

Fire Control Panels “Solution F2” Operating and Installation Manual



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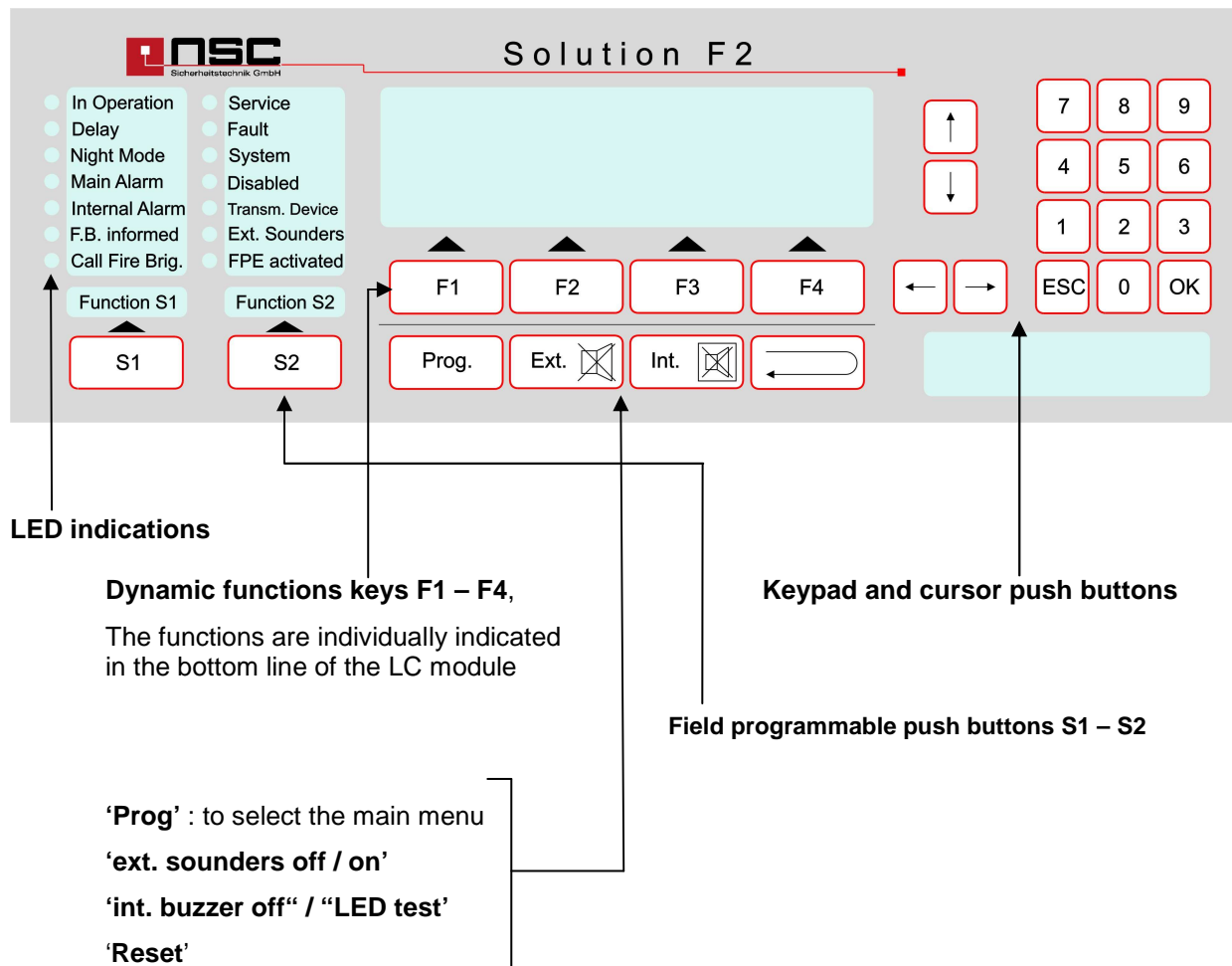
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Attachment A : Menus for the end user

Attachment B : Menus for the installer

1. Description of Control Panel:

Picture of the control panel of the "Solution F2":



LED indications:

LED :	Description :
green LED "In Operation"	The Fire Control Panel (FCP) is in operation.
green LED "Delay"	Delay of transmission device signal to the fire brigade for automatic detectors.
green LED "No Delay"	Indicates that the FCP is in normal operation mode. That means the main alarm is NOT delayed and any alarm activates the Fire Brigade immediately.
green LED "Service"	Indicates that the FCP is in „Service Mode“.
red LED "Main alarm"	Indicates that the FCP is in Alarm condition. See LC module for detailed information. If an alarm transmission device (TD) is connected to the panel the panel has tried to activate the TD.
red LED "Internal alarm"	Indicates that the FCP is in Alarm condition. See LC module for detailed information.
red LED "Fire Brigade alarmed"	Indicates that the FCP has activated the alarm transmission device (TD) to the Fire Brigade and the TD

	gave a response to confirm the activation. (Input "TD response" in the wiring diagrams can be used for this confirmation signal).
red LED "Call Fire Brigade"	Indicates that the FCP is in Main Alarm condition but the alarm transmission device (TD) could not be activated. So the Fire Brigade maybe has to be called by phone.
yellow LED "Fault"	Indicates that the FCP is in fault condition. At least one device (detector, module), input, output or system component is not in normal condition. See LC module for detailed information.
yellow LED "System"	The FCP itself is in fault condition. That means that maybe the main board (micro controller) does not work well and the correct function of the FCP is not guaranteed. Please check immediately by the installation company.
yellow LED "Disabling"	Indicates that at least one device (detector, module), input or output is disabled (switched off).
yellow LED "Transmission Device" (TD)	In case of flashing this LED (and yellow LED "Fault" is on) the TD is in fault condition. In case this LED is on (and yellow LED "Disabled" is on) the TD is switched off.
yellow LED "Sounders"	In case of flashing this LED (and yellow LED "Fault" is on) one of the sounder outputs is in fault condition. In case this LED is on (and yellow LED "Disabled" is on) one of the sounder outputs is switched off.
red LED "FPE activated"	One or more automatic controlling, configured to switching function "switch like fire protection equipment", are active.

LC module indications:

The LC module is a graphics LCD which is automatically illuminated in the case of any event. That means if an alarm message, a fault message, a disabled message or just if any push button is pressed the LC module activated the illumination. Then detailed information is shown in the display. Either the LCD shows the information in 8 lines of alpha numerical texts or in a graphics mode like bar charts or columns.

Usually the FCP shows the condition of the panel in the middle of the LC module. There is in big letter the current status on a dark background. The following messages are possible :

IN OPERATION	= normal condition
ALARM	= the FCP is in alarm condition
TEST ALARM	= the FCP is in test alarm condition
FAULT	= the FCP is in fault condition
SWITCH OFF	= certain devices of the FCP are switched off
ACTIVATION	= outputs are activated by automatic controllings

If the user enters one of the menus (by pressing the push button „Prog“) at the bottom line of the LC module he sees the **dynamic function keys F1 – F4**. Sometimes all 4 keys are used, sometimes only




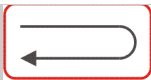




one or two. It depends on the menu. Here we do not describe the function keys in details. Therefore please have a look into section 2.

Please note that : usually there are the following standard functions for

- „F1“ = „cancel“ or „back“. Means to leave the current menu and jump into the menu above, and
- „F4“ = „Enter“. Means to select (or confirm) the function which is marked in the LC module by a black background.

Description of the push buttons:

The control panel of the FCP "Solution F2" is a high-quality membrane keypad. An intelligent circuit detects any pressing of the push buttons and confirms it by a **beep**.

Push button :	Description :
	By this push button the user leaves the normal operation display and enters the main menu of the FCP. See the detailed description in section 2.
	This push button deactivates (switch off) the external sounder outputs in case of an alarm. This is a temporary deactivation because if another alarm comes in the sounders will be activated again. It's also possible by this key to reactivate the sounders manually.
	This push button deactivates (switch off) the internal buzzer in case of an alarm or fault message. This is a temporary deactivation because if another message comes in the buzzer will be activated again. In case of an alarm and delayed alarm transmission, the inspection time will be started. If there is no alarm and no fault holding this push button activates an LED test.
	This push button resets the FCP. To reset a "key deposit alarm" message you have to enter the installer mode in main menu. Afterwards the alarm can be reset it by this key.
	Programmable function key (S1, S2). The setting could be done by the pC configuration tool.
	Use this push button in the menus to confirm your inputs line by line.
	Use this push button in the menus to cancel your inputs.
	Cursor control keypad.

Configuration:


The configuration of the fire control panel "Solution F2" has to be done generally by the PC configuration software.

With Firmware release 1.00 and following the data communication between panel and pc must be enabled by user- or installercode. This requires as minimum release 6.0.0.0 of the configuration software.

You need a standard USB cable USB-A to USB-B for connection between pc and panel.

Some essential settings also can be made directly through the keypad of the panel, i.e. setting of system parameters or interface configuration. You have to type in the installer code to get access to the relating menus (**s. menu [20](#)**)

2. Menus for the end user:

The following description contains all the menus for the end user. If the push button „Prog“  is pressed it starts with the main menu.

