.

Faults such as the removal of a detector are nevertheless evaluated and displayed.

You can only run the 'Alarm evaluation OFF' command on the following elements:

'XC10 zone'

'Section'

'Automatic zone'

'Technical zone'

5.3.6 Switching off sabotage evaluation [DE]

If a class 3 key safe (fire department key safe, 'FSD') forms part of the fire detection installation and you want to open the housing of the control panel, you have got to switch off the sabotage evaluation.

NOTICE

Sabotage ALARM with police or security service

Costs due to unnecessary deployment.

- In a site with 'FSD', switch off sabotage evaluation before you open the housing of a control panel.

'Sabotage evaluation OFF'

▷ Sabotage evaluation is switched on.

▷ You have access level 3 entitlement.

1. In the main menu, select the 'Topology' menu item.
   ⇨ The three partial trees of the topology tree are indicated.
2. Select 'Hardware tree'.
   ⇨ One or more 'Stations' are displayed.
3. Select the 'Stations' to which 'FSD' is connected.
4. Press 'Lower level' <softkey>.
   ⇨ The elements of 'Stations' are displayed.
5. Select the element 'FSD'.
6. Press <Execute Commands>.
7. Select the 'Sabotage evaluation OFF' command.

⇨ Sabotage evaluation is switched off.

5.4 Log in / Change access level

You can enable an 'Access level' by entering your PIN in the PIN entry dialog, or by pressing <ok>. As an alternative, you may release an 'Access level' by means of the key switch (optional).

When you actuate a button on the PMI the function of which requires a higher 'Access level', the PIN entry dialog is indicated automatically.

Login/logout
Enter PIN: *
For guest-login no PIN required
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

PIN entry dialog box

Enabling an 'Access level' without a PIN

1. Press <Menu> on the keypad.
   ⇨ The PIN input dialog is indicated.
2. Do not enter a PIN and confirm with <ok>.

⇨ The lowest 'Access level' is enabled.

⇨ The main menu is open.

Enabling an 'Access level' with a PIN

1. Press <Menu> on the keypad or select the 'Login/logout' main menu item.
   ⇨ The PIN input dialog is indicated.
2. Enter your PIN and confirm with <ok>.

⇨ The corresponding 'Access level' is enabled.

⇨ The main menu is open.

The present 'Access level
is indicated in the main menu in the header of the display.

5.5 Logging out from an access level

1. Select the 'Login/logout' main menu item.
   ⇨ The PIN input dialog is indicated.
2. Do not enter a PIN and confirm with <ok>.

⇨ The 'Access level' is reset back to the lowest 'Access level'.

5.6 Switching between 'Manned' / 'Unmanned' operation modes

The 'Manned operation' or 'Unmanned operation' operation modes have an impact on the processing of 'ALARM' and 'Fault'. Information on the operation mode can be found in the chapter in account.

The operation mode set is indicated by the 'Premises manned' LED.

- When the 'Premises manned' LED is on, the operation mode is set to 'Manned operation'.
- When the 'Premises manned' LED is not on, the operation mode is set to 'Unmanned operation'.

Switching between operation modes

1. Press the 'Premises manned' standard button on the PMI.
   ⇨ The PIN input dialog is indicated.
2. Enter your PIN and confirm with <ok>.

⇨ The operation mode has been switched.

- Check the setting of the 'Premises manned' LED.

'Manned operation' / 'Unmanned operation' mixed operation

If one PMI has visibility to more than one fire control panel, with different 'Manned operation' / 'Unmanned operation' operation modes, this is considered "mixed operation".

In this case, the event list opens upon actuation of the 'Premises manned' button. The event list includes all events of the 'Manned operation' and 'Unmanned operation' operation modes.

With the 'More Options' softkey the three following commands are available:

- 'Switch all to 'manned"
- 'Switch all to 'unmanned"
- 'Manned' or 'Unmanned', depending on the condition of the selected entry in the event list

When there is at least one 'Premises manned' event, the 'Premises manned' LED is on.

By means of configured switching from 'Manned operation' to 'Unmanned operation' at predefined times, the operation mode may switch although no manual switching has been performed.

There is no possibility of an automatic switching from 'Unmanned operation' to 'Manned operation'.

See also

Operation modes [→ 98]

5.7 Changing visibility

See also

Visibility [→ 103]

5.7.1 Deactivating standby

'PMI standby visibility' cannot be activated manually.
The 'Deactivate standby visibility' command is only available once the monitored 'Station' or the management station is back in normal operation.

▷ The 'PMI standby visibility' is active.

▷ The monitored 'Station' or the management station is in normal operation.

1. In the 'Main menu', select the 'Message summary' menu item.
   ⇨ The message categories containing messages are displayed.
2. Select 'Information'.
   ⇨ 'PMI standby visibility' is shown.
3. Select this element.
4. Press <Execute Commands>.
5. Select 'Deactivate standby visibility'

⇨ 'PMI standby visibility' is deactivated.

See also

Standby visibility [→ 103]

5.7.2 Activating / deactivating expanded visibility

The 'Activate expanded visibility' function can be assigned to a favourite to make it easier to find.
Activation can be configured depending on the condition that the monitored 'Station' is 'Fault'.

Activating the function 'Expanded visibility'

▷ The 'Station' is configured for 'Expanded visibility'.

1. In the 'Main menu', select the 'Topology' menu item.
   ⇨ The three partial trees of the 'Topology' are displayed.
2. Select 'Hardware tree'.
   ⇨ The elements in 'Hardware tree' are displayed.
3. Select 'Station' and press the 'Lower level' softkey.
   ⇨ The elements of 'Station' are displayed.
4. Select 'PMI' and press the 'Lower level' softkey.
   ⇨ The elements of 'PMI' are displayed.

5. Select the 'expand.' element and press the 'More Options' softkey or the command at the bottom directly, depending on the 'Access level'.
   ⇨ The 'Selection option' window is displayed depending on the 'Access level'.
6. Select 'Execute commands'.
   ⇨ The 'Select command' window is displayed.
7. Select 'Activate expanded visibility'

⇨ 'Expanded visibility' is activated.

Deactivating the 'Expanded visibility' function

1. In the 'Main menu', select the 'Message summary' menu item.
   ⇨ The message categories containing messages are displayed.
2. Select 'Information'.
3. 'PMI expanded visibility' is shown.
4. Select this element.
5. Press <Execute Commands>.
6. Select 'Deactivate expanded visibility'.

⇨ 'PMI expanded visibility' is deactivated.

See also

Expanded visibility [→ 104]

5.8 Main menu / Open menu item

'Main menu'

1. Press the <Menu> button.
   ⇨ The PIN input dialog is indicated.
2. Enter your PIN and confirm with <ok> or confirm with <ok> without entering the PIN.

⇨ The 'Main menu' is indicated on the display.

Without PIN entry, the 'Main menu
only includes the menu items that are available without logging-in. To view an extended menu list in the 'Main menu
', you need to log in at a corresponding access level.

Opening menu item

For each menu item there is a shortcut (a digit in brackets) on the keypad.

- Press on the digit in account on the numerical pad in order to open the menu item.
- Alternatively, you may navigate to the next menu item using the navigation buttons <▲> and <▼>.
- You may open the highlighted menu item with the button <ok> or with the navigation button <►>.

See also

Menu button [→ 21]

5.9 Executing commands - Basics

There are different ways to enter commands. Basically, there are two ways to enter a command:

- Function-oriented command entry
  - Here, first select a command and then the target object on which the command is to be executed.
- Object-oriented command entry
  - Here, first select the target object and then the command on which the target object is to be executed.

In the fire detection system, these two methods of entering commands are combined in the interest of a better overview during the selection. It is thus possible to change between the two methods during the command entry sequence.

As only the possible command or element categories are indicated, each selection restricts the selection that follows.

The example in the following chapter makes this clear.

Depending on the 'Access level', the possible selection of commands via softkeys or the 'Main menu' is extended or restricted.

See also

Selection in the topology [→ 63]
Searching for elements [→ 64]
List of all commands and required access levels [→ 105]

5.9.1 Executing commands - General

Example for the execution of commands

1. Select a command category such as e.g. 'Function On/Off' by pressing the <softkey 1> in the 'Main menu' or the 'Functions' main menu item.
   ⇨ The pre-selection restricts the element category selection.
   ⇨ A list of all element categories on which a command of the 'On / Off' command group can be executed is indicated.
2. Select an element category.
   ⇨ The 'Enter address' window is open.
3. Enter an address or leave the entry field blank and confirm with <ok>.
   ⇨ If no address is entered, all elements of the selected element category are indicated.
4. In this case, select an element and press the 'Execute Commands' <softkey>.
   ⇨ The 'Select command' window is open.
5. Select a command.

⇨ The command is executed.

The tables below indicate the steps described above:

Main menu Exit with <C>			Access level 2.1
Message summary	(1)	Element search	(5)
Functions	(2)	Event memory	(6)
Favorites	(3)	Login/logout	(7)
Topology	(4)	Settings/administration	(8)
Function On/Off	Function All	Test LED	

- Press 'Function On/Off' <softkey 1>.

Selecting element category	
Area	(1)
Section	(2)
Zone	(3)
Sounder	(4)
Fire control group	(5)

- Select for example 'Zone'.

Enter address
Zone ---------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Confirm with <ok> without entering an address.

021 Zones		
Zone	10	Power supply room
Zone	11	EDP room, false floor
Zone	12	EDP room
Zone	13	Office 21

Execute Commands	Show Topology

- Select a zone and press 'Execute Commands' <softkey 1>.

Select command	
OFF	(2)
OFF/timer	(4)

- 'Select a command, e.g. 'OFF'

⇨ Window with command response

Execute command **OFF**
Command executed

5.9.2 Executing commands - object-oriented

You can apply object-oriented command entry to selected target objects. A selection can be made e.g. as follows:

- Navigation in the topology
- Element search

You can execute a command on the selection or the selected element from a list. To do this press the 'Execute Commands' <softkey> and then select a command.

Exemplary selection of an element from the 'Detection tree' for command entry:

Main menu Exit with <C>			Access level 2.1
Message summary	(1)	Element search	(5)
Functions	(2)	Event memory	(6)
Favorites	(3)	Login/logout	(7)
Topology	**(4)**	Settings/administration	(8)

Function On/Off	Function All	Test LED

- Select 'Topology' menu item in the main menu, continue with <ok>

Topology Exit with <C>		Access level 2.1
Detection tree	**(1)**	
Hardware tree	(2)	
Control tree	(3)	

Function On/Off	Function All	Test LED

- Select 'Detection tree', continue with <ok>

001 Element		Detection tree
Area	**2**	Portaphone AG

	Lower level	Execute Commands

- Select 'Area 2', continue with 'Lower level' <softkey 2>

005 Elements Portaphone AG		Area 2
Section	**1**	Ground floor
Section	2	1. floor
Section	3	1. floor / EDP room
Section	4	2. floor

Upper level	Lower level	Execute Commands

- Select 'Section 1', continue with 'Lower level' <softkey 2>

005 Elements Ground floor		Section 1
Zone	1	Reception hall
Zone	2	Corridor
Zone	3	Warehouse
Zone	4	Reception hall

Upper level	Lower level	Execute Commands

- Select 'Zone 1', continue with 'Lower level' <softkey 2>

002	Elements Reception hall		Zone 1
Detect.	1	Main entrance	
Detect.	2	Reception	

	Upper level		Execute Commands

- Select 'Detect. 1', continue with 'Execute Commands' <softkey 3>

Select command	
OFF	(1)
Activate alarm indicator	(3)
Deactivate alarm indicator	(4)

- Select 'OFF' command continue with <ok>

⇨ Command response

Execute command **OFF**
Command executed

5.9.3 Executing commands – function-oriented

Executing commands, function-oriented

1. In the 'Main menu', select the 'Functions' menu item.

   ⇨ The 'Functions' menu is open.

2. Select a menu item in the menu list or press the softkey in account.

If a command such as e.g. 'Test LED' cannot be executed directly, the 'Select element category' window is open after the selection of a menu item or softkey (see above, in the chapter "Executing commands – General").

Functions Exit with <C>			Access level 2.1
On / Off	(1)	Configuration	(5)
Test	(2)	Maintenance	(6)
Activate / deactivate	(3)	All functions	(7)
Information	(4)		

Function On/Off	Function All	Test LED

'Functions' menu

5.9.4 Hide command confirmation message

After entering a command, two windows with command confirmation messages confirm the execution of the command as well as the successful execution.

When the execution duration of a command is very short, the command confirmation message is immediately shown, including a message about the successful command execution.
In general, the command confirmation messages disappear after a few seconds.

Regarding the following commands with longer execution durations, the window with the command confirmation messages does not disappear automatically:

- Auto configuration functions
- 'Accept replaced devices'
- 'Read-in installed devices'
- 'Read current topology'
- 'Detector line ON'
- 'Restart line'
- 'Detector line OFF'

Hiding the indicated command confirmation message

- Press <Menu> or <C>.

⇨ The window disappears.

5.10 Selecting elements or events

The objective of selecting an element or event is e.g. the detailed and information indication, the configuration or command entry applied to the selection.

5.10.1 Select events

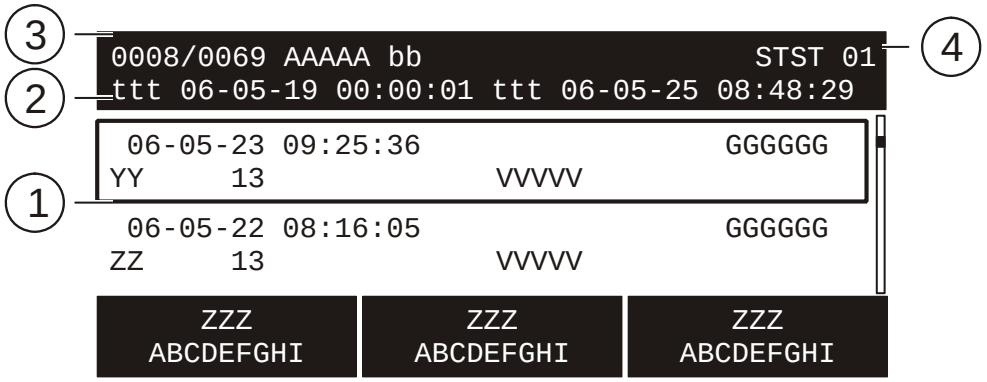
All events that have occurred in the fire detection installation are stored in the event memory . The event list is sorted chronologically and you may filter the events by category, date and time.

The preselection by category as well as the entry of a timespan makes it possible to indicate a part of all the events stored in 'Event memory'.

Selecting events

1. In the 'Main menu', select the 'Event memory' menu item.
   ⇨ A list with 'Stations' is displayed. The 'Station', where the selection is made is identified accordingly.
2. Select the 'Station'.

⇨ A list of all events is displayed.



Example of an event list

1	Event list	3	Highlighted entry (0008) of the total number of entries (0069)
2	Timespan	4	Selected 'Station'

Using the softkeys to limit the selection of all events indicated

You can use the 'Select Event category' softkey to select an event category and then enter the date or time range.

Select event category	
ALARM	(0)
Pre-ALARM	(1)
Fault	(2)
Isolation	(3)

You can use the 'Select Date/time range' softkey to enter the timespan.

Select date/time range	
Whole range	
From / to	(1)
Today	(2)
Yesterday	(3)
Last 7 days	(4)

The 'More Options' softkey gives you the following options:

Selecting option	
Select station	(3)
Execute commands	(4)
Jump to begin	(5)
Jump to end	(6)
Delete event memory	(8)

5.10.2 Selection in the topology

It is possible to navigate through the topology tree structure via the 'Topology' menu item in the Main menu. To do so, you may select an element for detailed view or execute a function on a selected element.

In the topology you can preselect the elements by selecting the topology partial tree.

There are three partial trees:

- 'Detection tree'
- 'Hardware tree'
- 'Control tree'

Selecting element in the topology

1. In the 'Main menu', select the 'Topology' menu item.
   ⇨ The three partial trees of the topology are indicated.
2. Select a partial tree.
3. In the structure, continue navigating to the detail with the 'Lower level' softkey or use the 'Execute Commands' <softkey> to execute a command.

⇨ Details are shown or the window with a selection of commands is indicated.

Navigating in an exemplary 'Detection tree'

Topology Exit with <C>		Access level 2.1
Detection tree	(1)	
Hardware tree	(2)	
Control tree	(3)	

Function On/Off	Function All	Test LED

- 'Control tree' selection
  ⇨ The control tree includes three elements.

003 Elements		Control tree
Fire control group	2	Fire protection doors
Alarming control group	**2**	Standard alarming control
Fire control group	3	Lift control

	Lower level	Execute Commands

- Select 'Alarming control group 2', 'Lower level' <softkey 2>

006 Elements		Alarmg.
ExtS.Ct	4	External sounder
RTfault	**4**	RT channel Fault
RT 1	7	RT channel 1
Alarm Verification Concepts	8	RT channel 2

Upper level	Execute Commands

- Select 'RTfault', 'Execute Commands' <softkey 3>

Select command	
OFF	(1)
Deactivate	(2)
Poll RT counter	(3)

5.10.3 Searching for elements

An 'Element search' makes it possible to view the details of an element or to enter commands applicable to an element.

There are two variants to 'Element search':

- Search by category
- Search by 'Address'

Searching for an element

1. In the 'Main menu', select the 'Element search' menu item.

   ⇨ The window to select the search variant is open.

2. Select the search variant and proceed as follows:

- 'Start with category'

  First of all, select an element category.
  In the 'Enter address' window you have the possibility to enter <ok> without entering an address. In that case, all elements of this element category are listed.
  When you enter a valid address in the 'Enter address' field, only that element is listed.

- 'Start with address'

  Here you enter a valid address at the beginning. All elements with this address are listed.
  The elements may belong to different element categories such as 'Area' 2, 'Section' 2, 'Zone' 2, 'Alarming control group' 2 or 'Fire control group' 2, after the entry of address 2..

Search by category

The tables below indicate steps of the 'Element search' with 'Start with category':

Main menu Exit with <C>			Access level 2.1
Message summary	(1)	Element search	**(5)**
Functions	(2)	Event memory	(6)
Favorites	(3)	Login/logout	(7)
Topology	(4)	Settings/administration	(8)
Function On/Off		Function All	Test LED

- Select 'Element search', continue with <ok>

Element search Exit with <C>		Access level 2.1
Start with category	**(1)**	
Start with address	(2)	
Function On/Off	Function All	Test LED

- Select 'Start with category', continue with <ok>

Selecting element category	
Area	(1)
Section	(2)
Zone	(3)
Sounder	(4)
Fire control group	(5)

- Select e.g. 'Zone', continue with <ok>

Enter address
Zone 2--------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Enter e.g. 2, continue with <ok>

001 Zone		
Zone	2	Corridor

Execute Commands	Execute commands Topology

Corresponding functions are possible with the softkeys.

Search by address

The tables below indicate steps of the 'Element search' with 'Start with address':

Element search Exit with <C>	Access level 2.1
Start with category	(1)
Start with address	(2)

Function On/Off	Function All	Test LED

- Select 'Start with address', continue with <ok>

Enter address
Address 2--------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Enter e.g. 2, continue with <ok>

050 Elements		
Area	2	Portaphone AG
Section	2	1. floor
Zone	2	Corridor
RT fire	2	RT channel Fire

Execute Commands	Execute commands Topology

Corresponding functions are possible with the softkeys.

5.11 Testing

The following chapters with operation sequences for testing include sample tests.

See also

Test [→ 99]

5.11.1 Testing detectors

For 'Detector test' you can select automatic 'Detectors' or 'Manual call point'.

The 'Detector test' function can be performed at 'Zone', 'Section' or 'Area' level.

The 'Detector test' is performed by means of a detector exchanger and tester. To use the detector exchanger and tester, you must enable the detector exchanger and tester communication on the 'Station'. For information about this, see the 'Enabling detector exchanger and tester communication' chapter.

Testing all automatic 'Detectors'

1. In the 'Main menu', select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Test' menu item.
   ⇨ The 'Select element category' window is open.
3. Select the 'Element category' 'Area'.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ The 'Select command' window is open.
5. Select 'Non-MCP zones det.test'.
   ⇨ All automatic 'Detectors' are set to 'Detector test'.
   ⇨ The 'DETECTOR TEST' LED on the Person Machine Interface is on.
6. Test the 'Detectors'.

Example of selecting commands for the 'Detector test' of all automatic 'Detectors':

Select command	
Installation test	(2)
Non-MCP zones det.test END	(3)
Installation test END	(4)
MCP zones det.test END	(5)
Non-MCP zones det.test	**(6)**

'Detector test' all automatic 'Detectors'

Proceed as with Detector test but select the 'Non-MCP zones det.test END' command.

See also

Enabling detector exchanger and tester communication [→ 70]

5.11.2 Testing the installation

As in the 'Installation test' all functions of the complete fire detection system including the 'Fire control' and alarming are tested, you must take appropriate actions.

The 'Installation test' can be performed at 'Area' or 'Section levels.

⚠ WARNING

During the system test, the alarming and fire control are activated!

Personal injury resulting from extinguishing activation

The fire brigade is called up unnecessarily.

- Set the 'Fire controls' to 'Control test' in advance.
- Inform the fire brigade in advance.

Before the 'Installation test' you can set 'Fire controls' to 'Control test'.

Testing the installation

- Proceed as with 'Detector test' and select the 'Installation test' function.

See also

Testing detectors [→ 67]
Control test [→ 69]

5.11.3 Control test

The 'Control test' checks the function of configured controls.

During the 'Control test', the controls function in the same way as during normal operation; however, the hardware is not actuated.

The effects of the controls, e.g. the actuation of digital outputs and the sounders or the execution of commands is ensured, however, the corresponding hardware does not receive a signal and is thus not activated.

All controls can be set to 'Control test'.

Testing a control

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' window is open.
2. Select the 'Test' menu item.
   ⇨ A list of all element categories on which a command of the 'Test' command group can be executed is indicated.
3. Select the 'Fire control group' element category.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list of all 'Fire control groups' is displayed.
5. Select the desired 'Fire control group' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select 'Control test'.

⇨ The control test is performed

Example of selecting commands for the 'Control test' in the 'Fire control group' element category:

Selecting element category	
Section	(2)
Zone	(3)
Sounder	(4)
RT control	(5)
Fire control group	(6)

Select command	
Control test END	(1)
Control test	(2)

See also

Testing detectors [→ 67]

5.12 Enabling detector exchanger and tester communication

To test a detector with a detector exchanger and tester, you must enable communication between the detector exchanger and 'Station'.

Enabling the communication with the detector exchanger and tester

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' window is open.
2. Select 'Maintenance' and confirm with <ok>.
   ⇨ A list of all element categories on which a command of the 'Maintenance' command group can be executed is indicated.
3. Select the 'Element category' 'Station'.
   ⇨ The 'Enter address' window is open.
4. Enter the number of the 'Station' on which you want to enable communication with the detector exchanger and tester and confirm with <ok>.
   ⇨ The 'Select command' window is open.
5. Select the 'Enable MC link' command and confirm with <OK>.

⇨ The communication between the detector exchanger and tester and the 'Station' has been enabled.

Canceling enabling

- Proceed as with the enable above but select the 'Disable MC link' command.

