ESSER
by Honeywell


# Fire Alarm Control Panel FlexES Control

GB Commissioning Instruction

798982.GB0
10.2015 / AB

### Intended purpose

This product may only be used for the applications outlined in the catalogue and in the technical description, and only in conjunction with the recommended and approved external devices and components.

### Warning

In order to ensure correct and safe operation of the product, all guidelines concerning its transport, storage, installation, and mounting must be observed. This includes the necessary care in operating the product.

### Safety-related user information

This manual includes all information required for the proper use of the products described.

The term 'qualified personnel' in the context of the safety information included in this manual or on the product itself designates:

- project engineers who are familiar with the safety guidelines concerning fire alarm and extinguishing systems.
- trained service engineers who are familiar with the components of fire alarm and extinguishing systems and the information on their operation as included in this manual.
- trained installation or service personnel with the necessary qualification for carrying out repairs on fire alarm and extinguishing systems or who are authorised to operate, ground and label electrical circuits and/or safety equipment/systems.

### Safety warnings

The following information is given in the interest of personal safety and to prevent damage to the product described in this manual and all equipment connected to it.

Safety information and warnings for the prevention of dangers putting at risk the life and health of user and maintenance personnel as well as causing damage to the equipment itself are marked by the following pictograms. Within the context of this manual, these pictograms have the following meanings:

Designates risks for man and/or machine. Non-compliance will create risks to man and/or machine. The level of risk is indicated by the word of warning.

Important information on a topic or a procedure and other important information!


Observe configuration and commissioning information in accordance to the national and local requirements.

### Dismantling

In accordance with Directive 2002/96/EG (WEEE), after being dismantled, electrical and electronic equipment is taken back by the manufacturer for proper disposal.

**Table of contents**


1 General / Application ... 4
2 Preparations for commissioning ... 5
2.1 Installation of the service and programming software tools 8000 ... 6
2.2 Connection between the FACP and service PC ... 7
2.3 Control panel hardware / customer data ... 8
2.4 Identifier Function (option) ... 9
2.5 Firmware Update ... 13
2.6 Firmware update for redundant setup ... 16
2.6.1 Firmware update of the main CPU (control module1 and redundant control module 2) ... 16
2.7 Updating the indicating and operating panel with SD card ... 18
2.7.1 Prepare SD card ... 18
3 Details and overview menu ... 21
3.1 Status display >Details< ... 21
3.2 >Overview< menu ... 22
4 Service functions ... 23
4.1 Access level 3 (Service/ Maintenance) ... 23
4.2 >Service< menu ... 25
4.2.1 Menu - Language ... 26
4.2.2 Menu - Event memory ... 27
4.3 essernet® diagnostic line (Debug-Mode) ... 28
4.3.1 Menu - essernet® ... 28
4.4 Checking the essernet® devices and connections ... 31
4.5 Checking the redundancy functions ... 33
4.5.1 Menu - Redundancy ... 33
4.5.2 Menu – Printer ... 36
4.5.3 Revision mode ... 36
4.5.4 Menu – Revision ... 37
4.5.5 Menu – Buzzer off ... 39
5 Operate options ... 41
5.1 Function menu ... 42
5.2 Simulation of detector states ... 43
5.3 Simulation of control states ... 45
5.4 Simulation of Loop function ... 47
5.5 Testing the loop ... 48
5.6 Replace Devices on loop ... 49
5.7 Replace RF-Devices / IQ8 Wireless components ... 49
5.8 Detector replacement ... 50
6 Diagnostic Functions ... 52
6.1 Lamp test ... 52
6.2 Power supply values ... 53
6.3 Configuration ... 54
6.4 Meaning of the three digit error codes / test mode ... 55
6.5 Trouble messages in the display ... 61
7 Test instructions according to manufacturer ... 64
7.1 Insulation measurement of the loop periphery ... 64
7.2 Checking the quiescent current consumption ... 65
7.1 Connectible devices/accessories ... 65

# 1 General / Application

The fire alarm control panel FlexES Control may only be commissioned by trained personal with training specific to this FACP.

**Additional and updated Informations**

The described features, specifications and product related informations in this manual correspond to the date of issue (refer to date on the front page) and may differ due to modifications and/or amended Standards and Regulations of the System design, Installation and Commissioning.

Updated informations and declaration of conformity are available for comparison on the www.esser-systems.com homepage.



The fire alarm control panel FlexES Control may only be commissioned by trained personal with training specific to this FACP.

**Associated Documents**

| | |
|---|---|
| 798980.GB0 | Operation Instruction FACP FlexES Control |
| 798981.GB0 | Installation Instruction FACP FlexES Control |
| 798983.GB0 | Brief instruction Fire Alarm Control Panel FlexES Control |
| 798952 | Open Source Informationen BMZ FlexES Control |
| 798654.GB0 | Technical Information Manufacturer's instruction for the commissioning and maintenance of fire alarm systems |
| | Online help for the tools 8000 programming software |

**If the FACP is installed in an equipment cabinet, the following documentation will also apply:**

| | |
|---|---|
| 798985.GB0 | Installation Instruction Floor-type cabinet and rack-mounting for FACP FlexES Control |
| 798985.20.GB0 | Order Floor-type cabinet and rack-mounting for FACP FlexES Control |
| 798985.30.GB0 | Checklist for equipment cabinet and rack mounting FACP FlexES Control |

**Device and system design training**
We constantly offer project design, planning and commissioning training courses for the fire alarm system FlexES Control panel. Please visit www.esser-systems.com or contact us by telephone at 0049 (0) 2137 / 17-600 for more information on our training courses.

**GNU Licence (GPL)**
The firmware integrated in this product contains copyright protected third party software, which was licensed under the GPL (GPL software). The following applies in accordance with the GPL:

1. The source code for the GPL software can be downloaded from www.esser-systems.com.
2. The GPL software can be reused, forwarded and modified.
3. The GPL software alone shall be provided to the extent permitted by law without liability for defects and without any express or implied guarantee, including that of the capacity to act or suitability for a specific purpose.
4. A copy of the GPL can be viewed and downloaded at www.esser-systems.com. Please use the contact form on the website for potential queries and additional information.

**Open source software – information**
The FACP FlexES Control contains open source software subject to modified (2-clause, 3-clause) BSD licenses. For further detailed information on this, please refer to Open Source Informationen BMZ FlexES Control (Part No. 798952).

# 2 Preparations for commissioning

The components of the fire alarm control panel FlexES Control are delivered with the software current at the time these components were manufactured.

The operating and input sequences as well as the displayed information depends on the software used and the programming of the fire alarm control panel (FACP) and may differ from what is shown here due to current software updates. The FlexES Control fire alarm control panel can only be commissioned and configured with the aid of the service and programming software tools 8000, from version V1.16 onwards.

Before commissioning the fire alarm control panel, the software should be checked for available updates. This ensures that all features are used and the system is operated with up-to-date software.

The software updates for individual components/modules can be easily downloaded from the customer section at www.esser-systems.com.
Updates are available for the individual software containers (a container comprises all software modules for a fire alarm control panel) and the service and programming software tools 8000 required for commissioning.

**Online help for the programming software**
The tools 8000 programming software includes a context-sensitive online help programme. This help programme can be accessed by pressing the >Help< button or >F1< once the programme has started. This online help programme contains detailed descriptions of the programme's functions and programming options.

**Summertime/wintertime changeover**
In essernet® networked fire alarm control panels, the time zone, incl. automatic summertime/wintertime changeover can be set for the entire networked system from a single fire alarm control panel FlexES Control. In this case, the FlexES Control acts as (master) timer for all other essernet® devices.

If other timers are already present in the networked fire alarm system, their time output is ignored and the time zone configured on the (master) timer is accepted by the other devices on the essernet®.

The timer function of the FACP can be deactivated with the setting >No time zone<.

Details on the time zone setting can be found in the online help of the programming software tools 8000.

- The service functions for the installer are shown only in access level 3!
- The displayed screens may differ from the ones shown here due to building-specific programming.

## 2.1 Installation of the service and programming software tools 8000

When installing the programming software tools 8000 of version V1.16 or higher, the USB drivers for the PC interface are automatically updated.


*Fig. 1: Installation of the programming software tools 8000*


*Fig. 2: Installation of the required USB drivers*

**USB drivers**

If the USB drivers have accidentally been deleted or damaged on the service PC, they can be installed later as well, after installation of the programming software.
The USB drivers are located in the directory >Firmware | USB> on the installation CD for the programming software tools 8000.

## 2.2 Connection between the FACP and service PC

The service PC and the control panel are connected via USB for configuring / programming the FACP FlexES Control.

*Fig. 3: Service PC ➔ control panel at USB port on the 1st control module*

Only the USB port on the control module 1 should be used for connecting to the FACP. The USB port of control module 2 (redundancy operation, if present) is only used for updating the firmware of the control module 2.

The communication between the service PC and the FACP is shown in the lower left corner of the programming interface tools 8000 with the green symbols for data exchange (communication) and USB connection.

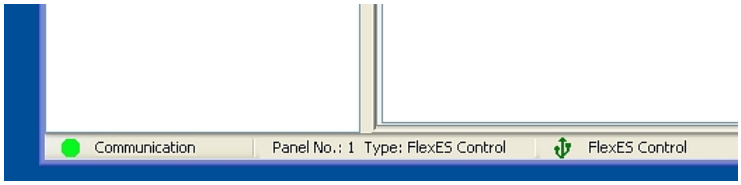



*Fig. 4: Proper connection and data exchange over the USB connection*

## 2.3 Control panel hardware / customer data

In order to program the FACP FlexES Control, it is possible to query the hardware installed in the control panel (with open cover contact of the FACP) via the programming software tools 8000.

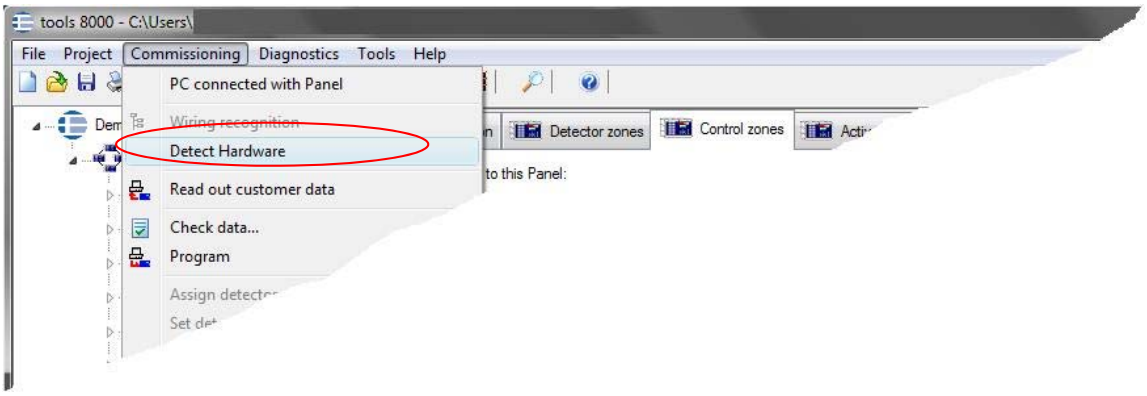



*Fig. 5: Querying the hardware - Example*

The control panel hardware is displayed in a table and compared with any available customer data set, e.g. for previously programmed systems.

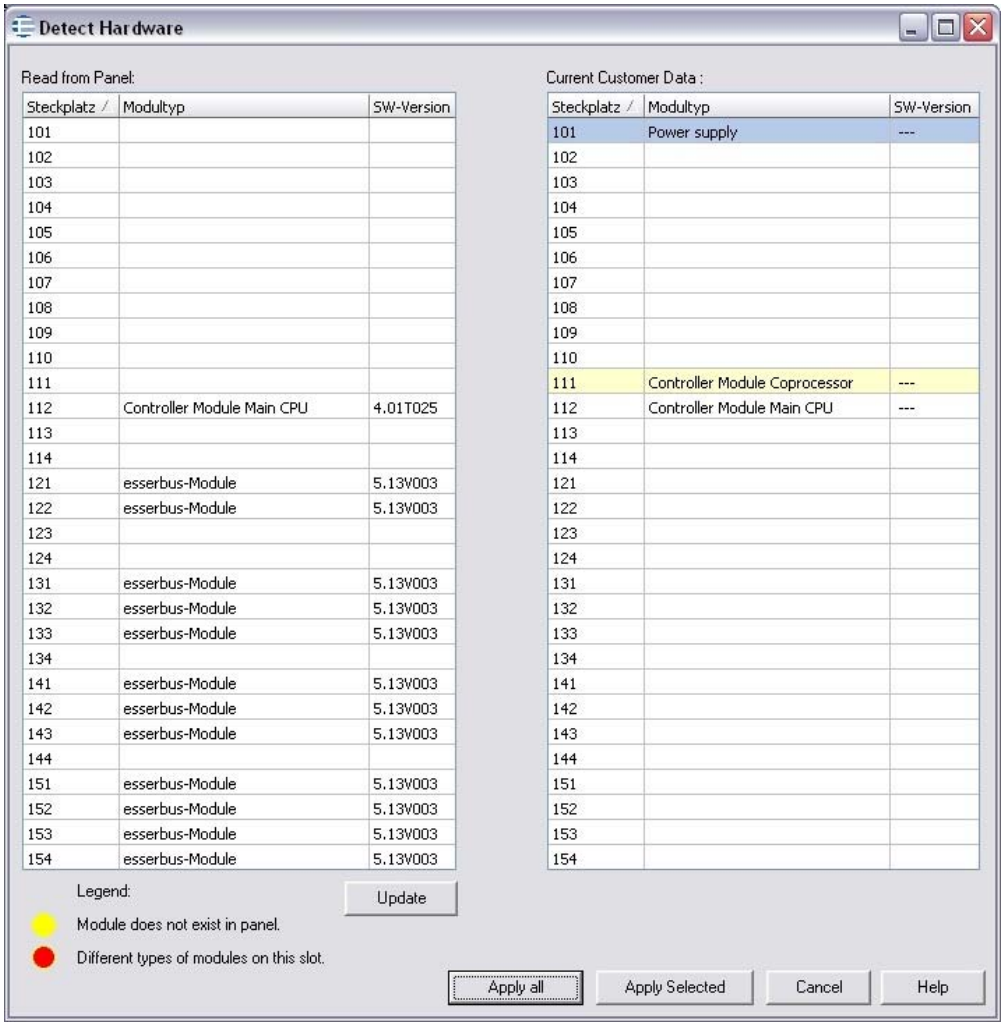



*Fig. 6: Control panel hardware of the FACP (Example)*

The control panel hardware can be compared with the customer data record (if available) by clicking the buttons >Apply all< or >Apply Selected<.

## 2.4 Identifier Function (option)

The fire alarm control panel FlexES Control supports operation via the input of identifiers. An identifier consists of a max. of 18 alphanumeric characters and is specified in the customer data programming of the FACP. The FACP can either by operated via identifiers or by inputting zone, detector and control zone numbers.

On fire alarm control panels where this identifier function is activated, this operating concept differs slightly by the functions described below.

In more extensive systems, the identifier function allows building identifiers (warehouse, main entrance, staircase etc.), for example, to be input as a description of the associated zone number. This function supports simple and fast operation, without the need to enter the individual zone numbers.

**System requirement**

System software: HMI: 1.03.R000

Programming software tools 8000: from V1.19 R000

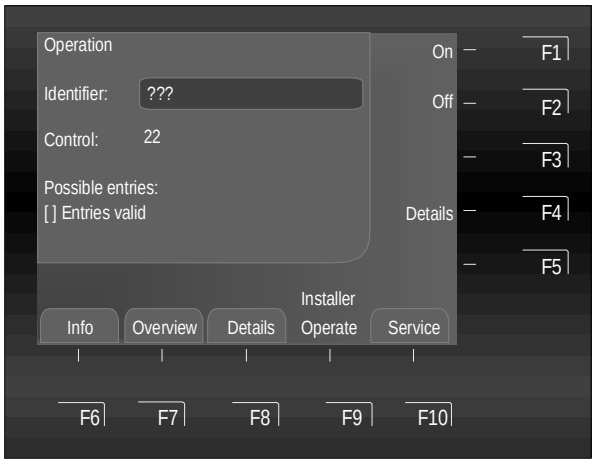
The identifier function is possible with a FlexES Control (stand-alone) fire alarm control panel or with networked FlexES Control fire alarm control panels with the corresponding programming.
For systems networked via essernet®, the identifier function must be activated for all panels of the network.

Whilst panel start-up procedure the „Identifier“ is communicated within the essernet®. This will be indicated as “System Fault Identifier” at the operation panel and may take a few minutes relating to the system configuration.

If the identifier option is configured for a system the Display shows „Identifier ???“ if detector and control functions are operated.

Use cursor button to select and edit the Identifier.

If the selected detector is already assigned to an Identifier, this will be displayed directly instead of the question marks.




Edit Identifier


Confirm by pressing >OK<

*Fig. 7: Identifier functionality*

**Identifiers for detector zones, detectors and control zones**

The >identifier function< can be used for all detector zones, detectors and control zones. These can therefore be operated easily and directly. It is no longer required to input a zone/detector number or a control zone number. These numbers are uniquely assigned to an identifier.

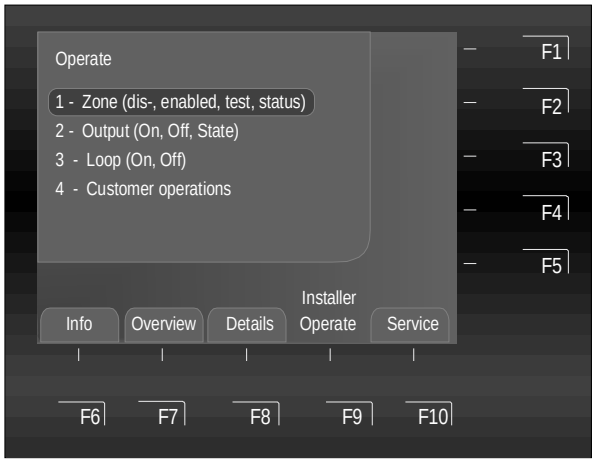



*Fig. 8: Display screen >Operate<*


Press key ➔ Operate

Select the >Zone Operate< function in the Operate screen and run it with the >OK< key or select it using the keypad by entering a number 1 - 4 ➔ the sub-menu is then opened directly.

The cursor keys  can be used to switch between the main menu /sub-menus.

Operation via "Identifier" is only possible in menu items 1 (Zone Operate) and 2 (Control Operation).

**Example:**

For detector zone 3, all connected fire detectors were programmed with the identifier "BUILDING….".

Using input "B", all identifiers starting with this letter are automatically searched through and a "suggestion list" of possible inputs is displayed.
These suggestions include further sub-identifiers such as "F" for floor or "A" for acoustic alarm devices in this building and/or values for the zone/detector numbers.

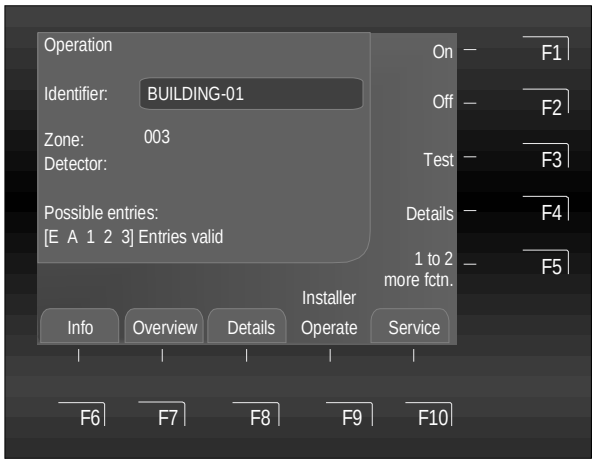
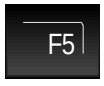



*Fig. 9: Zone 3 with Identifier „BUILDING….“*

Input the desired starting characters/letters of the identifier.


Confirm by pressing >OK<




Press F5 key ➔ for additional functions

If >input valid < appears, the identifier is complete, and you can possibly call up further numbers / letters with the

key.
Only then do the corresponding values of the zone / detector appear.


*Fig. 10: Keypad / number entry*

The keypad can be used to enter both numbers and letters.

Depending on the items shown on the display screen, functions can be selected directly by inputting the associated numbers / letters.

ESC = Cancel a function

CLR = Delete the last entry

0 = The 0 key can be used to enter characters . and - .