Nr.	LC-Display of Solution F2	Description
01	<pre> Main menu 1. Switch on/off 2. Alarm counter 3. End user code 4. Diagnosis Cancel Installer Enter </pre>	<p>General Main menu for end user</p> <p>This menu appears immediately after pressing „Prog“.</p> <p>The functions have the followings meanings :</p> <ol style="list-style-type: none"> To switch on / off detectors, input-/ output modules, delay mode, zones and general outputs → Jump to Menu 02 Indication of the alarm counter. It is a 4 digit number (1 – 9999) Menü 03 To change the end user code → Jump to Menu 04 To jump to the diagnosis menu → Jump to Menu 05 <p>The push button "cancel" (F1) leads to the normal status indication of the FCP.</p> <p>The push button Installer (F3) is to use for the installer company only. It leads to the menus for service and configuration.</p> <p>The push button „Enter“ (F4) selects (activates) the function which is marked by a black background. Instead you can also select the function by pressing the no. left in front of the functions (here : 1 – 4).</p>
02	<pre> Switch on/off 1. Zones & detect. 5. Sounder/Strobe 2. Output 6. Alarm Trans.Dev. 3. Relay 7. Delay 4. Power Output 8. Fire Outputs Cancel Enter </pre>	<p>Main menu „Switch on / switch off“</p> <ol style="list-style-type: none"> Switching on/off of zones and detectors → Jump to Menu 02.1 Switching on/off of OC-Outputs → Jump to Menu 02.3 Switching on/off of Relays inside the FCP → Jump to Menu 02.4 Switching on/off of 3 monitored power outputs → Jump to Menu 02.5 Continuously switching on/off of sounders / strobes (incl. loop sounders) → Jump to Menu 02.6 Switching on/off the alarm transmission device (TD) → Jump to Menu 02.7 To activate / deactivate the alarm delay for the TD → Jump to Menu 02.8 Temporary switching on/off the fire protection outputs. This means all outputs will be deactivated until this function is canceled. The fire protection outputs CAN NOT be switched off during alarm state. → Jump to Menu 02.9

02.1	<pre>Zones & detect. Status from zone : 5 programmed zone text To zone : Cancel On Off Detect.</pre>	<h3>Switching on/off: zones and single detectors</h3> <p>You can switch off <u>single zones</u> or <u>several zones simultaneously</u>. This is done by using the "from ... to..." function. Please type the zone number and confirm by "OK".</p> <p>"Status" means the current status of the zone (e.g. normal, alarm, fault). To switch off the zone you have to press "Off" (F3) or for switching on the zone you have to press "On" (F2).</p> <p>If only <u>one</u> zone shall be switched the line "to zone" can be missed and F2/F3 (on/off) can be pressed immediately.</p> <p>If single detectors shall be switched you have to type "Detect." (F4) after the zone has been confirmed (do not use F2/F3 (on/off) in this case) → Jump to Menu 02.2</p>
02.2	<pre>Zone 0005 Status from detector : 1 normal evt. individual detector text to detector : 3 normal evt. individual detector text Cancel On Off</pre>	<h3>Switching on/off: Addressable detectors</h3> <p>The first line of the LC module shows the zone where the detectors are located (here : 5).</p> <p>It is possible just to switch off only <u>one</u> detector as well as <u>several</u> detectors. Please type the detector number and confirm by "OK".</p> <p>"Status" means the current status of the detector (e.g. normal condition, alarm condition, fault condition). If a individual detector text has been configured, this text will be displayed right below the detector line after pressing "OK".</p> <p>For switching off you have to press "Off" (F3) or for switching on you have to press "On" (F2).</p> <p>If only <u>one</u> detector shall be switched the line "to detector" can be missed and F2/F3 (on/off) can be pressed immediately.</p>
02.3	<pre>Switch on/off from output : 001 normal to output : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Output 001 Main processor 002 Output 002 Main processor 003 Output 003 Main processor Cancel On Off Enter</pre>	<h3>Switching on/off: OC-Outputs</h3> <p>Here the 8 OC-outputs on the main processor board of the FCP "Solution F2" as well as the 9 OC-outputs on the F2 io extension can be switched on/off.</p> <p>Outputs 1 – 8 : OC- Outputs on main board Outputs 9 – 17 : OC- Outputs on I/O extension</p> <p>To switch on/off the outputs there are two possibilities you can choose :</p> <ol style="list-style-type: none"> To type the output no. directly by the keypad and confirming with "OK". Please use the line "from output" and "to output" for this. Select the outputs by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the output numbers with "Enter" (F4) or "Ok". <p>The actual "status" of the output (e.g. normal condition or active) will be displayed behind the number.</p> <p>After selecting the output / outputs you have to switch them by pressing F3 („off“) or F2 („on“).</p>



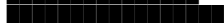





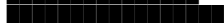





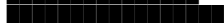









<p>02.4</p>	<pre> Switch on/off from relay : 001 normal to relay : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Relay 001 Main processor 002 Relay 002 Main processor 003 Relay 003 Main processor Cancel On Off Enter </pre>	<p>Switching on/off: 6 internal relays</p> <p>Here the 6 internal relays can be switched on/off.</p> <p>Relay 1 – 3 : Relais on main board Relay 4 – 6 : Relais on I/O extension</p> <p>To switch on/off the relays there are two possibilities you can choose :</p> <p>a) To type the relay no. directly by the keypad and confirming with "OK". Please use the line "from relay" and "to relay" for this.</p> <p>b) Select the relays by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the relay numbers with "Enter" (F4) or "OK". Then press "Enter" (F4) to confirm the switching.</p> <p>The actual „status“of the relay (e.g. normal condition or active) will be displayed behind the number.</p> <p>After selection the relay / relays you have to switch them by pressing F3 ("off") or F2 ("on").</p>
<p>02.5</p>	<pre> Switch on/off from power output : 001 normal to power output : ↓+1 ↑-1 Selection -> +10 <- -10 >001 Power Output 001 Main processor 002 Power Output 002 Main processor 003 Power Output 003 Main processor Cancel On Off Enter </pre>	<p>Switching on/off: 4 internal power outputs</p> <p>Here the 4 internal power outputs can be switched on/off.</p> <p>Power output 1 – 2 : Power output on main board Power output 3 – 4 : Power output on I/O extension</p> <p>To switch on/off the relays there are two possibilities you can choose :</p> <p>a) To type the power output no. directly by the keypad and confirming with "OK". Please use the line "from power output" and "to power output" for this.</p> <p>b) Select the power outputs by using the cursor keys ↓ and ↑ (means 1 line up or 1 line down) or the cursor keys → and ← (means 10 lines down or 10 lines up) and confirm the power output numbers with "Enter" (F4) or "OK".</p> <p>The actual "status"of the power output (e.g. normal condition, fault or active) will be displayed behind the number.</p> <p>After selection the power output / power outputs you have to switch them by pressing F3 ("off") or F2 ("on").</p>
<p>02.6</p>	<pre> Switch on/off 1. Zones & detect. 5. Sounder/Strobe 2. Output 6. Alarm Trans.Dev. 3. Relay 7. Delay 4. Power Output 8. Fire Outputs Cancel off "External sounders/strobes" are all power outputs, relays and outputs, which are configured to switching function „on/off like sounders“. </pre>	<p>Switching on/off: sounders / strobes</p> <p>After selecting this function in the switch on/off main menu you see at the bottom line of the LCD „off“ (F3) or „on“ (F2).</p> <p>By pressing F3 all sounders / strobes will be switched off continuously.</p> <p>Pay attention :</p> <p>By the function (F3) all sounders and strobes will be switched off continuously. If another alarm</p>

	<p>Also all loopsonders belong to the external sounders.</p>	<p>comes in the sounders / strobes will not be activated again until they are switched on again.</p>								
02.7	<p>Switch on/off</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel off</p> <p>"Transmission devices" are all power outputs, relays and outputs, which are configured to switching function „on/off like transmission device“.</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<p>Switching on/off: Alarm Transmission Device (TD)</p> <p>After selecting this function in the switch on/off main menu you see at the bottom line of the LCD "off" (F3) or "on" (F2).</p> <p>By pressing F3 the Alarm transmission device will be switched off continuously.</p> <p>The current status of the TD will additionally indicated by the yellow LED on the control panel.</p>
1. Zones & detect.	5. Sounder/Strobe									
2. Output	6. Alarm Trans.Dev.									
3. Relay	7. Delay									
4. Power Output	8. Fire Outputs									
02.8	<p>Switch on/off</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel on</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<p>Switching on/off: Alarm transmission delay</p> <p>Here the delay of the alarm transmission device of the FCP „Solution F2“ can be switched on/off.</p> <p>After selecting this function you see at the bottom line of the LCD "off" (F3) or "on" (F2). "On" means to activate the delay (Day Mode)</p> <p>The current status of the delay will be additionally indicated by the green LEDs (Delay, No Delay) on the control panel.</p> <p>When the delay is activated there is an additional indication in the LC module ("Delay activated")</p> <p>Pay attention : To switch on the delay of the alarm transmission device is only possible if "Response time" and "Inspection time" are configured. This can only be done by the installer company.</p>
1. Zones & detect.	5. Sounder/Strobe									
2. Output	6. Alarm Trans.Dev.									
3. Relay	7. Delay									
4. Power Output	8. Fire Outputs									
02.9	<p>Switch on/off</p> <table border="0"> <tr> <td>1. Zones & detect.</td> <td>5. Sounder/Strobe</td> </tr> <tr> <td>2. Output</td> <td>6. Alarm Trans.Dev.</td> </tr> <tr> <td>3. Relay</td> <td>7. Delay</td> </tr> <tr> <td>4. Power Output</td> <td>8. Fire Outputs</td> </tr> </table> <p>Cancel off</p>	1. Zones & detect.	5. Sounder/Strobe	2. Output	6. Alarm Trans.Dev.	3. Relay	7. Delay	4. Power Output	8. Fire Outputs	<p>Switching on/off: Fire protection outputs</p> <p>This function disables all outputs which have been configured to "switch on/off like fire protection outputs". This disablement only is possible in case of no alarm.</p> <p>After selecting this function you see at the bottom line of the LCD "off" (F3) or "on" (F2).</p> <p>Pay attention : By the function (F3) all fire outputs will be switched off continuously. If an alarm comes in no output will be activated.</p>
1. Zones & detect.	5. Sounder/Strobe									
2. Output	6. Alarm Trans.Dev.									
3. Relay	7. Delay									
4. Power Output	8. Fire Outputs									
03	<p>Alarmcounter</p> <table border="0"> <tr> <td>FCP</td> <td>- Alarm</td> <td>: 0025</td> </tr> <tr> <td></td> <td>Testalarm</td> <td>: 0011</td> </tr> </table> <p>cancel</p>	FCP	- Alarm	: 0025		Testalarm	: 0011	<p>Alarmcounter</p> <p>It is a 4 digit number (1 – 9999). Testalarms (Detector test/revision) will be displayed by a seperate counter.</p>		
FCP	- Alarm	: 0025								
	Testalarm	: 0011								