5.13 Activation / Deactivation / Reset

You can activate and deactivate outputs, for example 'Sounders'.

Channel inputs, e.g. detectors, may be activated but not deactivated. They can be reset after an activation.

The activation of 'Fire controls' actuates e.g. flaps, lifts, system equipment and extinguishing equipment, including those with extinguishing gases. You must take appropriate measures to prevent any possible damage.

⚠ WARNING

Deactivated controls hinder appropriate measures in case of fire!

Personal injury and damage to property in the event of a fire.

- Deploy staff to monitor the deactivated area.
- You must reactivate deactivated controls as soon as possible.

⚠ WARNING

Activated parts of the system may actuate alarming and universal control devices!

Personal injury resulting from extinguishing activation.

The fire brigade is called up unnecessarily.

- Set the 'Fire controls' to 'Control test' in advance.
- Inform the fire brigade in advance.

5.13.1 Activating an alarm indicator (AI)

You can activate an alarm indicator e.g. to check the geographic assignment of a detector. This function is useful for commissioning and maintenance.

'Activate alarm indicator'

1. In the main menu, select the 'Topology' menu item.
   ⇨ The three partial trees of the topology tree are indicated.
2. Select 'Detection tree'.
3. Go on navigating through the tree structure to the next detector, using the 'Lower level' softkey 2.
4. Highlight a detector.
5. Press 'More Options' <softkey 3>.
   ⇨ The 'Select option' window is open.

6. Select the 'Execute commands' option.

   ⇨ The 'Select command' window is displayed.

7. Select the 'Activate alarm indicator' command.

⇨ The alarm indicator is activated.

The example below shows navigation in the 'Detection tree' to select a detector and activate the alarm indicator:

Topology Exit with <C>		Access level 3
Detection tree	(1)	
Hardware tree	(2)	
Control tree	(3)	

Function On/Off	Function All	Test LED

- Select 'Detection tree', continue with <ok>

001 Element			Detection tree
Area	**1**	Portaphone AG	

	Lower level	More Options

- Select 'Area 1', continue with 'Lower level' <softkey 2>

005	Elements Portaphone AG		Area 1
Section	1	Ground floor	
Section	2	1. floor	
Section	**3**	1. floor / EDP room	
Section	4	2. floor	

Upper level	Lower level	More Options

- Select element 'Section 3', continue with 'Lower level' <softkey 2>

004	Elements 1. floor / EDP room		Section 3
Zone	9	EDP room	
Zone	10	Power supply room	
Zone	**11**	EDP room, false floor	
Zone	12	EDP room	

Upper level	Lower level	More Options

- Select element 'Zone 11', continue with 'Lower level' <softkey 2>

001	Element 1. floor / EDP room	Zone 11
Detect.	**1**	EDP room, false floor

Upper level	Lower level	More Options

- Select element 'Detect. 1', continue with 'More Options' <softkey 3>

Selecting option	
Execute commands	**(3)**
Jump to link	(4)
Show details	(5)

- Select 'Execute commands' option, continue with <ok>

Select command	
OFF	(1)
Set customer text	(3)
Activate alarm indicator	(5)
Set PS MANNED	(6)
Set PS UNMANNED	(7)

- Select 'Activate alarm indicator' command continue with <ok>

⇨ Command response

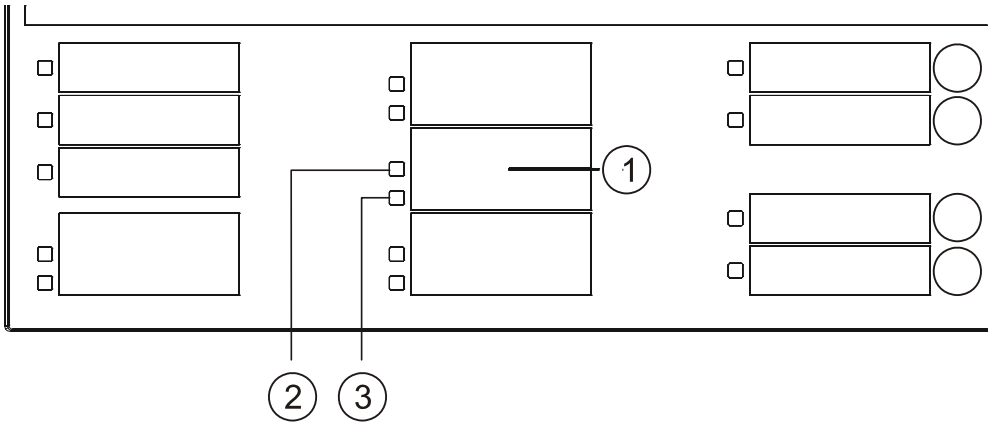
Execute command **Activate alarm indicator**
Command executed

5.13.2 Deactivating / Activating alarm devices

In case of alarm, the alarm devices are active and the corresponding LED on the PMI is on.

You can deactivate activated alarm devices on the PMI.

The figure below shows one part of the PMI including the 'Alarm device' button:



PMI

1 'Alarm device' button
2 'Alarm device Active' LED
3 'Alarm device Fault/Off' LED

Deactivating the alarm devices

▷ An alarm event has occurred.

- Press <Alarm device>.

⇨ Alarm devices are deactivated.

Activating deactivated alarm devices

- Press <Alarm device> again.

⇨ Alarm devices are activated.

When activated alarm devices have been deactivated after an alarm event, they are automatically re-activated when a new alarm event occurs.

5.13.3 Activating / resetting zone

An activated 'Zone' generates an 'ALARM' event.

Activating 'Zone'

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Activate / deactivate' menu item.
   ⇨ A list of all element categories on which a command of the 'Activate / deactivate' command group can be executed is indicated.
3. Select the 'Zone' element category.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list with all 'Zones' is open.
5. Select an 'Zone' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select 'Activate'.

⇨ 'Zone' is activated.

⇨ The window with the command response is open.

Example for the activation of a 'Zone'

Functions Exit with <C>			Access level 2.2
On / Off	(1)	Configuration	(5)
Test	(2)	Maintenance	(6)
Activate / deactivate	(3)	All functions	(7)
Information	(4)		

Function On/Off	Function All	Test LED

- Select 'Activate / deactivate' function in the main menu, continue with <ok>

Selecting element category	
Area	(1)
Zone	(2)
Sounder	(3)
RT control	(4)
Alarming control group	(5)

- Select 'Zone' element category, continue with <ok>

Enter address
Zone ---------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Press <ok> without entering an address

004 Zones		
Zone	1	FSE Zone1
Zone	2	Manual Zone 2
Zone	3	
Zone	4	
Execute Commands		Execute commands Topology

- Select 'Execute Commands' <softkey 1>

Select command	
Activate	(1)

- Select 'Activate', continue with <ok>

⇨ Command response

Execute command Activate
Command executed

After a 'Zone' zone has been activated, the 'ALARM' event is indicated on the display:

Fire Brigade requested 001 ALARM			
001 !	Manual FIRE ALARM FSE zone 1	Zone	1
Execute Commands		Show Intervention text	More Options

'ALARM' event

Acknowleding 'ALARM'

- Press <Acknowledge>.

⇨ The alarming equipment is switched off.

Execute command Acknowledge
Command executed

Command response

Resetting 'Zone'

1. Press <Reset>.
   ⇨ The 'Login/logout' dialogue is open.
2. Enter an admissible PIN.

⇨ 'Zone' is reset.

5.13.4 Activating / deactivating universal control

Activating a 'Fire control'

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Activate / deactivate' menu item.
   ⇨ A list of all element categories on which a command of the 'Activate / deactivate' command group can be executed is indicated.
3. Select the 'Output Fire control' element category.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list with all 'Fire controls' is open.
5. Select an 'Fire control' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select 'Activate'.
   ⇨ 'Fire control' is activated.

⇨ The window with the command response is open.

Example of deactivating a 'Fire control', following the methods described above:

Functions Exit with <C>			Access level 2.1
On / Off	(1)	Configuration	(5)
Test	(2)	Maintenance	(6)
Activate / deactivate	(3)	All functions	(7)
Information	(4)		

Function On/Off	Function All	Test LED

- Select 'Activate / deactivate', continue with <ok>

Selecting element category	
Fire control group	(7)
Physical channel	(8)
Fire control group	(9)
Output Fire control	
RT channel	

- Select 'Output Fire control', continue with <ok>

Enter address
Fire 1--------
OUTFire 1--
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- E.g. continue with <ok> without entering an address

009 OUTFire		
OUTFire	2	Lakeside corridor
OUTFire	1	Mountain side corridor
OUTFire	2	Lakeside corridor
OUTFire	1	Lift shaft 1st floor

Execute Commands	Execute commands Topology

- Select 'Execute Commands' <softkey 1>

Select command	
OFF	(1)
Activate	(4)

- Select 'Activate' command, continue with <ok>

⇨ Command response

Execute command **Activate**
Command executed

Deactivating a 'Fire control'

Proceed as with activating, but select the 'Deactivate' command.

5.13.5 Activating evac controls

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' window is open.
2. Select the 'Activate / deactivate' menu item.
   ⇨ A list of all element categories on which a command of the 'Activate / deactivate' command group can be executed is indicated.
3. Select the 'Evac control group' element category.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list with all 'Evac controls' is open if more than one Evac category has been configured.
5. Select an 'Evac control group' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select 'Activate/EVAC'.

⇨ 'Evac control' is activated.

⇨ The window with the command response is open.

Example for the activation of 'Evac control'

Functions Exit with <C>			Access level 3
On / Off	(1)	Configuration	(5)
Test	(2)	Maintenance	(6)
Activate / deactivate	(3)	All functions	(7)
Information	(4)		

Function On/Off	Function All	Test LED

- Select 'Activate / deactivate' menu item, continue with <ok>

Selecting element category	
Area	(1)
Zone	(2)
Sounder	(3)
Evac control group	(4)
Fire control group	(5)

- Select 'Evac control group' element category, continue with <ok>

Enter address
Evac --------
Confirm with <ok>/Exit with <C>
Delete with <Cursor up>

- Continue with <ok> without entering an address

Since in the example here only one 'Evac control' is configured, after confirmation with <ok> without an address entry, there is no selection window for selecting 'Evac control'.

Select command	
Activate/ALERT+EVAC	(1)
Activate/EVAC	(2)
Activate/ALERT	(3)
Deactivate	(4)

- Select 'Activate/EVAC' command continue with <ok>

⇨ Command response

Execute command Activate/EVAC
Command executed

5.14 Show information

5.14.1 Polling alarm counters / remote transmissions

The fire control panel has a function which counts all alarm events. The number of all alarms can be polled by means of the alarm counter.

Another function counts all remote transmission events and may be indicated by means of the 'RT counter'.

Polling the alarm counter

1. Press 'Function All' <softkey 2> in the main menu.
   ⇨ The 'Select element category' window is open.
2. Select the 'Area' element category.
   ⇨ The 'Enter address' window is open.
3. Press <ok> without entering an address.
   ⇨ A list with 'Areas' is opened.
4. Select an 'Area' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
5. Select the 'Poll alarm counter' command.

⇨ The number of alarms that have been occurred is indicated.

Execute command **Poll alarm counter**
Alarm counter value is: $(COUNTER) 3

Example with alarm counter value

Polling the RT counter

1. Press 'Function All' <softkey 2> in the main menu.
   ⇨ The 'Select element category' window is open.
2. Select the 'RT control' element category.
   ⇨ The 'Enter address' window is open.
3. Press <ok> without entering an address.
   ⇨ A list with all elements of the 'RT' type is open.
4. Select an element and press <Softkey 1>.
   ⇨ The 'Select command' window is open.
5. Select the 'Poll RT counter' command.

⇨ The number of remote transmissions is indicated.

5.15 Entering the configuration

In the 'Configuration' menu you may e.g. perform the following settings:

- 'Switch Manned operation' / 'Unmanned operation'
- Set times for 'Unmanned operation'
- Set parameter sets for 'Manned operation' and 'Unmanned operation'
- Set customer text

Configuring the installation

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Configuration' menu item.
   ⇨ A list of all element categories on which a command of the 'Configuration' command group can be executed is indicated.
3. Select the element category you want to configure.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list with all elements is open.
5. Select an element and press <Softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select a command.

⇨ The command is executed.

5.16 Auto-configure station

With the 'Auto-configure station' function you can commission a newly installed 'Station' immediately and without any additional settings.

!	*NOTICE*
	Overwriting an existing configuration
	An existing customer-specific configuration is lost.
	● First save an existing customer-specific configuration.

The 'Auto-configure station' process takes a few minutes, depending on the installation size.

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Configuration' menu item.
   ⇨ A list of all element categories on which a command of the 'Configuration' command group can be executed is indicated.
3. Select the 'Station' element category.
   ⇨ The 'Enter address' window is open.
4. Press <ok> without entering an address.
   ⇨ A list with all 'Stations' is open.
5. Select an 'Station' and press <softkey 1>.
   ⇨ The 'Select command' window is open.
6. Select 'Auto-configure station'.

⇨ 'Station' is auto-configured.

⇨ The window with the command response is open.

5.17 Auto-configure line

The 'Line' element category in the 'Maintenance' menu facilitates the reading-in of the current topology, for example. This creates part of the elements in the 'Detection tree'.

!	*NOTICE*
	Overwriting an existing configuration
	Parts of an existing customer-specific configuration are lost.
	● First save an existing customer-specific configuration.

Auto-configuring a line:

1. In the main menu, select the 'Topology' menu item.
   ⇨ The 'Topology' window is open.
2. Select 'Hardware tree'.
   ⇨ The 'Element' window is open.
3. Select 'Station' and press the 'Lower level' <softkey>.
   ⇨ The elements of 'Station' are displayed.
4. Select the corresponding 'C-NET line card (onboard/FCL2001)' module and press the 'Lower level' <softkey>.
   ⇨ All lines of 'C-NET line card (onboard/FCL2001)' are indicated.
5. Select a line and press 'More Options' <softkey>.
   ⇨ The 'Select option' window is open.
6. Select 'Execute commands' and confirm with <ok>.
   ⇨ The window including the possible commands is displayed.
7. Select the 'Auto-configure line' command and confirm with <ok>.

⇨ The line is auto-configured.

Example of automatic configuration

Main menu Exit with <C>			Access level 3
Message summary	(1)	Element search	(5)
Functions	(2)	Event memory	(6)
Favorites	(3)	Login/logout	(7)
Topology	(4)	Settings/administration	(8)
Function On/Off		Function All	Test LED

- Select 'Topology', continue with <ok>

Topology Exit with <C>		Access level 3
Detection tree	(1)	
Hardware tree	(2)	
Control tree	(3)	

Function On/Off	Function All	Test LED

- Select 'Hardware tree', continue with <ok>

001 Element			Hardware tree
Station	**1**	Main building	

	Lower level	More Options

- Select 'Station 1', continue with 'Lower level' <softkey 2>

005 FC722	Elements Main building		Station 1
Module	1	Onboard I/Os	
Module	**2**	C-NET line card (onboard/FCL2001)	
Module	3	C-NET line card (onboard/FCL2001)	
Module	4	Communication interfaces	

Upper level	Lower level	More Options

- Select 'Module 2', continue with 'Lower level' <softkey 2>

007 Elements C-NET line card (onboard/FCL2001)			Module 2
Line	1		Line
Line	21		Line
Line	22		Line
Line	31		Line

Upper level	Lower level	More Options

- Select 'Line 1', continue with 'More Options' <softkey 3>

Selecting option	
Execute commands	(3)
Show details	(5)

- Select 'Execute commands', continue with <ok>

Select command	
Read-in installed devices	(1)
Detector line OFF	(2)
Auto-configure line	(3)
Set customer text	(4)
Accept replaced devices	(6)

- Select 'Auto-configure line', continue with <ok>

⇨ The line is auto-configured.

5.18 Enabling / disabling Cerberus Remote

Using Cerberus-Remote, you can represent the Person Machine Interface of a 'Station' on the PC. Depending on the mode, you can display the Person Machine Interface or display and operate. The 'Station' that is to be represented with Cerberus-Remote must be enabled.

You can grant the enable from all 'Stations' that have the 'Station' for which enabling is required in their visibility.

You can also enable Cerberus-Remote permanently in the configuration with Cerberus-Engineering-Tool.

To enable Cerberus-Remote on a 'Station', a licence key (at least L1 or L2) must be installed on the 'Station'.

Without a licence key, no commands are available on the Cerberus-Remote element.

Enabling Cerberus-Remote

▷ License key is installed.

1. In the 'Main menu', select the 'Functions' menu item.

   ⇨ The 'Functions' window is open.

2. Select 'Maintenance' and confirm with <ok>.

   ⇨ A list of all element categories on which a command of the 'Maintenance' command group can be executed is indicated.

3. Select 'Cerberus-Remote'

   ⇨ The 'Enter address' window is open.

4. Enter the number of the 'Station on which Cerberus-Remote is to be enabled and confirm with <ok>.

   ⇨ The 'Select command' window is open.

5. Select the 'Enable Cerberus-Remote operation' command and confirm with <ok>.

⇨ Enabling for viewing and operating the 'Station' with Cerberus-Remote is granted.

or

- Select the 'Enable Cerberus-Remote viewer' command and confirm with <ok>.

⇨ Enabling for viewing the 'Station' with Cerberus-Remote is granted.

The 'Enable Cerberus-Remote operation' and 'Enable Cerberus-Remote viewer' commands cannot be selected when enabling has already been granted. When disabling Cerberus-Remote the 'Disable Cerberus-Remote access' command is available instead in the command selection.

Canceling enabling for Cerberus-Remote

If Cerberus-Remote is enabled but there is no link to Cerberus-Remote, you can disable the enable with the 'Disable Cerberus-Remote access' command. Proceed as described above and select the corresponding command.

When Cerberus-Remote is enabled for operation and the connection with the Cerberus-Remote has been established, each operating attempt on the 'Station' opens the following window:

Window to abort the connection with Cerberus-Remote

Cerberus-Remote operation
Abort Cerberus-Remote connect. Exit with <C> Confirm with <ok>

- Press <ok>

⇨ Connection with Cerberus-Remote is broken.

⇨ Enabling for Cerberus-Remote is canceled.

5.19 Connecting Cerberus Remote

Cerberus-Remote can only ever be connected with one station at a time. The connection can be established locally or remote via the 'Central Access Point' (CAP). For this purpose, there must be a license key (at least L1 or L2) installed in the station that is to be displayed with Cerberus-Remote.

Cerberus-Remote receives the visibility which is configured on the 'Station' displayed using Cerberus-Remote.

You can use Cerberus-Remote in a fire detection installation with networked 'Stations' to gain global visibility. Just one licence key is needed for this per network if the licence key is installed in a 'Station' with global visibility.

The possible 'Cerberus-Remote viewer' or 'Cerberus-Remote access' operation modes must be enabled before connecting to the station. The possible operation modes can also be permanently enabled in the configuration with Cerberus-Engineering-Tool.

Establishing connection

1. Click on the 'Cerberus-Remote' task card.

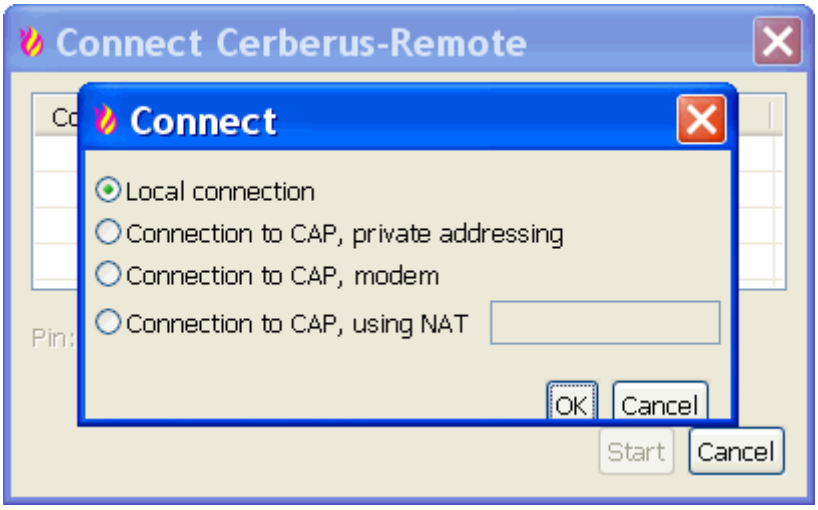
   ⇨ The Person Machine Interface of a station is shown.

2. In the menu bar, click on the 'Cerberus-Remote' menu item.

   ⇨ The submenu 'Connect' (and 'Disconnect') is indicated.

3. Select 'Connect'.

   ⇨ A window showing the selection of connection type is indicated.



4. Select the required type of connection and confirm with 'OK'.

   ⇨ A window with the list of all stations of the site is indicated.

5. Mark the corresponding station.

6. Enter your PIN.

7. Click the 'Start' button.

⇨ The connection is established.

The connection with a 'Station' is shown by the Person Machine Interface (display, LEDs, keys) transmitted.
The 'Cerberus-Remote access' operation mode is indicated by a red frame around the Person Machine Interface.
An enable granted for Cerberus-Remote is retained when a 'Station' restarted.

5.20 Operating Cerberus Remote

You can only operate Cerberus-Remote using the mouse.

The operating functions of the keys shown are identical with those on the station.

5.21 Polling / Deleting the event memory

As an alternative to the indication of the event memory on the 'Station', the data of the event memory may also be transmitted to a PC in a standard format. To do so, a PC with a configuration tool must be connected to the 'Station'.
Additional information can be found in the document 'A6V10210424, configuration'.

Polling the event memory

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' menu is open.
2. Select the 'Event memory' menu item.
   ⇨ The 'Select station' window is open.
3. Select the 'Station' you want.

⇨ The list of all events for 'Station' is displayed.

⇨ Using the softkeys 1 - 2 you can now filter by category, or date/time.

Navigating in the event memory

Entering a 3-digit number (e.g.: 1, 132, 500) and confirming by pressing <ok> in the event memory, takes you straight to the corresponding entry.

Deleting the event memory

1. In the main menu, select the 'Functions' menu item.
   ⇨ The 'Functions' window is open.
2. Select 'Maintenance' and confirm with <ok>.
   ⇨ A list of all element categories on which a command of the 'Maintenance' command group can be executed is indicated.
3. Select 'Station'.
   ⇨ The 'Enter address' window is open.
4. Enter the number of the 'Station' on which you want to delete the event memory and confirm with <ok>.
   ⇨ The 'Select command' window is open.
5. Select the 'Delete event memory' command and confirm with <ok>.

⇨ The event memory of the selected 'Station' is deleted.

5.22 Settings / Administration

5.22.1 PIN administration

You may change an existing PIN, as well as create or delete a new PIN if you have the necessary authorisation.

'Change PIN'

1. In the 'Main menu', select the 'Settings/administration' menu item.
2. Select the 'Change PIN' menu item.
3. Enter the PINs in accordance with the input fields and confirm with <ok>.

⇨ The PIN has been changed.

Change PIN
Old PIN: * New PIN: * Verify new PIN: * Confirm with <ok>/Exit with <C> Delete with <Cursor up>

'Create PIN'

▷ You have the required authorisation level.

1. In the 'Main menu', select the 'Settings/administration' menu item.
2. Select the 'Create PIN' menu item.
3. Enter an admissible access level.
4. Enter the PIN in accordance with the input fields and confirm with <ok>.