**The following numbers / letters (only uppercase) can be input via the keypad:**

| |
|---|
| 1 2 3 4 5 6 7 8 9 0 . - |
| A B C D E F G H I J K L M N O P Q R S T U V W X Y Z |

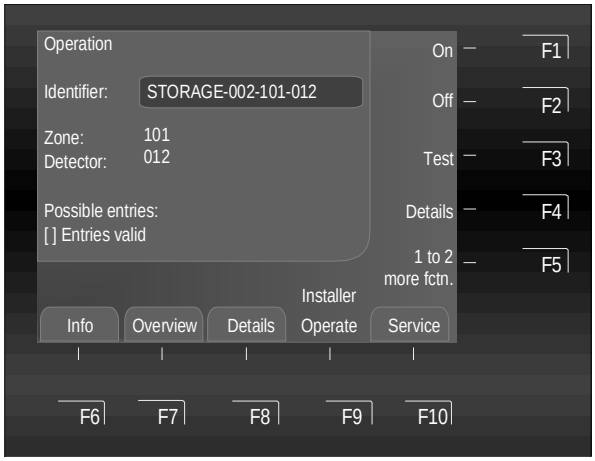
**Input example: BUILDING-01**

[Key 2] ➔ 3x ➔ B
[Key 8] ➔ 3x ➔ U
[Key 4] ➔ 4x ➔ I
[Key 5] ➔ 4x ➔ L
[Key 3] ➔ 2x ➔ D
[Key 4] ➔ 4x ➔ I
[Key 6] ➔ 3x ➔ N
[Key 4] ➔ 2x ➔ G
[Key 0] ➔ 3x ➔ -
[Key 0] ➔ 1x ➔ 0
[Key 1] ➔ 1x ➔ 1

**Example:**
**Operation of detector zones (via identifier input)**

Enter the first letter of the desired zone identification in the field >Identifier<. The possible inputs are searched through using the filed identifiers in the FACP and completed.

If an identifier cannot be completed automatically because, for example, several different zone numbers or detector numbers still exist, then the possible inputs available to complete the identifier are listed for selection.




Input the desired starting characters/letters of the identifier.


Confirm by pressing >OK<


Press F5 key➔ for additional functions

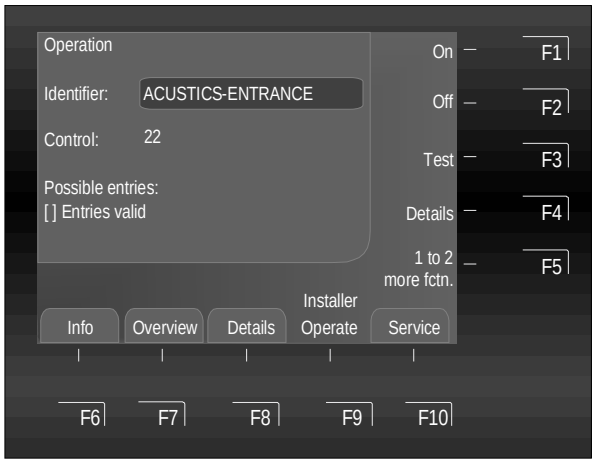
*Fig. 11: Operation of zones/detector zones via the identifier function*

Detector-related functions apply only to addressable fire detectors series IQ8Quad.

**Example:**
**Operation of controls (via identifier input)**

Enter the first letter of the desired control in the field >Identifier<. The possible inputs are searched through using the filed identifiers in the FACP and completed.

If an identifier cannot be completed automatically because, for example, several different control zone numbers exist, then the possible inputs available to complete the identifier are listed for selection.




Input the desired starting characters/letters of the identifier.


Confirm by pressing >OK<

*Fig. 12: Operation of controls via the identifier function*

In this example, the identifier >ACUSTICS-ENTRANCE< was used to select the associated control no. 22.

## 2.5 Firmware Update

For newly delivered (unprogrammed) fire alarm control panels, a "temporary" customer data record (e.g. only the FACP without additional hardware) can be created and transmitted to the FACP in the programming software tools 8000 with the menu item >Project | Create Control Panels<.

A firmware update is not possible without customer data in the fire alarm control panel or while the cover contact is closed.

Opening / closing the FACP activates / deactivates the USB port of the FACP via the built-in cover contact.

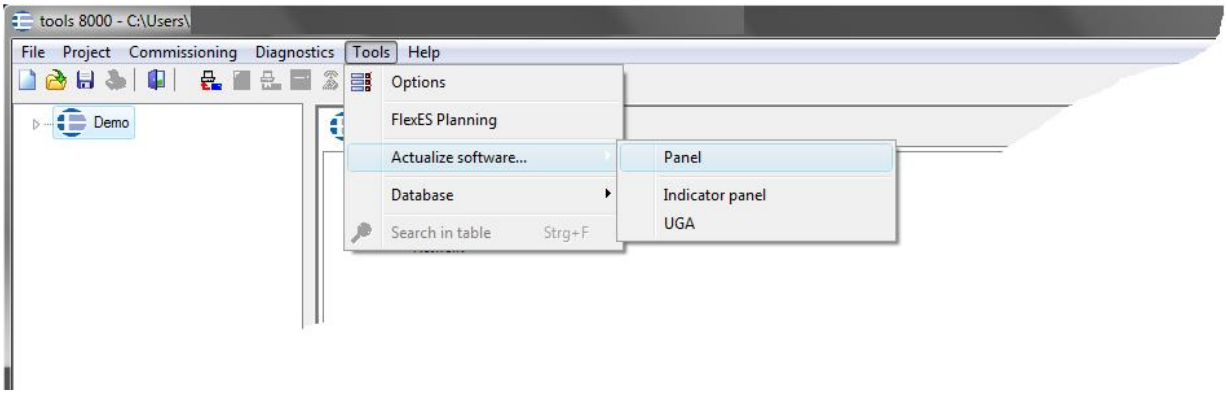



*Fig. 13: Updating the control panel software (firmware)*

The individual firmware files of the modules are stored in a “firmware container”. These firmware containers can be downloaded from the download area of the website www.esser-systems.com and saved on the hard drive of the service PC.

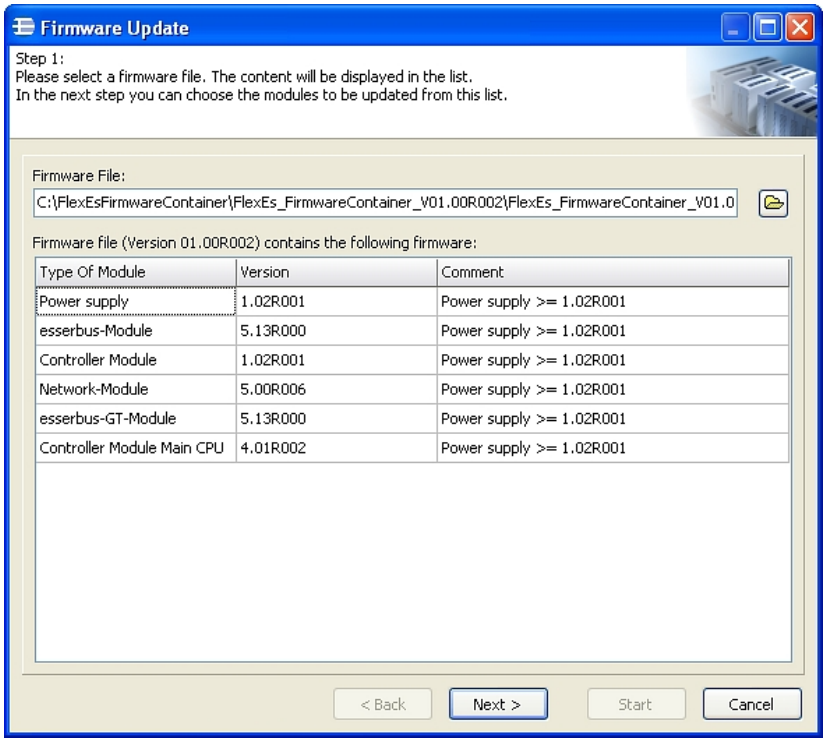



*Fig. 14: Content of a firmware container with various firmware update and compatibility information (example)*

In this example, the detected modules of the FACP are displayed. Modules for which a firmware update is required are marked and can be updated individually.

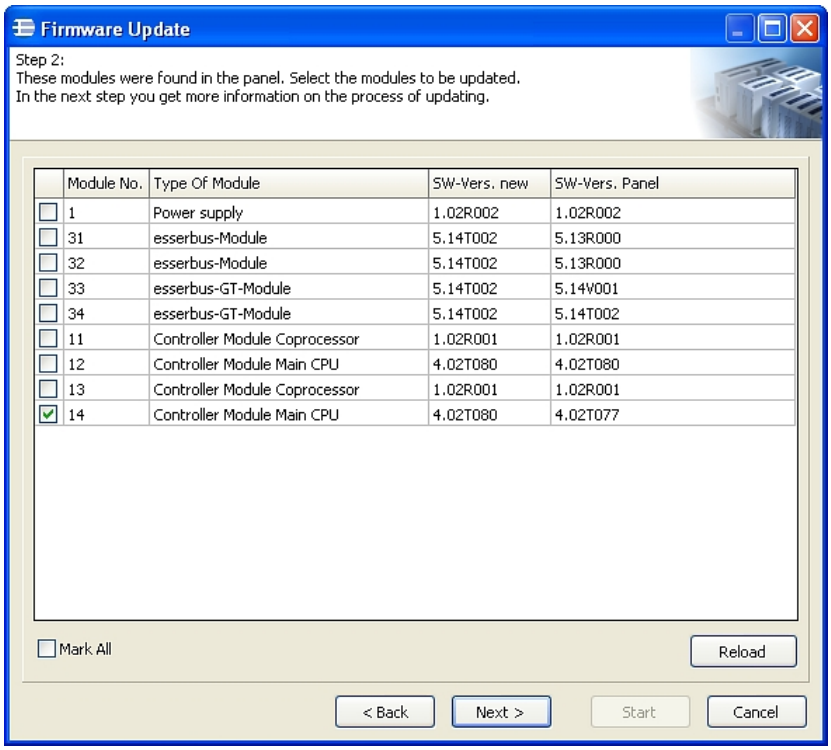



*Fig. 15: Detected modules of the FACP incl. installed and current firmware version in the container (example)*

The following image shows modules for which the firmware container contains no compatible firmware. These modules are marked in red and can not be selected for updating.

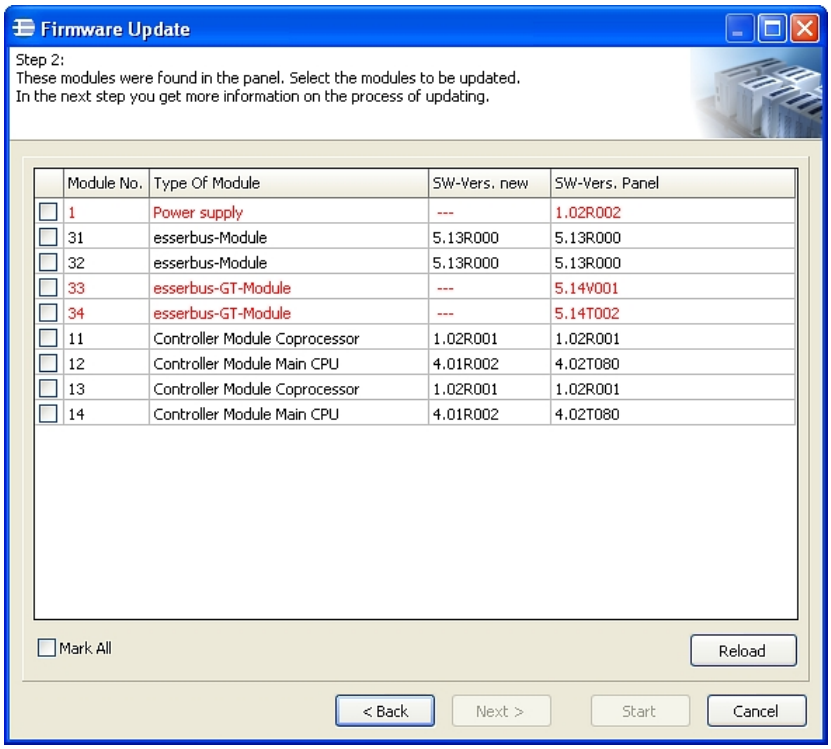



*Fig. 16: Modules for which no compatible firmware exists within the container are marked in red. (example)*

Please contact the technical hotline to coordinate further actions.

The update progress of the individual modules is indicated graphically.

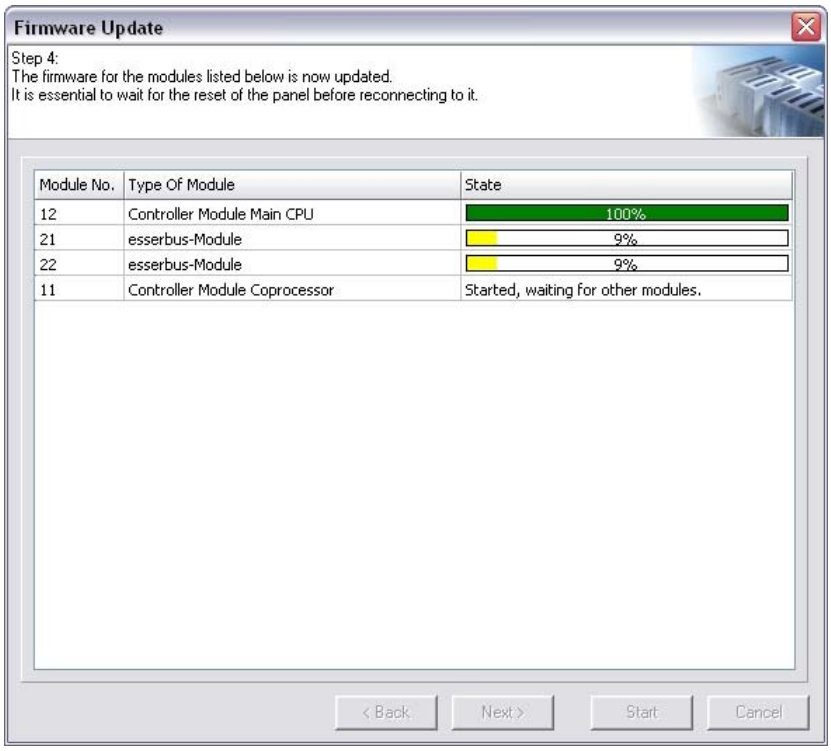



*Fig. 17: Graphical display ➔ Update progress (example)*

If certain modules could not be successfully updated, a corresponding error message appears.
➔ Repeat the process described in section 2.3 for the corresponding module.

**Online help**

Please refer to the online help section of the programming software tools 8000 for more information.

**Control module 2 ➔ redundant operation**

The firmware of the two control modules must be updated separately for each individual control module. This requires that the USB port of the service PC be connected first to control module 1 and then, after a successful update, to control module 2.

## 2.6 Firmware update for redundant setup

In event of a redundant setup of the FACP, the module updating features are generally available in the same scope as for setups with one control module.

However, there are several special aspects that must be noted:

- Updating the main CPU of both control modules must take place via the USB connection of the respective control module. Both main CPUs are visible via the detect hardware function on the control module 1, however, the main CPU of the control module 2 cannot be updated via the internal control panel bus.
- The coprocessors of both control modules can be updated via the main CPU of the control module 1.

### 2.6.1 Firmware update of the main CPU (control module1 and redundant control module 2)

In principle, the updating of a redundant FACP must take place from the control module 1. Here, all the hardware of theFACP is detected and displayed.

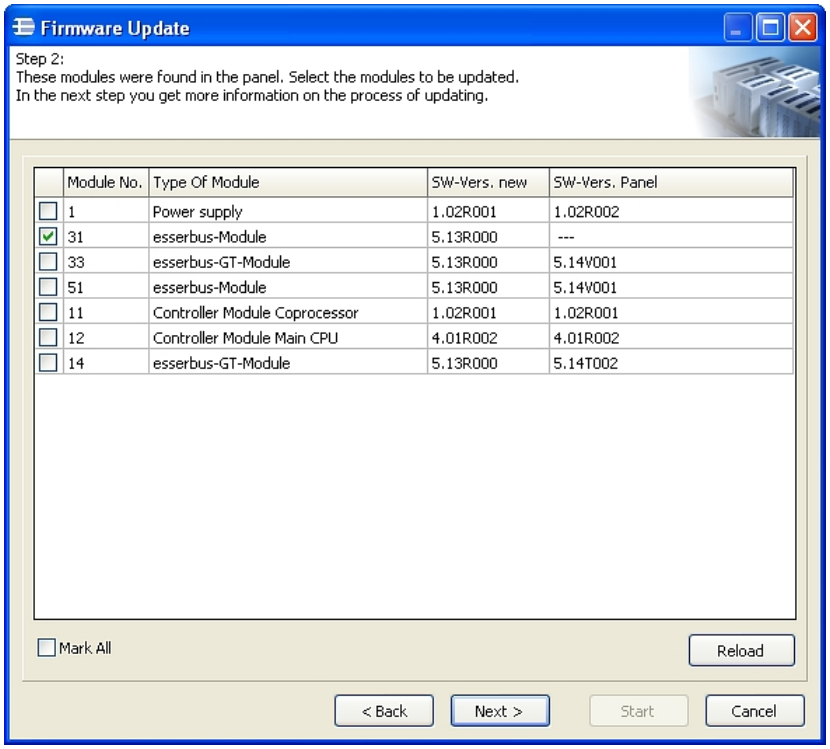



*Fig. 18: Firmware update of the main CPU*

If, as shown here, the main CPU of the redundant control module 2 is selected for update and the process continued, a window then appears stating that a connection must be established with the redundant control module 2.

Once the USB plug is moved from the control module1 to the redundant control module 2 (slave), the update can be continued.

If the update is performed via the redundant control module 2, only the main CPU of the redundant control module 2 can be updated.

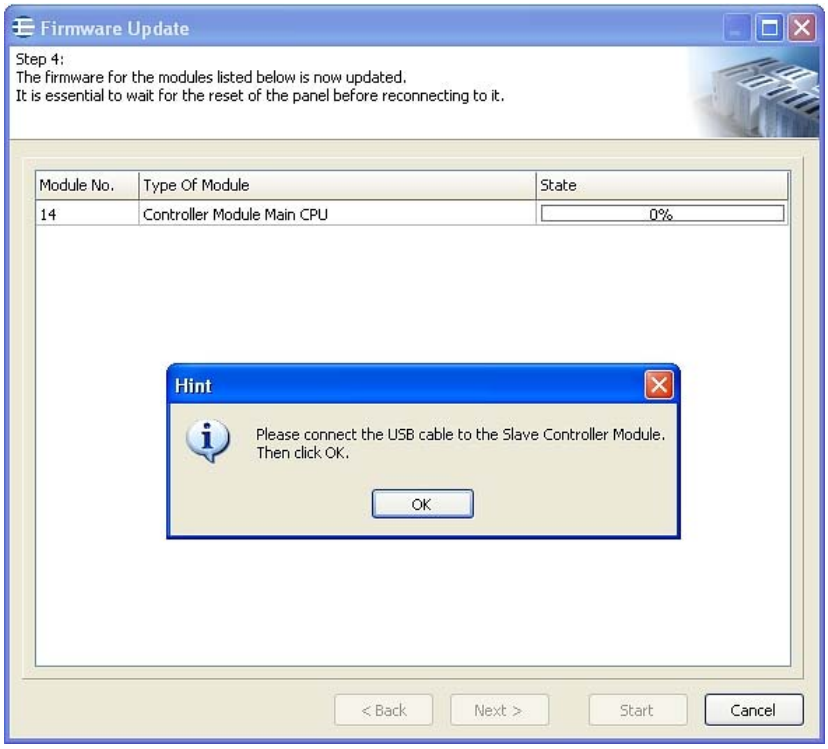



*Fig. 19: Establish USB connection*

## 2.7 Updating the indicating and operating panel with SD card

The indicating and operating panel of the FACP can be updated using a typical SD card. Please take note here of the compatibility information provided in the operating panel software with respect to the control software of the FACP and the associated firmware container!

**SD cards**

The following SD cards (e.g. for software updates) have been approved for use with FACP FlexES Control:

- Panasonic 4GB SDHC
- SanDisk 4GB SDHC
- SanDisk Ultra Class 4 2GB SD
- SanDisk Ultra Class 4 4GB SDHC
- Sony 2GB SD
- Kingston 2GB SD

In order to insure secure data exchange, only these types should be used.