		<p>marked with "-" this message will not be displayed. You can switch from "x" to "-" by push button F3 ("off") and from "-" to "x" by push button F2 ("on").</p> <p>The example on the left side shows only alarm and pre alarm messages but all other kind of message are hidden.</p>																														
06.2	<p>Event memory</p> <pre> from message : to message : Cancel print </pre>	<p>Event memory: "Printing"</p> <p>Please type the number of messages and confirm every line by "OK": The last (youngest) message is message no. 1 and the oldest one is message no. 1034.</p> <p>After selecting the messages press F4 ("print") for printing.</p> <p>The print goes out through the interface which is selected by menu "Settings 2" -> "2. Interfaces" -> "Protocol" -> "Printer".</p>																														
07	<table border="1"> <thead> <tr> <th>Zone</th> <th>existing</th> <th>config.</th> </tr> </thead> <tbody> <tr><td>> 0001</td><td>010</td><td>010</td></tr> <tr><td>0002</td><td>010</td><td>010</td></tr> <tr><td>0003</td><td>011</td><td>107</td></tr> <tr><td>0004</td><td>003</td><td>127</td></tr> <tr><td>0005</td><td>010</td><td>010</td></tr> <tr><td>0006</td><td>021</td><td>117</td></tr> </tbody> </table> <p>Cancel Segment Details</p> <table border="1"> <thead> <tr> <th>Segment</th> <th>existing</th> <th>Current</th> </tr> </thead> <tbody> <tr><td>> 01</td><td>024</td><td>008,4mA</td></tr> <tr><td>02</td><td>031</td><td>010,9mA</td></tr> </tbody> </table> <p>Cancel Zone Details</p>	Zone	existing	config.	> 0001	010	010	0002	010	010	0003	011	107	0004	003	127	0005	010	010	0006	021	117	Segment	existing	Current	> 01	024	008,4mA	02	031	010,9mA	<p>Detector data</p> <p>Here the zones which contain at least one detector are listed line by line (left column).</p> <p>The middle column shows the number of detectors which were found during last loop scanning.</p> <p>The right column "config." shows the number of detectors which were configured by configuration software.</p> <p>Ideally the numbers in the middle and right columns should be identical.</p> <p>By pressing key F3 "Segment", the display will change to a list of segments with number of connected devices and current on each segment. Please select with the cursor keys the zone/segment which should be investigated more detailed and press „Details“ (F4) → Jump to Menu 07.1</p>
Zone	existing	config.																														
> 0001	010	010																														
0002	010	010																														
0003	011	107																														
0004	003	127																														
0005	010	010																														
0006	021	117																														
Segment	existing	Current																														
> 01	024	008,4mA																														
02	031	010,9mA																														
07.1	<p>Zone 0003 Detect. 002/010</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Type</th> <th>Seg.</th> <th>Add</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>001</td><td>Conv. mo. CHQ_MZ</td><td>01:0</td><td>001</td><td>Normal</td></tr> <tr><td>>002</td><td>Flashl. CHQ_AB</td><td>01:0</td><td>002</td><td>Normal</td></tr> <tr><td>003</td><td>Ion. det. AIE_E</td><td>01:0</td><td>003</td><td>Normal</td></tr> <tr><td>004</td><td>opt. det. ALG_E</td><td>01:0</td><td>004</td><td>Normal</td></tr> <tr><td>005</td><td>Conv. mo. CHQ_Z</td><td>01:0</td><td>005</td><td>Normal</td></tr> </tbody> </table> <p>Cancel existing Details</p>	No.	Type	Seg.	Add	Status	001	Conv. mo. CHQ_MZ	01:0	001	Normal	>002	Flashl. CHQ_AB	01:0	002	Normal	003	Ion. det. AIE_E	01:0	003	Normal	004	opt. det. ALG_E	01:0	004	Normal	005	Conv. mo. CHQ_Z	01:0	005	Normal	<p>Table of detectors</p> <p>The first line of the LC module shows zone and number of the detector which is marked by ">" in the left column of the display area. Here in this example it is zone 0003 and detector 002 of 10 detectors in this zone at all.</p> <p>The second column shows <u>all configured</u> detectors of this zone by name (abbreviated), doesn't matter if they are connected to the panel or not. If you want to see only the connected detectors of this zone press "existing" (F2).</p> <p>In this case the bottom line changes and "config." is written above F2. Additionally the number of detectors in line 1 will change, if there is a difference between connected and configured detectors for this zone.</p> <p>Pressing F2 again will show all configured detectors again.</p> <p>One detector is shown per line. The grey line have the following meanings :</p>
No.	Type	Seg.	Add	Status																												
001	Conv. mo. CHQ_MZ	01:0	001	Normal																												
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004	opt. det. ALG_E	01:0	004	Normal																												
005	Conv. mo. CHQ_Z	01:0	005	Normal																												

	<p>No. : Detector number within the displayed zone Type : Kind of detector, e.g. optical, MCP etc. This information is automatically transmitted by the detectors to the FCP. The meanings of the abbreviations are :</p> <p>1. Hochiki ESP</p> <table> <tr><td>opt. det. ALG-E</td><td>Optical smoke detector</td></tr> <tr><td>opt. det. ALG-EN</td><td></td></tr> <tr><td>Ion. det. AIE-E</td><td>Ionisation smoke detect.</td></tr> <tr><td>Heat det. ATG-E</td><td>Heat detector</td></tr> <tr><td>Multisen. ACA-E</td><td>Multisensor</td></tr> <tr><td>Multisen. ACB-E</td><td>Multisensor Heat</td></tr> <tr><td>MCP. CHQ-CP</td><td>Manual Call Point</td></tr> <tr><td>MCP HCP-E</td><td></td></tr> <tr><td>Sound.mo. CHQ-BS</td><td>Base Sounder</td></tr> <tr><td>Sound.mo. YBO-BS</td><td>Base Sounder</td></tr> <tr><td>Sound.mo. YBO-BSB</td><td>Base Sounder / Beacon</td></tr> <tr><td>Sound.mo. CHQ-WS</td><td>Wall Sounder</td></tr> <tr><td>Sound.mo. CHQ-WS2</td><td>Wall Sounder</td></tr> <tr><td>Sound.mo. CHQ-WSB</td><td>Wall Sounder / Beacon</td></tr> <tr><td>Sound.mo. CHQ-DSC</td><td>2 ch. Sounder output module</td></tr> <tr><td>Input mo. CHQ-SIM</td><td>1 ch. Input module</td></tr> <tr><td>Input mo. CHQ-DIM</td><td>2 ch. Input module</td></tr> <tr><td>Conv. mo.CHQ-SIM</td><td>1 ch. conventional Zone monitor</td></tr> <tr><td>Conv. mo.CHQ-DZM</td><td>2 ch. conventional Zone monitor</td></tr> <tr><td>I/O mo. CHQ_MRC</td><td>Mians Relay Switching module</td></tr> <tr><td>I/O mo. CHQ-DRC</td><td>2 Relaiy Input-/output module</td></tr> <tr><td>I/O mo. CHQ-FIO</td><td>8 ch. Input-/output module</td></tr> <tr><td>I/O mo. NT-FIO</td><td>monitoring module for separate NSC power supplys</td></tr> <tr><td>Flashl. CHQ-AB</td><td>Addressable strobe</td></tr> <tr><td>Remote CHQ-ARI</td><td>Addressable remote ind.</td></tr> <tr><td>Add.Base YCA_3H2</td><td>Addressable base</td></tr> <tr><td>Add.Base YCA_5H2</td><td>Addressable base</td></tr> <tr><td>Outp-Mod. CHQ-POM</td><td>Power Output Module</td></tr> <tr><td>Outp-Mod. YBO-POM</td><td>Power Output Base</td></tr> <tr><td>STRATOS ASD</td><td>loop module of Startos Aspirating Smoke Detector</td></tr> </table> <p>2. Apollo Discovery/XP95/Xplorer</p> <table> <tr><td>opt. det. DISCOV.</td><td>Optical smoke detector</td></tr> <tr><td>Ion. det. DISCOV.</td><td>Ionisation smoke detect.</td></tr> <tr><td>CO detect.DISCOV.</td><td>Co detector</td></tr> <tr><td>Heat det. DISCOV.</td><td>Heat detector</td></tr> <tr><td>Multisen. DISCOV.</td><td>Multisensor</td></tr> <tr><td>CO/Heat DISCOV.</td><td>Multisensor CO / Heat</td></tr> <tr><td>MCP DISCOV.</td><td>Manual Call Point</td></tr> <tr><td>opt. det. XP95</td><td>Optical smoke detector</td></tr> <tr><td>Ion. Det. XP95</td><td>Ionisation smoke detect.</td></tr> <tr><td>Heat det. XP95</td><td>Heat detector</td></tr> <tr><td>H.Thermo. XP95</td><td>Heat detector high temperatur</td></tr> <tr><td>Multisen. XP95</td><td>Multisensor</td></tr> </table>	opt. det. ALG-E	Optical smoke detector	opt. det. ALG-EN		Ion. det. AIE-E	Ionisation smoke detect.	Heat det. ATG-E	Heat detector	Multisen. ACA-E	Multisensor	Multisen. ACB-E	Multisensor Heat	MCP. CHQ-CP	Manual Call Point	MCP HCP-E		Sound.mo. CHQ-BS	Base Sounder	Sound.mo. YBO-BS	Base Sounder	Sound.mo. YBO-BSB	Base Sounder / Beacon	Sound.mo. CHQ-WS	Wall Sounder	Sound.mo. CHQ-WS2	Wall Sounder	Sound.mo. CHQ-WSB	Wall Sounder / Beacon	Sound.mo. CHQ-DSC	2 ch. Sounder output module	Input mo. CHQ-SIM	1 ch. Input module	Input mo. CHQ-DIM	2 ch. Input module	Conv. mo.CHQ-SIM	1 ch. conventional Zone monitor	Conv. mo.CHQ-DZM	2 ch. conventional Zone monitor	I/O mo. CHQ_MRC	Mians Relay Switching module	I/O mo. CHQ-DRC	2 Relaiy Input-/output module	I/O mo. CHQ-FIO	8 ch. Input-/output module	I/O mo. NT-FIO	monitoring module for separate NSC power supplys	Flashl. CHQ-AB	Addressable strobe	Remote CHQ-ARI	Addressable remote ind.	Add.Base YCA_3H2	Addressable base	Add.Base YCA_5H2	Addressable base	Outp-Mod. CHQ-POM	Power Output Module	Outp-Mod. YBO-POM	Power Output Base	STRATOS ASD	loop module of Startos Aspirating Smoke Detector	opt. det. DISCOV.	Optical smoke detector	Ion. det. DISCOV.	Ionisation smoke detect.	CO detect.DISCOV.	Co detector	Heat det. DISCOV.	Heat detector	Multisen. DISCOV.	Multisensor	CO/Heat DISCOV.	Multisensor CO / Heat	MCP DISCOV.	Manual Call Point	opt. det. XP95	Optical smoke detector	Ion. Det. XP95	Ionisation smoke detect.	Heat det. XP95	Heat detector	H.Thermo. XP95	Heat detector high temperatur	Multisen. XP95	Multisensor
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		<p>MCP XP95 Manual Call Point Sounderm. XP95 Sounder output module Inp.mod. XP95 Input module Zone mod. XP95 Conventional module Inp/Outp. XP95 Input-/output module Flame det. XP95 Flame detector Beam XP95 Beam detector Ref.Beam XP95 Beam detector with reflector opt. det. XPlorer Optical smoke detector Heat det. XPlorer Heat detector H.Thermo. XPlorer Heat detector high temperatur opt. det. S90 Optical smoke detector Ion. det. S90 Ionisation smoke detect. Heat det. S90 Heat detector MCP S90 Manual Call Point Inp.mod. S90 Input module Inp/Outp. S90 Input-/output module Sounderm. S90 Sounder output module</p> <p>Seg. : Segment = Section of addresses with a maximum of 254 Hochiki detectors, modules / base sounders and a maximum of 126 Apollo detectors, modules.</p> <p>The segments are partitioned according this list :</p> <ul style="list-style-type: none"> • Loop 1 Main board: Segment 1 • Loop 2 Loop extension: Segment 2 <p>○ : This is a symbol for a loop. - : This is a symbol for a stub line.</p> <p>Adr. : Detector address (physical address stored in the detector) Status : Current status of the detector (e.g. normal condition, alarm condition, fault condition, disabled condition)</p> <p>By pressing F4 („Details“) it is possible to display more details of the detectors. That means analogue values, dust contamination, input bits and so on.</p> <p>→ Jump to Picture 07.2 for Manual Call Points → Jump to Picture 07.3 for optical smoke detector</p>
07.2	<pre> 0001/001 MCP CHQ-CP Configured detector text 1 2 3 4 5 6 7 8 Inputs 0 Outputs 0 Fault : missing Cancel </pre>	<p>Example of detector data: MCP</p> <p>The input bits display the status of the alarm contact of the MCP or - in case of input modules - the status of the input bits of the module (high / low). The "Output" bits show – in case of output modules – which outputs are active or in fault condition. Following status are possible:</p> <ul style="list-style-type: none"> • 0 = inactive • 1 = active • x = reset • = open curcuit • S = short curcuit • U = undefined <p>The last but one line shows any additional fault information if the detector/module is not in normal condition (here: fault because detector is missing).</p>