⇨ A new PIN has been created.

Create PIN
Access level: __ Enter PIN: * Verify PIN: * Confirm with <ok>/Exit with <C> Delete with <Cursor up>

'Delete PIN'

▷ PIN is present.

▷ You have the required authorisation level.

1. In the 'Main menu', select the 'Settings/administration' menu item.
2. Select the 'Delete PIN' menu item.
3. Enter the PIN in accordance with the input fields and confirm with <ok>.

⇨ PIN has been deleted.

Delete PIN
Enter PIN: * Verify PIN: * Confirm with <ok>/Exit with <C> Delete with <Cursor up>

5.22.2 Testing indicators

The display test is a functional hardware check for the following indication elements:

- Display
- LEDs

Simultaneously, optionally built-in indication and operation devices, e.g. the mimic display driver or fire department control panels that are controlled by commands, as far as they offer the possibility of performing a display test.

The test takes 10 seconds and has two phases of 5 seconds each.

Depending on the configuration, the 'LED test' command is available as softkey in the main menu.

Testing the indicators and displays

1. In the main menu, select the 'Settings/administration' menu item.
2. Select the 'LED test' menu item.

⇨ Phase 1 starts:
Display is totally white.
LEDs are in color mode 1.

⇨ Phase 2 starts:
Display is totally black.
LEDs are in color mode 2.

5.22.3 Setting the buzzer volume

You can set the volume of the buzzer for the 'Station' on four levels or switch it off.

'Set buzzer volume'

1. In the main menu, select the 'Settings/administration' menu item.
2. Select the 'Set buzzer volume' menu item.
   ⇨ The 'Set buzzer volume' window is open.
3. Select the desired settings in the list.

⇨ The buzzer volume has been set.

5.22.4 Adjusting the display brightness

You can set the display brightness on five levels between 'Off', 25% and 100%.

'Change display brightness'

1. In the main menu, select the 'Settings/administration' menu item.
2. Select the 'Display settings' menu item.
   ⇨ The 'Display settings' window is open.
3. Select 'Change display brightness'.
   ⇨ The window for the adjustment is open.
4. Select the desired settings in the list.

⇨ The display brightness has been adjusted.

5.22.5 Setting time and date

In countries with Central European Summer Time (CEST) the system clock automatically switches between summer time and normal time.

The clock must also be set when the fire detection system has been disconnected from the power supply.

'Enter date / time'

1. In the 'Main menu', select the 'Settings/administration' menu item.
2. Select the 'System commands' menu item.
   ⇨ The 'System commands' window is open.
3. Select the 'Set system time' menu item.
   ⇨ The 'Enter date / time' window is open.
4. Enter the date and time and/or confirm with <ok>.
   ⇨ The cursor jumps to the next field and terminates the input after the last field.

⇨ Adjusted or confirmed date and time are set.

Enter date / time
25-04-09 12:42:58 (yy-mm-dd) (hh:mm:ss) Confirm with <ok>/Exit with <C> Delete with <Cursor up>

Input window for time and date

5.23 Entering/Changing customer text

You can enter customer text for any element on the control panel, independently of Cerberus-Engineering-Tool.

Once customer text has been entered or changed, the updated display is only shown the next time the element is accessed.

Entering or changing customer text does not lead to a reboot.

'Set customer text'

1. Select an element
2. Press the 'Execute Commands' softkey.
3. Select the 'Set customer text' command.
4. Enter the desired customer text and confirm the entry with <ok>.

⇨ The customer text has been entered.

Changing customer text

Proceed in the same way as when entering customer text but change the existing customer text.

See also

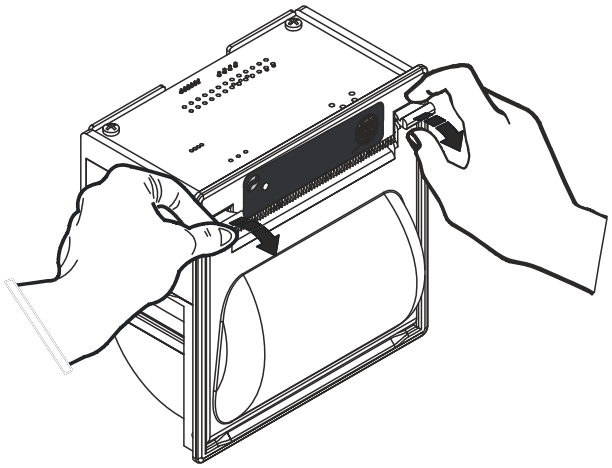
- Entry of numbers and letters [→ 34]
- Selecting elements or events [→ 61]

5.24 Inserting printing paper

The printer can also be fitted the other way round, i.e. different from the position shown below.

Opening the printer

- Push the clips slightly down and open the printer as shown in the figure.

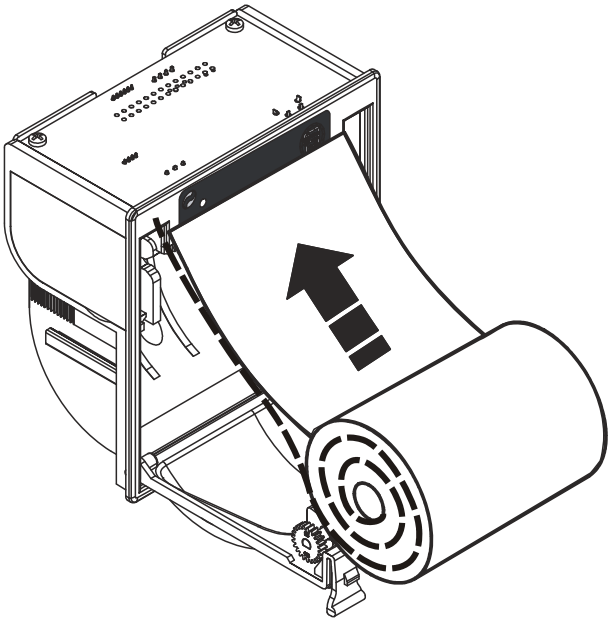


Opening the printer

Replacing the paper roll

1. Remove the reel of the old paper roll.
2. Insert the new paper roll as shown in the figure below.

Please make sure that the side that will be unwound is at the back of the drum, corresponding to the dashed line in the figure below.

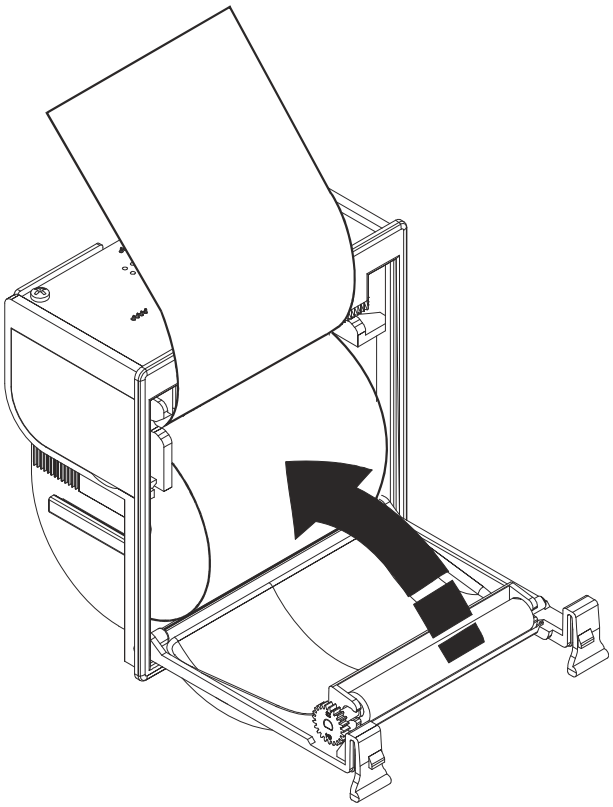


Inserting paper roll

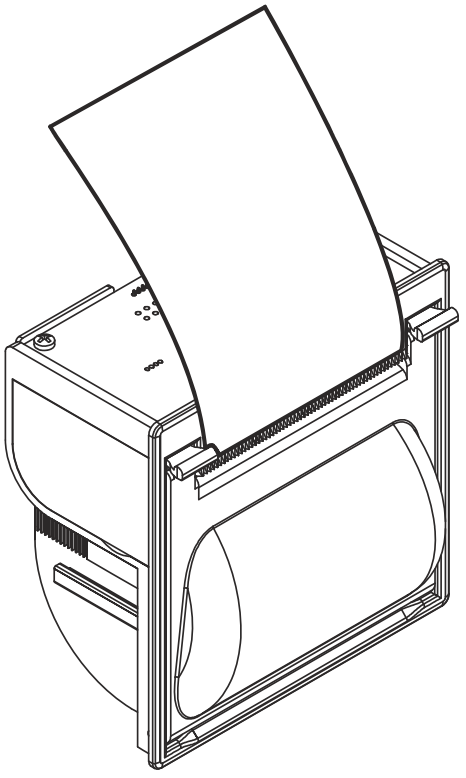
Closing printer

1. Pull some of the paper out of the printer.
2. Hold the paper end upwards.
3. Close the printer by holding the bracket upwards until the clips audibly engage.

⇨ The printer is ready.



Closing printer



Printer is ready

5.25 Switching off the printer

You can switch off the printer with a command.

Switching off the printer

1. Press <Menu>.
   ⇨ The main menu is open.
2. Press 'Function On/Off' <softkey 1>.
   ⇨ The window with element categories and elements is indicated.
3. Select the 'Printer' element and press <softkey 1>.
   ⇨ The window with the command selection is open.
4. Select the 'OFF' command and confirm with 'ok'.

⇨ The printer is switched off.

To switch on a printer that has been switched off, proceed as when switching the printer off but select the 'ON' command.

5.26 Show version

You will find the 'Station' version and configuration data in 'Hardware tree'.

Version indication

1. In the main menu, select the 'Topology' menu item.
   ⇨ The three partial trees of the topology tree are indicated.
2. Select 'Hardware tree'.
3. Select the 'Station'.
4. Press the 'More Options' softkey.
   ⇨ The 'Select option' window is open.
5. Select 'Show details'.

⇨ The version of the 'Station' and configuration data are indicated.

6 System functions

See also

Event categories [→ 151]

6.1 Note on the configuration of the local fire detection installation

Each fire detection system is individually configured. The configuration has an impact on the operation. The table below provides information on the configuration of your fire detection installation.

Parameter	Configuration
Operation level access	O via password O via key switch
Remote transmission of 'ALARMS'	O yes O no
Alarm sequence taking into account the staff present on site	O yes O no
Switching from 'Manned operation' to 'Unmanned operation'	O automatic O manual
Automatic switching time from 'Manned operation' to 'Unmanned operation'	O indicated O not indicated
Automatic switching time from 'Manned operation' to 'Unmanned operation'	O not activated
Delay t1	____ minutes
Delay t2	____ minutes
Switchover Summer time / Winter time	O automatic O manual
Remote transmission of 'Faults'	O yes O no
Function Evacuate	O activated O not activated
Access to acknowledgement	O always possible O via password / key switch
'Faults' must be reset	O yes O no
'Faults' are generally immediately transmitted to the receiving centre	O yes O no
Manual call points in mixed detector zones always trigger an 'ALARM', even when the detector zone is switched off	O yes O no
Maximum operation time without mains supply	____ hours
Building plan handed over	on _____ by _____

6.2 Operating condition

A fire detection installation is ready for operation when it is supplied with energy and no other operation condition is indicated.

As soon as an event occurs in the 'Station' which deviates from operational readiness, this event is indicated and the 'Station' changes to the condition corresponding to the type of event.

'Station' may be in several conditions simultaneously:

- 'ALARM' (fire detection condition)
- 'FAULT' (fault message condition)
- 'ISOLATION' (isolation condition)
- 'DETECTOR TEST' (test status)
- Normal operation (operational readiness)

Indication of the operating condition

- The operating condition is indicated on the PMI:
  - Visually and acoustically by LEDs, buzzers and on the display.

6.3 Operation modes

The fire control panel can be operated in the following operation modes:

- Normal operation
  - 'Manned operation'
  - 'Unmanned operation'
- Test
- 'Isolation'
  - "--Renovation mode'

6.3.1 Normal operation

In normal operation 'ALARMS' are evaluated and processed in accordance with the 'Manned operation' or 'Unmanned operation' operating mode.

Normal operation is described in the following:

- The detectors are set to normal sensitivity level, in accordance with the parameter in account.
- The fire detection installation is ready to receive danger messages ('ALARMS') and fault messages.
- The 'System On' LED lights up.

In normal operation the fire detection installation may be in 'Manned operation' or 'Unmanned operation' operating mode. In the 'Manned operation' operating mode the 'Premises manned' LED is on.

'Manned operation'

In the 'Manned operation' operating mode, events can be processed via 'AVC' or 'IC'.

The remote transmission of an 'ALARM' may be delayed, for example, and an operator may verify 'ALARMS' or 'Faults' that have occurred.

'Unmanned operation'

In 'Unmanned operation' operating mode events are directly handled in accordance with the configuration, without taking into account the 'AVC' or 'IC'.

This means e.g. that remote transmission of an 'ALARM' is effected without delay. Global alarming is activated immediately.

6.3.2 Test

The fire detection installation is in operating mode 'Test' if one of the following test modes is activated:

- 'Detector test mode'
- 'Control test mode'
- 'Install. test mode'
- Test variants

'Detector test mode'

The 'Detector test mode' test mode is a hardware function check and serves to check the functionality of one or several detector zones and their communication with the control panel.

An activated detector from a detector zone in 'Detector test mode' test mode generates a test activation message instead of a danger level. No alarm devices or controls are activated.

Existing sounder bases are equally activated when the corresponding detector is tested.

In 'Detector test mode' test mode the fire detection installation has the following properties:

- The automatic detectors are set to high sensitivity.
- Alarm devices and controls are active as in normal operation.
- No danger messages or fault messages are generated.
- Test activations are indicated as test activation messages, logged in the event memory and printed out if need be.

After the detector test the detectors are set to normal sensitivity again, like before the test.

'Install. test mode'

The 'Install. test mode' test mode serves for checking all functions of the complete fire detection installation including the 'Fire control' and alarming in normal operation.

In 'Install. test mode' test mode the functionality of all components of the fire detection installation is the same as in normal operation, with the following exception:

- The automatic detectors are set to high sensitivity to avoid long waiting times when the detectors are activated.

'Control test mode'

The 'Control test mode' test mode checks the function of the configured controls. During the 'Control test mode' test mode, the control functions in the same way as during normal operation; however, the hardware is not actuated.

The effects of the control, e.g. the actuation of digital outputs and the sounders or the execution of commands is ensured, however, the hardware in account does not receive a signal and is thus not activated.

Test variants

As a test variant it is possible to switch e.g. the control to test before performing the installation test.

See also

Testing [→ 67]

6.3.3 Isolation

You can switch off 'Zones' with automatic or non-automatic detectors in special situations, e.g. during construction work.

When parts of the fire detection installation are switched off, the fire detection installation is in 'ISOLATION' condition and operating mode.

The 'ISOLATION' LED on the Person Machine Interface is on.

In 'ISOLATION' operating mode neither 'ALARMS' nor 'Faults' from the parts that have been switched off can be evaluated.

You can set isolations with or without a time limit.

See also

Switching off / Switching on [→ 39]

6.3.4 Renovation

In "--Renovation mode' operating mode the detector parameter sets are changed as follows:

- No evaluation possible by the optical part of the detector.
- A static evaluation by the thermal part of the detector is possible, however, without the evaluation of the temperature difference.

The 'ISOLATION' LED on the PMI is on as soon as a part of the installation has been set to "--Renovation mode'.

6.4 Access level and access rights

'Station' station is protected against unauthorised operation by the following access levels:

Access level	Access rights	Functions and access rights
1	Everybody	'Acknowledge' and scrolling
2.1	Operator 1	Limited access rights (e.g. janitor)
2.2	Operator 2	Extended access rights (e.g. safety and security manager)
3	Service technician	All access rights (for service technicians)

- On access level 1 the most important commands can be entered in case of alarm.
- Other commands or the configuration of the 'Station' are possible from access level 2.1. onwards.
- Access levels are enabled by the PIN input dialog or the key switch.
- Each PIN is assigned to an access level.
- Menu entries, functions and favourites that are not accessible on an access level are hidden.

A list of all commands and the required access levels can be found in the annex.

The following table shows examples of main menu items and the access levels needed for execution

Main menu item	Required access level
'Message summary'	1
'Functions'	1, 2.1, 2.2, 3, depending on the function
'Favorites'	1, 2.1, 2.2, 3, depending on the favourite
'Topology'	1
'Element search'	1
'Event memory'	2.1
'Login/logout'	1
'Settings/administration'	3

Comparison of the access level release with key switch or PIN:

- The key switch takes priority over the PIN entry.
- When the key switch is in position 'On', the set access level cannot be changed by a PIN entry.
- When the key switch is turned to position 'On' during the PIN entry, the PIN entry dialog is closed.

When the key switch is in position 'On', the logout timeout function is deactivated.

See also

- Logout timeout [→ 102]
- List of all commands and required access levels [→ 105]

6.4.1 PIN input dialog

The 'Login/logout' main menu item opens the PIN input dialog. The access level in account is released by entering a valid PIN.

The PIN input dialog is indicated automatically if the activation of a button on the PMI requires a higher access level.

6.4.2 Logout timeout

The 'Station' is provided with a time control function for the operation.

The operation enable for an 'Access level' expires after a configurable period of time has passed since the last entry.

See also

- Log in / Change access level [→ 51]

6.4.3 Cerberus Remote enabling

The corresponding chapter describes how to enable Cerberus-Remote.

See also

Enabling / disabling Cerberus Remote [→ 86]

6.5 Visibility

Several fire control panels and fire terminals ('Stations') can be integrated into a fire detection installation. The visibility defines which part of a fire detection installation is visible and can be operated on a 'Station'.

The visibility is configured in Cerberus-Engineering-Tool.

The visibility for a fire control panel can be configured in the following topology levels of a fire detection installation:

- 'Site'
- 'Station'
- 'Area'

The visibility for this 'Station' is configured by selecting and assigning event categories from the topology to the visibility for this 'Station'.

For example, all the 'ALARMS' for the 'Site' or just the 'Faults' for the 'Area' of a 'Station' are indicated.

Two other modes are available for configuring the visibility:

- 'PMI standby visibility'
- 'PMI expanded visibility'

See also

Changing visibility [→ 53]
Event categories [→ 151]

6.5.1 Standby visibility

The 'Station' with the 'PMI standby visibility' configuration monitors one or more other 'Stations' or a management station in the configured visibility.

- When the fire detection installation is in normal operating condition, 'PMI standby visibility' is deactivated. The 'Station' configured in this way and the display are then in quiescent condition.
- If a monitored 'Station' fails or if the connection to a monitored 'Station' is interrupted, the configured 'PMI standby visibility' becomes active and the fire detection installation can be operated in the configured visibility via this 'Station' exactly as was previously the case with the failed 'Station'.

In addition to 'PMI standby visibility', 'PMI expanded visibility' can also be configured for a 'Station'.

See also

- Deactivating standby [→ 54]
- Expanded visibility [→ 104]

6.5.2 Expanded visibility

If configured, you can use a command to activate 'PMI expanded visibility' for a 'Station' and this gives you the configured visibility.

For a 'Station' with 'PMI standby visibility', 'PMI expanded visibility' can also be configured.

The 'PMI expanded visibility' configuration is however also available regardless of 'PMI standby visibility'.

The 'PMI expanded visibility' function can be configured with dependencies.

Possible dependencies

- 'PMI expanded visibility' can only be activated if a monitored 'Station' fails.

See also

- Activating / deactivating expanded visibility [→ 54]

6.6 Sabotage ALARM [DE]

If a class 3 key safe (fire department key safe, FSD) forms part of the fire detection installation, the door contact kit FCA2009-A1 must be installed in the housing of the control panel.

The door contact kit triggers a 'Sabotage ALARM' if the cover is removed from the control panel.

The sabotage evaluation can be switched off at access level 3.