### 2.7.1 Prepare SD card

1. An SD card (2 GB) is required for updating the software, for which contents of the zipped folder *"FlexEs_HMI_Vxx.yyRzzz_Update_SD.zip"* must be copied to the card.
2. Copy zip file to the SD card.
3. Select file with the right mouse button and choose "Extract file here".

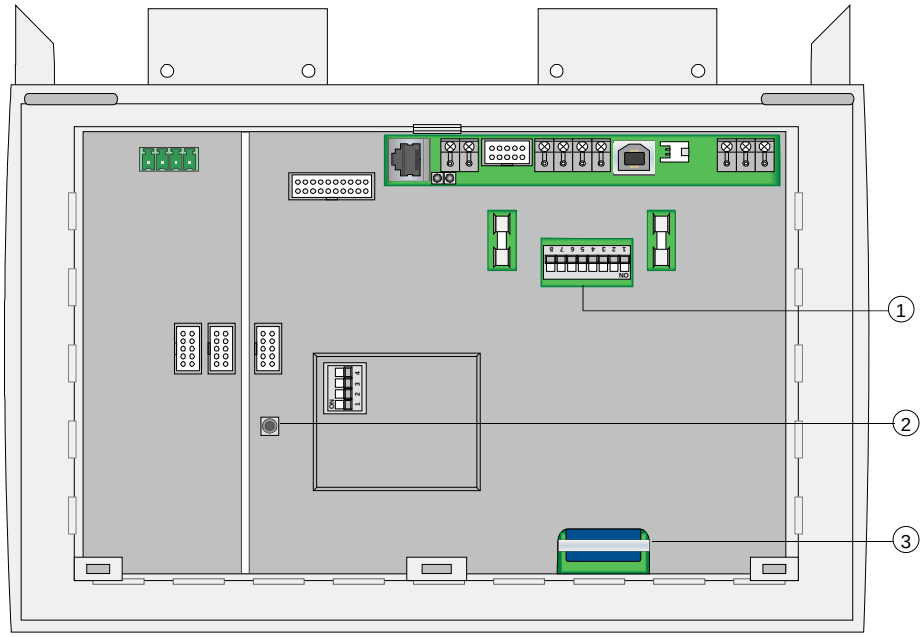
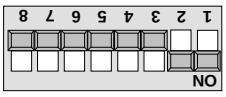
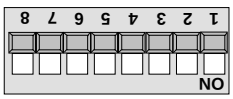
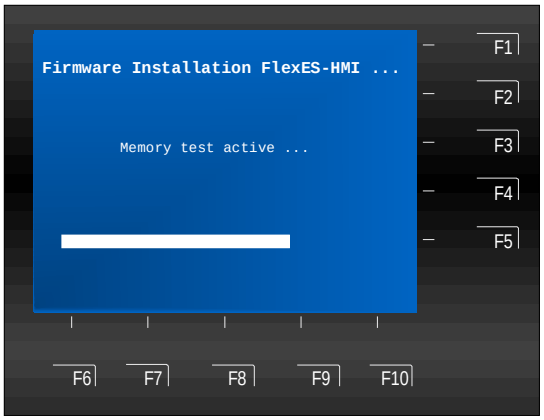



*Fig. 20: Location of components on the display and operating panel (Art.-No. FX808324) rear side - Top view*

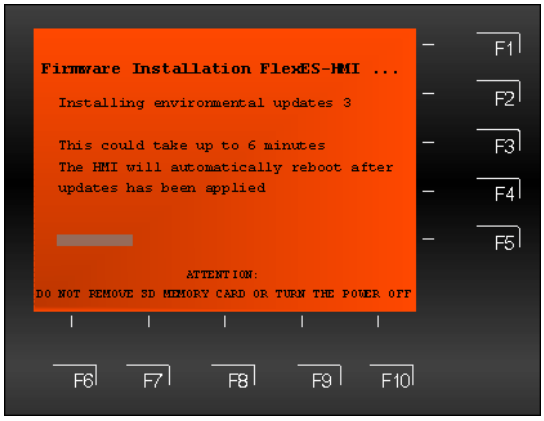
| | | | | |
|---|---|---|---|---|
| ① | DIL-Switch |  | Switch 1 = ON (display lights continuously)<br>Switch 2 = ON (Service mode active) | |
| | |  | Switch 1 = OFF<br>Switch 2 = OFF (Service mode off) | Factory setting |
| ② | Reset button for resetting the D/O unit | | | |
| ③ | Slot for SD memory card | | | |

The indicating and operating panel is active and indicates the central states or a communication disturbance to the FACP.

1. Set the DIL switch ① "read manual" at location 2 to position ON:
   Switch 2 = ON (service mode active)
2. Insert SD memory card ③.
3. Press CPU reset or shortly disconnect the indicating and operating panel.
4. The display goes dark briefly and then blue ➔ The verification process is started.

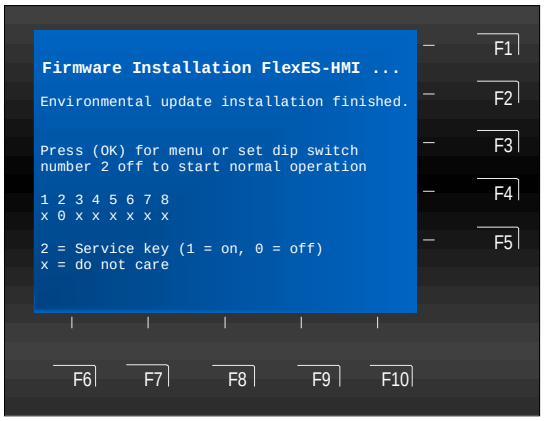



5. Then the display turns red. Now the updating of the data is started (this will take approximately 2-5 minutes).




Do not disconnect the indicating and operating panel or the FACP during this time.
If this process is interrupted, a factory reset will be required!

Once the data is updated, the indicating and operating panel will restart and the display will turn blue.




6. Remove the SD memory card ③.
7. Reset the DIL switch ① "read manual" at location 2 to position ON:
   Switch 2 = OFF (service mode off)
8. Press the RESET button ② with activated fire alarm control panel.
9. The indicating and operating panel restarts and the FlexES Control-Logo will be indicated.

The firmware update for the indicating and operating panel has been successfully completed.

# 3 Details and overview menu

The operating and input sequences as well as the displayed information depends on the software used and the programming of the FACP and may differ from what is shown here due to current software updates.

## 3.1 Status display >Details<

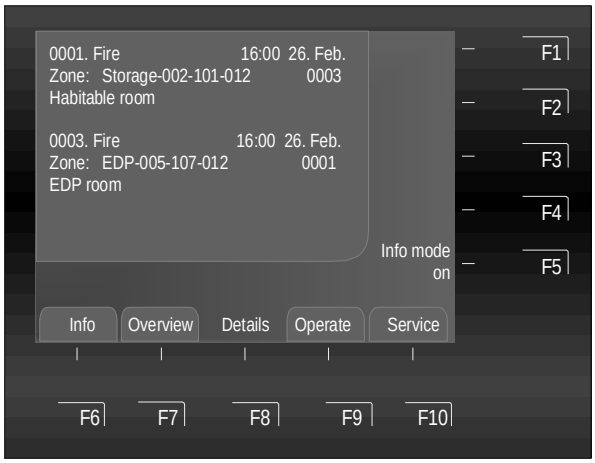



*Fig. 21: Status display for a fire alarm message (example)*

In normal operation of the FACP, the status information is shown in the display with the messages ordered by priority.

In event of an alarm, fault or shutdown, the first and last message always appears in the display.


Press key ➔ Info mode on / off
(alternate function key)

The fire alarm control panel's messages are displayed on the display in order of priority. If there are several messages of varying priority, these messages can be viewed as required by pressing the cursor keys. When viewing the additional text, it is possible to switch between the additional text display and the parameter display by pressing F5.

At priority level one (according to the standard), only all the groups signalling a fire are displayed.

The corresponding detectors are displayed in priority level 2 messages.

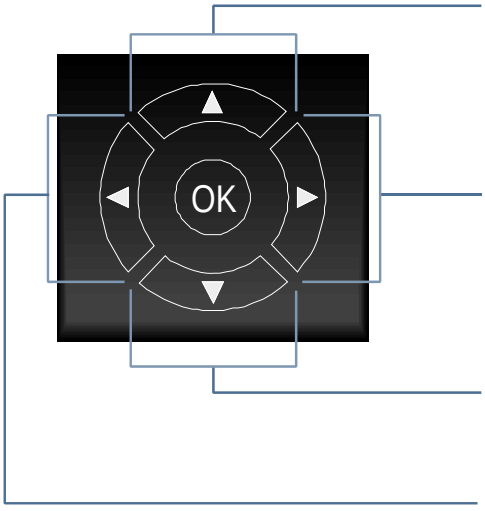



*Fig. 22: Cursor keys*

① First / last message with next higher priority

② Next equal priority message / **other messages**

③ First / last next lower priority message

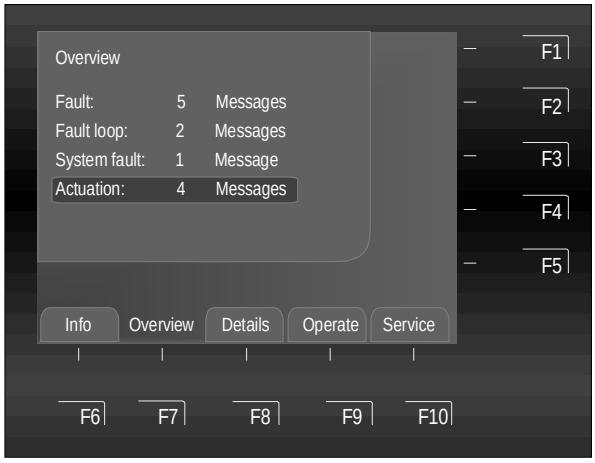
④ Previous equal priority message

⑤ OK ➔Confirm selection/input highlighted on display

If the FACP is operated while a message is being displayed, the function associated with the message will be performed. To return to the status display, press the >F5< key.
If no keys are pressed, the display will automatically show the message with the highest priority again.

## 3.2 >Overview< menu

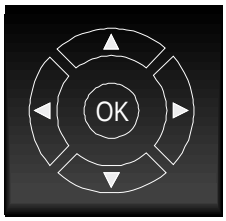
The >Overview< menu contains information on all of the current status and message levels such as >Fire<, >Disablement< and >Fault< of the fire alarm control panel by order of priority.





Press key ➔ menu Overview on

*Fig. 23: >Overview< menu*




If there are more messages than can be displayed on the screen, the messages can be scrolled through using the cursor keys.


By inputting a number 1-9, the relevant message can be selected directly. Depending on the message sizes, a max. of 9 messages are displayed.

Should there by more than 9 messages pending, then use >F5< to move to the next message list.


**Viewing >Status< details**

The detailed >Status< function is described in the following chapter.


Press ➔ to enable lateral scrolling.

Inputting the number on the keypad, enables the detailed display of the selected display priority in the >Status< view.

# 4 Service functions

The Commissioning / Maintenance as well as Operations and Fire Alarm Control Panel functions which should only be performed by specialised installers or authorised persons are integrated under the menu options >Service< in the FACP FlexES Control. By default, access authorisation for installers is protected against unauthorised access by a numeric access code.

This access level may only be used for operating and configuring the unit and for inputting data by specialist personnel.

## 4.1 Access level 3 (Service/ Maintenance)


**Keyboard access**
Press the key and enter the relevant access code for the operating function of access level 1 (operator level).

After the fourth incorrect login attempt, the entry will be locked for about 60 seconds.

Exception: The code request for the access code has been deactivated/erased in the customer data programming.

**Disable** ➔ Press the key again.

**Service function release**

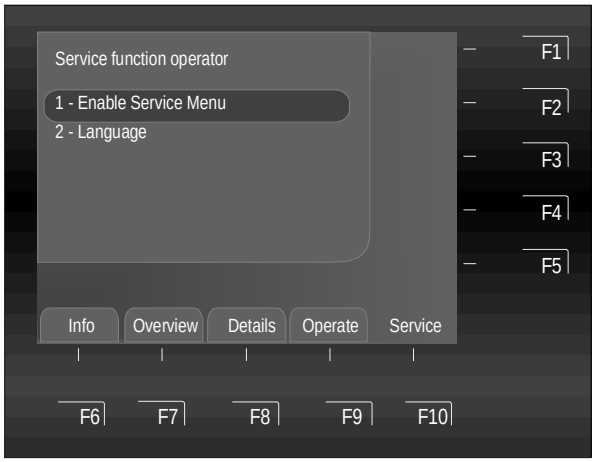



*Fig. 24: Menu – Service / Service function release*


Press key ➔ Service

Select the >Service function release< function and run it with the >OK< key or select it using the keypad by entering the number 1.

The cursor keys  can be used to switch between the main menu /sub-menus.

Incorrect configuration / data inputs can impact the proper function of the fire alarm control panel. To protect against unintended activation of the key (can lead to release / disabling of the keypad) a detection delay of about 1 second has been set.

**Input the access code for Service functions**

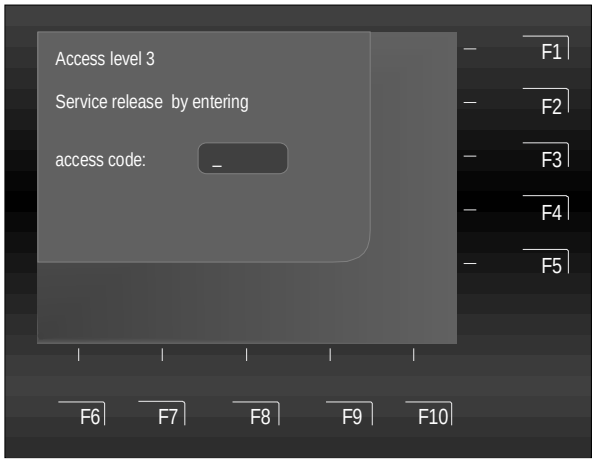



*Fig. 25: Access level 3 (Service function release)*

To enable, input the access code for specialist / customer service via the keypad (default 123).


Press OK key ➔ confirm

The access authorisation for operation in level 3 is retained until it is locked out again by pressing the button  or no keyboard inputs take place while in this mode for longer than ten minutes.

**Disable Service Menu**

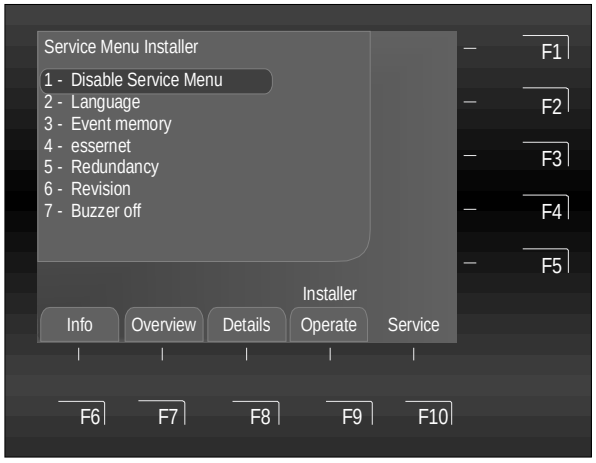



*Fig. 26: Menu – Service / Disable Service Menu*

Select the >Disable Service Menu< function and run it with the >OK< key or select it using the keypad by entering the number 1 ➔ the operating option of access level 3 will be locked again.

The cursor keys  can be used to switch between the main menu /sub-menus.

**Installer code unknown**

If the installer code is unknown or has been forgotten, it can be easily queried with the service PC. For this purpose, the Customer data is obtained from the control panel with the service and programming software tools 8000. The max. 8-digit authorisation code is then displayed under menu options >Customer data - installer code<.

Storage of the Customer data which has only been queried to obtain the installer code is not necessary.

## 4.2 >Service< menu


Press key ➔ Service
After the access code is entered, the menu appears with eight menu items

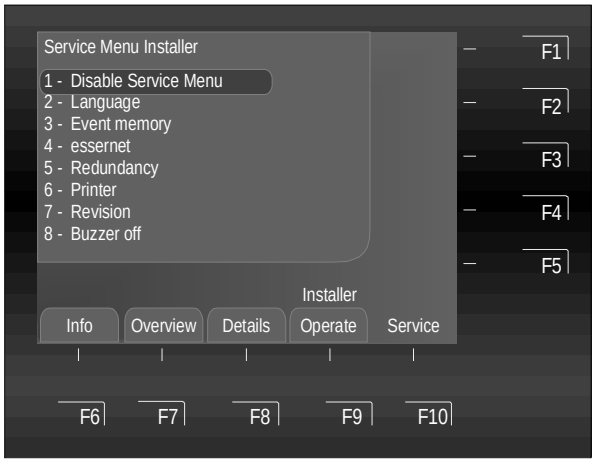
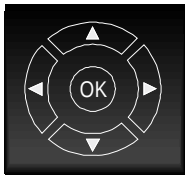



*Fig. 27: >Service< menu*

**Navigating within the >Service< menu**

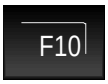

Direct selection by entering a number 1 - 8




Scroll or page up/down the display screen

or


For confirming a selection




Press key ➔ back to >Service< menu

| | |
|---|---|
| **1. Disable Service Menu** | The access authorisation for the installer level (access level 3) is released and can be blocked again by using the key „1“ or „OK“ (see Chapter 4) |
| **2. Language** | Selection of language for native display texts (see Chapter 4.1) |
| **3. Event memory** | The display of the event memory appears with a consecutive number and the current event in chronological order (see Chapter 4.2.2) |
| **4. essernet** | Selection of essernet® debug mode<br>The essernet® connection of the individual participants can be checked with this diagnosis line (see Chapter 4.4) |
| **5. Redundancy** | Selection of redundancy debug mode<br>This function allows the display and review of the redundancy mode of a FACP FlexES Control with a redundant control module 2<br>(Part No. 808328.RE) (see Chapter 4.5) |
| **6. Printer** | No function ➔ future system enhancement |
| **7. Revision** | Activates / deactivates revision mode for the service- / maintenance function (see Chapter 4.5.4) |
| **8. Buzzer off** | The local buzzer can be switched on or off (see Chapter 4.5.5) |

### 4.2.1 Menu - Language

In the >Language Selection< menu, the language for the system texts in the display can be changed. The languages displayed can be selected.

It is not possible to change the language for the additional texts programmed in the customer data programming of the FACP (information texts, identifiers).
These texts are always displayed in the language that has been input / programmed.

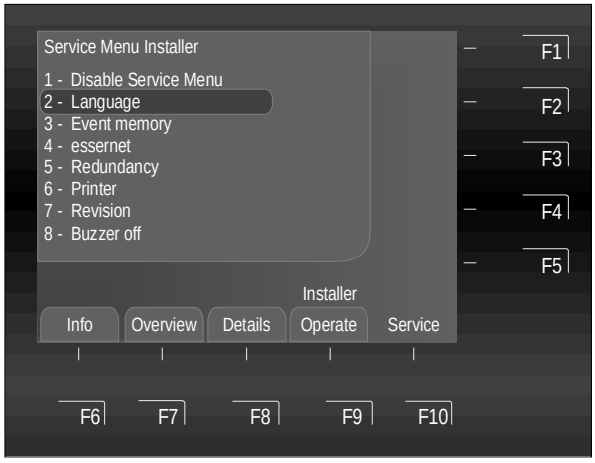



*Fig. 28: Menu – Service / Language Selection*

Select the >Language< function and run it with the >OK< key or select it using the keypad by entering the number 2.

The cursor keys can be used to switch between the main menu /sub-menus.

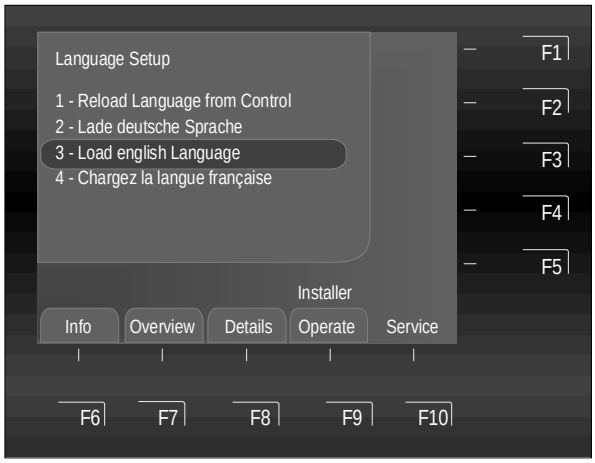



*Fig. 29: Language Setup*

Select desired language display for the system texts and run it with the >OK< key or select it using the keypad by entering a number 1 - 4.