		Leaving the menu by pressing F1 ("Cancel").																		
07.3	<p>Hochiki ESP</p> <p>0002/001 opt. det. ALG-E Configured detector text</p> <table border="0"> <tr> <td>A-Value</td> <td></td> <td>0,8%/m</td> </tr> <tr> <td>Pre alarm</td> <td></td> <td>2,7%/m</td> </tr> <tr> <td>Alarm</td> <td></td> <td>3,4%/m</td> </tr> </table> <p>Cancel Calib. Details</p> <p>Apollo</p> <p>0002/001 opt. det. XP95 Configured detector text</p> <table border="0"> <tr> <td>A-Value</td> <td></td> <td>025</td> </tr> <tr> <td>Pre alarm</td> <td></td> <td>045</td> </tr> <tr> <td>Alarm</td> <td></td> <td>055</td> </tr> </table> <p>Cancel Compens. Details</p> <p>For detector series "XP95", "Xplorer" and "S90" there is an automatic threshold compensation implemented. If the analogue value for optical smoke detectors or ionisation smoke detectors is higher than 40 or lower than 9 for several hours, the panel will display a pollution fault message.</p>	A-Value		0,8%/m	Pre alarm		2,7%/m	Alarm		3,4%/m	A-Value		025	Pre alarm		045	Alarm		055	<p>Example of detector data: Optical smoke detector</p> <p>The FCP displays the current values of the detector as horizontal bar charts. The meanings of the bars are :</p> <ul style="list-style-type: none"> • Analogue value (measured in detector chamber) • Pre alarm threshold • Alarm threshold <p>The percentage values on the right relates to the bar charts.</p> <p>The Pre alarm/alarm threshold depend on</p> <ol style="list-style-type: none"> the detector sensitivity which can be adjusted the mode if the detector is a multi sensor <p>Only for Hochiki ESP</p> <p>The push button „Calib“ration (F3) can be used to calibrate an optical smoke detector or a multi sensor manually. This will be done by the panel usually automatically once a day (see Settings -> System settings -> Parameter 12). That means usually this is not necessary to do manually except :</p> <ol style="list-style-type: none"> after replacing a detector and if the fault message "Calibration fault" appears. if after the daily automatic calibration the fault message "Calibration fault" appears. <p>The manual calibration process needs about 20 sec. If in the second case the fault message does not disappear the detector has to be replaced.</p> <p>The push button „Details“ (F4) shows the result of the last calibration of the detector → Jump to Picture 07.4.</p> <p>Only for Apollo</p> <p>By pressing „Compens.“ation (F3) an automatic smoke detector (Optical, Multi) can be readjusted manually. This should be done, if a polluted detector will be changed by a new one. By compensating the detector the drift value (Discovery) or the alarm threshold (XP95, Xplorer) will be reset. Without manual compensation the FCP will adjust these values automatically but this process may last several hours..</p> <p>The push button „Details“ (F4) shows more information for Apollo Discovery detectors→ Jump to Picture 07.4.</p>
A-Value		0,8%/m																		
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029		094	156		232															
	Zeropoint			Firepoint																

<p>61 190 Cancel</p> <p>0002/001 Multisen ALG-E</p> <p>029 094 156 232 Zeropoint Firepoint 61 190 Cancel</p> <p>0002/001 Ion det. ACA-E</p> <p>008 110 138 246 Zeropoint Firepoint 61 190 Cancel</p> <p><u>Only for Apollo Discovery</u></p> <p>0002/001 opt. det. DISCOV.</p> <p>Date of manufact. : 04/05 Pollution : 16 Sensitivity : 3 Last revision : - Det.LED flash at poll. : 0 cancel</p>	<p>Firepoint = testalarm threshold (139-246 depending on detector type)</p> <p>Out of these two values the actual smoke density and the alarm thresholds will be calculated. (s. picture 28).</p> <p>By calibrating the detector the smoke density will be set to 0 and the alarmthresholds will be readjusted. The zeropoint represents the pollution of the detector. In the bar charts on the left hand the limits and the standard values for the different detector types are demonstrated.</p> <p>A pollution fault will be generated automatically at the following smoke densities::</p> <table border="1"> <tr> <td>opt. det. ALG-E</td> <td>+ - 1,1 %/m</td> </tr> <tr> <td>Multisen ALG-E</td> <td>+ - 1,1 %/m</td> </tr> <tr> <td>Ion det. ACA-E</td> <td>+ - 0,17%/m</td> </tr> </table> <p><u>Only for Apollo Discovery</u></p> <p>The Apollo "Discovery" series has the ability to store data in the flash memory of the detector itself. These data remains in memory even if the detector will be removed from the base. The reading and transmitting of the data will last about 1-2 seconds. Therefore you have a short delay before first value will be displayed.</p> <p>The following data is aavailable:</p> <ul style="list-style-type: none"> - date of manufacture of the detector in format MM/JJ - pollution in the range 0-31. <ul style="list-style-type: none"> • 16 = clean air value • <=3 and 31 = pollution fault • 0 = fault with analogue value 4 - sensitivity 1-5 - date of last revision in format MM/JJ. If no revision alarm has been activated for this detector a "-".will be displayed. - detector LED at polling <ul style="list-style-type: none"> • 1 = LED flashes, if detector is polled. • 0 = LED off, if detector is polled this function can be set by system-parameter 8 	opt. det. ALG-E	+ - 1,1 %/m	Multisen ALG-E	+ - 1,1 %/m	Ion det. ACA-E	+ - 0,17%/m
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08	<p>Hardware modules</p> <pre> 1. Loop module HOCHIKI ESP : 01 2. Loop module Apollo XP/DISCOV: 00 3. Input-/output extension : 00↓ 4. RS 485 Extension Cancel Details Cursor key „↓“ show more : 5. Modem : 00 7. RS 485 Devices : 00 </pre>	<p>Hardware modules: Overview</p> <p>Here all possible types of internal modules are listed and behind them you can see how many numbers of modules are installed in the FCP (here: only loop module Hochiki ESP).</p> <p>These types of modules are possible (depending on software version) :</p> <ul style="list-style-type: none"> ➤ Loop module supporting Hochiki ESP detectors ➤ Loop module supporting Apollo XP95/Discovery detectors ➤ Input- / Output extension ➤ RS485 extension ➤ Telephone modem for software configuration ➤ Connected RS485 Devices <p>Please select with the cursor keys the module which should be investigated more detailed and press „Details“ (F4) → Jump to 08.1</p>
08.1	<p>Hardware modules 01/02</p> <pre> >01 Detector module HOCHIKI ESP 02 Detector module HOCHIKI ESP Cancel Details </pre>	<p>Internal Modules: Details</p> <p>Here only the really existing modules will be displayed.</p> <p>Detector module 1 represents the loop on the main board, Detector module 2 the loop extension PCB..</p> <p>Please select with the cursor keys the module which should be investigated more detailed and press „Details“ (F4) → Jump to 08.2</p>
08.2	<p>Detectormodul HOCHIKI ESP</p> <pre> Segment : 1 Loop: Yes , Normal ML 1: ON U = 34,9 V ML 2: OFF U = 34,9 V Current Seg. 1 = 038,2 mA [100mA] R+/- (015,7/014,1) = 029,8 ohm[999ohm] Cancel </pre>	<p>Example of details of Hochiki ESP detector module</p> <p>Display of the loop state: Recognition as Loop or Spurs, open- or shortcircuit faults, state of line 1 and line 2 outputs.</p> <p>Furthermore voltage and resistor values of the loop will be shown.</p>
08.3	<p>Modem</p> <pre> Call accept off Cancel hang up </pre>	<p>Modem data</p> <p>If a telephone modem has been installed on the main board, this menu displays the following information :</p> <p>Line 2: Product code Line 3: Firmware version Line 4: Modem version Line 5: Country code (FD=Europe) Line 6: Version of "Data pump"</p> <p>In line 7 the actual modem status will be displayed. The modem only accepts an incoming call, if the automatic call acceptance has been activated in the installer menu Menü 39 or the system parameter "ccAll accept after restart" is activated.</p> <p>Possible messages are:</p> <ul style="list-style-type: none"> • Call acceptance on • Call acceptance off • RING (of other modem)