See also

- Opening the control panel [DE] [→ 158]
- Switching off sabotage evaluation [DE] [→ 50]

7 List of all commands and required access levels

7.1 'Switching on/off' command group

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'OFF'	'Zone' 'Detect.' 'RT fire' 'Alarmg.' 'Evac' 'UniEvac 'Ph.Evac 'Alert' 'Fire' 'OUTFire' 'Sounder' 'Printer'	'Zone' 'Detector' 'RT fire control' 'Alarming control group' 'Evac control group' 'Universal evac control 'Phased evac control' 'Alert sounder' 'Fire control' 'Output Fire control' 'Sounder control' 'Printer	2.1
'OFF/timer'	'Zone'	'Zone'	2.1
'Renovation mode'	'Zone'	'Zone'	2.2
'ON'	'Zone' 'Detect.' 'RT fire' 'Alarmg.' 'Evac' 'UniEvac 'Ph.Evac 'Alert 'Fire' 'OUTFire' 'Sounder' 'Printer'	'Zone' 'Detector' 'RT fire control' 'Alarming control group' 'Evac control group' 'Universal evac control 'Phased evac control 'Alert sounder 'Fire control' 'Output Fire control' 'Sounder control' 'Printer'	2.1
'Non-MCP zones OFF'	'Area', 'Section'	'Area', 'Section'	2.1
'Non-MCP zones OFF/timer'	'Area', 'Section'	'Area', 'Section'	2.1
'Non-MCP zones ON'	'Area', 'Section'	'Area', 'Section'	2.1
'MCP zones OFF'	'Area', 'Section'	'Area', 'Section'	2.1
'MCP zones OFF/timer'	'Area', 'Section'	'Area', 'Section'	2.1
'MCP zones ON'	'Area', 'Section'	'Area', 'Section'	2.1
'All zones OFF'	'Area', 'Section'	'Area', 'Section'	2.1
'All zones OFF/timer'	'Area', 'Section'	'Area', 'Section'	2.1
'All zones ON'	'Area', 'Section'	'Area', 'Section'	2.1
'Alarm evaluation OFF'	'Area', 'Section', 'Zone'	'Area', 'Section', 'Zone'	2.1
'Fire related controls OFF'	'Area'	'Area'	2.1
'Fire related controls ON'	'Area'	'Area'	2.1

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Sounders OFF'	'Area'	'Area'	2.1
'Sounders ON'	'Area'	'Area'	2.1
'Detector line ON'	'Line'	'Line'	2.2
'Detector line OFF'	'Line'	'Line'	2.2
'RT FIRE channels OFF'	'Area'	'Area'	2.1
'RT FIRE channels ON	'Area'	'Area'	2.1
'Alarm evaluation OFF	'Zone'	'Zone'	2.1
'Sabotage evaluation OFF	'FSD'	'FSD'	3
'Sabotage evaluation ON	'FSD'	'FSD'	3

7.2 Command zone 'Test'

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Detector test'	'Zone'	'Zone'	2.2
'Detector test END'	'Zone'	'Zone'	2.2
'Non-MCP zones det.test'	'Area' 'Section'	'Area' 'Section'	2.2
'Non-MCP zones det.test END'	'Area' 'Section'	'Area' 'Section'	2.2
'MCP zones det.test'	'Area' 'Section'	'Area' 'Section'	2.2
'MCP zones det.test END'	'Area' 'Section'	'Area' 'Section'	2.2
'Installation test'	'Area' 'Section' 'Zone'	'Area' 'Section' 'Zone'	2.2
'Installation test END'	'Area' 'Section' 'Zone'	'Area' 'Section' 'Zone'	2.2
'Control test'	'RT fire' 'RTfault' 'RT 1' … 'RT 8' 'Evac' 'UniEvac 'Ph.Evac 'Fire' 'Fire' 'Sounder' 'IntS.Ct' 'ExtS.Ct'	'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control' 'Evac control group' 'Universal evac control 'Phased evac control 'Fire control group' 'Fire control' 'Sounder control' 'Internal sounder control' 'External sounder control'	2.2

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Control test END'	'RT fire' 'RTfault' 'RT 1' … 'RT 8' 'Evac' 'UniEvac 'Ph.Evac 'Fire' 'Fire' 'Sounder' 'IntS.Ct' 'ExtS.Ct'	'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control' 'Evac control group' 'Universal evac control 'Phased evac control 'Fire control group' 'Fire control' 'Sounder control' 'Internal sounder control' 'External sounder control'	2.2

7.3 'Activating/deactivating' command group

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Activate'	'Zone' 'RT fire' 'RTfault' 'RT 1' … 'RT 8' 'UniEvac 'Fire' 'OUTFire' 'Sounder'	'Zone' 'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control' 'Universal evac control 'Fire control group' 'Output Fire control' 'Sounder control'	2.1
'Activate/ALERT'	'Evac' 'Ph.Evac 'Alert	'Evac control group' 'Phased evac control 'Alert sounder'	2.1
'Activate/EVAC'	'Evac' 'Ph.Evac Evac	'Evac control group' 'Phased evac control Evac	2.1
'Activate/ALERT+EVAC'	'Evac' 'Ph.Evac 'Phased'	'Evac control group' 'Phased evac control 'Phased sounder'	2.1
'Deactivate'	'RT fire' 'RTfault' 'RT 1' … 'RT 8' 'UniEvac 'Ph.Evac 'Alert Evac 'Phased' 'Fire' 'OUTFire' 'Sounder'	'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control' 'Universal evac control 'Phased evac control 'Alert sounder Evac 'Phased sounder' 'Fire control group' 'Output Fire control' 'Sounder control'	2.1
Activate sprinkler 1	Exting	Exting. control group	2.1
Activate sprinkler 2	Exting	Exting. control group	2.1
'Activate alarm indicator'	'Detect.'	'Detector'	2.1
'Deactivate alarm indicator'	'Detect.'	'Detector'	2.1

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Time limited activation'	'RT fire' 'RTfault' 'RT 1' … 'RT 8' 'Sounder' 'Ext.snd'	'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control' 'Sounder control' 'External sounder'	2.1

7.4 Command group 'Information'

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Poll alarm counter'	'Area'	'Area'	1
'Show active detectors'	'Area'	'Area'	2.1
'Poll RT counter'	'RT fire' 'RTfault' 'RT 1… 'RT 8'	'RT fire control' 'RT fault control' 'RT 1 control' … 'RT 8 control'	2.1
'Print event memory'	'Printer'	'Printer'	2.1

7.5 'Configuration' command group

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Switch to MANNED'	'Area	'Area'	2.1
'Switch to UNMANNED'	'Area	'Area'	2.1
'Activate expanded visibility	'Visib.'	'PMI visibility'	2.2
'Deactivate expanded visibility	'Visib.'	'PMI visibility'	2.2
'Deactivate standby visibility	'Visib.'	'PMI visibility'	2.1
'Set PS MANNED	'Detect.'	'Detector'	3
'Set PS UNMANNED	'Detect.'	'Detector'	3
'Set PS	'Detect.'	'Detector'	3
'Set customer text	'All'		3

7.6 'Maintenance' command group

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'Reset module'	'Module'	'Module'	3
'Accept replaced devices'	'Line'	'Line'	3
'Device replace mode ON'	'Detect.'	'Detector'	3
'Device replace mode OFF'	'Detect.'	'Detector'	3
'Read-in installed devices'	'Line'	'Line'	3
'Remove/delete device'	'Detect.'	'Detector'	3
'Restart line'	'Line'	'Line'	2.2
'Auto-configure line'	'Line'	'Line'	3
'Calibrate'	'Module'	'Module'	3
'Enable sys.analyzer access'	Station	'Station'	3
'Disable sys.analyz. access'	Station	'Station'	3
'Enable remote access'	Station	'Station'	2.2
'Disable remote access'	Station	'Station'	2.2
'Enable MC link'	Station	'Station'	2.2
'Disable MC link'	Station	'Station'	2.2
'Restart'	Station	'Station'	3
'Remove loop extension'	'Module'	'Module'	3
'Enable Cerberus-Remote operation'	'Si.View'	'Cerberus-Remote'	2.2
'Disable Cerberus-Remote access'	'Si.View'	'Cerberus-Remote'	2.2
'Enable Cerberus-Remote viewer'	'Si.View'	'Cerberus-Remote'	2.2
'Delete event memory'	Station	'Station'	3
'Factory reset'	Station	'Station'	3
'Poll diagnostic data'	'Line'	'Line'	2.2
'Release FSD'	'FSD'	'FSD'	3
'Reset maintenance reminder'	Station	'Station'	3
'Scan for new modules'	Station	'Station'	2.2

7.7 Other commands

'Command'	'Element category' (short)	'Element category' (long)	'Access level'
'START LED test'	'Module'	'Module'	2.2
'END LED test'	'Module'	'Module'	2.2
'Set system time'	Station	'Station'	2.1
'Auto-configure station'	Station	'Station'	3
'Alarm delay off'	'Zone'	'Zone'	1

8 List of elements

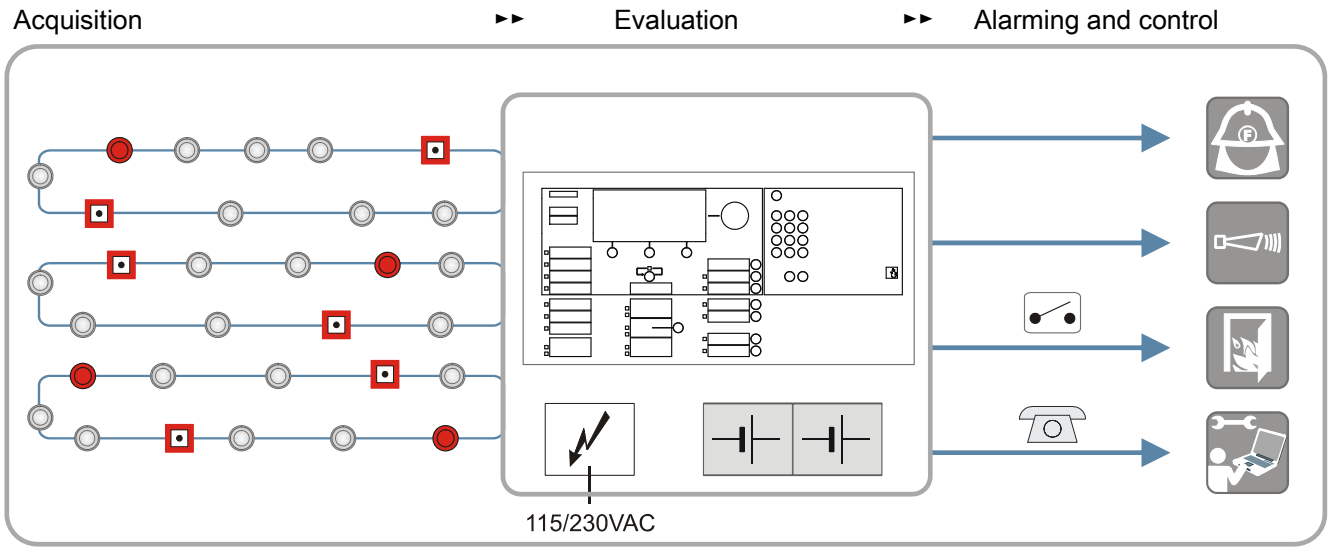
Element (short text long text)	Definition
'Area' 'Area'	Highest level in the 'Detection tree', alarm organisation level
'Section' 'Section'	2. level in the 'Detection tree', building section (e.g. room, staircase, floor) serving for the unambiguous identification and location of a fire alarm
'Zone' 'Zone'	3. level of the 'Detection tree'; decision on alarm is taken on this level
'Detect.' 'Detector'	Lowest level in 'Detection tree'
'Control' 'Control'	General control
'Evac' 'Evac control'	3. level in 'Control tree'
'Evac' 'Evac control group'	2. level in 'Control tree'
'Fire' 'Fire control'	3. level in 'Control tree'
'Fire' 'Fire control group'	2. level in 'Control tree'
'RT fire' 'RT fire control'	3. level in 'Control tree'
'RTfault' 'RT fault control'	3. level in 'Control tree'
'RT 1' … 'RT 8' 'RT 1 control' … 'RT 8 control'	3. level in 'Control tree'
'Alarmg.' 'Alarming control group'	2. level in 'Control tree'
'Sounder' 'Sounder control'	3. level in 'Control tree'
Sounder ???	2. level in 'Control tree'
'Phased' 'Phased sounder '	Lowest level in 'Control tree'
'Evac' 'Evac sounder'	Lowest level in 'Control tree'
Sounder Sounders Alarming control	Lowest level in 'Control tree'
Sounders Fire control	Lowest level in 'Control tree'
Station 'Station'	Highest level in 'Hardware tree'
'Station' 'Station'	'Station' network

Element (short text long text)	Definition
'Printer' 'Printer'	'Station' printer
Station 'Station'	Highest level in 'Hardware tree', control panel
'Module' 'Module'	2nd level in 'Hardware tree'
'Line' 'Line'	3. level in 'Hardware tree', primary detection line
'Device' 'Device'	Lowest level in 'Hardware tree', functions of the physical device
'Supply' 'Power supply'	Mains / Battery
'FRT'	Object display with operation function
'FRD'	Object display without operation function
'Phys.ch' 'Physical channel'	Lowest level in 'Hardware tree'
'PMI' 'PMI'	'Station' operating unit
'Mimic' 'Mimic display driver'	LED indication unit on the P2 periphery bus
'Keydep.' 'Key depot'	Fire department key depot
'BN dev.' 'BACnet device object'	'BN dev.' device connection
'FAT 'FAT	Fire brigade indication panel
'FAT/FBF' 'FAT with FBF'	Fire brigade indication panel with integrated fire brigade operating panel

9 System description

This part of the document includes information on the setup and functions of the fire detection installation.

9.1 Overview



Graphic representation of a fire detection system

- Automatic fire detector
- Sounder
- Manual call point
- Switching
- Remote transmission
- Global alarming (e.g. fire brigade)
- Local alarming (e.g. horns)
- Fire control (e.g. doors)
- Service intervention

Acquisition

Fire detectors detect fire phenomena, e.g. smoke, heat or carbon monoxide, and transmit signals to the control panel in the form of different danger levels.

Evaluation of the danger levels

The control panel evaluates the danger levels and decides whether to trigger alarms or not. In doing so, the control panel distinguishes between automatic and manual fire alarms, 'Pre-ALARM' and 'Degraded FIRE ALARM'.

Alarm events are allocated to the following event categories:

Event category for alarm events	Typical example	Activation/cause
'ALARM'	The detector detects a fire phenomenon with a high danger level	Detector sensor
'Pre-ALARM'	The detector detects a fire phenomenon with a low danger level	Detector sensor

Event categories for alarm events

Evaluation of the system events

The fire control panel has comprehensive monitoring and self-monitoring functions. Deviations from the normal operation mode are recognized as a system event.

System events are allocated to the following event categories:

Event category for system events	Typical example	Activation/cause
'Fault'	● Faulty detector line ● Mains failure detector	Short-circuit, open line or malfunction
'Isolation'	A detector zone has been switched off	Operation or control
Test	A detector zone is switched to Test	Operation
'Technical message'	Fault or danger from extraneous equipment	Sensor or contact
'Activation'	A control is activated	Operation or control
'Information'	● Access level ● 'Manned operation' operation mode	Condition

Event categories for system events

Alarming

The different fire alarms and system events are verified independently from one another. Depending on the configuration, local alarming is actuated or direct or delayed global alarming is actuated.

- Local alarming:

  Local alarming equipment (e.g. acoustic or optical alarm devices) is actuated in order to call up immediately available intervention personnel (e.g. in-house staff) and to alert people of a possible fire hazard.

- Global alarming:

  Global alarming equipment (e.g. remote transmission) is actuated and external intervention forces (e.g. the fire department) are alerted.

The following points influence the type of alarming:

- Configuration of the alarming process
- Position of 'Manned operation'/'Unmanned operation' operation mode
  - 'Manned operation': Personnel present on site
  - 'Unmanned operation': No personnel present on site
- Type of alarm activation (automatic or manual)

Control

In the event of fire it makes sense to initiate first, decisive actions automatically. Automatic measures are carried out by controls, e.g. by the control of building services, evacuation or extinguishing.

9.2 Topology

Configuration of a FS720 fire detection installation is mapped in a tree structure with the three following trees.

- 'Hardware tree'
- 'Detection tree'
- 'Control tree'

The tree structure is created by the installation and the configuration of the fire detection installation, and the trees are linked to each other via the channels.

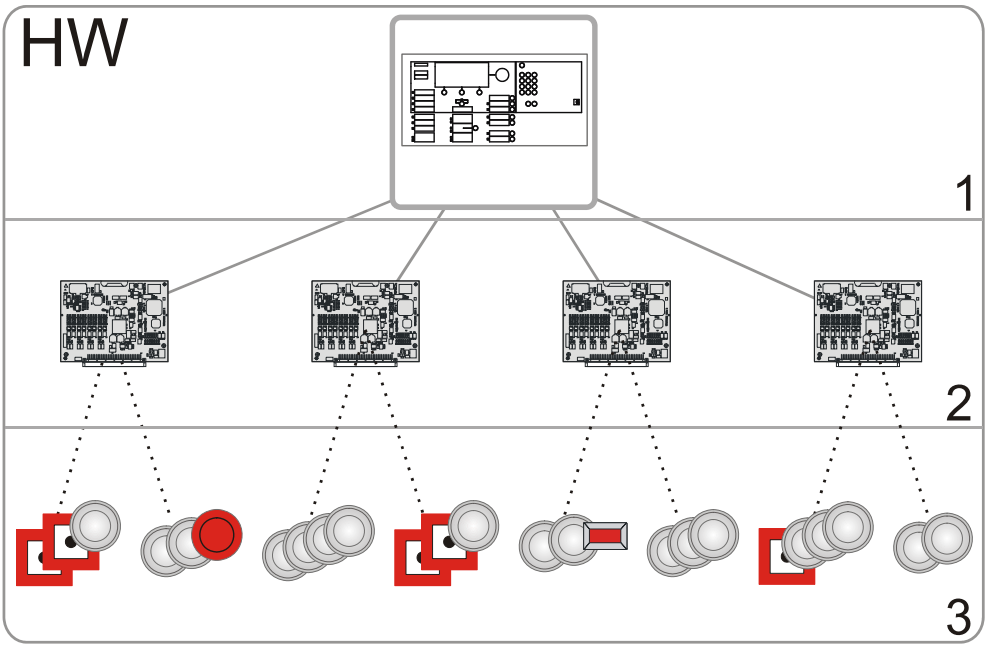
Due to the structure of the topology, along with hierarchy and arrangement in zones, events can be e.g. geographically assigned and visualized accordingly. In terms of operation it is also possible to send commands to combined parts of the system.

9.2.1 Hardware tree

The 'Hardware tree' represents the installed hardware. The individual elements of the 'Hardware tree' are structured as follows:

- 'Station'
- 'Module'
- 'Line'
- 'Device'
- 'Physical channel'

Example of 'Hardware tree'



1 'Station'
2 'Module'
3 'Device'
Dotted line 'Line'

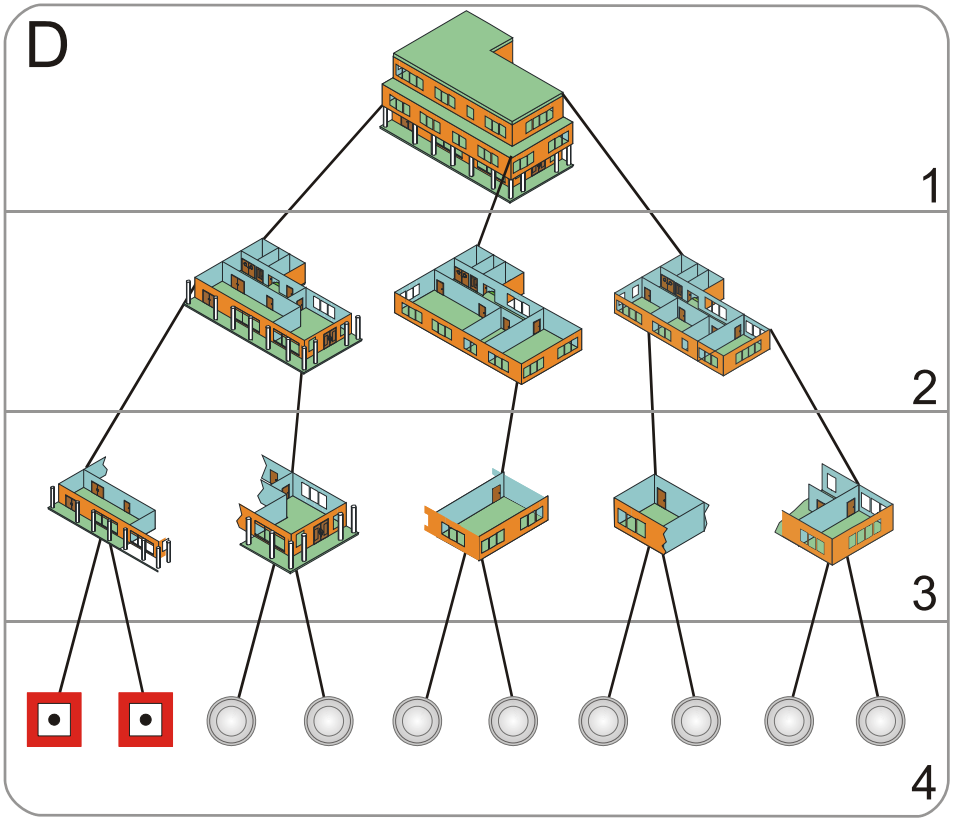
9.2.2 Detection tree

The 'Detection tree' is an image of the geographic and functional situations in a 'Site'. It is adapted to the building structure and room use. The 'Detection tree' is independent from the line arrangement of the detector network.

'Detection tree' elements and typical representation

- 'Area'
  - Building
- 'Section'
  - Floor or staircase
- 'Zone'
  - Room
- Channel
  - Logical detector function

Example of 'Detection tree'



1 'Area'
2 'Section'
3 'Zone'
4 Channel / detector

9.2.2.1 Elements of the detection tree

'Area'

- 'Area' typically corresponds to a building.
- 'Area' combines 'Sections' which are subject to the same 'Manned operation'/'Unmanned operation' operation mode.
- 'Area' actuates the alarming equipment (acoustic and optical alarming devices as well as remote transmission).
- 'Area' is assigned the following functions:
  - 'Manned operation'/'Unmanned operation' operation mode
  - Switching assigned 'Sections' on/off

Several 'Areas' are possible per control panel:

- FC722, FC724: up to four 'Areas'

There is an 'Area' that groups together the functions of alarm verification(AVC), e.g. collective alarms and degraded mode operation.

'Section'

'Section' is optional and does not exist in some countries.

- 'Section' combines 'Zones' to form logical units. Such a unit can be e.g. a floor or a staircase.
- 'Section' is assigned the following function:
  - Switching assigned 'Zones' on/off

'Zone'

- 'Zone' generally combines the detectors in a room.
- 'Zone' evaluates the danger levels transmitted by the detectors. The configured combination of different danger levels defines the conditions upon which an 'ALARM' is triggered.
- The following fire alarm zone types exist:
  - 'Automatic zone'
  - 'Manual zone'
  - 'Technical zone'
  - 'FSE zone'
  - 'Flow switch zone' (sprinkler)
- The following extinguishing zone types exist:
  - 'Sprinkler zone'
  - 'XC10 zone'

Channel

The channel in the 'Detection tree' represents the functionality of the inputs and outputs of an C-NET device.

9.2.2.2 Operating modes of the detection tree elements

'Area'

- 'Manned operation'

  In 'Manned operation' operating mode, operating personnel are present and can investigate the fire location. The detectors are set to normal sensitivity, in accordance with the selected parameter set.

- 'Unmanned operation'

  In the 'Unmanned operation' operating mode, there are no operating personnel present to investigate the fire location. The sensitivity level of the detectors or their parameter sets are typically increased by switching to 'Unmanned operation' operating mode.

The settings for the 'Manned operation'/'Unmanned operation' operation modes are defined in the chapter Alarm Verification Concept (AVC).

'Zone'

- Switched on (normal operation)

  Danger levels are evaluated and 'ALARMS' produced in normal operation. The detectors have a normal sensitivity level, in accordance with the selected parameter set.

- Switched off

  If a 'Zone' is switched off, the channels assigned to the 'Zone' are isolated. No signals are evaluated, neither danger levels nor 'Faults'.
  There are two isolation functions:
  – Isolation without time limits
  – Isolation with time limits

- "--Renovation mode'

  This operating mode is not assigned a function.

- 'Detector test'

  In the 'Detector test' operating mode, detectors can be actuated for test purposes. When a detector is triggered, a test activation message is generated. Alarm devices or controls are not activated.
  The following devices are activated:
  – Internal alarm indicators
  – External alarm indicators in accordance with the configuration
  – Base sounders if they are in the base of the activated detector
  During testing the detectors must react quickly so that the holding times are short. During the 'Detector test', the detectors are switched to increased sensitivity with the 'Test' parameter set for this purpose.
  After terminating the 'Detector test' operating mode, the detectors and 'Zones'are reset to the condition they were in before the 'Detector test'.

- 'Installation test'

  An 'Installation test' can be performed during normal operation. The alarm devices and controls are activated.
  In the test the detectors must react quickly so that the holding times are short. During the 'Installation test', the detectors are switched to increased sensitivity with the 'Test' parameter set for this purpose.
  After terminating the 'Installation test' operating mode, the detectors and 'Zones'are reset to the condition they were in before the 'Installation test' operating mode.

'Channel'

- Switched on (normal operation)

  In the normal operation, the danger levels of the detector as well as any 'Faults' are transmitted to the 'Zone' for evaluation.

- Switched off

  If a 'Channel' is switched off, no signals are forwarded to the 'Zone', neither danger levels nor 'Faults'.

9.2.2.3 Functions of the detection tree elements

'Area':
Switching the operating mode

- The 'Unmanned operation' operating mode is manually switched to 'Manned operation'. Switching is not possible when 'ALARMS' have occurred and need to be dealt with.
- The 'Manned operation' operating mode is automatically or manually (configurable) switched to 'Unmanned operation'. Four time settings can be configured for this, regardless of the day of the week:
  - The first time setting is for automatic changeover.
  - The second, third and fourth time setting is for safety reasons, in case somebody switches to 'Manned operation' after the expiry of the first, second or third automatic changeover.
- Blocking switchover
  - If an 'ALARM' has occurred in the 'Area' and is waiting for treatment, the switchover function from 'Manned operation' to 'Unmanned operation' is blocked.
  - It is still possible to switch from 'Unmanned operation' to 'Manned operation'.
- Switching functions on and off
  - All functions available for the 'Zones' are also available as collective functions at area level.