The conversion of the system texts can be verified directly at the operating menu (function key F6-F10). All system texts will be displayed in the selected language.
The language selection is always temporary! Once the installer level is exited, the programmed language is displayed again.

## 4.2.2 Menu - Event memory

### Display the Event memory

At the installer level 3, the event memory of the Fire Alarm Control Panel can be shown on the display. The last 10.000 events, such as alarms, malfunctions, switch-offs and operating authorisations are stored in the event memory in chronological order. The display shows the most recent event.

The events are automatically numbered with consecutive report numbers. The higher the report number, the more recent is the event (report number 001 = oldest event).

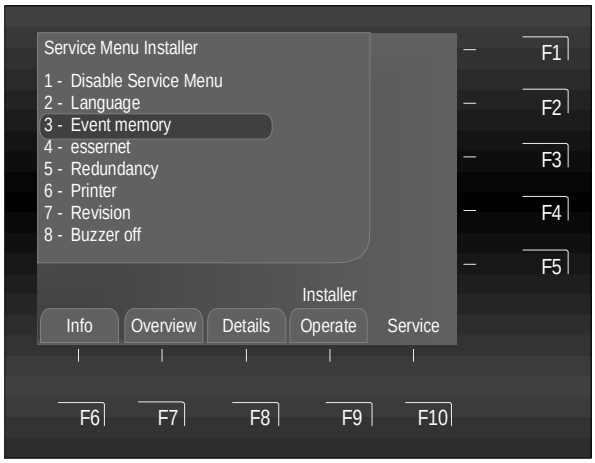



*Fig. 30: Menu – Event memory*

Select the >Event memory< function and run it with the >OK< key or select it using the keypad by entering the number 3.

The cursor keys can be used to switch between the main menu /sub-menus.

It is possible to browse the event memory for individual events using the cursor keys.

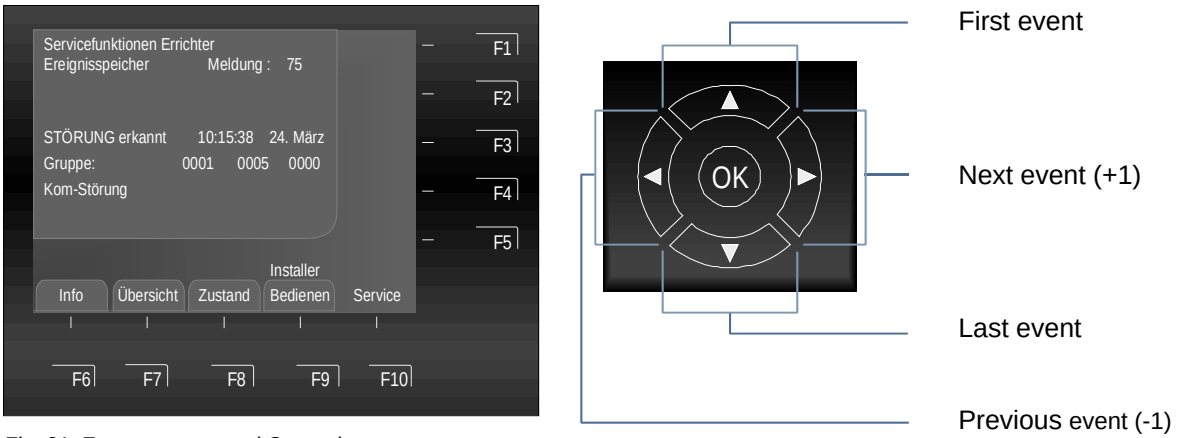



*Fig. 31: Event memory and Cursor keys*

## 4.3 essernet® diagnostic line (Debug-Mode)

The essernet® connection of the various units in the network can be checked with this diagnostic line.

### 4.3.1 Menu - essernet®

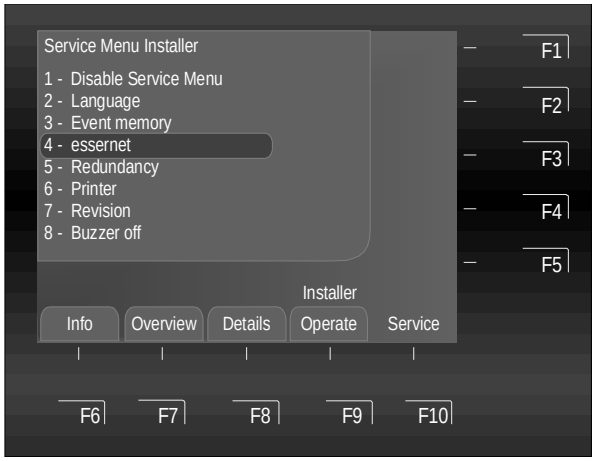



*Fig. 32: Menu >essernet<*

Select the > Menu >essernet< function and run it with the >OK< key or select it using the keypad by entering the number 4.

The cursor keys  can be used to switch between the main menu /sub-menus.

**Switching on the essernet® consistency row**

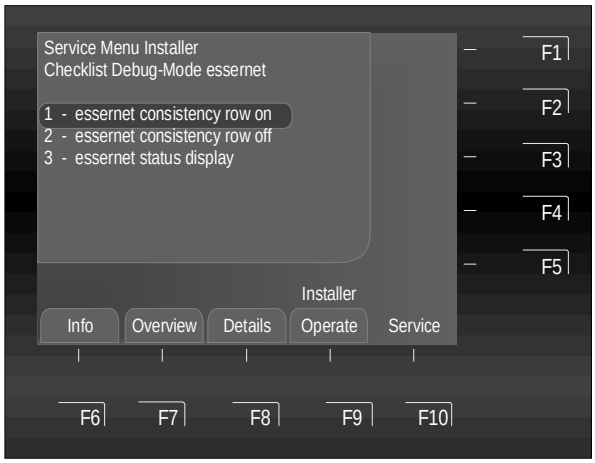



*Fig. 33: Menu >essernet consistency row on<*

Select the >essernet consistency row on< function and run it with the >OK< key or select it using the keypad by entering the number 1.

Approx. 2 seconds after switching on, the essernet® diagnostic line appears in the display.

After switching on, this is shown in all message levels of the display until it is switched off again.

**Switching off the essernet® consistency row**

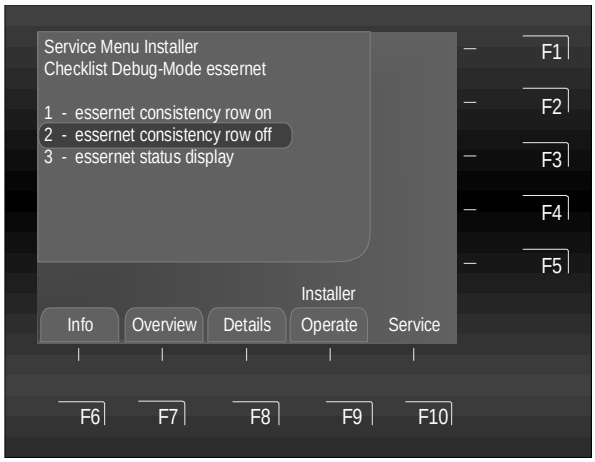



*Fig. 34: Menu >essernet consistency row off<*

Select the >essernet consistency row off< function and run it with the >OK< key or select it using the keypad by entering the number 2.

After approx. 2 seconds, the display of the essernet® diagnostic line is switched off.

**Display contents and their significance**

The essernet® consistency row (L:xxx) indicates which connections are functioning correctly (standard operation) and which have malfunctioned. Non existent units/ control panels are represented by the character "?".

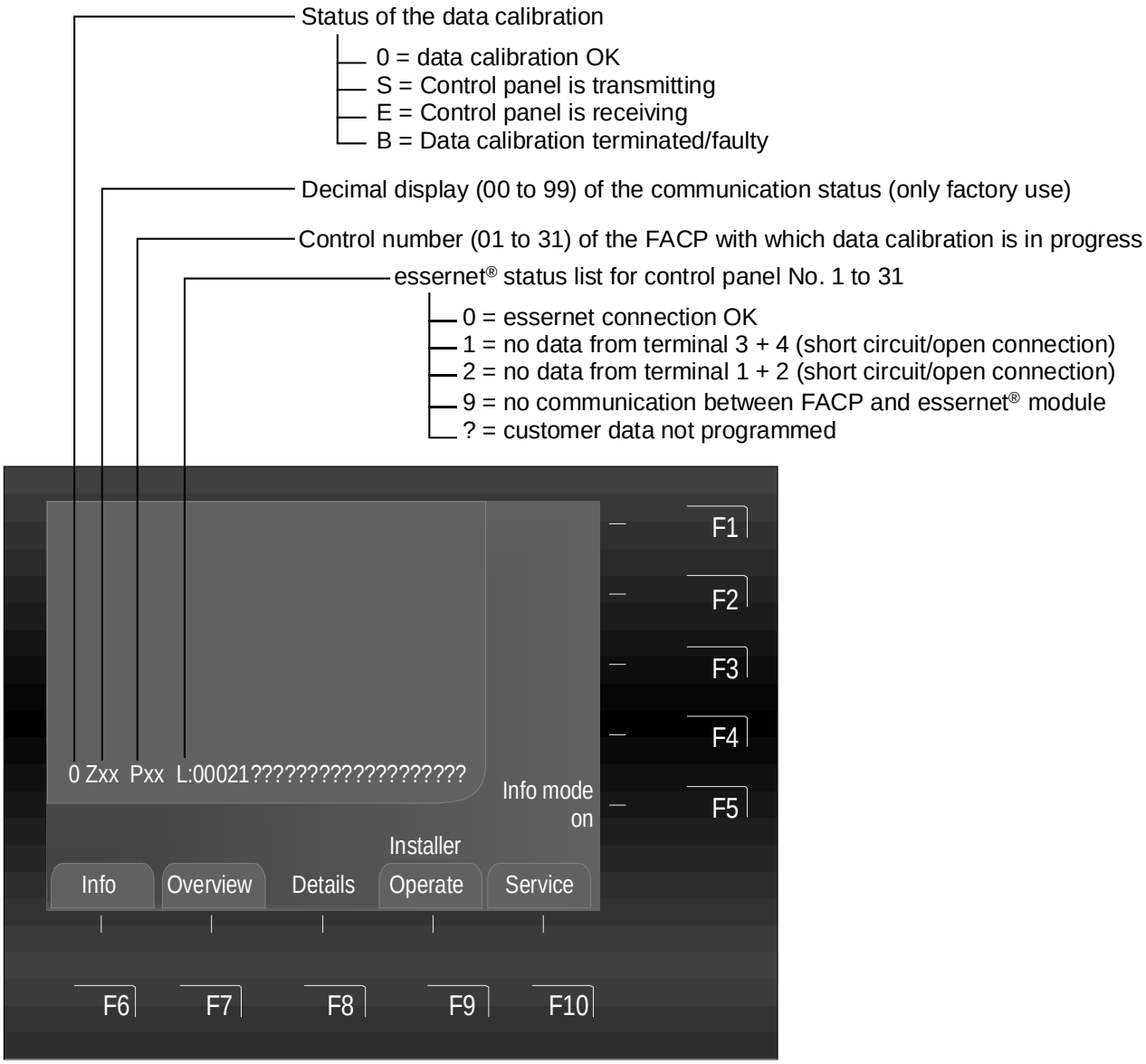



*Fig. 35: essernet® consistency row in the display*

The status display at the beginning of the line (0,S,E or B) indicated whether data calibration is in progress between two control panels. This is always the case when signals are updated in the essernet®, for example when a switched off FACP is switched back on or when a new FACP is integrated in the essernet® network and its data is automatically updated.

Which fire alarm control panel is conducting this data calibration can be determined by the two-digit control panel number (P: xx).

**Example of essernet® consistency row**

In the illustrated example, four Fire Alarm Control Panels are interconnected in the essernet®.

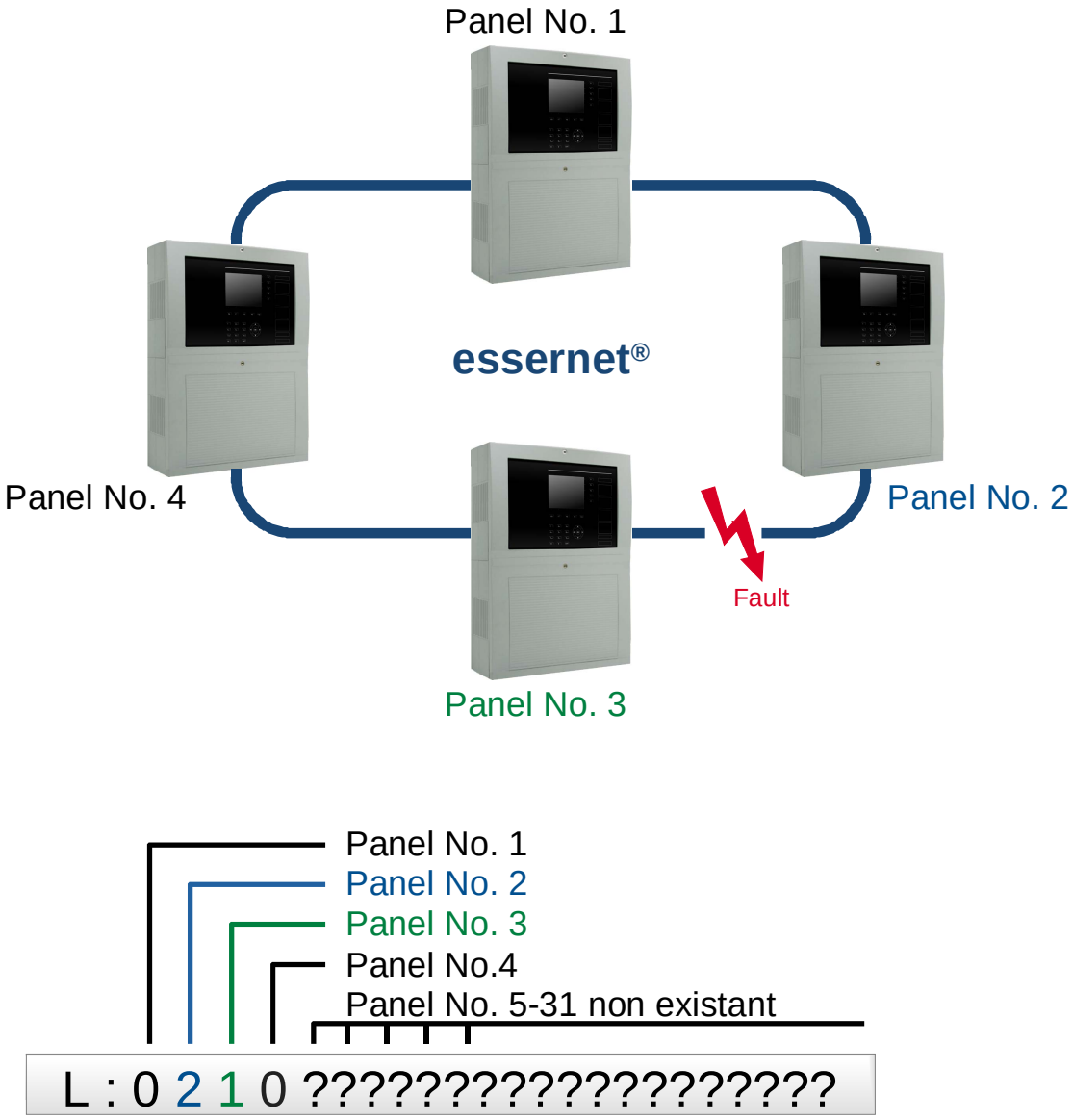



*Fig. 36: Example essernet® consistency row with four control panel (Example)*

The connection between control panel No. 2 and No. 3 is faulty due to an open line, a short circuit or incorrect wiring.
Panel no. 5 to 31 are displayed with the ?-sign, because the they are not programmed in the customer data.

During the display of the essernet® consistency row, status messages such as >MB switched off< or >Acoustics switched off< are not shown in this row of the display.

## 4.4 Checking the essernet® devices and connections

Activate status display of essernet® statistics on the fire alarm control panel:

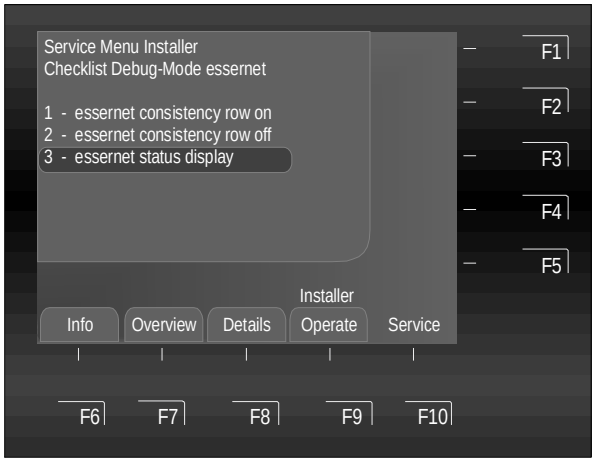



*Fig. 37: Menu >essernet status display<*

Select the >essernet status display< function and run it with the >OK< key or select it using the keypad by entering the number 3.

About 2 seconds after switching on, the display page 1 + 2 appears.

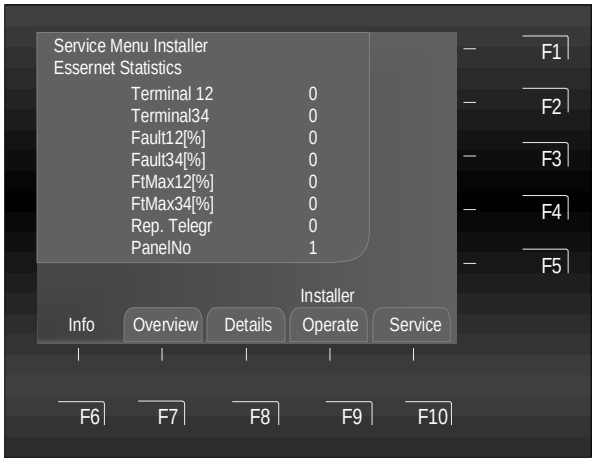



*Fig. 38: Menu >essernet® statistics<*

Switching between display page 1 + 2 takes place automatically.

Cursor key ➔ back to menu >Checklist Debug-Mode essernet<.

The meaning of the individual displays is described in the following table.

### Display information for extended service function

| Display page 1 | Value (example) | Description |
|---|---|---|
| Terminal 12 | 1555 | Number of telegrams received without error at terminals 1+2 of the essernet® module. Automatic update of the values:<br>- essernet® module 62.5 kBd: every 45 seconds<br>- essernet® module 500 kBd: every 10 seconds |
| Terminal 34 | 1551 | Terminals 3+4 (see “Terminal 12”) |
| Fault 12 [%] | 0 | Percentage display of the faulty telegrams which are received at terminals 1+2 of the essernet® module. Automatic update of the values:<br>- essernet® module 62.5 kBd: every 45 seconds<br>- essernet® module 500 kBd: every 10 seconds |
| Fault 34 [%] | 0 | Terminals 3+4 (see “Fault12”) |
| FtMax 12 [%] | 6 | Maximum percentage value of the faulty telegrams received at terminals 1+2 since the panel was last restarted. This function enables a measurement over a longer period and is reset to “0” after every restart of the FACP. |
| FtMax 34 [%] | 8 | Terminals 3+4 (see “FtMax 12”) |
| Rep. Telegr | 4 | Number of repetition requests.<br>Repetition requests for telegrams are a sign that there are faults on a module or on the transmission path. |
| PanelNo. | 10 | Display of the micro module address which has been set on the essernet® module. This address must correspond to the customer data of the FACP. |
| **Display page 2** | **Value (example)** | **Description** |
| Level 12 | 33 | Value range at terminal 1+2 from 0 to 100.<br>Values from 10 to 100 ➔ normal operation<br>Values below 10 ➔ fault<br>The yellow LED onto the module lits. Furthermore the message will be displayed as >common fault< and indicated in the display with >Sys. fault essernet<. |
| Level 34 | 66 | terminals 3+4 (refer to “Level 12”) |
| -<br>-<br>-<br>- | --- | --- |
| Version | 500000 | Software Version V5.00R00 of the essernet® module |

The counters are reset when the FACP is restarted.

## 4.5 Checking the redundancy functions

This function allows for the display and inspection of the redundant operation of an FACP with control module 2 (Part No. 808328.RE) inserted.