		<ul style="list-style-type: none"> • CONNECT 33600 (Connection to other modem established) • NO CARRIER (Connection terminated) <p>You can cancel a connection by pressing F3 „hang up“.</p>																								
08.4	<table border="1"> <tr> <td colspan="2">Internal Modules</td> <td>01/63</td> </tr> <tr> <td>>01</td> <td>FRP with FBC</td> <td>A B</td> </tr> <tr> <td>02</td> <td>Remote LCD Panel</td> <td>A</td> </tr> <tr> <td>03</td> <td>Remote LCD Panel</td> <td>A</td> </tr> <tr> <td>04</td> <td>FRP</td> <td>A B</td> </tr> <tr> <td>05</td> <td>-</td> <td></td> </tr> <tr> <td>06</td> <td>-</td> <td></td> </tr> <tr> <td colspan="2">Cancel</td> <td>Details</td> </tr> </table>	Internal Modules		01/63	>01	FRP with FBC	A B	02	Remote LCD Panel	A	03	Remote LCD Panel	A	04	FRP	A B	05	-		06	-		Cancel		Details	<p>Display of FRP/LCD Panel</p> <p>Different protocol can be set to each serial interface of the FCP. (s. menu 38.1). On all interfaces set to "FRP protocol" connected devices will be scanned. The address range for these devices is 1-63. The device types will be shown as text.</p> <p>Folowing devices are available:</p> <ul style="list-style-type: none"> ➤ FRP ➤ FRP with FBC ➤ Remote LCD Panel ➤ LED Panel ➤ PC Managementsystem <p>By characters "A" and "B" will be signalised, on which channels a device has been connected. For further informations please press „Details“ (F4) → jump to menu 8.5</p>
Internal Modules		01/63																								
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FRP with FBC																										
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zurück																										
09	<table border="1"> <tr> <td colspan="2">Voltages</td> </tr> <tr> <td>Charging voltage nominal:</td> <td>27,66 V</td> </tr> <tr> <td>Charging voltage actual</td> <td>: 27,57 V</td> </tr> <tr> <td>Battery voltage</td> <td>: 27,48 V</td> </tr> <tr> <td>Earth fault voltage</td> <td>: 1,42 V</td> </tr> <tr> <td>Ri-Battery</td> <td>: 00,55 Ohm</td> </tr> <tr> <td colspan="2">Cancel</td> </tr> </table>	Voltages		Charging voltage nominal:	27,66 V	Charging voltage actual	: 27,57 V	Battery voltage	: 27,48 V	Earth fault voltage	: 1,42 V	Ri-Battery	: 00,55 Ohm	Cancel		<p>Example of power supply voltages</p> <p>The charging voltage should be in between 27,3V and 27,6V (20°C). This should be checked by voltage meter.</p> <p>The earth fault voltage normally has a value between 9 V and 17,5V. In case of an earth fault you can see here, i fit is an earth fault against plus oder minus potential.</p> <p>Mit F1 ("zurück") Rücksprung aus dem Menü.</p>										
Voltages																										
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cancel																										

11	<pre> Inputs > 01. Input 01 : 04,81V 02. Input 02 : 04,78V 03. Input 03 : 04,80V 04. Input 04 : 04,83V 05. Input 05 : 04,79V 06. Input 06 : 04,78V Cancel </pre>	<p>Example of input voltages</p> <p>Here the FCP input voltages are listed:</p> <ul style="list-style-type: none"> • Input 1-4 on the main board • Input 5-12 on the I/O extension • Input line SL (fault extinguish system) • Input line KDB • Input line LA (extinguish system activated) <p>Leaving the menu by pressing F1 („Cancel“).</p>
12	<pre> FCP data Software version S031A01.00 SL031A00.11 Serial number 1711/0067 Cancel </pre>	<p>Example of displaying software version and Serial No.</p> <p>Leaving the menu by pressing F1 („Cancel“).</p>


3. Menus for the installer:

The following menus are available only for the installer as the access is protected by a separate access code. When the panel is shipped out by NSC the access code for the installer is :

00000

This access code can be changed by the installer. In any case it should be kept at a save place. When the installer has changed this access code it is unique and nobody else can operate in the installer menus of the panel.

**Please keep the installer code (access code) in a save place.
It is the protection of the panel against wrong operation.**

After pressing the push button  you will enter the main menu of the FCP "Solution F1". Then please press **F3 ("Installer")** to enter the installer menus. After that the installer code is required.

To select sub menus you have the following possibilities :

- Using the **cursor keys** ↓ and ↑ to mark the sub menu with the black background and then press **F4 ("Enter")** to confirm the selection.
- Directly by pressing the **number** of the sub menu. No „Enter“ button is necessary in this case.

Some times you will see a listing of e.g. outputs, inputs etc. in the LC module. In which case usually there is a selection bar like this :

```
↓+1   ↑-1   Selection   -> +10   <- -10
```

When there is such a selection bar you can use the **cursor keys** again and pressing **F4 ("Enter")** confirms the selection. The cursor keys ↓ and ↑ go one line down / up and the cursor keys → and ← will go 10 lines down / up.


There are some more standard operating functions:

- "Cancel" in the bottom line of the LC module (right above F1) means always jumping into the menu before
- The "ESC" push button cancels the current typing but do not lead to a jump out of the menu.


Usually the bottom line of the LC module looks like this (if there are no additional options to F2 and F3):

```
Cancel                                     Enter
```

Nr.	Indication of the LC module:	Description :
20	<p>Installer</p> <p>Access Code: *****</p> <p>Cancel</p>	<p>Access to the installer menu</p> <p>After pressing push button F3 („Installer“) the FCP requires the installer access code. Please type this code and confirm by OK.</p>
21	<p>Hauptmenü</p> <p>1. Ein-/Ausschalten 5. Testfunktionen 2. Alarmzähler 6. Einstellungen 3. Betreiber Passw. 4. Diagnose</p> <p>zurück Betreiber Enter</p> <p>Main menu</p> <p>1. Switch on/off 5. Test mode 2. Alarm counter 6. Settings 3. End user code 4. Diagnosis</p> <p>Cancel End use Enter</p>	<p>General Main menu for installer</p> <p>This menu appears immediately after pressing „Prog“. The functions have the followings meanings :</p> <ol style="list-style-type: none"> To switch on / off detectors, input-/ output modules, zones and general outputs → Jump to Menu 02 Indication of the alarm counter. This alarm counter cannot be set back. It is a 4 digit number (1 – 9999). Menü 03 To change the end user code → Jump to Menu 04 To enter the diagnosis menu → Jump to Menu 05 To enter the test mode. That are the following functions : <ul style="list-style-type: none"> ➤ Detector test ➤ Manual Controlling ➤ Simulation ➤ Revision → Jump to Menu 22 Einstellungen aufrufen. Dazu gehören : <ul style="list-style-type: none"> ➤ To set data and time ➤ System settings ➤ To scan LCD repeater panels ➤ Scanning of detectors ➤ To delete the configuration ➤ To delete detector texts ➤ To delete event memory ➤ To select the language ➤ To change installer access code ➤ To configure the interfaces ➤ To configure the Modem ➤ To adjust the power outputs ➤ To put in the loop parameters ➤ To activate options <p>Settings 1 → Jump to Menu 27 Settings 2 → Jump to Menu 36</p> <p>The push button cancel (F1) leads to the normal status indication of the FCP.</p> <p>The push button End user (F3) is for entering the end user area.</p> <p>The push button Enter (F4) selects (activates) the function which is marked by a black background. Instead you can also select the function by pressing the no. left in front of the functions (here: 1 – 8).</p>


22	<div style="background-color: #e0e0e0; padding: 2px;">Test mode</div> <ul style="list-style-type: none"> 1. Detector test 2. Manual Control 3. Simulation 4. Revision <div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;"> Cancel Enter </div>	<h3>Main menu: Test functions</h3> <p>As soon as this menu is selected the FCP is in the service mode. This will be indicated by the yellow LED „Service“. After leaving this menu the LED is off.</p> <ol style="list-style-type: none"> 1. The function „Detector test“ can be used to set individual detectors in alarm condition (electronically) → Jump to Menu 23 2. Manual Control means manual controlling of the outputs. With a simple press on a push button an output can be activated → Jump to Menu 24 3. Simulation can be used to set individual detectors in alarm condition without connected detectors (by software). This is useful for testing the panel outputs / indications as long as the panel is not installed → Jump to Menu 25 4. Revision means a „One-Man-Test procedure“ to set smoke and heat detectors in alarm by using special test equipment. During this procedure the FCP resets all alarms on the relevant zones automatically after a certain time → Jump to Menu 26 																								
23	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Detector test</th> <th style="text-align: left;">Status</th> </tr> </thead> <tbody> <tr> <td>Zone : 2</td> <td>Normal</td> </tr> <tr> <td>Detector : 3</td> <td>Normal</td> </tr> </tbody> </table> <p>Alarm unset (outputs inactive) !</p> <div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;"> Cancel On set </div> <p>Example of detector test :</p> <p>Detector not yet in alarm :</p> <div style="background-color: #e0e0e0; padding: 2px;"> 0002/002 opt. det. ALG- Evt. individual detector text </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">A-Value</td> <td style="width: 60%;"><div style="background-color: black; width: 10%; height: 10px;"></div></td> <td style="width: 25%; text-align: right;">0,0%/m</td> </tr> <tr> <td>Pre alarm</td> <td><div style="background-color: black; width: 30%; height: 10px;"></div></td> <td style="text-align: right;">2,7%/m</td> </tr> <tr> <td>Alarm</td> <td><div style="background-color: black; width: 50%; height: 10px;"></div></td> <td style="text-align: right;">3,4%/m</td> </tr> </table> <div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;"> Cancel Calib. Details </div> <p>Detector in alarm :</p> <div style="background-color: #e0e0e0; padding: 2px;"> 0002/002 opt. det. ALG-E Evt. individual detector text </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">A-Value</td> <td style="width: 60%;"><div style="background-color: black; width: 70%; height: 10px;"></div></td> <td style="width: 25%; text-align: right;">4,5%/m</td> </tr> <tr> <td>Pre alarm</td> <td><div style="background-color: black; width: 40%; height: 10px;"></div></td> <td style="text-align: right;">2,7%/m</td> </tr> <tr> <td>Alarm</td> <td><div style="background-color: black; width: 60%; height: 10px;"></div></td> <td style="text-align: right;">3,4%/m</td> </tr> </table> <div style="background-color: #e0e0e0; padding: 2px; display: flex; justify-content: space-between;"> Cancel Calib. Details </div>	Detector test	Status	Zone : 2	Normal	Detector : 3	Normal	A-Value	<div style="background-color: black; width: 10%; height: 10px;"></div>	0,0%/m	Pre alarm	<div style="background-color: black; width: 30%; height: 10px;"></div>	2,7%/m	Alarm	<div style="background-color: black; width: 50%; height: 10px;"></div>	3,4%/m	A-Value	<div style="background-color: black; width: 70%; height: 10px;"></div>	4,5%/m	Pre alarm	<div style="background-color: black; width: 40%; height: 10px;"></div>	2,7%/m	Alarm	<div style="background-color: black; width: 60%; height: 10px;"></div>	3,4%/m	<h3>Detector test (only for addressable detectors)</h3> <p>First zone and detector number (within the zone) has to be typed. Every line has to be confirmed by “OK”.</p> <p>The push button F4 („set / unset“) can be used to configure if the outputs of the FCP shall be activated during the test alarm or not. The current selection is displayed in the last but one line of the LC module (here : „outputs inactive“).</p> <p>After that the test alarm can be activated by pressing F2 („On“).</p> <p>By using the „System Settings“ (parameter 16) it is possible to configure an auto-reset of the test alarm condition or no auto-reset. In that case the test alarm has to be reset by pressing „Reset“  .</p> <p>The bar charts as in the <u>example on the left side</u> show how the test alarm will arise (see A-value). If the analogue value passes the alarm threshold the detector goes into alarm condition.</p>
Detector test	Status																									
Zone : 2	Normal																									
Detector : 3	Normal																									
A-Value	<div style="background-color: black; width: 10%; height: 10px;"></div>	0,0%/m																								
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24	<p>Manual Controlling</p> <p>1. Output 2. Relay 3. Power Output 4. Output module</p> <p>Cancel Enter</p>	<p>Menu "Manual Controlling"</p> <p>Please select the kind of output you want to activate manually (1-4). The possibilities are :</p> <ol style="list-style-type: none"> Output means internal OC-outputs on main board and loop cards → Jump to Menu 24.1 Relay means 4 internal dry contact relays on main board → Jump to Menu 24.2 Power Output means 3 internal monitored power outputs 24V / 500 mA on main board → Jump to Menu 24.3 Output module means loop modules → Jump to Menu 24.4
24.1	<p>Manual control Status</p> <p>from Output : 001 Active to Output :</p> <p>↓+1 ↑-1 Selection ->+10 <--10</p> <p>>001 Output 001 Main board 002 Output 002 Main board 003 Output 003 Main board</p> <p>Cancel On Off Enter</p>	<p>Manual Control: internal OC Outputs</p> <p>This menu to activate open collector outputs manually by the user / installer to test their function.</p> <p>Please select the OC output which shall be activated by the cursor keys :</p> <p>↑,↓ : Marker „>“ one line up / one line down <-, -> : Marker „>“ 10 lines up / 10 lines down or type the number of the OC output directly by using the keypad and confirm this by “OK” or by F4 (“Enter”).</p> <p>It is possible to operate several outputs simultaneously by using the “from – to” function.</p> <p>Underneath the grey line Selection you can see the location of the selected output:</p> <p>Outputs 1 – 8 : OC outputs on main board Outputs 9 – 17 : OC outputs on I/O extension</p> <p>After confirming the output the last line of the LC module changes and you can</p> <ul style="list-style-type: none"> ➤ activate the output by F2 (“On”) ➤ deactivate the output by F3 (“Off”) <p>The activations can be checked on the LC display because they will be displayed immediately or you can check the status as shown “Active” in the picture left side. If the output is not active it is indicated as “normal”.</p>
24.2	<p>Manual Control Status</p> <p>from relay : 001 Normal to relay :</p> <p>↓+1 ↑-1 Selection ->+10 <--10</p> <p>>001 Relay 001 Main board 002 Relay 002 Main board 003 Relay 003 Main board</p> <p>Cancel On Off Enter</p>	<p>Manual Control: 6 internal Relays</p> <p>This menu is used to activate the 6 internal relay outputs manually to test their function.</p> <p>Relay 1 – 3 : Relay on main board Relay 4 – 6 : Relay on I/O extension</p> <p>The way of operation is the same as in Menu 24.</p>