  Examples:
  - Switching all automatic 'Zones' on and off.
  - Switching all manual 'Zones' on and off.

- 'Poll alarm counter'
  - The alarm counter counts the number of alarm states.
  - The alarm state is the state from the first 'ALARM' to the successful reset.

'Section': 'switching 'Zones' on and off

- All 'Zones' of the same kind (automatic/manual) can be switched off and on within the section. 'Zones' with automatic fire detectors and 'Zones' with manual call points are treated differently.

'Zone': reset behavior of the manual call points

- The reset behavior of an activated manual call point can be selected:
  - 'ALARM'can always be reset; 'Glass broken' is indicated.
    or
  - 'ALARM' cannot be reset.
- Blocking of the isolation
  - If the isolation blocking function has been configured, the 'Zone' cannot be switched off.
- 'Detector test' timeout
  - After the expiry of a configurable delay the system automatically cancels the 'Detector test' state. This function can be deactivated.
- Switching devices back on
  - When devices are switched back on, they are in an undefined state for a short period. The 'Station' changes to the 'Not ready' state for this period.
- Simulation function
  - With the simulation function the 'Zone' switches from the normal operation mode to 'Pre-ALARM' and then to 'ALARM'. The controls are activated as if the detectors had triggered an 'ALARM'. Reset is performed by means of the keys on the PMI.

9.2.3 Control tree

'Control tree' represents the control in the fire detection system. Control groups are grouping units for configuration and operation.

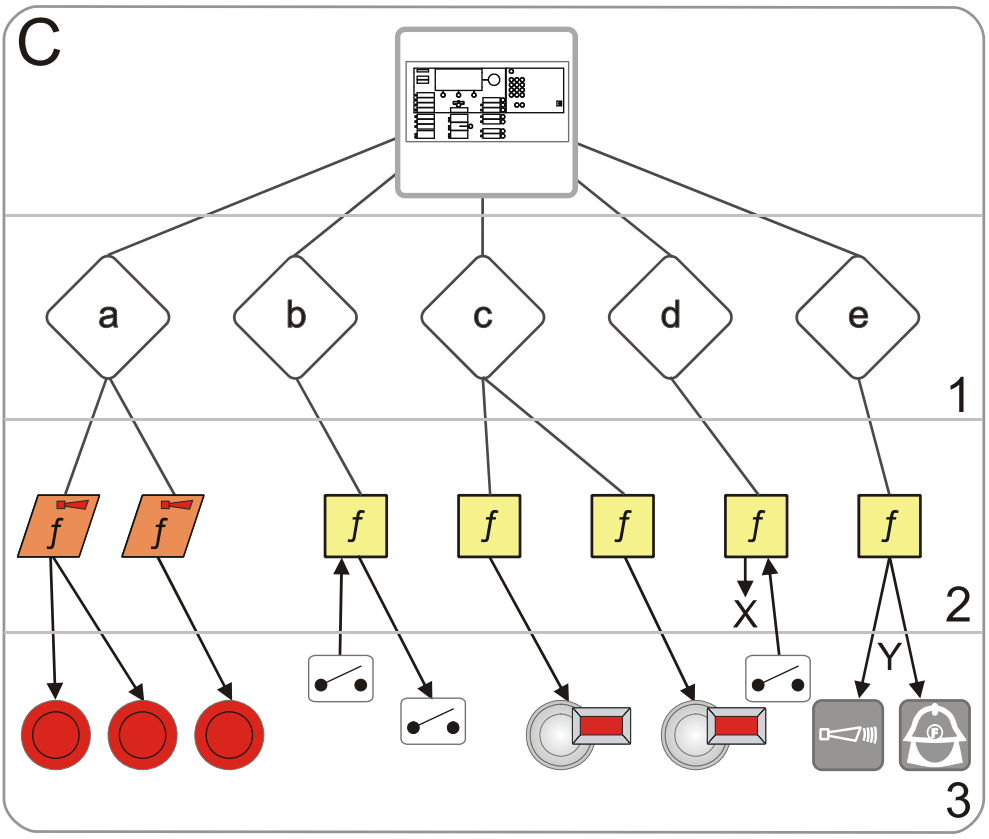
Control groups in 'Control tree'

- 'Alarming control group'
- 'Fire control group'
- 'Evac control group'
- 'Counter control group'

Each group has one or more elements including an input (Cause) and an output (Effect).

- Elements of the 'Alarming control group' are controls for internal and external alarm devices.
  - Remote transmission outputs for 'Fire' and 'Fault'
  - Eight more remote transmission outputs
- Elements of 'Fire control group' are controls for building equipment.
- Elements of 'Evac control group' are controls for alarm and announcement devices.

Effects in 'Control tree' (example)



C	'Control tree'	b	'Fire control group' e.g. for door controls
1	5 control groups (a - e)	c	'Fire control group' for alarm indicators (external AI)
2	Controls	d	'Fire control group' for commands
3	Devices and remote transmission, 2 circuits	X	E.g. isolation, commands to other installation parts
Lines	Logical link	e	'Alarming control group' for alarm devices and remote transmission
Arrows	Signal transfer	Y	Local or global alarming
a	'Evac control group'		

9.2.4 Operating tree

The following elements and settings are represented in the Operation tree:

- Global system configuration
- Display and operator units such as:
  - Person Machine Interface(PMI)
  - Floor repeater terminal and floor repeater display
  - Mimic display
  - Event printer

Global system configuration

The global system configuration has the following elements:

- Global behaviour
  - Events (event configuration)
  - Commands ('Access level' assignment)

The behavior set here is always valid unless a different behavior is set locally.

- Master clock: The master clock is automatically assigned to the first station (address 1).
- Country settings: Settings are undertaken here for localization and changing between summer and winter time.

Person Machine Interface(PMI)

The PMI is a permanent part of the station. The following settings can be configured in the Operation tree:

- Basic settings with definition of default access level for the key switch and time period during which the display returns to the normal display from an operating display.
- Visibility:

  A detailed description of the visibility can be found in the corresponding chapter.
  - Standard visibility
  - Standby visibility
  - Expanded visibility
- LEDs for signaling events and statuses (causes):
  - Event with defined, local visibility.
  - Event with optional, global visibility on particular element from the Hardware tree, Detection tree or Control tree.
- Standard keys:

  Frequently used functions can be assigned to the configurable standard keys.
  - Views, e.g. message indicator, customer text view, fire department view.
  - Commands, e.g. activate/deactivate, test, configuration ('Set PS MANNED', 'Switch to UNMANNED', etc.).

- Favorite keys:

  The favorite keys are in the display menu. There is a maximum of eight favorite keys of which three are preconfigured. Frequently used functions can be assigned to the favorite keys.

Floor repeater terminal FT2010

The following settings can be configured in the Operation tree:

- Visibility on the stations and/or detection trees
- Cause for activating the LEDs
- Views and commands for the function keys

Floor repeater display FT2011

The following settings can be configured in the Operation tree:

- Visibility on the stations and/or detection trees
- Cause for activating an LED

Mimic display

There are two possible ways of configuring the LED indicator (internal) FTO2002:

- Visibility of the 24 LED groups (red/yellow) on a Section or Zone.
- Visibility of each of the 48 LEDs on any event.

Mimic display driver FT2001

The mimic display driver activates up to 48 LEDs which are fitted on a ground plan panel. Communication is via the C-NET.

The mimic display driver also has two control outputs for local buzzer and 'System On' LED and two inputs for 'Silence buzzer' and 'START LED test'.

Event printer

The event printer logs all system events in the configured view.

Fire department periphery [DE]

The fire department periphery comprises the following devices:

- Fire department control panel (FBF)
- Fire department key depot (FSD)
- Fire department display terminal (FAT)
- FAT with FBF

FSD is assigned to the fire department periphery module FCI2001.

FBF can either be connected via the fire brigade periphery module FCI2001 or an RS485 interface.

FAT and FAT with FBF are connected to the station via a serial interface RS485.

To configure the devices, the logical element must be created in the 'Operation' task card and linked with the corresponding hardware element.

EVAC panel [NL]

The EVAC panel is an operating and indication unit for manual evacuation control, integrated in the control panel's PMI. The EVAC panel consists of a master and up to four slaves. Master and slave both have up to ten indicators for the evacuation zones. Both the universal and two-stage evacuation control are suited to automatic evacuation.

9.2.5 Network tree

The network tree represents integration of an FS720 system in the global and local network. The following aspects are linked to this:

- Networking several stations with one another using the C-WEB protocol
- Access to networked stations using Cerberus-Engineering-Tool and Cerberus-Remote
- Linking management stations to an FS720 sub-system using the BACnet protocol

Networking several stations

Stations can be networked in two ways:

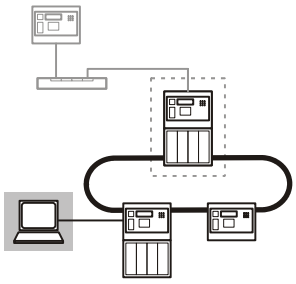
- Via SAFEDLINK (standard for the operation according to EN 54-2)
- Via Ethernet (option for special applications)

The stations differ according to their networking and functions:

- Stand-alone station

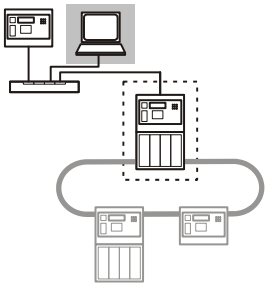
Stand-alone station with local connection for the PC only

- SAFEDLINK station



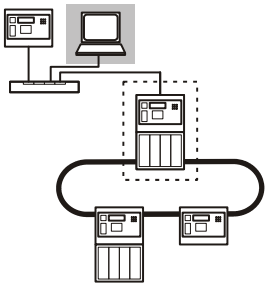
Participants in the SAFEDLINK sub-net with local connection for the PC

- Ethernet station



Participants in the Ethernet sub-net without local connection for the PC

- CAP station (Central Access Point)



Connection station between the SAFEDLINK and Ethernet sub-nets and / or central point of access for remote access, e.g. using Cerberus-Engineering-Tool.

Type of access

Access to the stations, e.g. with Cerberus-Engineering-Tool, may take the following forms:

- Local connection: The PC is connected to the station directly. Cerberus-Engineering-Tool can be used to establish a connection to the station that automatically assigns an IP address to the PC.
- Remote access: The PC or a BACnet client is linked to the CAP station via an Ethernet network. The PC's IP address must be set manually.

Responsibility for the IP network

When configuring IP addresses in the network, distinctions are made between the following:

- Private network: Fire detection installations are normally equipped with their own cabling. The settings for the networks are defined automatically (recommended). The IP addresses come from a reserved range for private networks.
- Public network: Fire detection installations can be incorporated in an existing IT infrastructure as sub-nets (public network). In these cases, the IP settings must be performed according to the IT administrator's instructions.

Connection of management stations

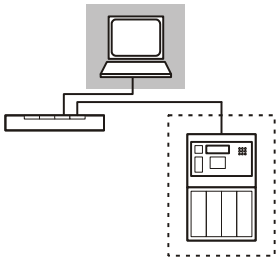
Management stations or other sub-systems are connected to the FS720 sub-system using BACnet/Ethernet. Since FS720 makes its data available to other partners via BACnet in its role as a server, these are usually known as BACnet clients.

BACnet is a communication protocol used in building automation. BACnet acts as an inter-network and requires its own logical IDs for the stations, such that each station is uniquely recognized as a BACnet participant.

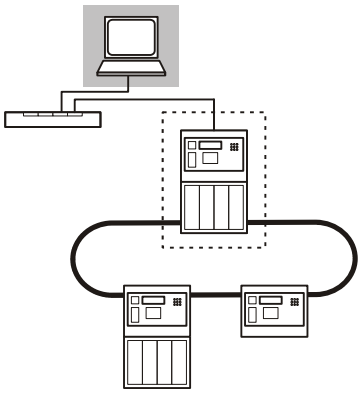
A management station is connected to the FS720 sub-system via the Ethernet interface of the Central Access Point (CAP), usually via hub/switch. Every single station that is to use the BACnet protocol must be enabled with a license key (L2).

Configuration options for BACnet (the management station is shown as the PC highlighted in gray):

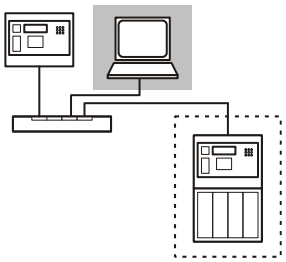
- Link to CAP station, stand-alone



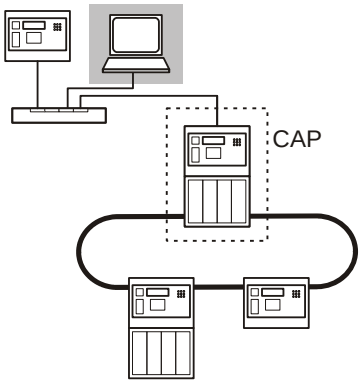
- Link to CAP station with SAFEDLINK



- Link to CAP station with Ethernet



- Link to CAP station with Ethernet and SAFEDLINK

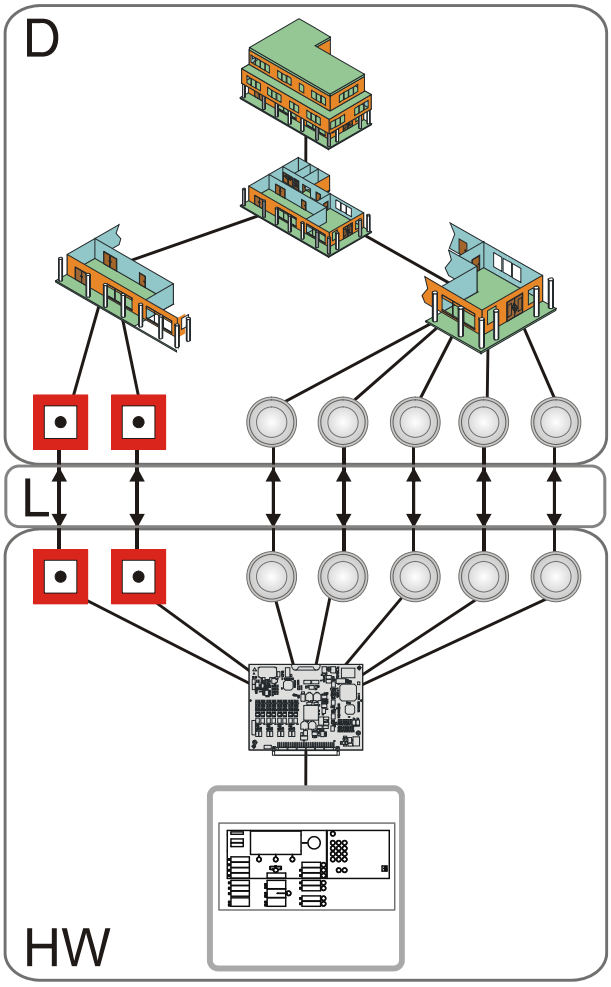


9.2.6 Linking with the hardware tree

Components can be allocated to a geographical location in the system. This assignment is a link.

Geographical allocation

Each device in the 'Hardware tree' has a unique address. In 'Detection tree', it is possible to allocate room x on floor y to the device, for example.



Sample linking of the detection tree to the hardware tree

D 'Detection tree'
L Linking
HW 'Hardware tree'

The physical and the logical channel of a device are linked between the 'Detection tree' and 'Hardware tree'.

The physical channel is the lowest level in the 'Hardware tree' and maps the physical function of a device.

The logical channel is the lowest level in the 'Detection tree' and maps the logical function of a device.

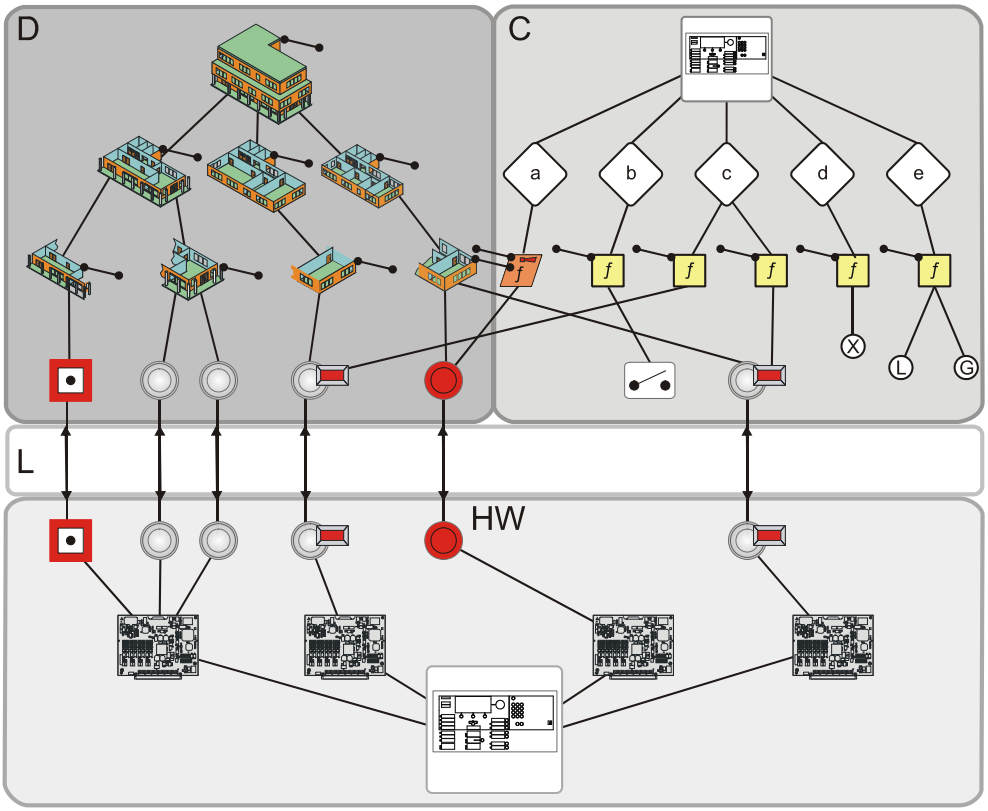
9.2.7 Topology tree

Functional allocation

In the 'Control tree', a function is assigned to a device from the 'Hardware tree', for example a monitoring function (cause) is assigned to an input or a control function (effect) is assigned to an output.

In the 'Control tree', the function of a logical element from the 'Detection tree' is evaluated (cause) or controlled (effect). For example, the alarm condition of the 'Zone' is evaluated or the 'Zone' is switched on or off.

The figure below shows the interrelations of the aforementioned structures by way of example.

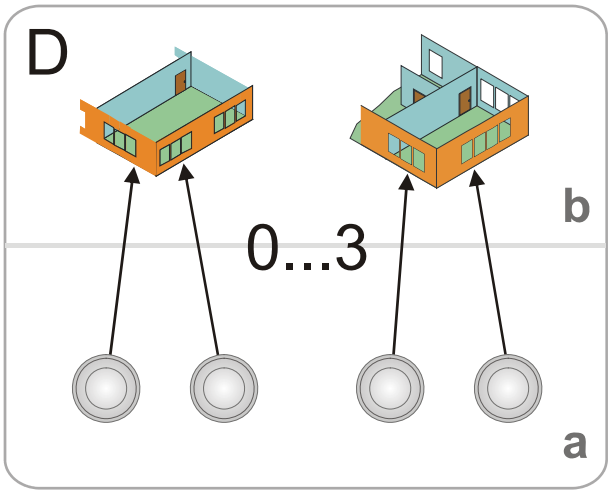


Sample topology tree

D	'Detection tree'	X	E.g. isolation, commands to other installation parts
C	'Control tree'	L	Local alarming Alarming equipment (e.g. acoustic or optical alarm devices) is actuated in order to call up immediately available intervention personnel (e.g. in-house staff) and to alert people of a possible fire hazard.
L	Linking	G	Global alarming Alarming equipment (e.g. remote transmission) is actuated and external intervention forces (e.g. the fire department) are alerted.
HW	'Hardware tree'		Visualization of the link from causes and effects via controls
a - e	Control groups	Lines	Signal transfer or logical link
f	Controls		

9.3 Acquisition

The detectors detect the fire phenomenon, e.g. smoke, heat or carbon monoxide, and transmit the danger level to the 'Zone'.



Information flow of the danger levels

D 'Detection tree'
a Detector / channel
b 'Zone'
0.. 3 Danger levels

Overview of danger levels, divided according to line type and detector type

Danger level	Addressed detector line		Collective detector line	Technical input
	Automatic	Manual		
0	No danger	No danger	No danger	No danger (entry contact opened)
1	Possible danger	Button not pressed	Detector line resetting	–
2	Probable danger	–	Alarm verification of the first alarm is running	Danger ● Input contact closed ● Input configured as not relevant for degraded mode
3	Highly probable danger	Button pressed, danger	Highly probable danger	Danger ● Input contact closed ● Input configured as not relevant for degraded mode

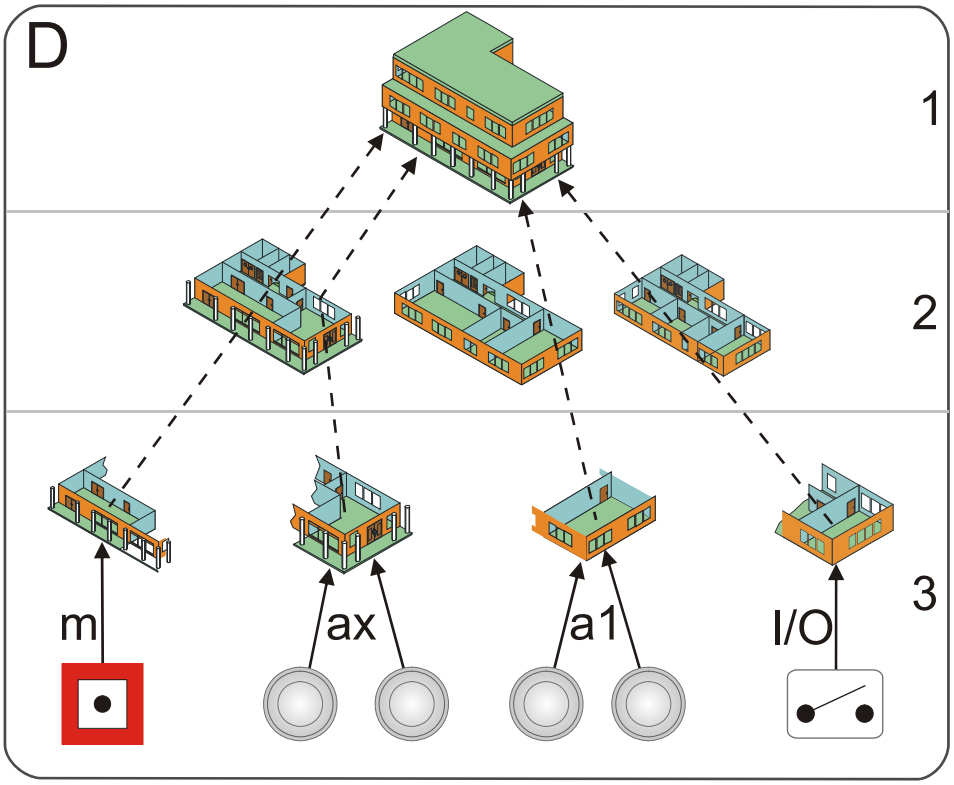
Danger levels

9.4 Evaluation

The evaluation of the danger level and the decision to trigger an 'ALARM' or not takes place on 'Zone'.