### 4.5.1 Menu - Redundancy

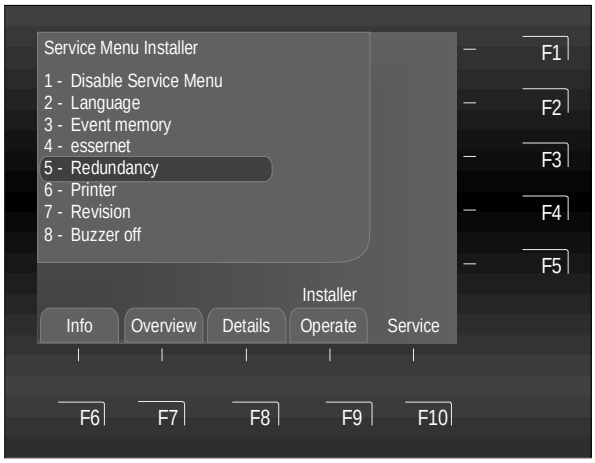



*Fig. 39: Menu >Redundancy<*

Select the >Redundancy< function and run it with the >OK< key or select it using the keypad by entering the number 5.

The cursor keys can be used to switch between the main menu /sub-menus.

**Switching on the Debug row Redundancy**

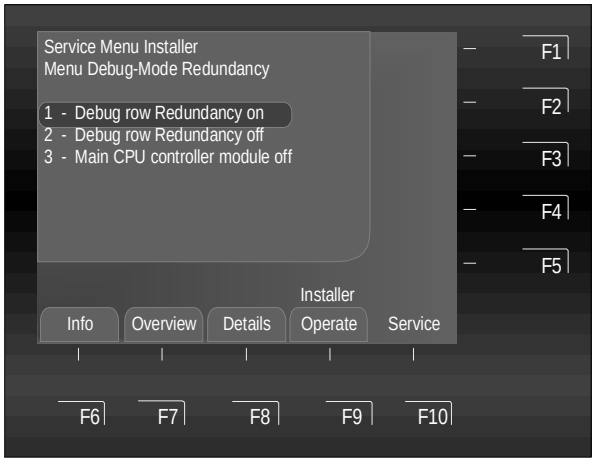



*Fig. 40: Menu >Debug row Redundancy on<*

Select the >Debug row Redundancy on< function and run it with the >OK< key or select it using the keypad by entering the number 1.

Approx. 2 seconds after switching on, the Debug row Redundancy appears in the display.

The activated display continues to be shown in all message levels of the display until switched back off.

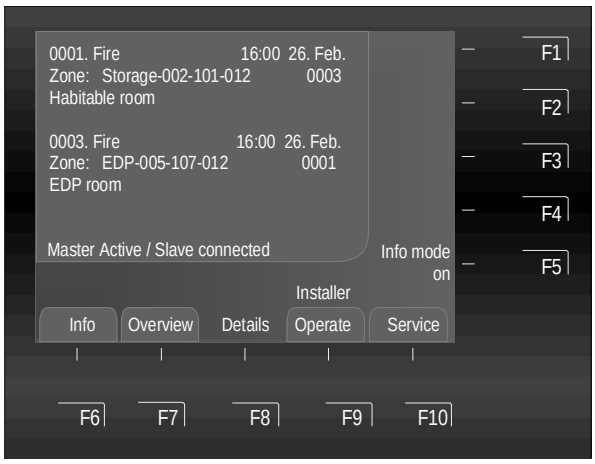



*Fig. 41: Menu ➔ Debug row Redundancy*

After switching on, the Debug row Redundancy appears in the display: >Master Active / Slave connected<

The activated display continues to be shown in all message levels of the display until switched back off.

### Switching off the Debug row Redundancy

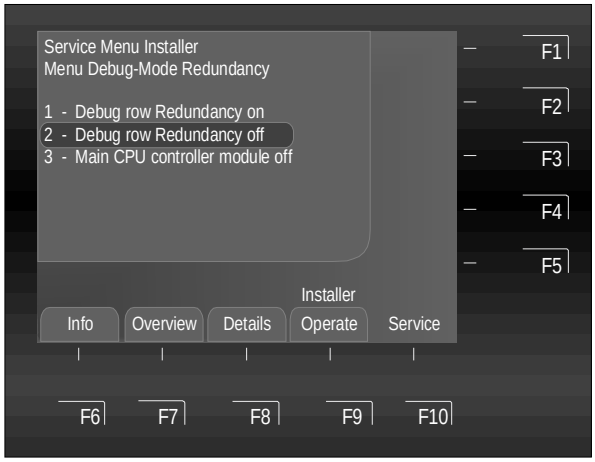



*Fig. 42: Menu >Debug row Redundancy off<*

Select the > Debug row Redundancy off< function and run it with the >OK< key or select it using the keypad by entering the number 2.

Display of the Debug row Redundancy is switched off.

If the redundant control module 2 (Part No. 808328.RE) is plugged into the FACP FlexES Control and the function is programmed appropriately in the customer data, “System fault CPU 2” appears for a few seconds in the display after a cold start of the FACP (shortly after start-up) until the system software has booted up in this control module.
Display of this message is inherent to the system since starting of control module 2 is delayed.

**Malfunctioning possible!**

When inspecting the functioning of the redundant control module 2 the control module 1 may not be removed!

**Operation of the redundancy function**

In this menu the switchover between the control module 1 (master) and the redundant control module 2 (slave) can be examined during operation of the fire alarm control panel.

This function is only available, if a control module 2 for the redundancy mode is available in the fire alarm control panel.

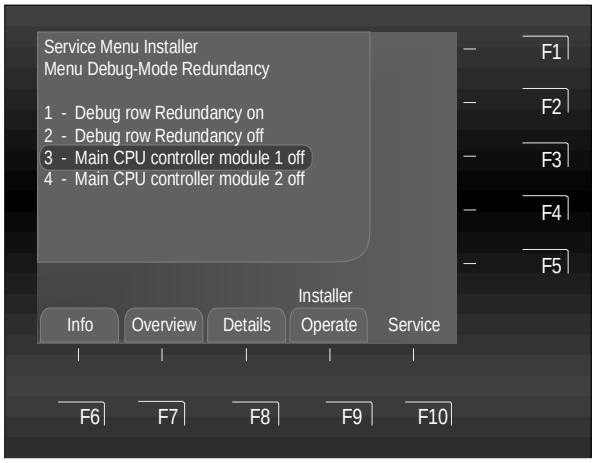



*Fig. 43: Menu control module 1 ➔ off*

**Control module 1 ➔ off**

Selecting menu and confirming switches off the control module 1 (=MASTER) causing an automatic switchover to the SLAVE.
To restore normal operation of the FACP, the FACP must be restarted. To do this, unplug control module 2 for approx. 30 seconds and then re-insert it.

Select function >Main CPU control module 1 off<

with the cursor keys  or  and confirm with the key >OK< or directly select and run by pressing the numeric key 3.

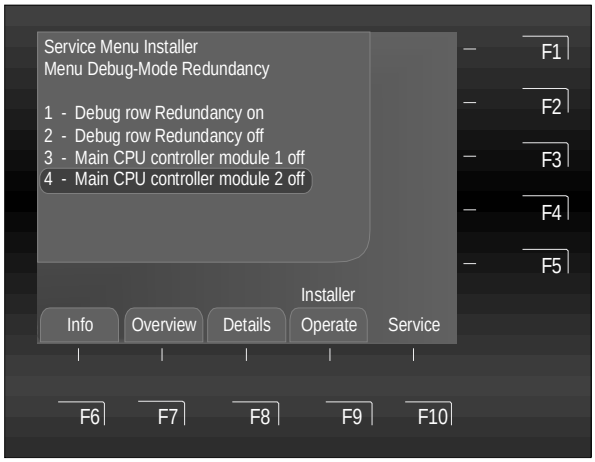



*Fig. 44: Menu control module 2 ➔ off*

**Control module 2 ➔ off**

Selecting menu and confirming switches off the control module 2 (=SLAVE) for testing.

Select function >Main CPU control module 2 off <

with the cursor keys  or  and confirm with the key >OK< or directly select and run by pressing the numeric key 4.

### 4.5.2 Menu – Printer

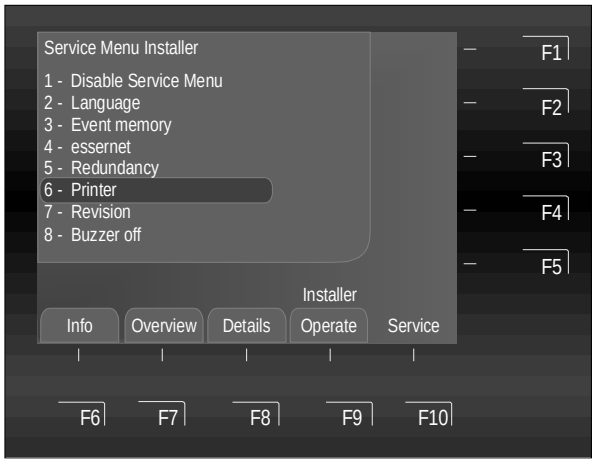



*Fig. 45: Menu >Printer<*

This menu is not active and is intended for additional functions in the future.

### 4.5.3 Revision mode

The revision mode for service and maintenance work is switched on.
Detectors / groups can be checked for functionality without any external or internal alerting.

Fire alarm control panels that have already been installed and are fully operational may only be operated by fully authorised and trained persons, by taking adequate precautions and, where applicable, in consultation with the relevant emergency services (e.g. fire department).

During revision mode, the transmission device and any other external alarm and fire protection systems are not activated.

## 4.5.4 Menu – Revision

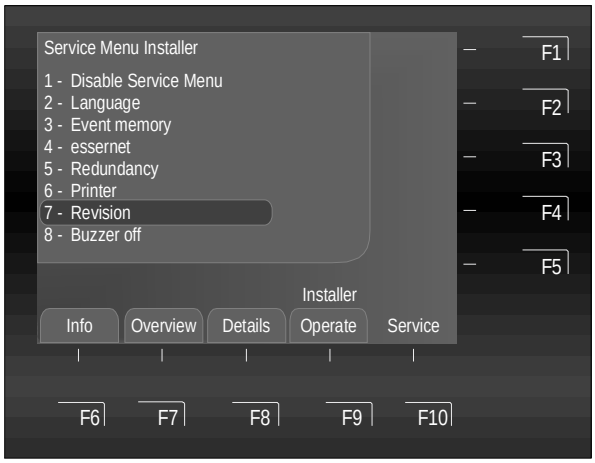



*Fig. 46: Menu >Revision<*

Select the >Revision< function and run it with the >OK< key or select it using the keypad by entering the number 7.

The cursor keys  can be used to switch between the main menu /sub-menus.

### Activate Revision

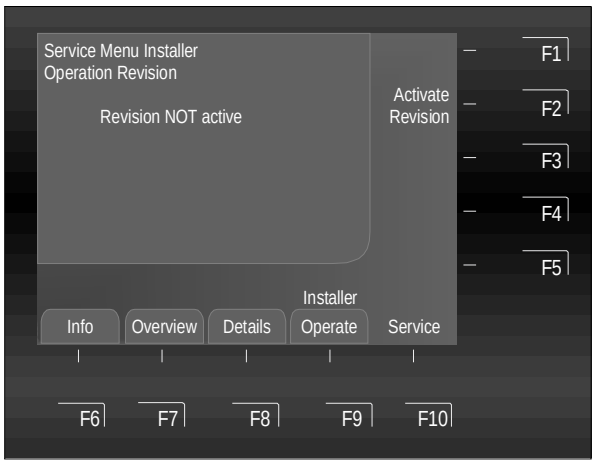
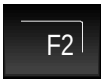



*Fig. 47: Menu >Activate Revision<*




Press key ➔ Activate Revision

### Revision mode

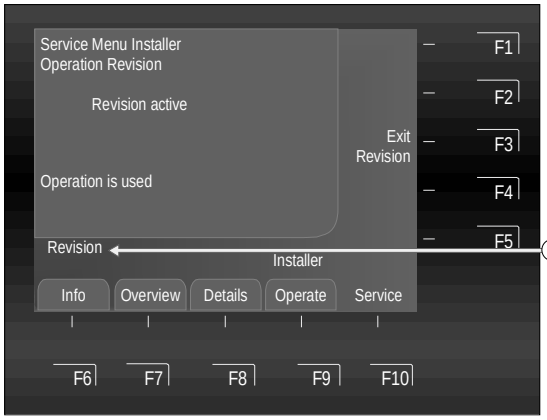



*Fig. 48: Menu Revision mode*

The active revision function ① is shown on all display screens.

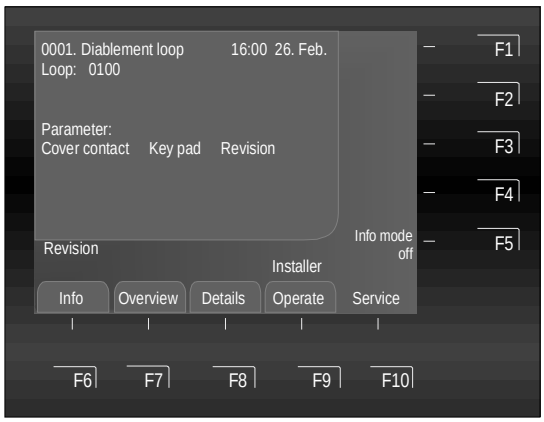



*Fig. 49: Menu Info mode on*

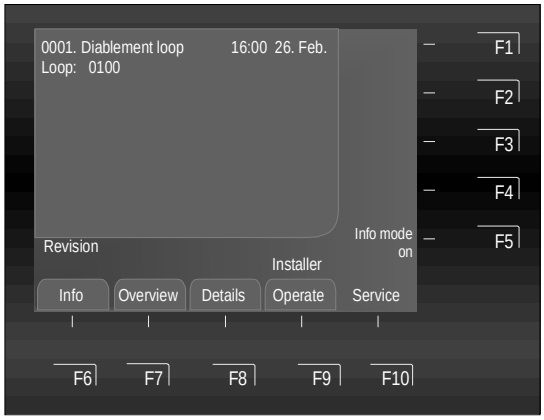
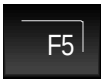
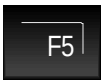



*Fig. 50: Menu Info mode off*

Additionally, the active revision will be indicated with >Disconnection of line XX00< and the parameter >Revision<.
(XX is the line no. in the essernet®).




Press key ➔ Info mode on




Press key ➔ Info mode off

## Exit Revision

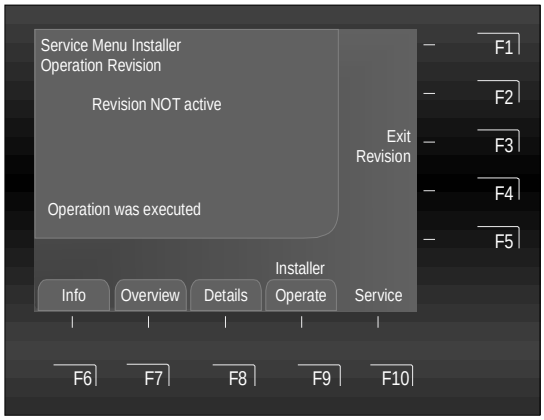
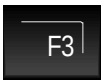



*Fig. 51: Menu >Exit Revision<*




Press key ➔ Exit Revision

The message >Operation was executed< appears briefly on the display.

The FACP is back to normal state.

### 4.5.5 Menu – Buzzer off

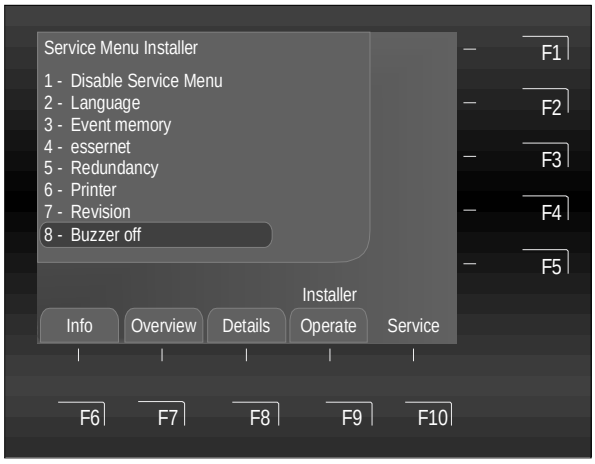



*Fig. 52: Menu >Buzzer off<*

Select the >Buzzer off< function and run it with the >OK< key or select it using the keypad by entering the number 8.

The cursor keys  can be used to switch between the main menu /sub-menus.

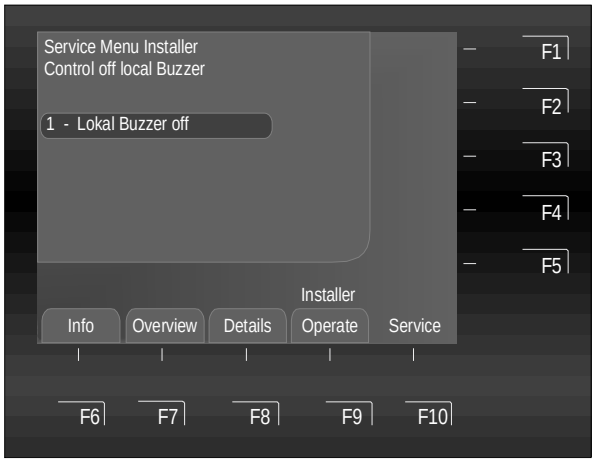



*Fig. 53: Menu >Local buzzer off<*


The >Local buzzer off< function (in the operator and installer levels) is used to disable alerts via the buzzer. The key tones remain unaffected.

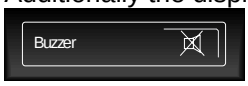
Press key ➔ Local buzzer off


*Fig. 54: Menu with switched off buzzer.*

>Buzzer off< ① is shown on all display screen. All local buzzers of this FACP are switched off.


Press key ➔ Local buzzer off (confirm function).

Additionally the display will flash



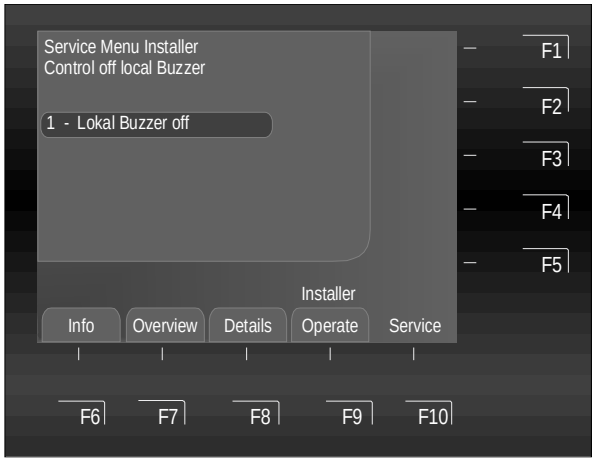




*Fig. 55: Menu >Local buzzer on<*


Press key ➔ Local buzzer on (confirm function).

# 5 Operate options

The display screen for this menu item depends on the customer data programming, here the display screen is described without identifier function.

For more information and differences with identifier function, see chapter 2.4.

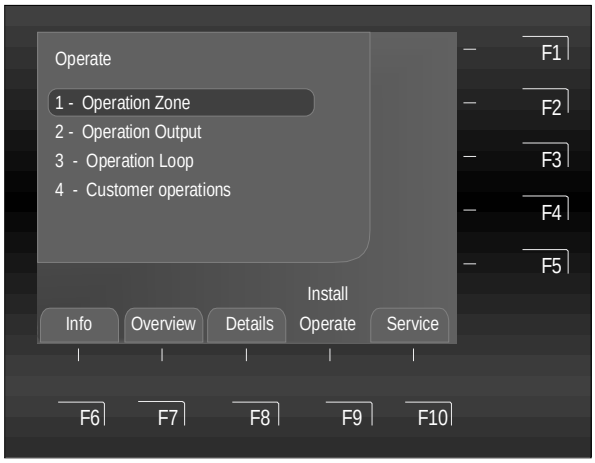



*Fig. 56: >Operate< menu*


Press key ➔ Operate

Select the >Zone Operate< function in the Operate screen and run it with the >OK< key or select it using the keypad by entering a number 1 - 4 ➔ the sub-menu is then opened directly.

The cursor keys  can be used to switch between the main menu /sub-menus.