24.3	<table border="1"> <thead> <tr> <th>Manual Control</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>from power output : 001</td> <td>Normal</td> </tr> <tr> <td>to power out :</td> <td></td> </tr> <tr> <td>↓+1 ↑-1 Selection ->+10 <--10</td> <td></td> </tr> <tr> <td>>001 Power output1</td> <td>Main board</td> </tr> <tr> <td>002 Power output2</td> <td>Main board</td> </tr> <tr> <td>003 Power output3</td> <td>Main board</td> </tr> <tr> <td>Cancel On Off</td> <td>Enter</td> </tr> </tbody> </table>	Manual Control	Status	from power output : 001	Normal	to power out :		↓+1 ↑-1 Selection ->+10 <--10		>001 Power output1	Main board	002 Power output2	Main board	003 Power output3	Main board	Cancel On Off	Enter	<p>Manual Control: 4 monitored Power Outputs</p> <p>This menu is used to activate the 4 internal monitored power outputs manually to test their function.</p> <p>Power output 1 – 2 : Power output on main board Power output 3 – 4 : Power output on I/O extension</p> <p>The way of operation is the same as in Menu 24.</p>
Manual Control	Status																	
from power output : 001	Normal																	
to power out :																		
↓+1 ↑-1 Selection ->+10 <--10																		
>001 Power output1	Main board																	
002 Power output2	Main board																	
003 Power output3	Main board																	
Cancel On Off	Enter																	
24.4	<table border="1"> <thead> <tr> <th>Manual Control</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Zone : 2</td> <td>Active</td> </tr> <tr> <td>Detect : 3</td> <td>Active</td> </tr> <tr> <td>Output/Relay : 1</td> <td>00000001</td> </tr> <tr> <td>Cancel On Off</td> <td></td> </tr> </tbody> </table>	Manual Control	Status	Zone : 2	Active	Detect : 3	Active	Output/Relay : 1	00000001	Cancel On Off		<p>Manual Control: Output modules (loop)</p> <p>This menu is used to activate output modules on the loops.</p> <p>Please type :</p> <ul style="list-style-type: none"> - the zone of the module - die number of the module within the zone - the output no. of the module <p>and confirm every line by “OK”.</p> <p>After confirming the output you can</p> <ul style="list-style-type: none"> ➤ activate the output by F2 (“On”) ➤ deactivate the output by F3 (“Off”) <p>The activations can be checked on the LC display because they will be displayed immediately as bit values. Or you can check the status as shown “Active” in the picture left side. If the output is not active it is indicated as “normal”.</p>						
Manual Control	Status																	
Zone : 2	Active																	
Detect : 3	Active																	
Output/Relay : 1	00000001																	
Cancel On Off																		
25	<table border="1"> <thead> <tr> <th>Simulation</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Zone : 5</td> <td>Normal</td> </tr> <tr> <td>Detect. : 33</td> <td></td> </tr> <tr> <td>Alarm unset (outputs inactive) !</td> <td></td> </tr> <tr> <td>Cancel Alarm</td> <td>set</td> </tr> </tbody> </table>	Simulation	Status	Zone : 5	Normal	Detect. : 33		Alarm unset (outputs inactive) !		Cancel Alarm	set	<p>Menu „Simulation“</p> <p>The purpose of the menu Simulation is to simulate alarm conditions of certain addressable detectors without having any detector connected. The intention is to test the configuration before installation of the panel.</p> <p>Please type the Zone and the Detector (Detector number, not physically address) and confirm every line by “OK”.</p> <p>The push button F4 („set“) can be used to switch the function of the outputs : „set“ means the outputs will be activated in case of a simulated alarm and „unset“ means the outputs will not be activated.</p> <p>The test alarm will be activated by F2 („Alarm“) and the LC module displays „ALARM“</p> <p>The alarm has to be reset by Reset FCP . Press cancel (F1) to leave this menu.</p>						
Simulation	Status																	
Zone : 5	Normal																	
Detect. : 33																		
Alarm unset (outputs inactive) !																		
Cancel Alarm	set																	

26	<table border="1"> <thead> <tr> <th colspan="2">Revision</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>from zone</td> <td>: 2</td> <td>Normal</td> </tr> <tr> <td>to zone</td> <td>: 4</td> <td>Normal</td> </tr> <tr> <td>Cancel</td> <td>On</td> <td>Off</td> </tr> </tbody> </table>	Revision		Status	from zone	: 2	Normal	to zone	: 4	Normal	Cancel	On	Off	<p>Menu „Revision“</p> <p>The revision mode can be used to check the detectors by detector test equipment (e.g. Solo test equipment). When the detector is activated by the test equipment the alarm is displayed at the FCP and reset automatically if analogue value falls below the alarm threshold.</p> <p>Please type in the number of zones which shall be investigated by the revision mode. Every line has to be confirmed by “OK“.</p> <p>Please activated the revision mode for the selected zones by F2 („on“). <u>Pay attention: the zones in revision will be displayed at the panel as „disabled“.</u></p> <p>The alarm of such a zone will be displayed in the LC module as „T E S T A L A R M“</p> <p>After finishing the revision do not forget to switch off the revision mode by F3 („Off“) because an alarm of these zones will not be transmitted to the fire brigade.</p> <p>The Apollo DISCOVERY sounder will be set in configuration mode by setting the group to revision. This enables the functions to switch it on / off and change volume setting by the magnetic wand. After switching the revision off you can accept or discard the volume change of each sounder.</p>						
Revision		Status																		
from zone	: 2	Normal																		
to zone	: 4	Normal																		
Cancel	On	Off																		
27	<table border="1"> <thead> <tr> <th colspan="3">Settings 1</th> </tr> </thead> <tbody> <tr> <td>1. Date/Time</td> <td>5. Delete program</td> <td></td> </tr> <tr> <td>2. System settings</td> <td>6. Delete texts</td> <td></td> </tr> <tr> <td>3. Scan RS485</td> <td>7. Delete Events</td> <td></td> </tr> <tr> <td>4. Scan detectors</td> <td>8. Language</td> <td></td> </tr> <tr> <td>zurück</td> <td>mehr</td> <td>Enter</td> </tr> </tbody> </table>	Settings 1			1. Date/Time	5. Delete program		2. System settings	6. Delete texts		3. Scan RS485	7. Delete Events		4. Scan detectors	8. Language		zurück	mehr	Enter	<p>Settings 1 of FCP</p> <ol style="list-style-type: none"> To change date, time and day of the week → Jump to Menu 28 To enter sub menu for system settings where some individual hardware and software features can be configured → Jump to Menu 29 After pressing 3. LCD repeater panels connected to serial interfaces will be scanned. The number of found devices will be displayed in the last but one display line → Jump to Menu 30 To enter sub menu for new scanning of addressable detectors → Jump to Menu 31 To delete configuration of FCP. Before deleting there will be a security inquiry → Jump to Menu 32 To delete detector texts. Before deleting there will be a security inquiry → Jump to Menu 33 To delete all events in event memory. Before deleting there will be a security inquiry → Jump to Menu 34 To change the panel's language → Jump to Menu 35 <p>For another settings menu please press F3 („more“) to enter sub menu „Settings 2“ → Jump to Menu 36</p>
Settings 1																				
1. Date/Time	5. Delete program																			
2. System settings	6. Delete texts																			
3. Scan RS485	7. Delete Events																			
4. Scan detectors	8. Language																			
zurück	mehr	Enter																		
28	<table border="1"> <thead> <tr> <th colspan="3">Date/Time</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td>: 09</td> <td>Friday</td> </tr> <tr> <td>Month</td> <td>: 07</td> <td>Winter</td> </tr> </tbody> </table>	Date/Time			Day	: 09	Friday	Month	: 07	Winter	<p>To set date and time</p> <p>Please type the right data line by line and confirm every line by OK.</p>									
Date/Time																				
Day	: 09	Friday																		
Month	: 07	Winter																		