The danger levels of several alarming detectors are combined in the 'Zone'. The following zone types exist:

- 'Manual zone'
- 'Automatic zone'
- 'Technical zone'
- 'FSE zone'
- 'Sprinkler zone'
- 'XC10 zone'



Information flow of alarm and pre-alarm

D	'Detection tree'	ax	Automatic detector zone with multi-detector dependency
1	'Area'	a1	Automatic detector zone with single-detector dependency
2	'Section'	I/O	'Technical zone'
3	'Zone'	Dashed arrows	'ALARM'/'Pre-ALARM'
m	'Manual zone'		

'Manual zone'

A 'Manual zone' combines the 'Manual call points'. Danger signals are evaluated by means of an OR relation. Each detector of a 'Manual zone' can generate 'ALARM', but not 'Pre-ALARM'.

'Automatic zone'

A 'Automatic zone' combines 'Automatic detectors'. The 'Automatic zone' can generate 'Pre-ALARM' and 'ALARM'. A distinction is made between the following detector dependencies:

- Multi-detector dependency

  With multi-detector dependency, the danger levels of several detectors are linked (AND relation) and evaluated. A 'Pre-ALARM' or 'ALARM' is generated when the defined danger levels have been reached.
  Several evaluation variants are possible in multi-detector dependency.

- Single-detector dependency

  With single-detector dependence the danger levels are linked (OR relation) by one or more detectors. A 'Pre-ALARM' or 'ALARM' is generated as soon as at least one detector has reached the defined danger level.

Sample criteria for 'Pre-ALARM' or 'ALARM'

Alarm level	Single-detector dependency	Multi-detector dependency
'Pre-ALARM'	1 x danger level 2	1 x danger level 2 or 3
'ALARM'	1 x danger level 3	2 x danger level 2 or 3

Alarm levels

'Technical zone'

In a 'Technical zone', inputs for technical messages are combined, e.g. fault or danger by extraneous equipment.

'FSE zone'

A release element is assigned to this zone. With the release element, a fire alarm is generated manually, which in turn releases the lock to the 'Key depots' with the keys for the building. A key is required to operate the release element and this is held in the exclusive possession of the fire department.

'Sprinkler zone'

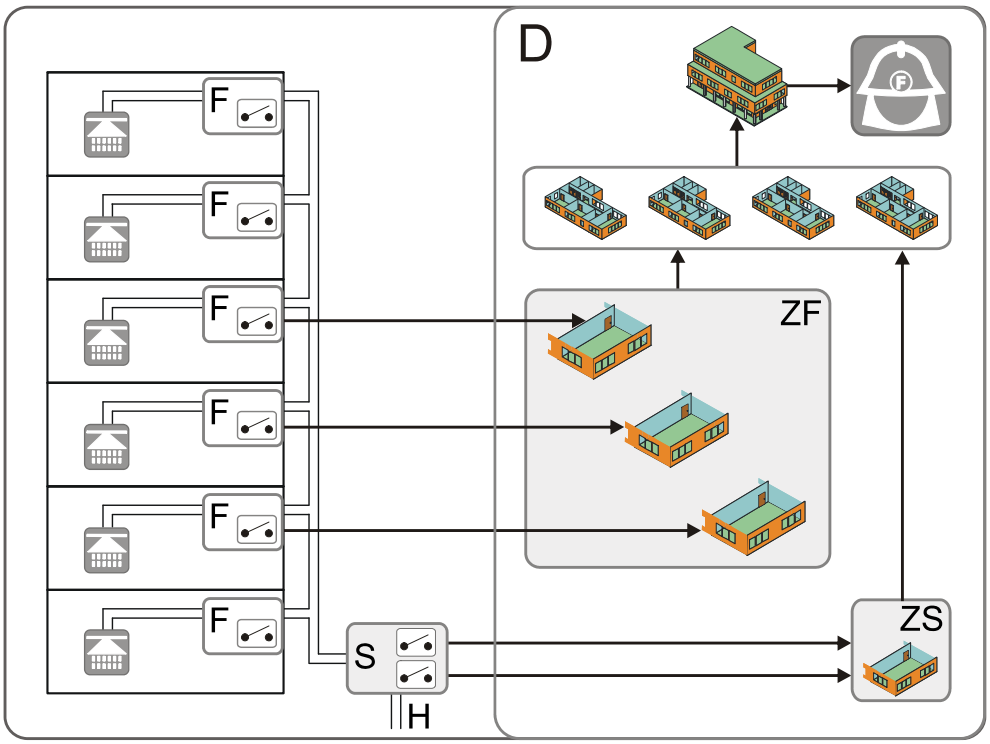
A sprinkler system is a piping system that is terminated at several locations with sprinkler heads. It is normally fed by the public network of hydrants.

The sprinkler station is installed directly after the house feed. It separates the sprinkler network from the hydrant network due to overpressure in the sprinkler network.

The sprinkler station signalizes when the sprinkler network is opened somewhere and water begins to flow. This condition is reported to the fire control panel via a contact (or two as an option) and triggers an alarm with immediate response from the fire brigade.

In larger sprinkler systems, the piping system is distributed over several floors and the line network has an outlet on every floor. Flow rate indicators are built into each outlet.

The flow rate indicators generate a signal when there is a flow.



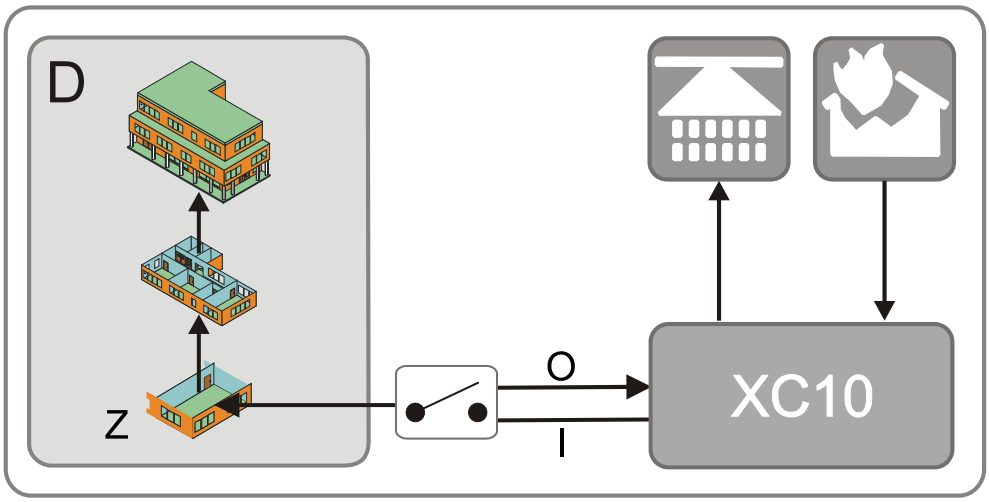
Information flow for sprinklers

D	'Detection tree'	ZF	'Flow switch zone'
F	Flow rate indicator	ZS	'Sprinkler zone'
S	Sprinkler station with one or two contacts (cause)	Arrows	Signal transfer
H	Hydrant network		

'XC10 zone'

Extinguishing is actuated and monitored by the autonomous extinguishing control unit XC10.

An interface to the extinguishing control unit makes it possible to send extinguishing control unit functions to the fire control panel, and to transmit commands from the fire control panel to the extinguishing control unit.



Information flow from the extinguishing control unit XC10

D	'Detection tree'
XC10	Extinguishing control unit
I	Extinguishing control unit inputs: 'Extinguishing activated', 'Fault', 'Pre-alarm', 'Autom. + manual extinguishing OFF'
O	Extinguishing control unit outputs: 'Reset', 'Autom. Blocking extinguishing activation, 'Autom. + manual extinguishing activation blocked'
Z	'XC10 zone'

Detailed information can be found in the Technical Documentation of the extinguishing control unit XC10, document 008399.

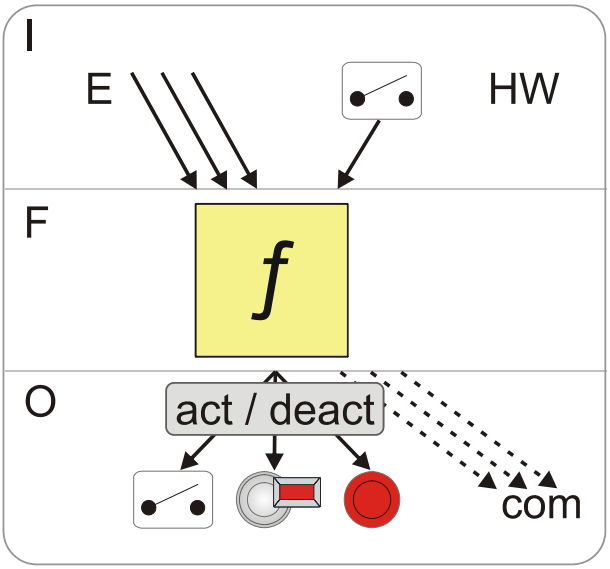
9.5 Control

Alarm events and system events may occur in a fire detection installation. It is the task of the fire control unit to alert people and/or initiate appropriate actions based on the different event categories. This is achieved with the different control types:

- Alarming control
- 'Fire control'
- 'Evac control'
- Extinguishing control

The alarming control is described in the chapter "Alarm Verification Concept (AVC)".

Sample control



Sample control function

I	Causes	Input	Contact
F	Control	act / deact	Activate / deactivate
O	Effects	cmd	Command
E	Events ('ALARM', 'Fault', 'Isolation', test mode, etc.)		

Causes are any events such as 'ALARM', 'Fault', 'Isolation', test mode as well as signal inputs (contacts).

The **control** has an "OR / AND / NOT" combination of the causes that have occurred.

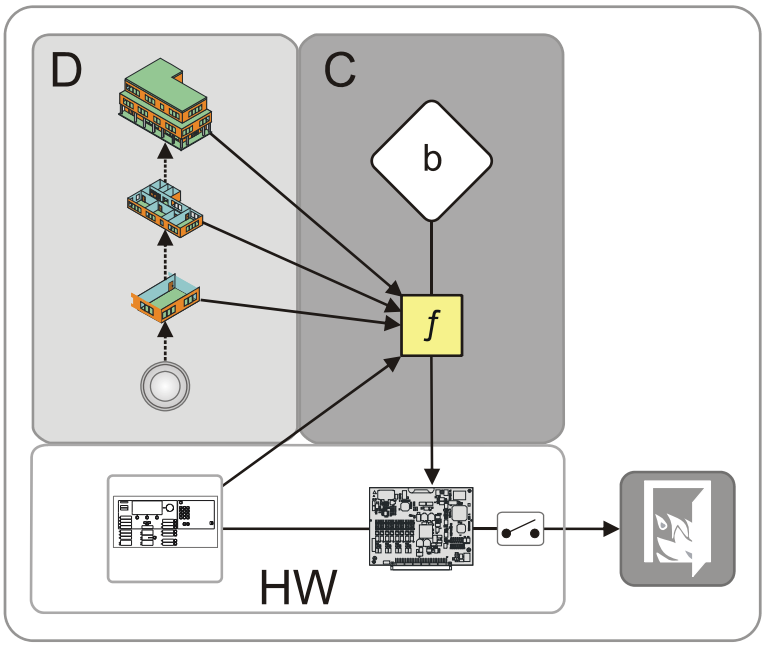
The **effects** of the control are the activation or deactivation of outputs. The actuated outputs can be combined with inputs for confirmation.

Effects are also commands within the fire detection system, e.g. for the isolation of a 'Zone' or for changing a detector parameter set.

9.5.1 Universal control

In the event of a fire, different measures are initiated automatically, such as:

- the closing of fire dampers and fire doors
- the switching off of fans and air conditioning systems
- the descending of lifts



Information flow for universal control

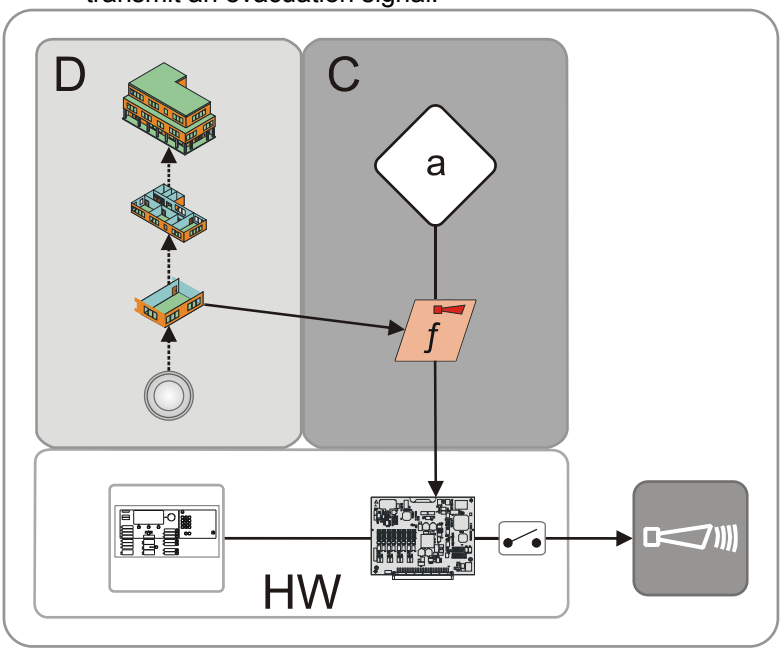
D	'Detection tree'	f	'Fire control'
C	'Control tree'	HW	'Hardware tree'
b	'Fire control group'		

9.5.2 Evacuation control

'Evac control' makes it possible to program a complete evacuation function for each alarm device group, e.g. on one floor.

Two function blocks are available for each control:

- ALERT
  - The linking of all conditions, so that the corresponding alarm devices transmit a warning signal.
- EVAC
  - The linking of all conditions, so that the corresponding alarm devices transmit an evacuation signal.



Information flow for evacuation control

D	'Detection tree'	f	'Evac control'
C	'Control tree'	HW	Hardware
a	'Evac control group'		

In 'Evac control group' two different controls are possible:

- 'Universal evac control' (EVAC)
- 'Phased evac control' (ALERT / EVAC)

Events from 'Station', detector line, 'Section' or 'Zone' (cause) trigger a 'Evac control'.

'Universal evac control'

'Universal evac control' is suited for horns that do not allow two-phased (multi-channel) alarming.

For the alarming equipment (outputs, alarm devices) on the control outputs (effects), it is possible to choose different tonalities for alerting (ALERT) and evacuation (EVAC).

'Universal evac control'

With 'Universal evac control', initiation of the alarming equipment (outputs, alarm devices) is effected separately for alerting (ALERT) and evacuation (EVAC).

Application [GB]: First, all floors are warned (ALERT). After that, the evacuation (EVAC) of individual floors is performed at particular intervals (phases), starting with the floor on which the seat of fire is located, in order to prevent a blocking of the escape routes.

This application may be different for different parts of a building.

- In the first phase the floor on which the fire is located as well as the one above and the two top floors, all basement floors and possibly the ground floor are evacuated.
- In additional phases, one upper and one lower floor are also evacuated at predefined intervals. If need be, additional floors can be evacuated during the same phase.

Example of evacuation in the event of a fire on the 4th floor

10. Floor		ALERT	EVAC → → →
9. Floor		ALERT	EVAC → → →
8. Floor		ALERT → → →	EVAC → → →
7. Floor		ALERT → → →	EVAC → → →
6. Floor		ALERT → → →	EVAC → → →
5. Floor		ALERT	EVAC → → →
4. Floor		ALERT	EVAC → → →
3. Floor		ALERT → → →	EVAC → → →
2. Floor		ALERT → → →	EVAC → → →
1. Floor		ALERT → → →	EVAC → → →
EG		ALERT → → →	EVAC
UG		ALERT	EVAC → → →

Two-stage evacuation process

UG	Basement
EG	Ground floor
Floor	Floor
ALERT	Alarming
EVAC	Evacuation

9.5.3 Extinguishing control with sprinkler

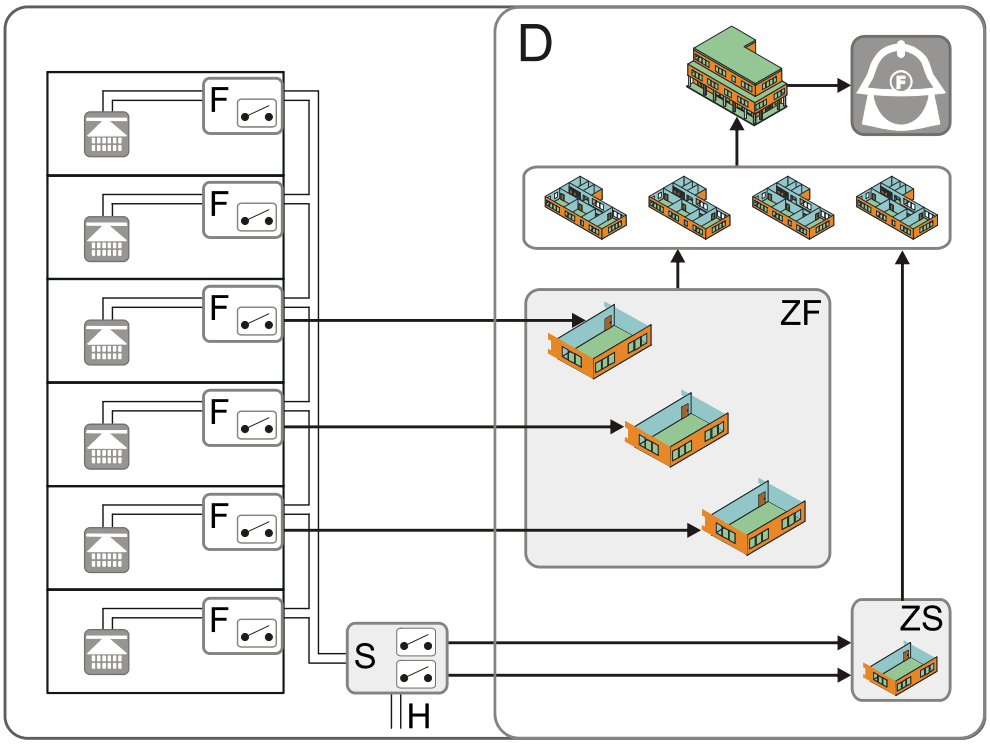
A sprinkler system is a piping system that is terminated at several locations with sprinkler heads. It is normally fed by the public network of hydrants.

The sprinkler station is installed directly after the house feed. It separates the sprinkler network from the hydrant network due to overpressure in the sprinkler network.

The sprinkler station signalizes when the sprinkler network is opened somewhere and water begins to flow. This condition is reported to the fire control panel via a contact (or two as an option) and triggers an alarm with immediate response from the fire brigade.

In larger sprinkler systems, the piping system is distributed over several floors and the line network has an outlet on every floor. Flow rate indicators are built into each outlet.

The flow rate indicators generate a signal when there is a flow.



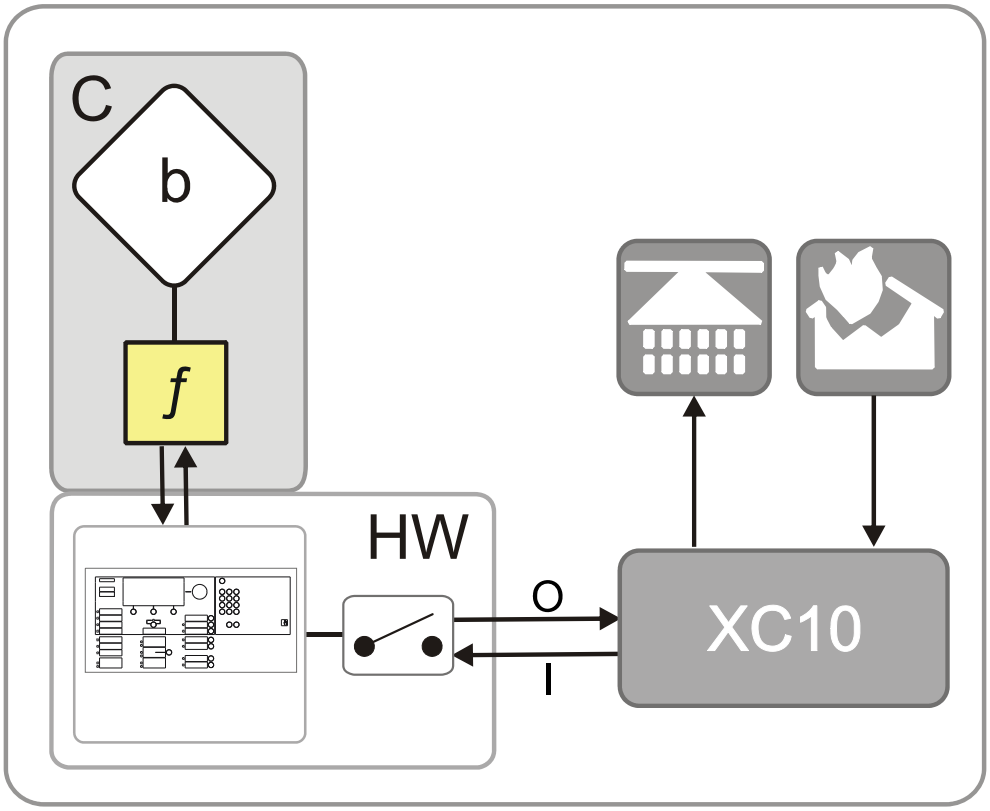
Information flow for sprinklers

D	'Detection tree'	ZF	'Flow switch zone'
F	Flow rate indicator	ZS	'Sprinkler zone'
S	Sprinkler station with one or two contacts (cause)	Arrows	Signal transfer
H	Hydrant network		

9.5.4 Extinguishing control with extinguishing control unit XC10

Extinguishing is actuated and monitored by the autonomous extinguishing control unit XC10.

An interface to the extinguishing control unit makes it possible to send extinguishing control unit functions to the fire control panel, and to transmit commands from the fire control panel to the extinguishing control unit.