### 1. Detector simulation

This simulation allows activation of one detector without triggering it with an external testing device. The alarm reaction of the FACP, including activation of the alarm devices takes place as programmed in the customer data.

- Alarm simulation of a fire detector.
- Pre-alarm simulation of a fire detector.
- Fault simulation of a fire detector.
- End test (simulation).

### 2. Control simulation

The control is executed! The components connected to the controls (sirens, lights, etc.) are activated immediately.

- Activate simulation of a control (relay/open collector output).
- Fault simulation of a control (relay/open collector output).
- End test (simulation).

### 3. Loop function

- Switching on/resetting a loop.
- Switching off a loop.
- Test operation of an loop.
- Detector replacement in an loop.

## 5.1 Function menu

Switch to the desired function menu by pressing the F5 key.

**Example Zone / Detector function menu 3**

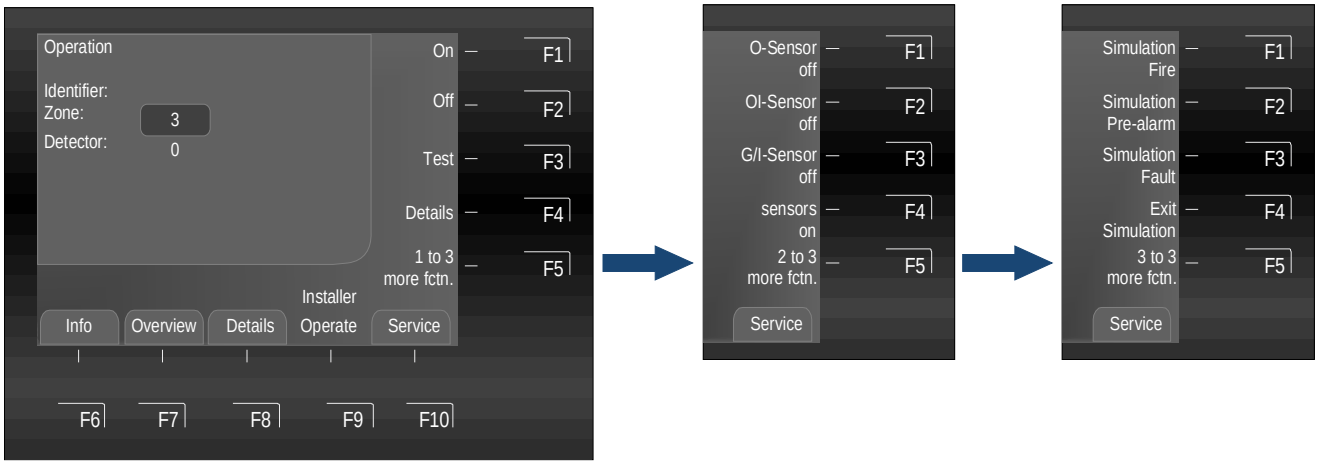
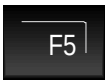



*Fig. 57: Function menu 1, 2 and 3*




F5 key ➔ show / hide more functions (alternate function key)

## 5.2 Simulation of detector states

Under this menu point, the state of addressable detectors series IQ8Quad (no esserbus® transponder) can be simulated for test purposes. With the simulation of a detector state for test purposes, all programmed displays and controls corresponding to this detector and state in the Customer data are activated.

### Self-control of the detector series IQ8Quad

An intelligent fire detector can be operated in connection with a detector base output (relay or open collector). If a control has not been programmed in the Customer data for this detector, the integrated detector base output is activated during the simulation of the >Simulation Fire< state.

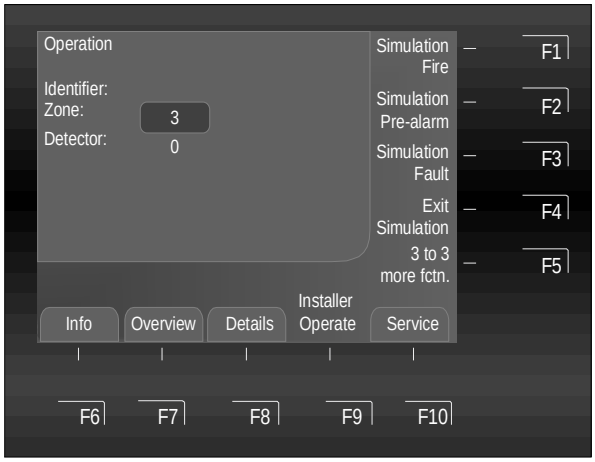
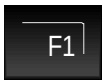


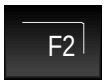

*Fig. 58: Selection of the desired simulation*

Enter the zone ID using the keypad (e.g. no. 3).

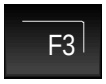
**Selecting the desired function F1 - F4**



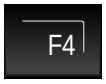

Press key F1 ➔ Simulation Fire




Press key F2 ➔ Simulation Pre-alarm




Press key F3 ➔ Simulation Fault




Press key F4 ➔ Exit Simulation

Exiting simulation switches on selected zones/detectors again.


F5 Key ➔ show / hide more functions (alternate function key)

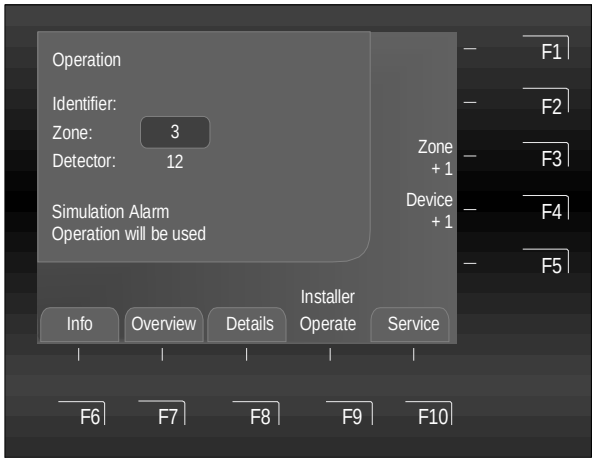



*Fig. 59: Entering the zone and detector number*

By pressing the F3 / F4 key, the displayed zone and detector number is incremented by the value "+1" without the need of entering. The new (next higher) zone and detector number on the keyboard.

F3 Zone +1 ➔ Zone number + 1

F4 Detector +1 ➔ Detector number + 1

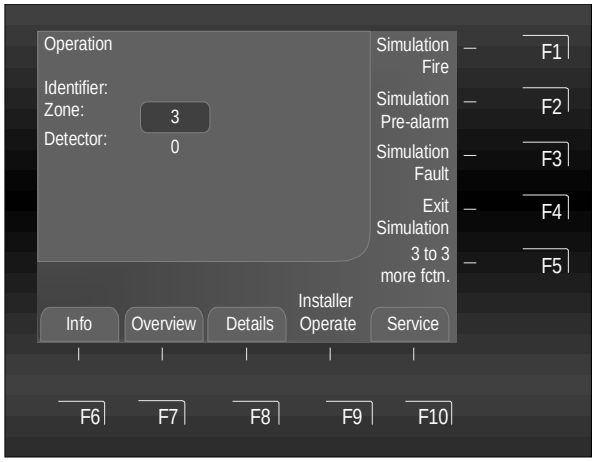



*Fig. 60: Selection of the detector status for simulation*

- Enter the zone and detector number of the fire detector or TAL module.
- For the desired function select function key F1 – F3 and press the key F5 >OK< to acknowledge the input.
- To end this simulation each individual detector (or zone) whose operating state has been simulated must be terminated with the >Exit Simulation< function!

This function pertains exclusively to the detectors of this (local) FACP.
The simulation of detector states in the essernet® network is impossible.
Simulation of individual detectors or zones is not supported via esserbus® communications transponder (Part No. 808615) for the 8010 extinguishing control system.

Depending on the customer data programming, the transmission unit and any other external alarm devices are activated during the status simulation of a fire detector.

## 5.3 Simulation of control states

Under this menu point, the state of any control, such as relays or open collectors, can be simulated for test purposes. The simulation of control states in an essernet® network is impossible. The function pertains exclusively to controls which are allocated to this Fire Alarm Control Panel and are programmed in the customer data with a control zone number, such as:

- Relay or open collectors of the micro modules of these FACP
- Detector base outputs of fire detectors Series IQ8Quad
- Controls of esserbus® transponders in the loop

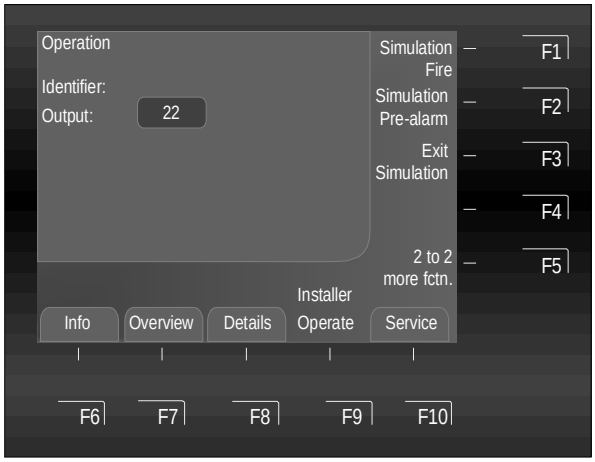
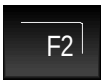



*Fig. 61: Selection of the desired simulation*

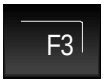
Enter the zone ID using the keypad (e.g. no. 22).

**Selecting the desired function F1 - F4**


Press key F1 ➔ Simulation Fire




Press key F2 ➔ Simulation Pre-alarm




Press key F3 ➔ Exit Simulation


F5 Key ➔ show / hide more functions (alternate function key)

With the simulation of a control state, all programmed displays and controls for this control and state are activated or deactivated. (Observe customer data programming)

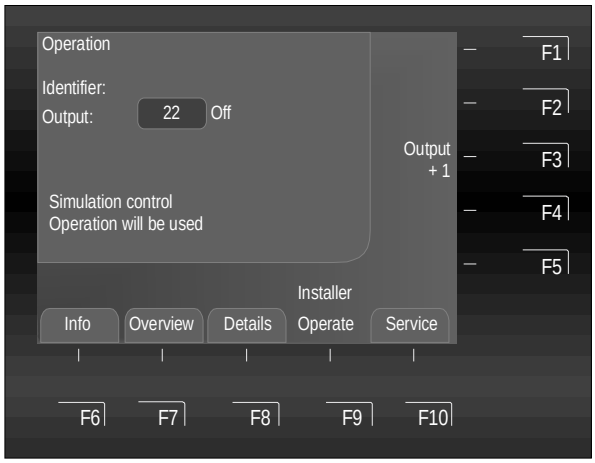
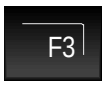



*Fig. 62: Entering the control number*

By pressing the F3 key, the displayed control number is incremented by the value "+1" without the need of entering. The new (next higher) control number on the keyboard.




Output +1 ➔ output number + 1.

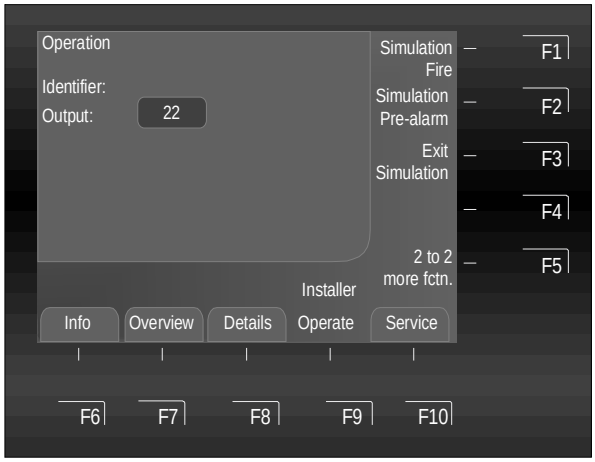



*Fig. 63: Selecting a function*

- Enter the control number of the corresponding open collector or relay.
- For the desired function select function key F1 and F2.
- To end this simulation each individual detector (or zone) whose operating state has been simulated must be terminated with the >Exit Simulation< function!

For the master box controls (Control numbers 1 to 10), a simulation is impossible!
Simulation of individual detectors or zones is not supported via esserbus® communications transponder (Part No. 808615) for the 8010 extinguishing control system.

## 5.4 Simulation of Loop function

Under this menu point, the internal primary loops of this Fire Alarm Control Panel or other Fire Alarm Control in an essernet® network can be switched on or off and checked by a manual test function. Additionally, it is possible to replace single detectors in operative loops e.g. during maintenance work.

**Loops are:**

- All loop modules installed in this FACP
  (Incl. the loop connected to this module with all bus devices)
- Specific components, such as relays or the interface to the control module

**Connector and corresponding loop number**

Individual components of the control panel can be switched on/off with the internal signal line ID via the control panel keyboard or programmed using the Programming Software tools 8000. This internal signal line ID is comprised of control panel number, slot and component number.

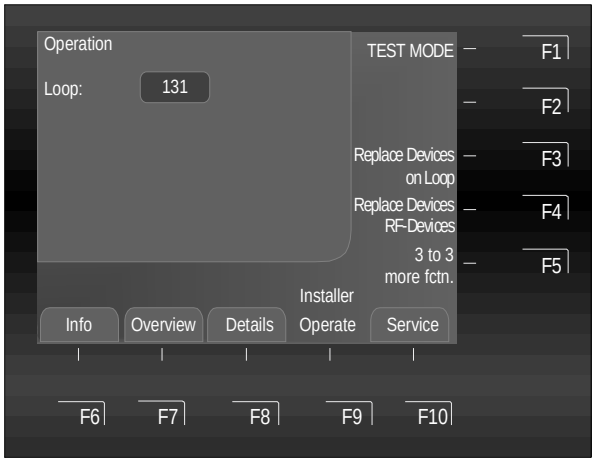
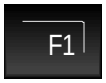


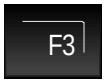

*Fig. 64: Selection of the desired simulation*

Enter the zone ID using the keypad (e.g. no. 131).

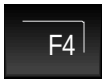
**Selecting the desired function F1 - F4**




Press key F1 ➔ TEST MODE




Press key F3 ➔ Replace device on Loop




Press key F4 ➔ Replace device RF-device


F5 Key ➔ show / hide more functions (alternate function key)

## 5.5 Testing the loop

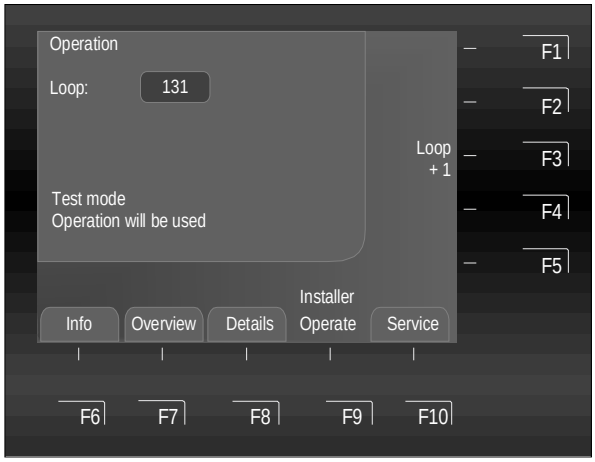
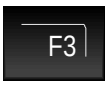



*Fig. 65: Testing the loop*

- Enter the number of the loop to be tested.
- Enter the number with the function key F1 >Test mode <.
- By pressing the F3 key, the displayed control number is incremented by the value "+1" without the need of entering. The new (next higher) control number on the keyboard.




Loop +1 ➔ Loop number + 1

The possible control functions for the keys F1 - F5 will be shown.

Depending on the configuration, the execution of this function may take a few minutes.

The test operation must be carried out individually for each loop or detector zone. D The simultaneous testing of several loops/detector zones is impossible. The selected loop including all detectors and esserbus® transponders or single zones in the loop are tested for the following functions:

- Malfunctions of one or more detectors / esserbus® transponders.
- Conformance of the addresses with the Customer data programming (if necessary, the detector data is automatically updated).
- Agreement of the actual loop wiring with the information stored in the customer data.
- Agreement of detector type and external connection with the information stored in the customer data.

An loop in test operation will not signal an alarm in the case of an event!

**The Function >Test mode< is not carried out when ...**

- the loop is switched off.
- the loop module is defective.

## 5.6 Replace Devices on loop

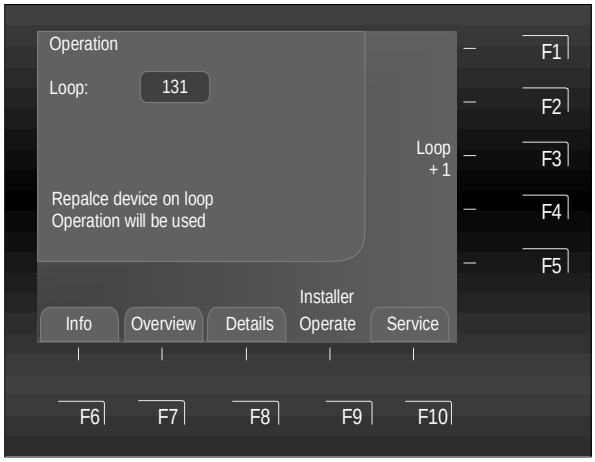
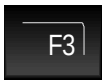



*Fig. 66: Replace Devices on loop*

- Enter the number of the loop to be tested.
- Enter the number with the function key F3 >Replace Devices on loop<.
- By pressing the F3 key, the displayed control number is incremented by the value "+1" without the need of entering. The new (next higher) control number on the keyboard.




Loop +1 ➔ Loop number + 1

The possible control functions for the keys F1 - F5 will be shown.

Depending on the configuration, the execution of this function may take a few minutes.

## 5.7 Replace RF-Devices / IQ8 Wireless components

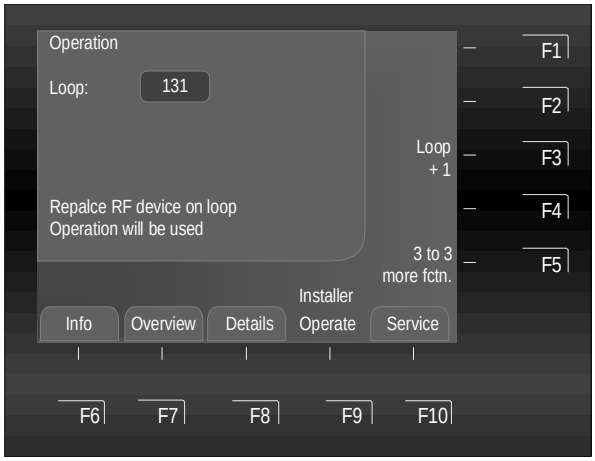
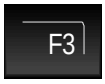



*Fig. 67: Replace RF-Device*

- Enter the number of the loop to be tested.
- Enter the number with the function key F4 >Replace RF-Devices on loop<.
- By pressing the F3 key, the displayed control number is incremented by the value "+1" without the need of entering. The new (next higher) control number on the keyboard.




Loop +1 ➔ Loop number + 1

The possible control functions for the keys F1 - F5 will be shown.

Depending on the configuration, the execution of this function may take a few minutes.