	Year : 04 Hour : 07 Minute : 46 Second : 39 Cancel Maintenance save	<p>Weekday for timer programs will be calculated automatically.</p> <p>It is not necessary to configure summer or winter time because the panel does this automatically. This means at the last weekend in March and October the panel switches to summer or winter time. This can be deactivated if you go to System settings (Menu 29) → item 7.</p> <p>By pressing F3 ("Maintenance") a Maintenance interval can be configured. When this interval elapsed, a fault message will be generated -> Menü 28.1</p> <p>When you have finished data, time and weekday please press F4 („save“) to save the new configuration.</p>																																						
28.1	Maintenance Day : 09 Status Month : 07 Off Year : 07 Hour : 10 Cancel On save	<p>Maintenance</p> <p>Here you can define a date for the next necessary maintenance. When this date is reached, a fault message will be generated.</p> <p>By pressing F2 ("on") this function will be enabled.</p> <p>By pressing F4 ("save") the date will be saved..</p>																																						
29	System settings FBC settings : 00 ↓+1 ↑-1 Selection ->+10 <--10 >01: FBC settings (0-5) 00 02: battery capacity (0-2) 00 03: FCP cover contact (0-2) 01 Cancel save <p>*) If the German Fire Brigade Control Panel is connected to the „Solution F1“ the following outputs are occupied :</p> <ul style="list-style-type: none"> - Output OC 09 – 14 on i/o extension for NSC-FBC - Output OC 09 – 15 on i/o extension for SeTec-FBC - Input 05 – 09 on i/o extension (see wiring diagram) 	<p>System settings</p> <p>Here the user can configure certain individual software and hardware settings which are listed in the table below.</p> <p>The marker „>“ indicates the kind of setting which the user is configuring at the moment. It is displayed in the 2. line of the LC module.</p> <p>Please select the setting by the cursor keys and type the right value according the table below. The possible values are listed in brackets.</p> <p>If all settings are configured please press F4 („save“) to save the new configuration.</p> <p>The FCP supports the following settings :</p> <table border="1" data-bbox="831 1505 1420 2042"> <thead> <tr> <th>Nr.</th> <th>Parameter</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="3">01</td> <td>FBC</td> <td>0</td> <td>no FBC</td> </tr> <tr> <td>(Fire Brigade Control Panel)</td> <td>1 *)</td> <td>NSC-FBC</td> </tr> <tr> <td></td> <td>2 *)</td> <td>SeTec-FBC</td> </tr> <tr> <td rowspan="3">02</td> <td rowspan="3">Transmission Device</td> <td>3</td> <td>FBC Switzerland</td> </tr> <tr> <td>0</td> <td>continous</td> </tr> <tr> <td>1</td> <td>impulse</td> </tr> <tr> <td rowspan="2">03</td> <td rowspan="2">FCP cover contact</td> <td>2</td> <td>impulse & impulse feedback</td> </tr> <tr> <td>0</td> <td>Deactivated</td> </tr> <tr> <td rowspan="2"></td> <td rowspan="2"></td> <td>1</td> <td>Switch off TD</td> </tr> <tr> <td>2</td> <td>Switch on and off TD</td> </tr> <tr> <td>04</td> <td>Mains fault delay</td> <td>0-30</td> <td>Minutes</td> </tr> </tbody> </table>	Nr.	Parameter	Value	Description	01	FBC	0	no FBC	(Fire Brigade Control Panel)	1 *)	NSC-FBC		2 *)	SeTec-FBC	02	Transmission Device	3	FBC Switzerland	0	continous	1	impulse	03	FCP cover contact	2	impulse & impulse feedback	0	Deactivated			1	Switch off TD	2	Switch on and off TD	04	Mains fault delay	0-30	Minutes
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		2	Switch on and off TD																																					
04	Mains fault delay	0-30	Minutes																																					

		only with FBC Switzerland (s. Parameter 1)	0-60	Minutes
	05	Fault reset	0	Automatically
			1	by „  “
	06	Fault remind	0-30	Minutes or 0=no remind
	07	Summer time switching	0	Automatically
			1	Off
	08	Detector LED flash at polling	0	Off
			1	On
	09	---unused---	0	
	10	Sounder output Activation	0	In case of main alarm
			1	At any alarm
	11	---unused---	0	
	12	Calibration time	0-24	Corresponds to time
	13	Earth fault detection	0	On
			1	Off
	14	Earth fault sensitivity	0-9	0 = high (<9,0V & >17,0V) 9 = low (<4,5V & >22,0V)
	15	Pre alarm (for all detectors)	0	Off
			1	On
	16	Reset detector test	0	Automatic
			1	Manual
	17	RS485 channels	1,2	Corresponds to the numbers of channels
	18	Battery capacity	0	12 Ah
		1	17 Ah	
		2	24 Ah	
19	Buzzer at information	0-1	0 = off 1 = on	
20	Reset 1 st alarm		0, 5-99 Min.	
21	Calibration Fault	0-24	Time for message display of calibration faults.	
22	call accept after restart	0	off	
		1	on	
30	<p style="text-align: center;">I N I T I A L I S A T I O N</p> <hr/> <p style="text-align: center;">RSRS485 Devices : 001 -----</p>	<p>Scanning RS485 devices</p> <p>The FCP scans the serial interfaces for connected LCD repeater panels and fire brigade repeater panels.</p> <p>The number of recognized devices is displayed in the last but one line (here: 1).</p>		
31	<p>Scan detectors</p> <p>Loop module : 01</p>	<p>Scan detectors</p> <p>This menu relates to addressable detectors only.</p>		

	<p> ↓+1 ↑-1 Selection →+10 ←-10 > Loop module 01 Loop module 02 Cancel all Enter </p>	<p>The sense of this function is to scan all detectors of one loop to find some new installed detectors or if some detectors are removed.</p> <p>Please type the loop no. and confirm it by OK. After pressing Enter (F4) a safety request "Are you sure ?" appears on the LC module. If you confirm it by Yes (F4) the selected loop starts scanning all connected detectors again.</p> <p>Alternative you can select all loops for new scanning by pressing all (F2). Again the question „Are you sure ?“ appears on the LC module and you can confirm it by Yes (F4).</p>
32	<p>Delete program</p> <p>Are you sure ?</p> <p>No Yes</p>	<p>Delete Configuration</p> <p>This function deletes all configurations besides the individual texts of the detectors. Even zones, macro push buttons and timer programs will be deleted.</p> <p>Before deleting there will appear the question "Are you sure ?" on the LC module which has to be confirm by Yes (F4).</p> <p>These configurations will not be deleted :</p> <ul style="list-style-type: none"> ➤ Texts of the detector ➤ Event memory
33	<p>Delete texts</p> <p>Are you sure ?</p> <p>No Yes</p>	<p>Delete Texts</p> <p>This function deletes all individual texts of the detectors.</p> <p>Before deleting there will appear the question „Are you sure ?“ on the LC module which has to be confirm by Yes (F4).</p>
34	<p>Delete Events</p> <p>Are you sure ?</p> <p>No Yes</p>	<p>Delete Events</p> <p>This function deletes the event memory.</p> <p>Before deleting there will appear the question „Are you sure ?“ on the LC module which has to be confirm by Yes (F4).</p>
35	<p>Language</p> <p>1. German 5. czech 2. English 6. italian 3. portuguese 4. dutch</p> <p>Cancel Enter</p>	<p>Selecting the panel language</p> <p>Use this function to select the panel language on the LC module. Please choose one of the numbers offered on the LC module to select the right language.</p>
36	<p>Settings 2</p> <p>1. Installer code 5. Loop parameters 2. Interfaces 6. Options 3. Modem 4. Power Outputs</p> <p>Cancel more Enter</p>	<p>Einstellungen 2 der BMZ</p> <ol style="list-style-type: none"> 1. To change installer access code → Jump to Menu 37 2. To enter sub menu of 3 serial interfaces RS-232. It is possible to configure the interfaces with different protocols and different baud rates → Jump to Menu 38 3. Opens input screen "Modem" → Jump to Menu 39 4. Opens input screen to adjust the power outputs → jump to Menü 41 5. Opens input screen to configure the loops → jump to Menu 42

		<p>6. Opens input screen to unlock possible options → Menu 43</p> <p>By pressing Cancel(F1) you get back to menu Settings 1 → jump to Menu 27</p>
37	<pre> Installer old access code: 00000 new access code: 22351 new access code: 22351 Cancel </pre>	<p>Changing the installer access code</p> <p>First you have to type the old access code, then you have to type two times the new access code.</p> <p>Every line has to be confirmed with „OK“.</p> <p><u>Example left side : old access code 00000 is replaced by new access code 22351.</u></p>
38	<pre> Interfaces 1. UART 1 2. UART 2 3. UART 3 Cancel Protocol Baud rate </pre>	<p>Configuring the interfaces</p> <p>The FCP offers 3 different serial interfaces RS-232 (see wiring diagrams). UART 3 only is available, if the RS485 extension module is mounted.</p> <p>For every interface a certain protocol can be configured e.g. for printer, PC configuration etc. This means the FCP is easily to adapt to the required application and very flexible.</p> <p>Please select UART 1, 2 or 3 by the cursor keys ↑,↓ and then press F2 („Protocol“) → Jump to Menu 38.1</p> <p>After that you can configure the “baud rate” by pressing F3 → Jump to Menu 38.2</p>
38.1	<pre> Interfaces UART 1 1. Printer 5. Modbus PLC 2. FRP 3. PC 4. ESPA 4.4.4 Cancel On save </pre>	<p>Interface protocols</p> <p>The example on the left side shows <u>UART 1</u>. Please select the protocol you want to assign to UART 1 by using the cursor keys. The following protocols are available :</p> <ul style="list-style-type: none"> ➤ Printer ➤ FRP (Fire Brigade Repeater Panel) ➤ PC configuration (Laptop) ➤ ESPA 4.4.4 (Option) ➤ Modbus PLC <p>After selecting the protocol it has to be activated by pressing On (F2). The activation will be indicated in the 1st display line.</p> <p>By pressing Off (F3) the protocol will be deactivated again.</p> <p>Press save (F4) to save the new configuration.</p>
38.2	<pre> Interfaces UART 1 1. 4800 5. 57600 2. 9600 x 6. 115200 3. 19200 7. 1200 4. 38400 8. 2400 Cancel Off save </pre>	<p>Interface baudrates</p> <p>The example on the left side selects baudrate of 9600 of UART 1.</p> <p>After selecting the baudrate it has to be activated by pressing On (F2). The activation will be indicated in the 1st display line.</p> <p>By pressing Off (F3) the protocol will be deactivated again.</p>