Information flow for extinguishing control

C	Control tree	XC10	Extinguishing control unit
b	Extinguishing control group	I	Extinguishing control unit inputs: 'Extinguishing activated', 'Fault', 'Pre-alarm', 'Autom. + manual extinguishing OFF'
f	Extinguishing control	O	Outputs to extinguishing control unit: 'Reset', 'Autom. Blocking extinguishing activation, 'Autom. + manual extinguishing activation blocked'

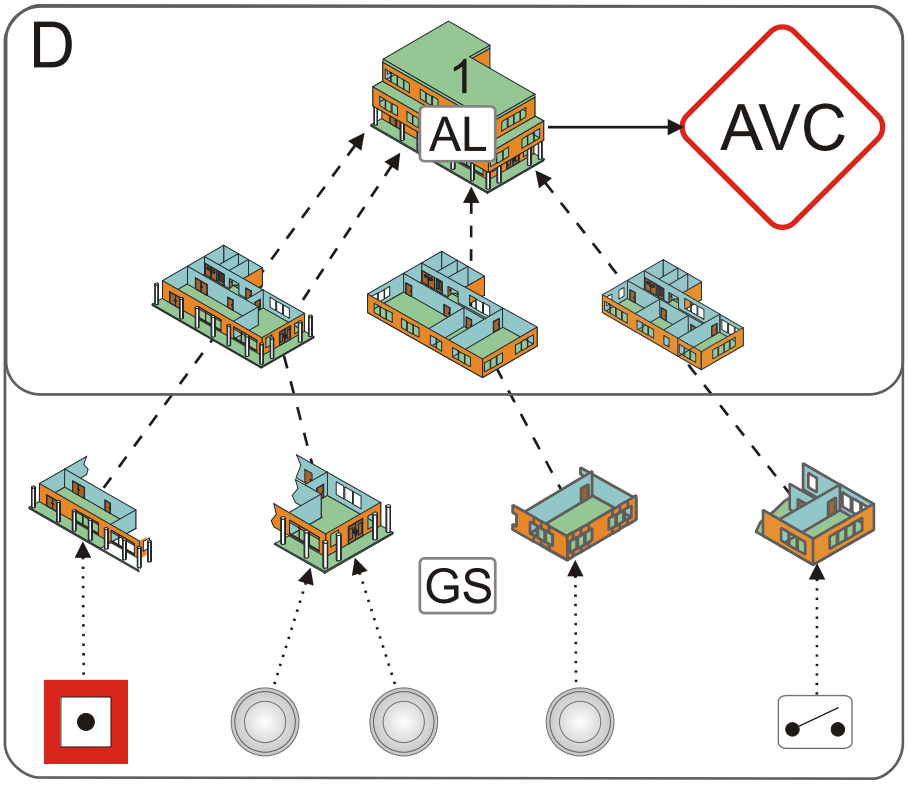
Detailed information can be found in the Technical Documentation of the extinguishing control unit XC10, document ID 008399.

9.6 Alarm verification concept (AVC)

The 'Alarm Verification Concept' serves for delayed alarm transmission and takes into account the interaction of the operating personnel in the alarming sequence.

Operating personnel are able to examine the indicated fire location in the event of a fire alarm. In the event of a false alarm or minor incident the intervention of the fire brigade can be avoided.

Information flow of 'ALARM' and 'Pre-ALARM'



D	'Detection tree'	AL	'Pre-ALARM'/'ALARM'
AVC	Alarm verification concept	GS	Danger levels
1	'Area'		

The 'Area' receives 'Pre-ALARMS' or 'ALARMS' from 'Zones'. Alarm verification takes place at 'Area' level.

Configuration for 'Pre-ALARMS' and 'ALARMS' is not related within 'AVC'. The type of verification and alarming can be separately configured for the 'Manned operation' and 'Unmanned operation' operation modes.

'ALARMS' from 'Manual zones ' and 'Automatic zones' 'Zones' as well as 'Degraded FIRE ALARM' can be configured differently.

A maximum of one 'AVC' is possible per 'Area'.

9.6.1 Attendance check

Should an event ('Pre-ALARM', 'ALARM') arise, the operating personnel may acknowledge presence within the time t1. After acknowledgement, the investigation time t2 starts. If presence is not acknowledged within the given time t1, global alarming is activated.

9.6.2 Investigation time

During the investigation time t2 the operating personnel may examine the indicated source of alarm and check the cause of the 'ALARM':

- Or is it a real fire (emergency)?
- Is it a smoldering waste-paper basket (minor incident)?
- Has the installation detected a deceptive phenomenon (false alarm)?

In the event of a major incident (emergency), the nearest 'Manual call points' or <Alarm delay off> must be pressed. ''Immediate global alarming'' is then triggered.

In the case of a minor incident or false alarm the operator may reset the 'ALARM' and cancel alarming.

If the 'ALARM' is not reset within the given time t2, 'Immediate global alarming' is activated.

9.6.3 Example of a verification process

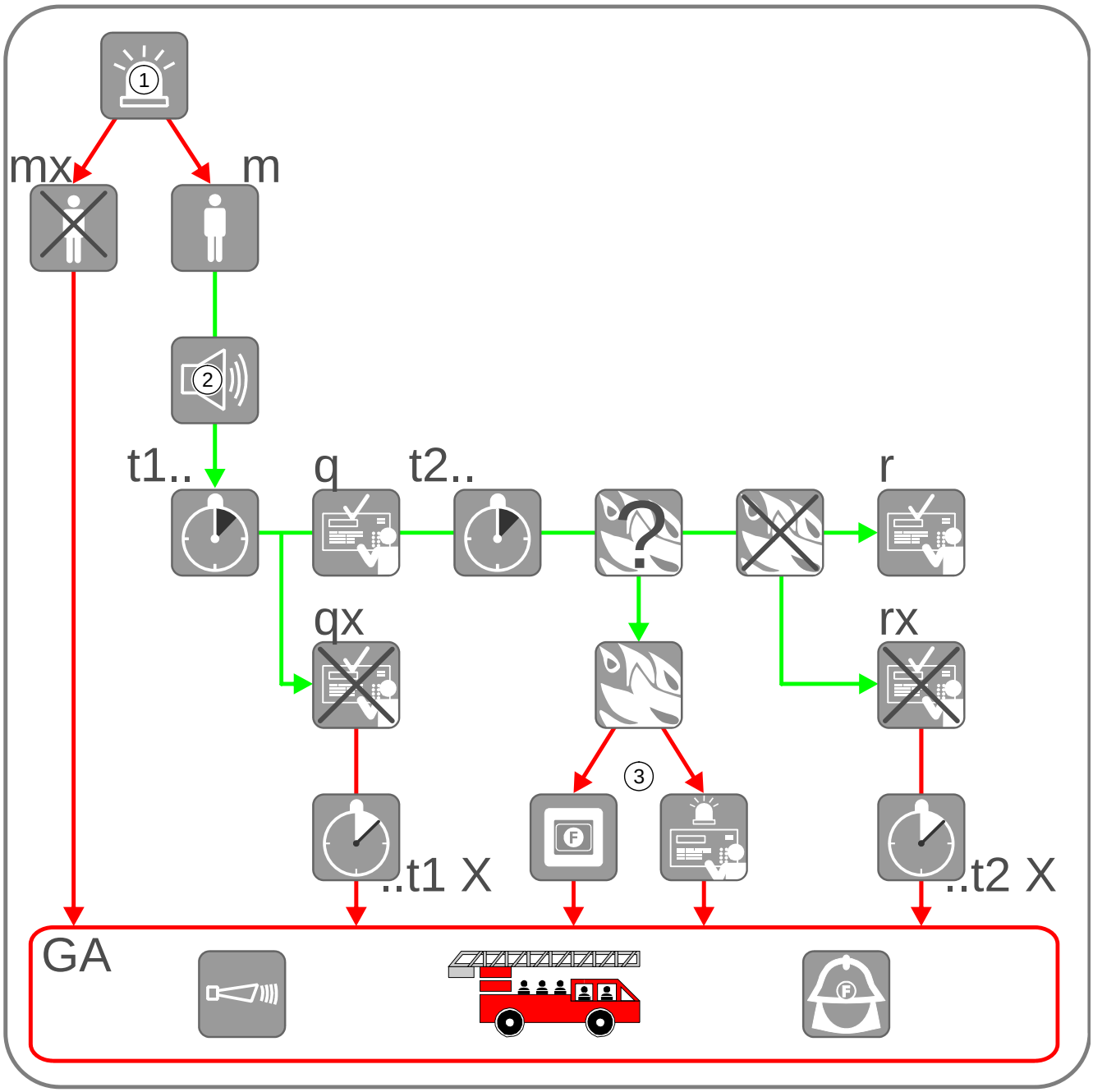
The alarm verification is as follows:

- An alarm event activates local alarming and starts the time t1 for attendance monitoring.
- Operating personnel acknowledge 'ALARM' on the operating terminal prior to the expiry of t1. Acknowledging normally silences local alarming (configurable feature).

If the fault is not acknowledged, global alarming is activated before the expiry of t1.

- After acknowledgement, the investigation time t2 starts. During time t2 operating personnel investigate the fire location.
  - In the case of a minor incident the operator resets the 'ALARM' at the nearest operating terminal. The alarming process stops, and no global alarming is activated.
  - In the event of a fire, the nearest 'Manual call points' or <Alarm delay off> must be pressed. 'Immediate global alarming' is triggered.

If the fault is not reset, "Immediate global alarming" is also activated before the expiry of t2.



Alarm verification

1	Alarm event	q	Acknowledge at 'Station'
2	Local alarming	qx	Not acknowledged
3	Manual call point or <Alarm delay off> on 'Station'	t2..	Time t2 to investigate the source of alarm / the fire location
mx	'Unmanned operation' operation mode	..t2 X	Time t2 has expired
m	'Manned operation' operation mode	r	Reset on 'Station'
t1..	Time t1 for attendance check	rx	Not reset
..t1 X	Time t1 has expired	GA	Global alarming

9.6.4 Fire alarming

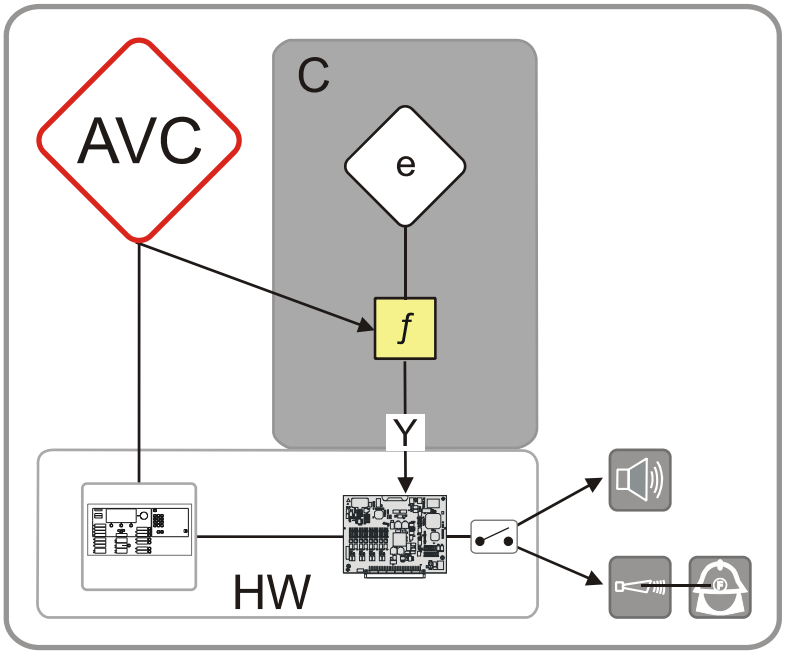
Alarming is controlled at 'Area' level. During alarming the alarming equipment is activated, e.g. alarm devices and remote transmission devices.

Alarm devices

For local and global alarming, acoustic alarm devices, strobes, digital outputs, etc. can be used. The tonality of the alarm devices can be configured differently for local and global alarming (the alarm devices must be suitable for this).

Remote transmission

The alarm message is transmitted to an intervention station. In the case of local alarming, this is usually the company fire brigade and for global alarm usually the state fire brigade. A remote transmission device must be used to transmit alarm messages via the public telephone network.



Information flow during alarming

AVC	'Alarm Verification Concept'	f	Alarming control
C	'Control tree'	Y	Local and global alarming
e	'Alarming control group'		

The alarm devices and the remote transmission can be separately configured for:

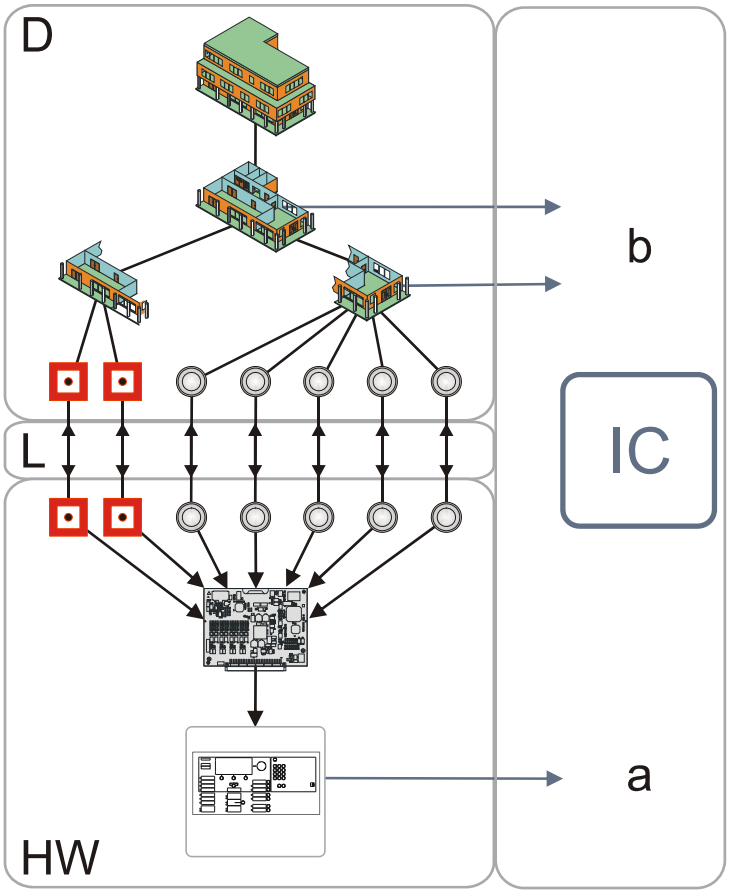
- Alarm type (only with automatic zones)
  - 'Pre-ALARM'
  - 'ALARM'
- Zone type (only with 'ALARMS')
  - Manual alarm
  - Automatic alarm
  - Degraded fire alarm
- Operating mode:
  - 'Manned operation'
  - 'Unmanned operation'
- Alarming type:
  - 'Local alarming only'
  - 'Delayed alarming'
  - 'Global alarming only'

9.7 Intervention concept (IC)

The fire control panel features comprehensive monitoring and self-monitoring functions.

The different events in the system are acquired, classified into corresponding event categories and evaluated by the 'Intervention Concept'. After the evaluation, the 'Intervention Concept' activates the corresponding alarming equipment.

Flow of information to 'IC'



Information flow for intervention

D	'Detection tree'	a	Events from 'Hardware tree'
HW	'Hardware tree'	b	Events from 'Detection tree' and 'Control tree'
IC	'Intervention Concept'	L	Linking

The 'Intervention Concept' ('IC') is an integral part of the fire control panel and takes into account the interaction of the operating personnel. The 'Intervention Concept' can be used to define an intervention process which is initiated should an event occur or once a particular delay time has lapsed.

For each of the following event categories the behavior can be defined separately:

- 'Fault'
- 'Isolation'
- Test
- 'Technical message'
- 'Activation'
- 'Information'

The 'Intervention Concept' has two independent, parallel intervention processes:

- Attendance check (t1)
- Intervention monitoring (ts)

The intervention process can be configured according to the 'Manned operation'/'Unmanned operation' operating mode.

A triggered intervention process (t1 and/or ts running) is not restarted when a 'Fault' of the same category occurs for a second time.

9.7.1 Attendance check

Attendance check with the 'IC' serves for immediate intervention. Events such as technical deficiencies, 'Faults' and malfunctions can be investigated and possibly remedied directly by the operating personnel.

If an event is not acknowledged within the configured timespan (e.g. up to one hour), an external intervention station is informed (global alarming).

The remote transmission for 'Faults' is not interrupted by the acknowledgement. The external intervention centre is also informed when the 'Fault' is acknowledged but the cause of the 'Fault' is not rectified after a specified time. This is ensured by parallel checking by the intervention center.

9.7.2 Intervention monitoring

Intervention monitoring is used to safeguard a service intervention. Events such as a 'Fault' caused by a soiled detector are monitored during a preconfigured period of time (up to one week).

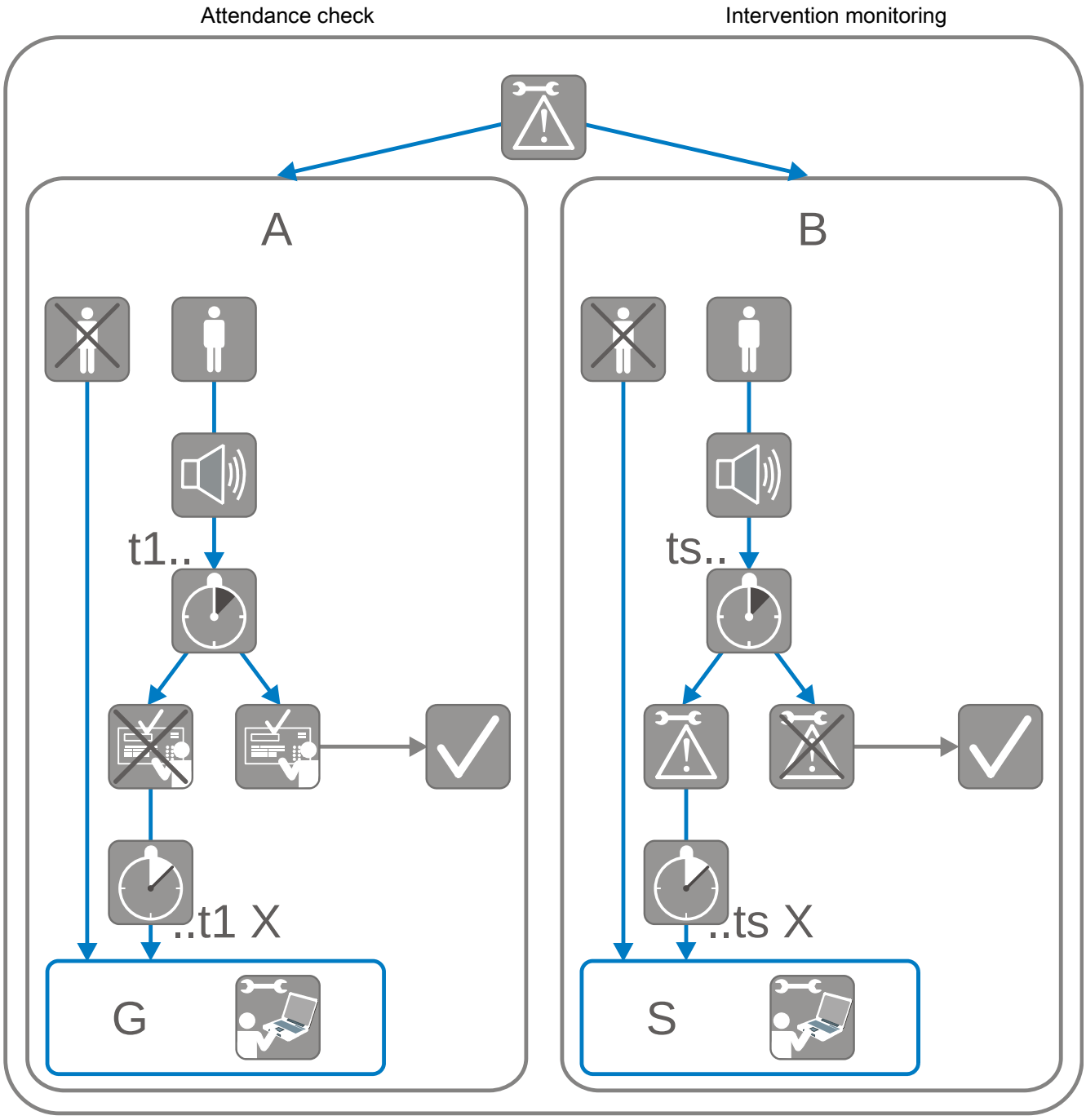
If the normal operation conditions are not re-established within this period of time, service intervention is started and/or the maintenance personnel are informed.

9.7.3 Example of an intervention process

- A 'Fault' activates local alarming and starts the time t1 for attendance monitoring.
- Operating personnel acknowledge presence on the operating terminal prior to the expiry of t1. Acknowledging silences the local alarming equipment. If the fault is not acknowledged, global alarming is activated before the expiry of t1.
- The time ts for service intervention monitoring starts in parallel to the time t1. If the 'Fault' is not eliminated prior to the expiry of ts, maintenance personnel are called up.

A triggered intervention process (t1 and/or ts running) is not restarted when a 'Fault' of the same category occurs for a second time.

The figure below shows an exemplary intervention process for the 'Fault' event category.



Intervention in case of fault

A	Attendance check	B	Intervention monitoring
t1..	Time t1 for attendance check	ts..	Time ts for service intervention monitoring
..t1 X	Time t1 has expired	..ts X	Time t1 has expired
G	Global alarming	S	Service intervention

9.7.4 Intervention alarming

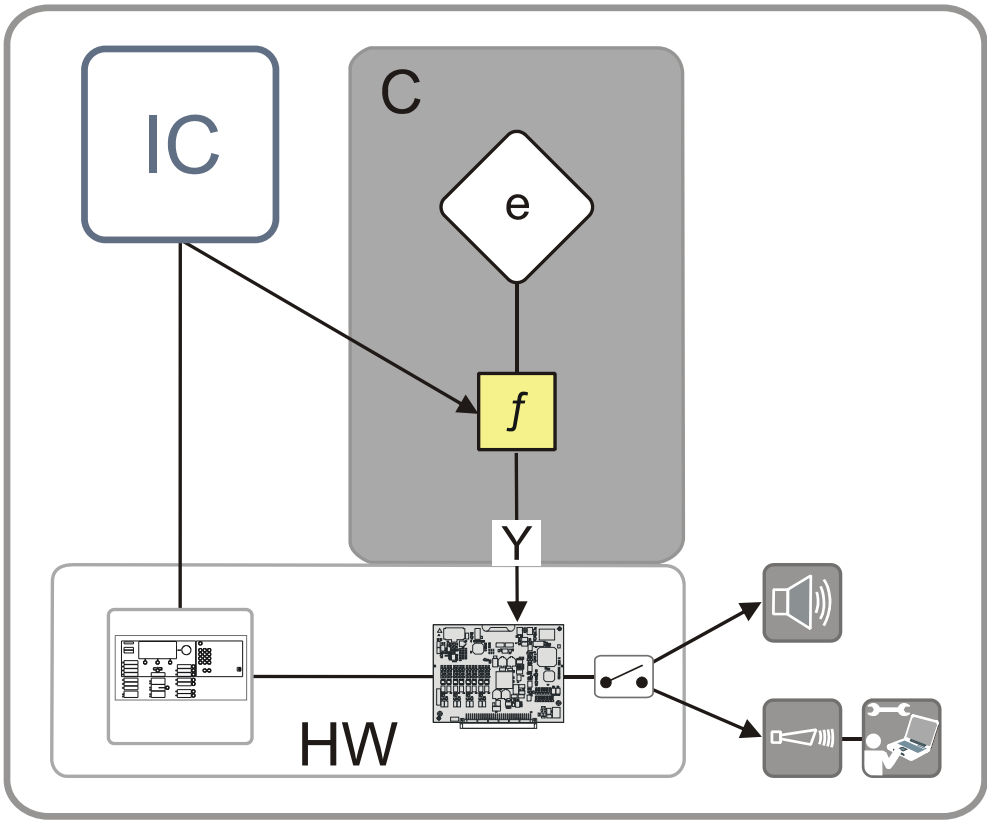
The alarming equipment, such as alarm devices and remote transmission devices, can be selected separately for 'Manned operation' and 'Unmanned operation':

Alarm devices

Alarm devices, strobes, digital outputs, etc. can be used for local and global alarming. The tonality of the alarm devices can be configured differently for local and global alarming.