## 5.8 Detector replacement

**Replacement of standard fire detectors**
Diagnostic fire detectors can be replaced without adjustment of the detector address on the base circuit board or overwriting data with the service PC. The menu options >Detector replacement< is inoperable for these detectors.
**Replacement of intelligent detectors (loop)**
Any number of detectors IQ8Quad or esserbus® transponders in an loop can be replaced. The replacement of detectors can be carried out in many cases without the service PC. (See table)

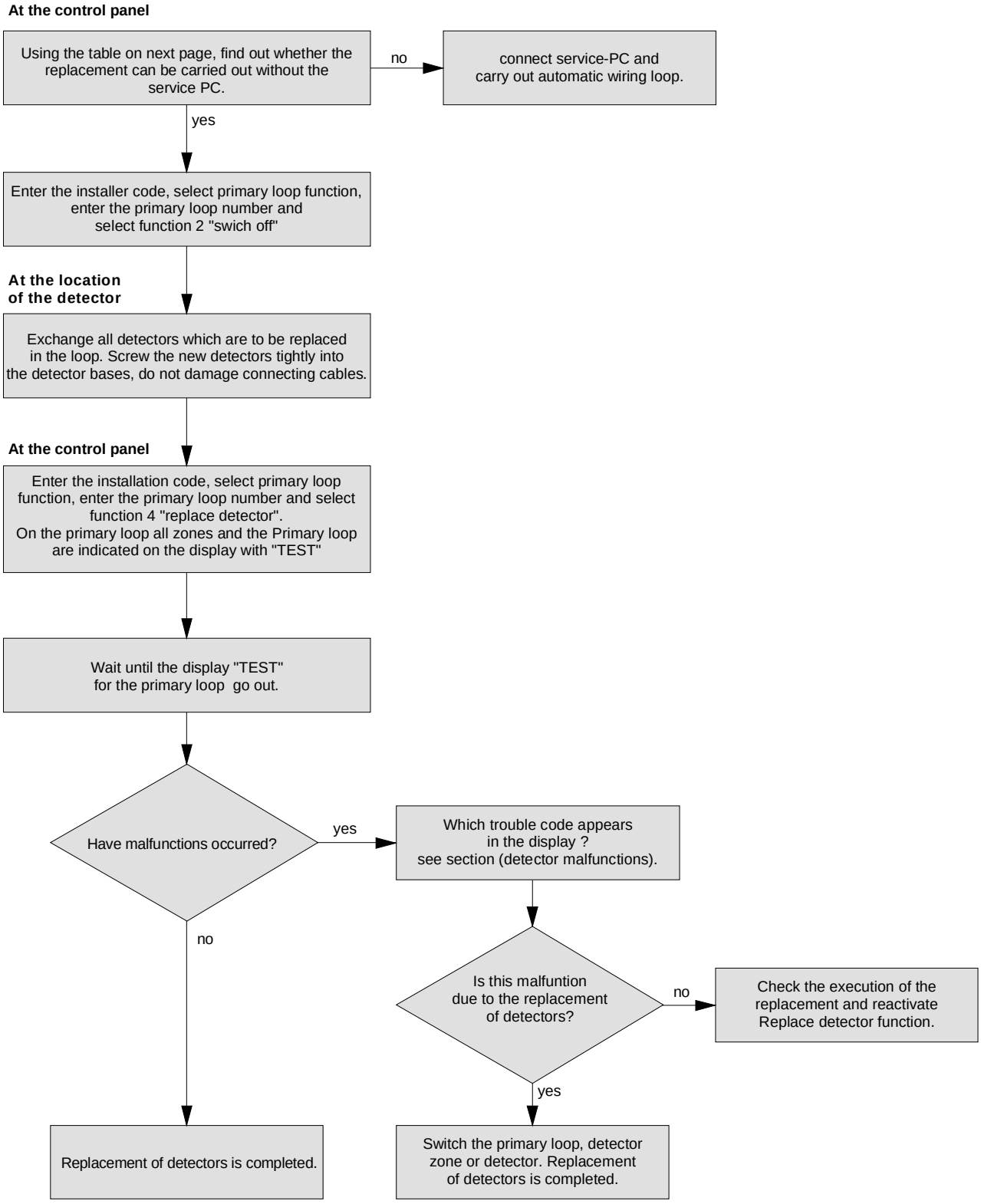



*Fig. 68: Flow diagram of detector replacement*

| Type/extent of the detector replacement | without Service-PC * | displayed trouble code |
|---|---|---|
| The type and external switching of the exchanged detector are in conformance. For example, if a defective OHI-detector without a detector base output is replaced with a new OHI-detector without a detector base output. | yes | **---** |
| The detector type changes , the external switching remains the same. For example, an optical smoke detector is replaced with an OHI- detector and the existing external wiring is not changed. | yes | **St : 081-087/ 095** |
| During the replacement of detectors, the external switching is removed; the detector type remains unchanged. For example, an OHI-detector with a relay output is replaced with an OHI-detector without a relay output. The change in the external switching from relay to LED outputs (or the converse) is not recognised. | no | **St : 088** |
| During the replacement of detectors, the external switching is added, the detector type remains unchanged. For example, an OHI-detector without a relay output is replaced with an OHI-detector with a relay output. The change in the external switching from relay to LED outputs (or the converse) is not recognised. | yes | **St : 089** |
| An isolating circuit is removed, the detector type remains unchanged. For example, an OHI-detector with an isolating circuit (zone isolator) is replaced with an OHI-detector without an isolating circuit. | no | **St : 088** |
| An isolating circuit is inserted, the detector type remains unchanged. | yes | **St : 090** |
| The wiring of the loop is changed. For example, during the replacement of detectors, a new detector is inserted in an additional spur loop. | no | **St : 066** |
| Replacement of identical esserbus® transponders. A defective esserbus® transponder Type 12 relay is replaced with an identical esserbus® transponder. The programming of the 12 relay outputs is not changed. | yes | **---** |
| Replacement of dissimilar esserbus® transponders. An esserbus® transponder is replaced by another type or the designation / programming of the outputs is changed. | no | **St : 080** |
| Replacement of an esserbus® transponder with an automatic detector and the converse. | no | **St : 080** |
| Replacement of a manual call point with an esserbus® transponder and the converse. | no | **St : 080** |

* *Operation without Service-PC available in the installer level 3 of the Fire Alarm Control Panel FlexES Control*

# 6 Diagnostic Functions

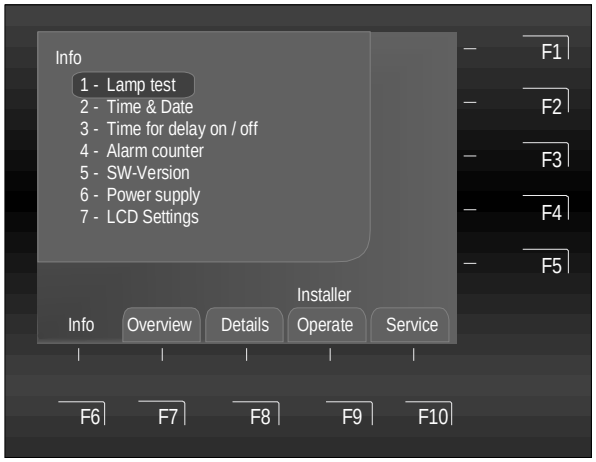
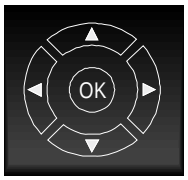



*Fig. 69: >Info< menu*

**Navigating within the >Info< menu**

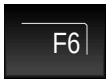

Direct selection by entering a number 1 - 7




Scroll or page up/down the display screen

or


For confirming a selection




Press key ➔ back to >Info< menu

## 6.1 Lamp test

The >Lamp test< function will activate the display (with general information) and all of the operating unit's optical displays and the internal buzzer for approx. 10 seconds in order to test the operating unit's optical and acoustic indicators.

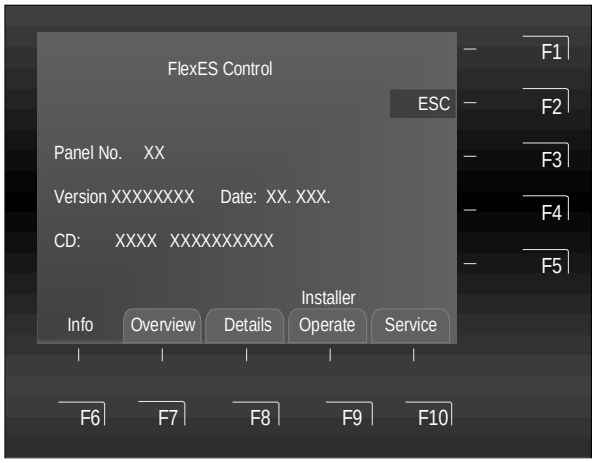
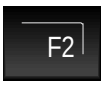



*Fig. 70: >Lamp test< Info menu item*

**Start lamp test**

Select the >Lamp test< menu item from the Info menu and confirm the selection by pressing the >OK< key or select it directly using the keypad by entering a number.




**Stop lamp test**

ESC = The lamp test can be stopped before its scheduled 10 seconds duration by pressing the >F2< key.

The lamp test stops automatically after approx. 10 seconds!

- The control panel's buzzer goes off.
- All of the operating unit's optical displays and the common display screen (if available) light up.
- The display will show information on the control panel type, control panel ID and other data.

## 6.2 Power supply values

The technical data of the power supplies will be displayed. This information can be used to quickly obtain system information for service and maintenance purposes or at the request of technical customer service (display might differ from the one shown due to building-specific programming).

In event of a system fault in the energy supply, such as a battery fault, earth fault, ext. UB fault, etc., details on the cause of the fault can be read from the display.

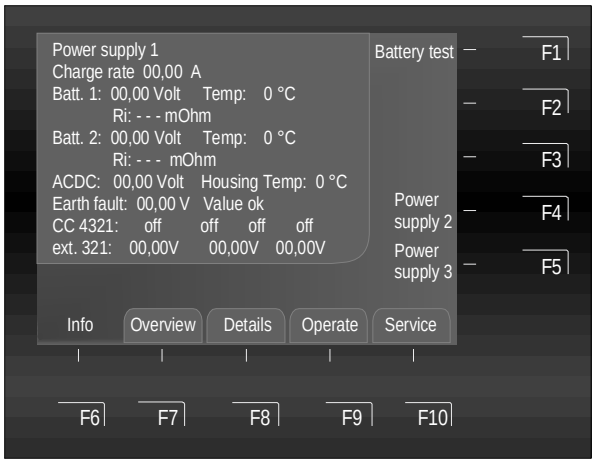



*Fig. 71: >Power supply< Info menu item (example)*

**Display power supply specifications**

Select the >Power supply< menu item from the Info menu and confirm the selection by pressing the >OK< key or select it directly using the keypad by entering a number.

F1 Start service function >Battery test< of the displayed power supply

F3 Update displayed values for power supply 1

F4 Update displayed values for power supply 2

F5 Update displayed values for power supply 3

F6 Press key ➔ back to >Info< menu

If no keys are pressed, the menu closes automatically.

Depending on the configuration of the fire alarm system, the panel can display up to 3 power supplies for each FACP.

**These data (example) can be displayed in the following screen:**

| **Power supply 1** | | |
|---|---|---|
| Charging current | Constant current charging @ 24 Ah battery = 2.5 A[*1]<br>Constant current charging @ 12 Ah battery = 1.25 A[*1]<br>Trickle charging <_ 0.5 A | |
| Charging voltage | Battery(line) 1: __[*2]___ V @ currently measured temperature (max. 60 °C)<br>Ri : __[*3]___ mOhm | |
| | Battery(line) 2: __[*2]___ V @ currently measured temperature (max. 60 °C)<br>Ri : __[*3]___ mOhm | |
| AC / DC | Approx. 24 V DC housing temperature: ___[*4]__°C | |
| Earth fault | Quiescent value = 15 … 16 V ➔ Value OK | < 10 V or > 18 _V ➔ Fault / earth-fault |
| DK 4321 | Status of the housing contacts | |
| UBext 321 | Approx. 24 V per connected power supply | 0 V = Power supply fuse defective |

[*1] If "faulty" appears in place of a value, the charging controller of the power supply is defective ➔ Replace PSM.
[*2] with constant current charging = 21 … 30 V DC / With trickle charging = Approx. 27.5 V DC
[*3] Ri = Approx. 150 mOhm @ 21 V DC (battery being charged)
Ri = 100 mOhm @ 27.5 V DC (battery fully charged)
[*4] Normal operation 30 °C … 50 °C
Max. value 60 °C (ambient temperature too high ➔ Check)

## 6.3 Configuration

The display will show the system's hard and software version data. This information can be used to quickly obtain system information for service and maintenance purposes, or at the request of technical customer service (The display might differ from the one shown).

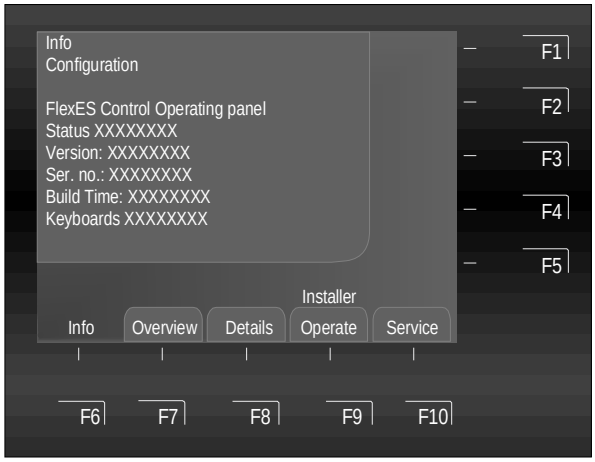



*Fig. 72: >Configuration< Info menu item*

**Display configuration information**

Select the >Configuration< menu item from the Info menu and confirm the selection by pressing the >OK< key or select it directly using the keypad by entering a number.


Press key ➔ back to >Info< menu

If no keys are pressed, the menu closes automatically.

## 6.4 Meaning of the three digit error codes / test mode

In event of a fault message from the bus-enabled fire detectors, a three-digit error code is shown in the two-digit additional text line of the plain text display. The meanings of these codes and measures for correcting the error (e.g. using the service and programming software tools 8000) are given in the following table.

**Error indication in case of detector replacement**

During detector replacement, the display shows error codes which have to comply with the modifications done. If error messages remain after the detector replacement has been completed the cause of the trouble can be identified quickly with the help of the 3 digit error code:

| Trouble Code No. | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 001<br>002<br>003 | Detector is faulty. | Exchange detector. | Return faulty detector to manufacture. |
| 004 | Strong electromagnetic disturbances or detector faulty. | Check the detector with programming software tools 8000, check installation place if necessary. | Return detector for controlling to manufacture. |
| 005 | Ambient light too bright at location where detector is installed. | Check whether detector is exposed to source of bright light. Change location if necessary. | If fault re-occurs on this detector, detector returned to manufacture for inspection. |
| 006<br>007<br>008 | Detector is contaminated or moist. | Clean detector and check with tools 8000. | --- |
| 009 | Strong electromagnetic disturbances of the visual sensor in the area of 8 - 60 kHz (> 50 V / m). | Disturbance is caused by an electrical consumer in immediate proximity of the detector. Moving detector if necessary. | Couple the fault via the detector cable. Check whether the detector cable has been installed parallel to high voltage lines. |
| 010 | 1) An electrically leading substance caused a short-circuit in the I-chamber. | Clean I-chamber and check it with programming software tools 8000. Noticing salt or fraying deposits. | Replace detector and return to manufacture. |
| | 2) CO sensor is overloaded with a high CO concentration. | Check if the detector is exposed to a high CO load. If necessary, reset the detector and recheck. The CO sensor should have at least 15 minutes to return to its quiescent values before rechecking. Check the CO concentration at the location of the detector and move the detector if necessary. | Return faulty detectors to the manufacturer. |
| | 3) Strongly pulsed high frequency fields. | If necessary, check installation location. | Return detector to manufacturer for checking. |
| | 4) Short circuit on the CO sensor. | Replace detector. | Return faulty detectors to the manufacturer. |
| 011 | 1) Detector is contaminated with dust or similar. | Clean detector and check it with programming software tools 8000. | Using an other detector type. |
| | 2) CO sensor is faulty. | Replace detector. | Return faulty detectors to the manufacturer. |

| Trouble Code No. | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 012 | 1) Detector is soiled or damp. | Clean detector and check it with programming software tools 8000. | Check the installed detector if the surrounding area is humid. Use protective measures if necessary, e.g. protection IP 43 (Part No. 805570, 805572, 805573). |
| | 2) CO sensor is faulty. | Replace detector. | Return faulty detectors to the manufacturer. |
| 013 | 1) Air speed too high at site of installation.<br>2) Detector is soiled with conductive substance and may be installed in damp environment. | Clean detector and check it with programming software tools 8000. | Using an other detector type. |
| | 3) CO sensor has temporarily left its working range (e.g. due to oversaturation). | Reset detector and recheck. | If the error occurs again, return detector to manufacturer for checking. |
| 014 | Short-circuit at the temperature sensor. | Replace detector and return to manufacture. | --- |
| 015 | 1) Faulty bonding of the temperature sensor.<br>2) First installation at a cool place. | Adjust detector to ambient temperature with programming software tools 8000. | Replace detector and return to manufacture. |
| 016 | see 001 | --- | --- |
| 017 | 1) Detector is soiled with a conductive substance or installed in damp surroundings.<br>2) Faulty detector. | Clean detector and check it with programming software tools 8000. | Replace detector and return to manufacture. |
| | 3) CO sensor is faulty. It is possible that the rel. humidity is always at a very low value in the area surrounding the detector. | Replace detector. | Return faulty detectors to the manufacturer. |
| 018 | 1) Detector is soiled with a conductive substance or installed in damp surroundings.<br>2) Faulty detector. | Clean detector and check it with programming software tools 8000. | Replace detector and return to manufacture. |
| | 3) CO sensor is faulty. | Replace detector. | Return faulty detectors to the manufacturer. |
| 019 | 1) Detector is soiled with oily substance. | Clean detector and check it with programming software tools 8000. | --- |
| | 2) CO sensor is faulty. | Replace detector. | Return faulty detectors to the manufacturer. |
| 020<br>021 | Current levels not correct on loop. | Check numbers of detectors, loop resistor and loop length. | Check detector base wiring. |

| Trouble Code No. | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 022 | Detector unable to correctly activate its base circuit board. | Check detector base wiring. | --- |
| 023 | Detector unable to correctly activate its base circuit board. | 1) Fault occurs while loop is being switched on: switch off loop and switch back on again after 1-2 minutes.<br>2) Fault occurs while switching the base output: check for connection of the freewheeling diode necessary for an inductive load. Pay attention to switching capacity of output.<br>3) Check whether the detector is installed in a damp environment. | Take any necessary protective measures, e.g. protection IP 43 (Part No. 805570, 805572, 805573). |
| 024 | Detector unable to correctly activate its base board. | Check whether detector is installed in a damp environment. | Clear detector and re-check. Take protective measure if necessary, e.g. protection IP 43 (Part No. 805570, 805572, 805573). |
| 025 | A manual call point has detected a short-circuit on its external Detector zone. | Check wiring of this detector zone for short circuit. | --- |
| 026 | A manual call point has recognised a wire break on its external detector zone. | Check wiring of this detector zone for open circuit. | --- |
| 027 | Error during measurement of light absorption | --- | --- |
| 028 | The detector has detected a short-circuit behind its cut-off relay. | Two detectors present with this trouble ⇒ search for loop short circuits between the two detectors. | One detector present with this trouble ⇒ loop short circuit between detector and panel. |
| 029 | The sounder of the IQ8Quad detector is defective. | Replace IQ8Quad detector and return to manufacture. | --- |
| 030 | The IQ8Quad detector cannot emit the specified signal tone. | 1. Check that the acoustic signal is supported by the IQ8Quad detector.<br>2. Check if the customer data has been programmed correctly. | Notify Customer Service. |
| 033 | see 001 | --- | --- |
| 034 | esserbus® transponder is fault | see 001 | see 001 |
| 035 | esserbus® transponder is fault | see 001 | see 001 |
| 036 | Strong electromagnetic disturbances or detector faulty. | see 004 | see 004 |
| 037 | esserbus® transponder has identified fault with its external voltage. | Check whether the external switching voltage of the esserbus® transponder is in the correct voltage range. | --- |
| 038 | esserbus® transponder has identified fault with its external voltage. | Check whether the external switching voltage of the esserbus® transponder is in the correct voltage range. | --- |

| Trouble Code No. | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 039 | Communication between esserbus® transponder and panel has been disturbed for 100 seconds. | Switch-on transponder or loop. If error occurs again refer to 2nd measure. | Notify Customer Service. |
| 041 | Monitoring of the esserbus® transponder for relay 1 has identified a fault. | With 10 kOhm end-of-line resistor:<br>The degree of resistance measured is outside of the monitoring range. | With EOL-O end-of-line:<br>The set monitoring current does not correspond to this measurement value; cable impedance is too high. |
| 042 | Monitoring of the esserbus® transponder for relay 2 has identified a fault. | With 10 kOhm end-of-line resistor:<br>The degree of resistance measured is outside of the monitoring range. | With EOL-O end-of-line:<br>The set monitoring current does not correspond to this measurement value; cable impedance is too high. |
| 043 | Communication between esserbus® communication transponder 808615 and the 8010 fire and extinguishing panel has been malfunctioned for over 100 seconds. | Check correct functioning of the 8010 fire and extinguishing panel. Correct any malfunctions of the fire and extinguishing panel and switch on the esserbus® - communication transponder via the FACP keyboard. | Notify Customer Service. |
| 044 | Communication between FACP and esserbus® communication transponder for the 8010 fire and extinguishing panel has been malfunctioned. | Notify Customer Service. | --- |
| 048 | see 001 | --- | --- |
| 052 / 053 | see 020 | --- | --- |
| 060 | Short circuit detected behind the isolator of the transponder. | see 028 | see 028 |
| 062 | The internal processor communication between NEC and MSP in the IQ8Wireless transponder/gateway is interrupted. | Check $UB_{ext.}$ for the IQ8Wireless transponder or replace the batteries of the IQ8Wireless gateway. | --- |
| 063 | Detector data assignment incomplete or EEPROM failure. | Repeat detector data assignment on the relating loop. | If error occurs again replace transponder |
| 064 | The NEC and MSP firmware in the IQ8Wireless transponder/gateway is not compatible. | Replace the IQ8Wireless transponder/gateway. | Return the IQ8Wireless transponder/gateway. |
| 066 | Loop wiring has been changed. | Connect the service PC and carry out wiring recognition. | Match customer data programming. |
| 067 | Detector cannot be addressed with serial number. The detector changed at this location is faulty or absent. | Check location to see whether detector is absent or improperly installed in detector base. Switch on loop, perform test on detector zone. | Change detector. Activate >Detector change< function in panel. |