Remote transmission

For service intervention the event message is transmitted to intervention forces, in general the maintenance personnel. A remote transmission device must be to transmit event messages via the public telephone network.



Intervention alarming

IC	'Intervention Concept'	f	Alarming control
C	'Control tree'	Y	Intervention alarming
e	'Alarming control group'	HW	'Hardware tree'

The alarm devices and the remote transmission can be separately configured for:

- Operating mode:
  - 'Manned operation'
  - 'Unmanned operation'
- Immediate intervention:
  - 'Local intervention only'
  - 'Delayed intervention'
  - 'Global intervention only'
- Service intervention:
  - 'Delayed intervention'
  - 'Direct intervention'

9.8 Events

See also

Event memory [→ 153]

9.8.1 Event categories

The fire detection system evaluates received signals and indicates them as events. Additionally, all events are stored and can be indicated in the 'Event memory' menu item.

There are the following event categories:

- 'ALARM'
- 'Pre-ALARM'
- 'Fault'

  Detector, output and system errors
- 'Isolation'

  Detector, output and system isolations
- Test

  Inspection messages and conditions, test messages
- 'Technical message'
- 'Activation'

  Activation of inputs and outputs
- 'Information'

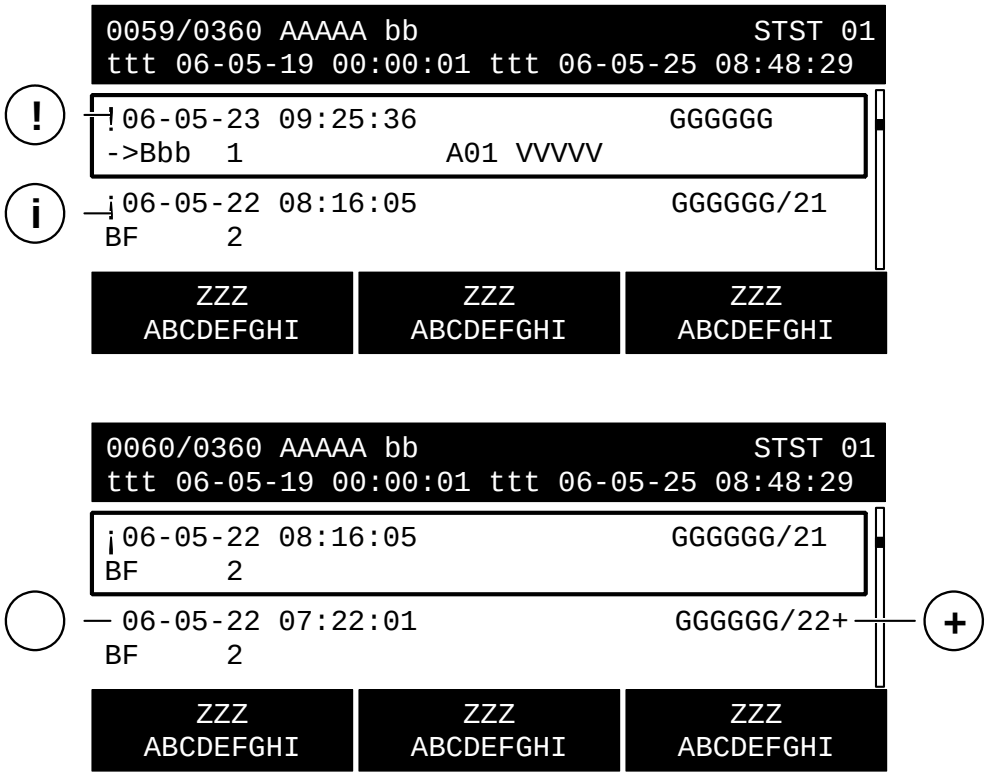
  Operating conditions, other system messages, information

9.8.2 Event status identification

Event messages indicated on the display are provided with an identification.

This identification provides information on the status of the message.

The following identifications are used:



Event status identification

Identification	Meaning
!	Message not acknowledged
¡	Cause of message no longer available
no identification	Message acknowledged
+	More than one detector is active

9.8.3 Event memory

All events that have occurred in the fire detection installation are stored in the event memory . You can indicate a list of all events under the 'Event memory' menu item.

The list is sorted chronologically and can be filtered by category, date and time.

The figure below shows an example of a 'Event memory' list:

0008 / 0069 Events		Station 01
from 06-03-06 09-34-50 to	06-03-06 09-34-50	
06-03-06 10-34-50		OFF
Zone 13	Office 21	
06-03-06 10-34-50		OFF
Autom. 13	A02 Window side	
Select Event category	Select Date/time range	More Options

See also

Select events [→ 61]

9.8.4 Message summary

The 'Message summary' main menu item includes messages in connection with events. The messages are combined in message categories and may be opened as message lists.

In the 'Message summary' main menu item only those message categories in which messages (events) have actually occurred are indicated.

The figure below shows an example of a message overview with 1 'Pre-ALARM', 8 'Faults' and 10 'Isolations':

'Message summary' list

Message summary Exit with <C>			
001	Pre-ALARMS	(001 Messages unconfirmed)	(2)
008	Faults		(3)
010	Isolations		(4)
003	Activations		(7)
	Function On/Off	Function All	Test LED

After pressing the short-cut button (2) the detailed view of the 'Pre-ALARM' message category is indicated:

'Pre-ALARM' detailed view

Remote transmission activated 001 Pre-ALARM			
001 !	Pre-ALARM Office 22	Zone	14
Execute Commands	Show Intervention text		More Options

9.9 List representation and types of lists

By the list representation and the possibility to search in lists, a large number of list entries and list positions can be indicated on the display.

There are the following types of lists:

- Event lists
- Element lists
- Selection lists

9.9.1 Event lists

Event lists include events that have occurred in the fire detection installations and belong to different categories.

In the 'Message summary' main menu item messages are combined in event categories. These event categories may be opened as an event list.

In the 'Message summary' main menu item only those event categories are indicated in which events have actually occurred.

In accordance with the event categories, there are the following event lists:

- 'ALARM'
- 'Pre-ALARM'
- 'Fault'
- 'Isolation'
- Test
- 'Technical message'
- 'Activation'
- 'Information'

All events are also included in the event list in the 'Event memory'. This 'Event memory' list has a different layout as well as additional functions. For this reason, a separate chapter 'Event memory' is included.

The figure below shows an example of an 'Isolation' event list:

Waiting for confirmation RT 002 Isolations			
Autom.	Zone	OFF	001
Sounder 2		OFF	002
Execute Commands	Show Intervention text	More Options	

See also

Event memory [→ 153]

9.9.2 Element lists

Element lists contain elements of the installation, as well as element data, e.g. configuration data.

An element list is indicated as e.g. the result of an element search.

The figure below shows a sample 'Element search':

025	Elements		
Station	1		
Area	1		
PMI	1		
Network	1		
Execute Commands		Execute commands Topology	

Example of an element list

Details of		Station 1
==========	Element Properties	==========
ElementId:	1/1	
Discipline:	FIRE	
ElementType	PanelFC722Elem	
Jump Back		

Example data of an element

9.9.3 Selection lists

Selection lists are used to select actions or categories.

There are selection lists for the following actions or categories:

- Commands
- Options
- Elements
- Events (to filter the event memory)

The table below shows an example of a 'Select command' selection list:

Select command	
Set customer text	(1)
ON	(2)
OFF	(3)
OFF/timer	(4)
Activate	(5)

9.10 Version indication station / Configuration data

You can display information about the 'Station' and the configuration data version in the topology tree.

A description of the calling-up of the indication can be found in the chapter in account.

See also

Show version [→ 96]

10 Faults / Troubleshooting

If the site is indicating 'Fault', the table below provides a list of possible 'Faults', including information on the possible causes.

If a 'Fault' cannot be eliminated with the help of these operation instructions, please contact the service engineer.

'Fault'	Cause	Remedy
Automatic detector	Detector is missing	Re-insert detector
	Detector is out of order	Replace the detector. **NOTICE! Any defective detector must always be replaced by another detector of the same type.**
Manual call point	Glass pane broken	Replace glass pane
	Other damages	Contact service provider
Mains failure	Mains failure in the public network	No action required. Emergency power supply is ensured by batteries during at minimum 12 hours; depending on the customer specification up to 72 hours.
	Fuse damaged	Check fuses (current distributor of the building) and replace them if necessary.
Paper out	Paper roll in the printer has been used up	Insert printing paper

With all other 'Faults', the service provider in account must be contacted.

See also

Inserting printing paper [→ 93]

11 System maintenance

Regular maintenance of the 'Site' is necessary in order to ensure the system will function reliably.

The fire detection installation has a reminder function that informs you of imminent maintenance. When the service reminder is displayed, regular maintenance by the service technician is required.

Depending on national regulations, the maintenance intervals can be set differently from the following maintenance recommendation.

11.1 Maintenance recommendation

You will find detailed instructions for maintaining the site in document A6V10210416, commissioning .

Please adhere to the local provisions.

Carry out the recommended maintenance work in regular intervals, or have them carried out by a service engineer.

Maintenance work	Interval
Testing detectors	annually
Testing the control panel	annually
Simulating alarm	annually
Simulating fault	annually

11.2 Opening the control panel [DE]

It is possible that the housing of the control panel may have to be opened for maintenance work.

If a class 3 key safe (fire department key safe, FSD) forms part of the fire detection installation, the door contact kit FCA2009-A1 must be installed in the housing of the control panel.

The door contact kit triggers a 'Sabotage ALARM' if the cover is removed from the control panel.

NOTICE

Sabotage ALARM by opening the control panel

Measures for 'Sabotage ALARM' are triggered unnecessarily.

- Switch off sabotage evaluation before you open the control panel.

See also

Switching off sabotage evaluation [DE] [→ 50]

12 Glossary

Term	Definition
A	
Acceptance test	(1) Formal testing conducted to determine whether or not a system satisfies its acceptance criteria and to enable the customer to determine whether or not to accept the system. (IEEE Standard) (2) Formal testing conducted to enable the user, customer, or other authorized entity to accept a system or component.
Acknowledge	Manual acknowledgement of a pending message concerning an → event.
address connection factor	The number of addresses a device occupies on the detector line.
Addressable detector line	Detector line technology in which all devices have a definite address. The control panel can receive, evaluate and indicate signals from each individual detector. → Collective detector line
AI	Abbreviation for → Alarm indicator
Alarm	Acoustic and/or optical signal used to announce danger.
Alarm counter	Device in the → fire control panel counting the number of alarm states. An alarm state is the state from the first alarm until successful reset (EN54).
Alarm device	A part of a → fire detection system serving for acoustic and/or optical alarming, e.g. → sounder, strobe.
Alarm indicator	The optic indicator on the detector to indicate an alarm or pre-alarm.
Alarm organization	Comprises all measures which in the event of a fire are used for alerting, evacuation, rescue, prevention of fire spread, fire fighting and orientation. It may differ depending on the operating mode of the → fire control panel, which can be either → 'Unmanned' or →'Manned'. → Alarm verification concept
Alarm verification concept	Concept to avoid false alarms, taking into account the interaction of the operating staff in the alarming process.
Alarming control	Application used for controlling and monitoring alarming devices.
Alarming equipment	Umbrella term for alarming and transmission devices
Area	The top level in the → detection tree. → Sections or → zones are assigned to the area.
Automatic fire detector	A device measuring a physical phenomenon (e.g. heat) to recognize a fire in the area to be monitored.
AVC	Abbreviation for → Alarm Verification Concept
B	
BACnet	A standardised protocol which is used for the communication with the → management station and with third-party products.
Base sounder	An → alarm device integrated into the → sounder base.
Blocking of the isolation	A setting blocking the isolation of a → zone.
Buzzer	An element for the acoustic signalling of an event in the operating terminal.
C	
C-NET	addressed → detector line for C-NET devices
C-NET device	A device connected to the C-NET detector line.

Term	Definition
Collective detector line	Conventional detector line technology in which all detectors connected to the same detection line have one collective address (common indication and operation without identification of the individual detectors).
Command	System-internal instruction to execute a function (e.g. isolate zone).
Component	Hardware components of a system. Umbrella term for modules, boards and cards.
Confirmation	Activating a switching condition of an output of the → fire control panel via a confirmation input.
Contact	The contact serves for switching electric currents. In fire detection engineering, different types of contacts are used, e.g. relay contacts (→ normally open contact, → normally closed contact)
Control	Logical function activating and deactivating actuators according to particular criteria.
Control group	Combination of several → controls of the same type.
Control panel	Short name for → fire control panel
Control test	An operation mode of the → fire detection installation to activate → controls for test purposes. Typically the → effects do not perform their actual function but only report a → test activation.
Control tree	Mapping of the functional and geographical arrangement of the actuators in a building; a hierarchical structure consisting of → control group and → control.
C-WEB	System bus
D	
danger detection system	The danger detection system is a superordinate system to monitor and operate safety-and security-relevant systems, e.g. fire protection, access control.
Danger level	Signal of a fire detector expressing the probability of a fire hazard. Automatic fire detectors know the danger levels 0 to 3; manual call points only know the danger levels 0 and 3. The danger levels are: 0 = no danger 1 = possible danger 2 = probable danger 3 = highly probable danger
Degraded alarming	→ Alarming activated in case of a → degraded fire alarm.
Degraded fire alarm	Fire alarm occurring when the system is in → degraded mode.
Degraded mode	Defined reduced operation mode taking over in case of failure of a part of the → fire detection installation.
Detection tree	Mapping of the geographical and organisational arrangement of the sensors in a building. This is a hierarchical structure consisting of → area, → section, → zone.
Detector line	The detector line is the electrical connection between the detectors and the fire control panel. There are collective and addressable (C-NET) detector lines.
Detector line topology	The arrangement of the devices on the detector line. Depending on the detector line, up to 3 topologies are possible: → loop, → stub, stub on loop.
detector test	An operation mode of the → fire detection installation to activate → fire detectors for test purposes. Typically the detectors are operated at an increased sensitivity level, so that they react faster. Alarming is not activated in detector test mode.
Diagnosis	Verification of the system status e.g. for the preparation of service intervention. This may be local or remote.
E	
Effect	Activation of e.g. a hardware output or a → command initiated by a control. → Cause
Emergency power operation	The → fire detection installation is fed by the second supply source, e.g. → batteries.
Evacuation	The controlled evacuation of an endangered part of a building.

Term	Definition
Event	An incident in a system triggering a message. Events are e.g. alarm, pre-alarm, fault, isolation.
Event memory	A feature a fire detection system: the event memory chronologically stores and logs the events and associated operator's actions (logging-in with access level, acknowledging, resetting, …) in a persistent data storage unit.
External alarm indicator	A separately connected optical element indicating the location of the fire. It is usually positioned in the entrance to the room where the alarming detector is installed.
Extinguishing	Fire-fighting measure that can be performed by stationary, automatic extinguishing installations or by portable extinguishers.
Extinguishing control	→ Control actuating a connected extinguishing system and evaluating and indicating its conditions.
Extinguishing control group	Level in the → control tree of the → fire detection system. The extnguishing control group serves for combining → extinguishing controls.
F	
Fault	Unwanted deviation from normal operation; usually caused by a technical defect (e.g. short-circuit or open line).
Fire alarm signal	Acoustic or optical indication of fire alarms at the → fire control panel.
Fire application	All functions required for the alarming process: acquisition, evaluation, verification, alarming and → control.
Fire brigade	Public or private organization with trained personnel, appliances and equipment for dealing with fires and other emergencies.
Fire brigade orientation plan	Building plan serving as an orientation aid for the fire brigade, so that they can quickly reach the fire location in the building.
Fire control	→ Control which is typically activated in case of → fire alarm.
Fire control group	Level in the → control tree of the → fire detection system. The fire control group serves for combining → fire controls.
Fire control panel	The central part of a fire detection system providing the detectors with energy, receiving messages, indicating these messages optically or acoustically and transmitting them if necessary, and monitoring the installation for faults.
Fire detection	The detection of a fire by automatic or manual → fire detectors.
Fire detection installation	Installed fire detection system for the recognition and announcement of a fire and for the initiation of countermeasures.
Fire detector	A component of a fire detection system which contains at least one sensor for the monitoring and detection of a fire phenomenon, and which provides a corresponding signal to the fire control panel.
Fire terminal board	Printed circuit board of the → fire terminal
Floor repeater display	A display device without operating elements.
Floor repeater terminal	A display device with operating elements for the acknowledgement and reset of alarms and faults.
G	
Gateway	A network jumper connecting two different systems/networks, at the same time translating the different communication and transmission standards/protocols.
Global alarming	Global alarming equipment (e.g. remote transmission) is actuated and external intervention forces (e.g. the fire department) are called up. → local alarming
H	
Hardware tree	The mapping of the hardware of a → fire detection system.

Term	Definition
I	
IC	Abbreviation for → Intervention Concept.
Installation test	During the installation test, the complete installation is in normal operation; only the detector is operated at the highest sensitivity level to make quick activation possible.
Intervention concept	Concept with two independent verification functions: Presence monitoring for local intervention and intervention monitoring for the service intervention.
Isolation	The condition of a part of the → fire detection system, which suppresses the evaluation of all signals. This condition remains until it is (manually) cancelled.
K	
Key switch	Key switches are electric switches which, for security reasons, are combined with a lock. The switching process can thus only be performed by a defined group of authorized persons with an appropriate key. In fire detection systems the key switch is often used to release operation.
L	
LAN	LAN is the abbreviation of 'Local Area Network'. This network technology serves for bridging short distances up to several kilometres. → WAN
Licence key	Hardware component to enable functions.
Line separator	An electronic switch in devices on the detector line that automatically isolates the defective line part in case of a short-circuit.
Local alarming	Local alarming equipment (e.g. acoustic or optical alarm devices) is actuated in order to call up immediately available intervention personnel (e.g. in-house staff) and to alert people of a possible fire hazard. → Global alarming
logical channel	Mapping of a logical function of a device in the → detection tree or control tree. The logical channel is the lowest level in the tree.
Loop	A detector line topology that leads from the → fire control panel to the → fire detectors and back, to increase operational safety (UL864 Class A Wiring). This switching technique makes it possible for all detectors to communicate with the control panel even in case of an open line or short circuit. → Stub
Loop line	An outdated term for → loop
M	
Major incident	An alarm incident that the operating personnel cannot handle and which thus actuates → global alarming. → minor incident
Management station	The management station is a subordinate system for monitoring and operatign safety- and security-relevant installations as well as building services, e.g. fire protection, intrusion, access control, heating, ventilation.
Manned	The switching condition of the → alarm organisation when the operating staff is present and can thus intervene in case of an event (alarm, fault).
maximum current connection factor	Factor for the maximum current quantity a device draws from the detector line.
Minor incident	Alarm incident that can be handled by the operating personnel and that does not actuate → global alarming. → major incident
Multi-detector dependency	In multi-detector dependency the → danger levels of more than one detector are taken into account in the decision on alarming. In doing so, actions such as → alarming or the closing of fire doors are only actuated when the defined dependencies are given (e.g. two detectors transmit danger level 3). → single-detector dependency

Term	Definition
N	
Network topology	The network topology describes the connection type of the stations - loop-shaped, star-shaped, etc.
Normally closed contact (NC)	Opens an electrical circuit when activated. → normally open contact
Normally open contact (NO)	Closes an electric circuit when activated.
O	
Operating terminal	A device facilitating operating access to a system.
P	
Parameter set	Defined behaviour of the detectors concerning sensitivity, immunity to deception, response time. State-of-the-art detectors can be operated with different parameter sets.
Peripheral data bus	The internal bus of the → fire control panel or fire terminal.
Person Machine Interface	The arrangement of operation and indication elements.
physical channel	Mapping of a physical function of a device in the → hardware tree. The physical channel is the lowest level in the hardware tree.
Physical tree	→ Hardware tree
PMI	Abbreviation for → Person Machine Interface
Power supply	A unit supplying electric energy to a consumer.
Pre-alarm	Preliminary stage of an → alarm for early information in case of an event.
Pre-configuration	A partial configuration of the → hardware tree, → detection tree and → control tree set up before the → fire detection installation is commissioned.
Q	
quiescent current connection factor	Factor for the current quantity a device draws from the detector line in quiescent condition.
R	
Recessed mounting	A mounting method in which the device is mounted into a recess. → surface mounting
Redundancy	The availability of additional, technical components required for the operation of a system or device in case of a technical failure.
Remote Access	Access to the fire detection system via a suitable data connection, e.g. a telephone line by means of a modem.
Remote alarm	The signalling in case of a fire outbreak, with the intention of calling external help (e.g. the fire department). This is mostly performed by means of → remote transmission
Remote transmission	Transmission of information based on events to a remote station, e.g. the fire department, by means of an RT device. This is usually performed via the public telephone network.
Reset	Actively terminating the condition of a fire control installation; e.g. resetting an → alarm.
RT	Abbreviation for Remote transmission
RT Alarm	The designation of a signal for the → remote transmission of an → alarm.
RT channel	Logical signal path for the remote transmission of a criterion (e.g. alarm)
RT Fault	The designation of a signal for the → remote transmission of a → fault.

Term	Definition
S	
Section	Level in the → detection tree of the → fire detection system. The → section is allocated to the → area and serves for combining → zones.
separator connection factor	Indicates whether a device on the detector line includes a line separator.
Single-detector dependency	In single-detector dependency the decision on alarming depends on the → danger level of only one detector. The first detector within a → zone that transmits the → danger level in account triggers a → fire alarm. → multi-detector dependency
Site	Representation of → Fire detection installation: the top level in the mapping of an installed system. Combines → Hardware tree, → Detection tree and → Control tree.
Sounder base	A detector base with an integrated, acoustic → alarm device. → Base sounder
Stub	A detector line that is connected to the control panel only on one end. In case of open line or short-circuit, not all → fire detectors are able to communicate with the → fire control panel. → Loop
Supervised line	Electrically monitored circuit (e.g. for short-circuit or open line)
Surface mounting	A mounting method in which the device is directly mounted to the surface on which it is positioned. → recess mounting
T	
T-branch	A line branching off from a primary line (e.g. → detector line) and executed as → stub.
Technical message	→ Events (e.g. in third-party systems) evaluated by → sensors or → contacts and transmitted to the → fire control panel for signalling.
Temporary site protection	For temporary fire detection during the building phase. Newly established → detector lines can be commissioned with an automatically generated → detection tree and → control tree.
Test activation	Activation of → fire detectors in → detector test or → effects in the → control test.
U	
Unmanned	The switching condition of the → alarm organisation when the operating staff is absent and can thus not intervene in case of an event (alarm, fault).
Z	
Zone	A level in the → detection tree. The zone comprises one or several → fire detector(s). Decision on alarming takes place on zone level. The zone is allocated to a → section or to the → area.

13 Index

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