| Trouble Code No. | Possible Cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 068 | The detector that was positioned at this location has been installed at a different location. One or more detectors on the loop have been interchanged. | If this change is desired, you must activate the >Detector change< function at the FACP. | If this change is not desired, connect service PC and run wiring recognition. Re-program customer data. |
| 069 | There are more detectors on the loop than programmed in the customer data. | If this change is desired, connect service PC and run wiring recognition. Re-program customer data. | If this change is not desired, connect service PC and run wiring recognition. Re-program customer data. |
| 070 | Error during detector data allocation. | Perform detector data assignment again. | --- |
| 080 | This detector change may only be performed with the service PC because this detector required customer data that cannot be generated in the FACP itself. | If this change is desired, connect service PC and run wiring recognition. Re-program customer data. | --- |
| 081 | The detector has been replaced with an OTI-detector. The sensor type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 082 | The detector has been replaced with an OT-detector. The sensor type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 083 | The detector has been replaced with an I-detector. The sensor type has changed in comparison with the customer data | Check whether detector type change is desired; if it is, activate loop | Otherwise install detector you require and re-start >Detector change< |
| 084 | The detector has been replaced with a TM-detector. The detector type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 085 | The detector has been replaced with a TME-detector. The detector type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 086 | The detector has been replaced with a TD-detector. The detector type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 087 | The detector has been replaced with an O-detector. The detector type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |

| Trouble Code No. | Possible Cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| 088 | Detector circuitry has been changed at detector location. Now detector has neither external circuit (relay / LED) nor isolating relay. | If this change is desired, connect service PC and run wiring recognition. Re-program customer data. | --- |
| 089 | Detector circuitry has been changed at detector location. Now detector has external circuit. (relay / LED). | Check whether this detector location is to have an external circuit. isolating relay. If it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 090 | Detector circuitry has been changed at detector location. Now detector has an isolating relay. | Check whether this detector location has an isolating relay. If it has, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 091 | The IQ8Quad detector circuit has been changed at the detector location. Voice output is now also possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector replacement< |
| 092 | The IQ8Quad / IQ8Alarm detector circuit has been changed at the detector location. An optical alarm is now also possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector change< |
| 093 | The IQ8Quad / IQ8Alarm detector circuit has been changed at the detector location. Voice output is no longer possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector change< |
| 094 | The IQ8Quad / IQ8Alarm detector circuit has been changed at the detector location. An optical alarm is no longer possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector change< |
| 095 | A $O^2T$-detector has been installed at detector location. The detector type has changed in comparison with the customer data. | Check whether detector type change is desired; if it is, activate loop. | Otherwise install detector you require and re-start >Detector change< |
| 096 | The IQ8Quad detector circuit has been changed at the detector location. An optical and/or acoustic alarm is no longer possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector change< |
| 097 | The IQ8Quad detector circuit has been changed at the detector location. An optical and/or acoustic alarm is now also possible. | Check if the detector type change is desired; if yes, reprogram the customer data and switch on the loop. | Otherwise, install desired detector and restart >Detector change< |

Ionisation smoke detector or fire detector with ionisation sensor may only be installed / serviced by authorised persons with handling license issued under the Radiation Protection Ordinance (German: Strahlenschutzverordnung - StrlSchV).

## 6.5 Trouble messages in the display

The system texts for the current message (ordered by priority) are shown in the first line of the display.

Up to three works-programmed trouble messages with 8 characters each can be displayed in the second line of the display. If a clear text trouble message applying to an event is displayed, this trouble message is shown automatically in the display or can be activated with the function key >Param/AT<.

| Trouble text | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| *UBext* | $UB_{ext}$ fuse blown. Short circuit in $UB_{ext}$ supply voltage. | Check whether fuse blown or short circuit. | --- |
| *UBint* | supply voltage Short circuit in $UB_{int}$ supply voltage. | Check fuse or remove components until message disappears. | --- |
| *short* | Brief loss of mains power. | Check mains supply and mains fuse. | --- |
| *long* | Loss of mains power. | Check mains supply and mains fuse. | --- |
| *ext. PSU* | Failure of supplementary external power supply. | Check external power supply unit. | Check monitor line. |
| *paper out* | The internal printer has run out of paper. | Replace the printer paper roll. | --- |
| *not ready* | The paper retaining lever has not been returned to its original position after paper change. | Set lever to correct position. | --- |
| *no voltage* | The internal printer has no supply voltage. | Check wiring of $UB_{ext}$ and fuse. | --- |
| *shrt ct.* | A short circuit has been detected in the corresponding loop. | Check the indicated loop (see loop No.). | --- |
| *short/open* | A short or open circuit has been detected in the corresponding loop. | Check the indicated loop (see loop No.). | --- |
| *com. err* | A communications error has been detected in the corresponding loop. | Check detector contacts, replace detector and/or necessary module if start-up. | --- |

| Trouble text | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| *[Line 1] CPU 1 fault*<br>*[Line 2] ---* | CPU 1 (main CPU) of control module 1 may have frozen in the service menu of the D/O unit. | Disconnect the FACP from power and restart with the cover contact open. | Control module 1 defective -> Replace |
| *[Line 1] CPU 2 fault*<br>*[Line 2] ---* | CPU 1 (main CPU) of control module 2 may have frozen in the service menu of the D/O unit. | | Control module 2 defective -> Replace |
| *[Line 1] CPU 1 fault*<br>*[Line 2] CD diff.* | Control module 1 and 2 have different content (customer data or firmware). | Resend the customer data to control module 1. | Bring the firmware in control module 1 and 2 to the same version. |
| *[Line 1] CPU 1 fault*<br>*[Line 2] CD trans.* | Control module 1 is sending the customer data to control module 2. | Wait until the data transfer has finished (max. 8 minutes). | If the data transfer has not finished after > 10 minutes, resend the customer data to control module 1. |
| *[Line 1] CPU 1 fault*<br>*[Line 2] License* | The required licenses for the programmed data are not present in control module 1. | Order a control module with the desired / required number of licenses. | Lower the customer data or adapt it to the existing license. |
| *[Line 1] CPU 2 fault*<br>*[Line 2] License* | The required licenses for the programmed data are not present in control module 2. | | |
| *[Line 1] CPU 1 fault*<br>*[Line 2] CD error* | Customer data was not detected or could not be read. | Resend the customer data to control module 1. | Control module 1 defective -> Replace |
| *[Line 1] CPU 2 fault*<br>*[Line 2] CD error* | | | |

| Trouble text | Possible cause | 1st. measure | 2nd. measure |
|---|---|---|---|
| *start-up* | An error has been detected when an loop was switched on; normal operation is impossible. | Localise the source with programming software tools 8000 switch on or reconfigure the loop. | --- |
| *Detector >* | When an loop was switched on, more detectors were found than programmed in the customer data or more detectors were found in an EDD detector zone than programmed in the customer data. | Localise the source with programming software tools 8000, switch on or reconfigure the loop For EDD detector zones, check the number of detectors and reprogram the customer data if necessary. | --- |
| *Detector <* | When an loop was switched on, fewer detectors were found than programmed in the customer data. | Localise the source with programming software tools 8000, switch on or reconfigure the loop. | --- |
| *Topolog.* | The wiring configuration of this loop cannot be precisely determined. | Localise the source with programming software tools 8000, switch on or reconfigure the loop. | --- |
| *Serial No* | A detector has been found in the corresponding loop which is not programmed in the customer data. | Have detectors been exchanged and is the error plausible? | If yes, execute the Exchange detector function for this loop to update data. |
| $U_{line}$ < | Loop voltage difference, measured from A>B, is too high. Sounder activation is impossible. | Module damaged, loop resistance too high. | check loop devices. |
| *WireRes* | Loop resistance too high. Sounders are unable to operate with full sound pressure. | Check length of cable, max. 3500 with consideration of the load factor. | Check terminals from all loop devices. |
| *Err. 42 V* | Loss of 42 V DC loop voltage. | mains supply not in +42 V DC mode. | loop module damaged. |
| *I-MesDef* | Internal module failure. | Module damaged. | Sounder damaged. |
| *base* | The IQ8Wireless base has been removed from corresponding detector base. | Insert IQ8Wireless base in detector base | --- |
| *Batt<30* | Battery below rated voltage | Replace battery within 30 days | --- |
| *Batt<7* | Battery below rated voltage | Replace battery within 7 days | --- |

# 7 Test instructions according to manufacturer

## 7.1 Insulation measurement of the loop periphery

Insulation measurements on the lines used (loop) are performed using measurement voltages that can have negative effects on already installed electronic components. It is therefore essential that all devices and the esserbus® module be disconnected from the line to be measured.

It is therefore essential that all devices and the esserbus® module be disconnected from the line to be measured and the resulting gaps in the loop closed to provide an uninterrupted line for the insulation measurement.

Close the resulting gaps in the loop to provide an uninterrupted line for the insulation measurement. Example:

- Remove fire detector series IQ8Quad from the detector base. The base contacts automatically close the loop.

## 7.2 Checking the quiescent current consumption

To determine the required emergency power capacity of the FAS, the quiescent current consumption of the FACP must be checked.

- The system must be in a state with absolutely no messages.
- Neither common displays nor the display illumination may be active.
- Disconnect one pole of a battery, and connect the ammeter in series between the FACP and battery.
- Switch off the rated voltage to the FACP.
- Wait for the network error and measure the quiescent current.
- The second measurement takes place during an alarm, with activation of the alarm zone with the largest assumed alarm current.
- The measurement values for the quiescent current and the alarm current are used to determine the required capacity to meet the defined emergency power bridging time.

**Battery capacity: 1.25 x ($I_{Emer.}$ x $t_{Emer.}$) + ($I_{Alarm}$ x $t_{Alarm}$) = [ Ah ]**

**Alternative test**

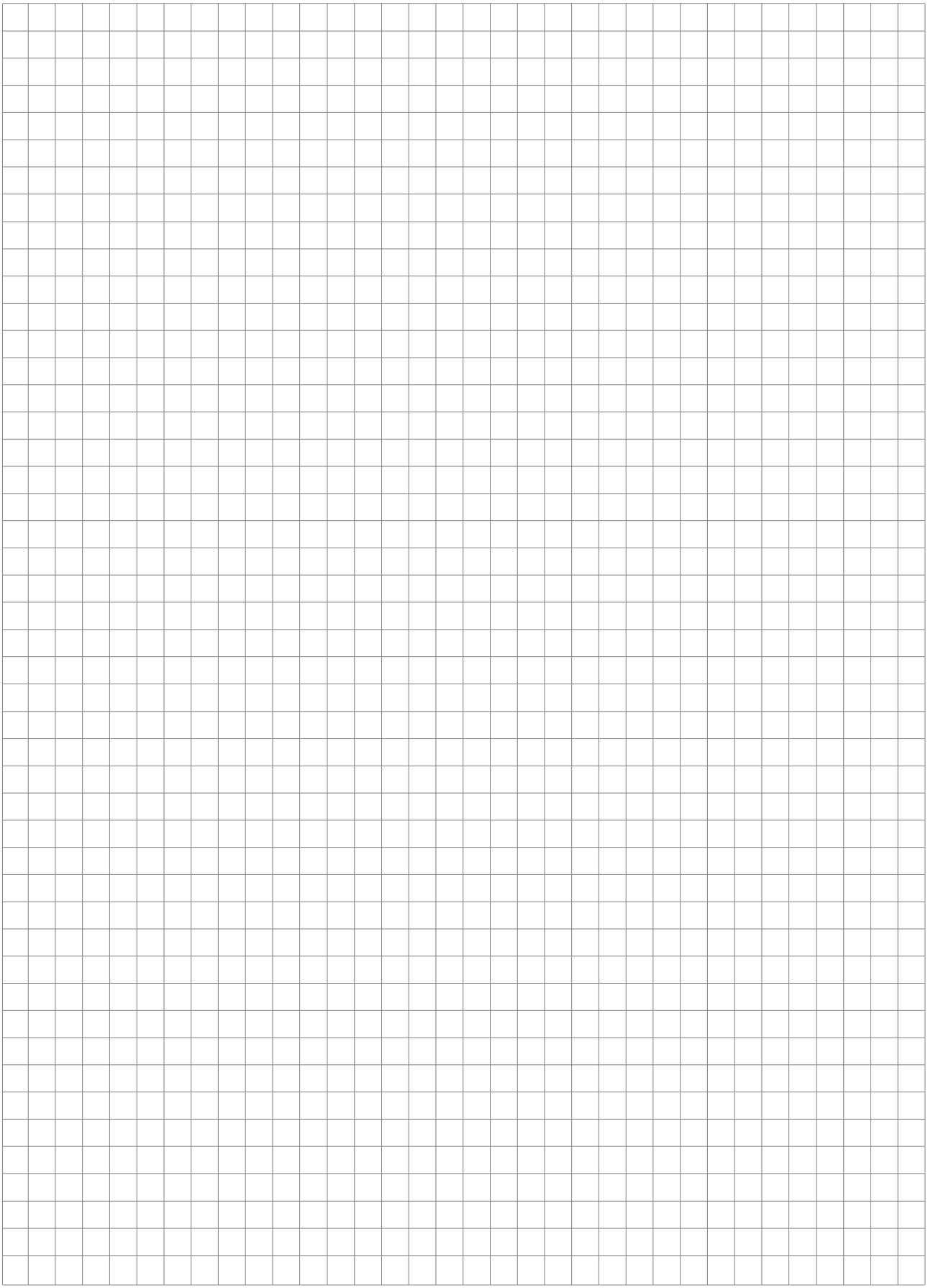
- Measure the current for external consumers at $UB_{ext.}$ (quiescent and alarm value).
- All other calculations are performed using the service and programming software tools 8000.

## 7.1 Connectible devices/accessories

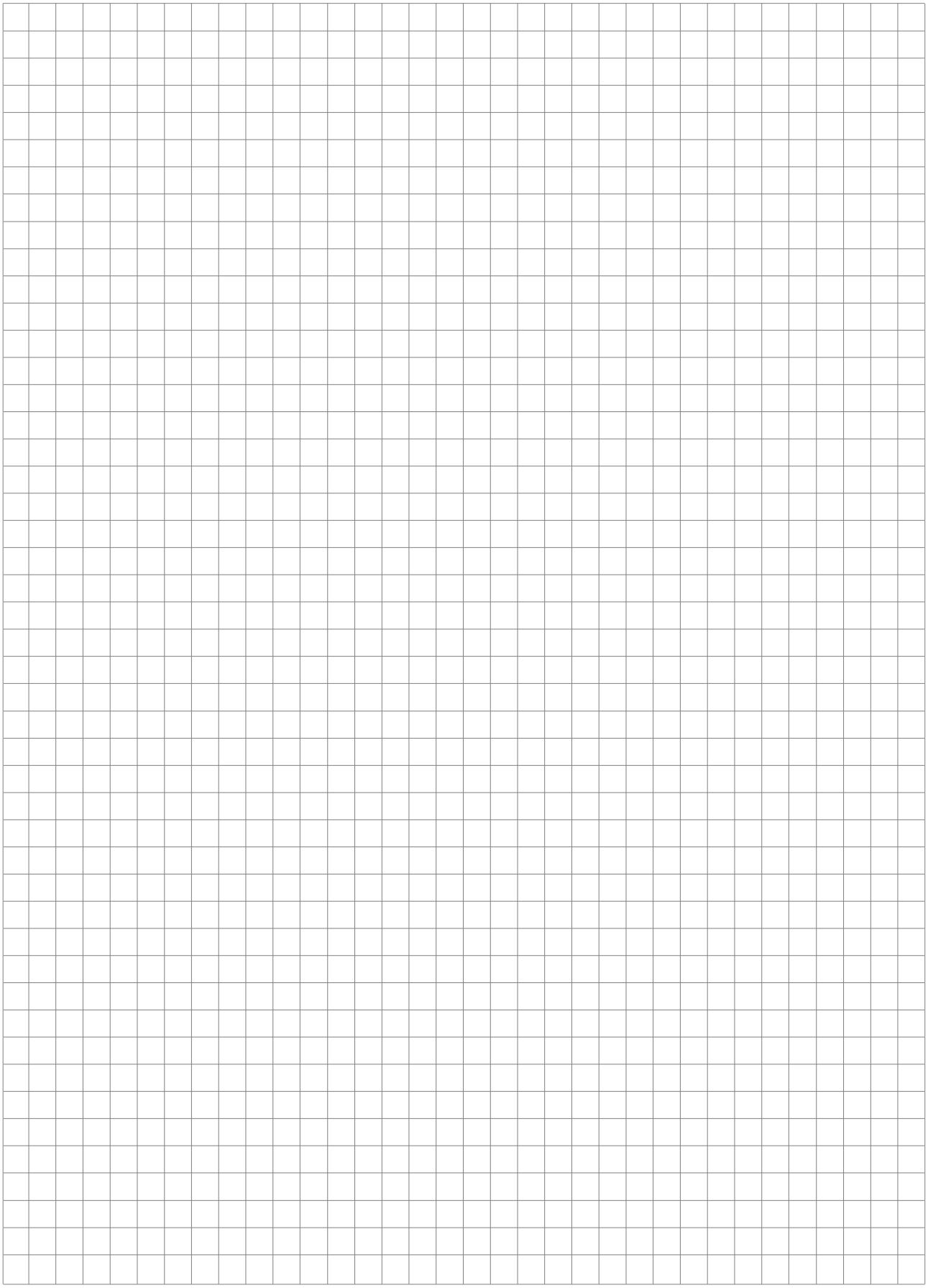
All currently available devices and accessories that can be connected to the FlexES Control FACP are specified in the documentation (Part No. 798981.GB0) and in the fire alarm technology product group catalog.
For further information, see the technical information "ESSER FACP Fire Department Peripherals" (Part No. 798962.GB0).

| Part No. | Description | Info |
|---|---|---|
| FX808378 | Fire brigade operating panel Austria | For operation in Austria only |
| FX808379 | Adapter module ADP-N3S-EDP | For connecting FDIP and/or FBOP to a redundant FACP |
| FX808380 | Fire department indicating panel FAT3000-EDP log | Additional display component of an FACP. The common displays and operating buttons uniformly indicate the conditions at the site to the fire department. |
| FX808381 | Adapter module ADP-N3E-U-EDP log | TTY interface as redundant transmission route |
| FX808382 | Fire brigade operating panel serial FBF2003-EDP log RS485 | Operating panel for FACP with transmission device for transmitting to the fire department |
| FX808383 | Fire brigade operating panel serial FBF2003-EDP log RS232 | |
| FX808384 | Control panels parallel display ZPA3000, surface-mounted | Additional display |
| FX808385 | Control panels parallel display ZPA3000, flush-mounted | |
| FX808386 | FD info and operating system, format A4 | Fire department information and operating system with redundant FDIP |
| FX808387 | FD info and operating system, format A3 | |
| FX808389 | FD info and operating system, format A4 | |
| FX808391 | FD info and operating system, format A3 | |
| FX808455 | 2.5 m PS cascading cable | Quantity depends on configuration |
| FX808460 | Touch screen operating and indicating panel surface-mounted | For remote display and operation |
| FX808461.10 | Touch screen operating and indicating panel flush-mounted | |

**Notes**



**Notes**



**Novar GmbH a Honeywell Company**
Dieselstraße 2
41469 Neuss, Germany
Telefon: +49 2131 40615-600
Telefax: +49 2131 40615-606
Internet: www.esser-systems.com
E-Mail: info@esser-systems.com

CE

VdS G 209207

ESSER
by Honeywell

Technical changes reserved!