		Press save (F4) to save the new configuration																														
39	<p>Modem</p> <p>1. Call accept on 2. Call accept off 3. Initialisation 4. Hang up</p> <p>Cancel OK</p>	<p>Modem functions</p> <p>If there is mounted a telephone modem in the FCP, from here you can send commands to the modem. These commands are:</p> <ol style="list-style-type: none"> <u>Call accept on</u> Will cause the modem to answer an external phone call. <u>Call accept off</u> Disables the automatic call acceptance <u>Initialisation</u> Initializes the modem with an ATZ command <u>Hang up</u> Disconnects modem from telephone line. <p>By modem connection you can do the following actions:</p> <ul style="list-style-type: none"> Read settings Read eventmemory Read diagnostic data Online mode (Message display & Operation) <p>but</p> <ul style="list-style-type: none"> NOT writing settings to FCP 																														
41	<p>Power Outputs</p> <table border="0"> <thead> <tr> <th>No.:</th> <th>(old)</th> <th>Norm</th> <th>OC-Tol.</th> <th>Th.OC</th> <th>Th.SC</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>:</td> <td>(1008)</td> <td>1000 + 100 =</td> <td>1100 ,</td> <td>0738 Ohm</td> </tr> <tr> <td>2</td> <td>:</td> <td>(0995)</td> <td>0995 + 100 =</td> <td>1095 ,</td> <td>0734 Ohm</td> </tr> <tr> <td>3</td> <td>:</td> <td>(1283)</td> <td>1282 + 100 =</td> <td>1383 ,</td> <td>0882 Ohm</td> </tr> <tr> <td>4</td> <td>:</td> <td>(1375)</td> <td>1374 + 100 =</td> <td>1475 ,</td> <td>0974 Ohm</td> </tr> </tbody> </table> <p>Cancel Calib. save</p>	No.:	(old)	Norm	OC-Tol.	Th.OC	Th.SC	1	:	(1008)	1000 + 100 =	1100 ,	0738 Ohm	2	:	(0995)	0995 + 100 =	1095 ,	0734 Ohm	3	:	(1283)	1282 + 100 =	1383 ,	0882 Ohm	4	:	(1375)	1374 + 100 =	1475 ,	0974 Ohm	<p>Power outputs: Thresholds</p> <p>Here for the 4 monitored power outputs the thresholds for open circuit and short circuit can be adjusted. The thresholds depend on the load resistance of the connected device inclusive the line resistance. This total resistance can be ascertained automatically for each power output individually by pressing Calib.(F3). The software then automatically calculates the thresholds for open circuit and short circuit.</p> <p>In brackets you see the value of the last calibration procedure, behind the 1st colon you see the actual value and behind the second colon you see the tolerance for each power output. The tolerance for the thresholds can be changed in the range 40 to 200Ω.</p> <p>The resistance can also be measured with a multimeter and typed in directly using the keyboard.</p>
No.:	(old)	Norm	OC-Tol.	Th.OC	Th.SC																											
1	:	(1008)	1000 + 100 =	1100 ,	0738 Ohm																											
2	:	(0995)	0995 + 100 =	1095 ,	0734 Ohm																											
3	:	(1283)	1282 + 100 =	1383 ,	0882 Ohm																											
4	:	(1375)	1374 + 100 =	1475 ,	0974 Ohm																											
42	<p>Loop parameters</p> <table border="0"> <tr> <td>Loop</td> <td>:</td> <td>1</td> </tr> <tr> <td>Open circuit</td> <td>:</td> <td>999 Ohm</td> </tr> <tr> <td>Short circuit</td> <td>:</td> <td>100 mA</td> </tr> <tr> <td>Number of detector LEDs</td> <td>:</td> <td>4</td> </tr> </table> <p>Cancel save</p>	Loop	:	1	Open circuit	:	999 Ohm	Short circuit	:	100 mA	Number of detector LEDs	:	4	<p>Loop parameters</p> <p>In this menu the values for open circuit and short circuit determined with the loopcalculation program (Excel sheet) can be entered. Furthermore the number of detector LEDs, that will be activated simultaneously on a loop, can be specified in the range 3-12. This input is important for the maximum alarm current, which has influence on the maximum allowed cable length and, as a consequence, to the functionality of the system.</p>																		
Loop	:	1																														
Open circuit	:	999 Ohm																														
Short circuit	:	100 mA																														
Number of detector LEDs	:	4																														

4. Firmware Update

For the flash update of the Solution F2 firmware you need the following items:

- PC with NSC configuration software version 4.0.0.0 or higher
- USB cable type A (PC) to type B (Solution F2)
- Actual firmware file 'S031Ann.nn.xmot' (nn.nn = actual version number)

Preparation

1. connect USB cable between PC and Solution F2 and start the configuration software.
2. **store the actual configuration on your PC**
3. if necessary, also store the event memory on your PC.

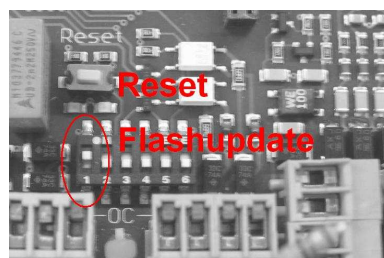
Start of Bootloader & Flash Update Routine

To start the Bootloader DIP switch 1 on the main board has to be set to the upper position (on). After a hardware reset the menu of the bootloader will be displayed.

```

=====Bootloader Version 01.01=====

1 - Start Firmware           in 30 sec.
2 - Flash Update
  
```



If no input will be done within 30 seconds the actual firmware will start automatically. The same result you get by pressing key '1'.

By pressing key '2' the flash update routine of the Solution F2 will be started and the actual flash status will be displayed.

```

=====Flashupdate=====

Maincontroller:      000000 Bytes written
XXXXXXXXXXXXXXXXXXXX-----X

Slavecontroller:    000000 Bytes written
XXXXXXX-----X
|
  
```

Explanation of symbols

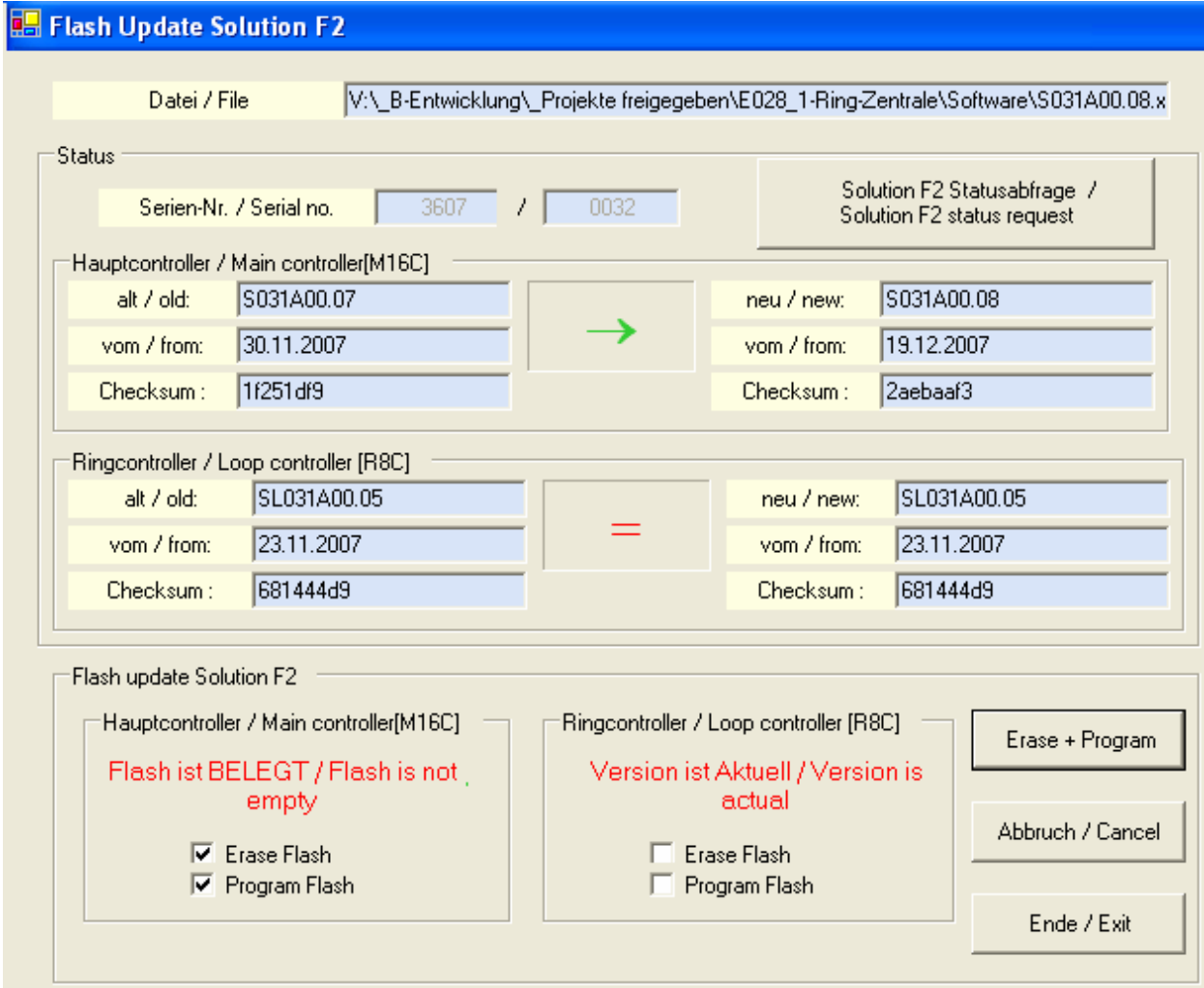
- X = used flash block
- = empty flash block
- P = new programmed block

the rotating line in the right bottom corner signals the communication with the PC.

Now the panel is ready to perform a flash update. The LCD shows the actual flash status of both microcontrollers of the panel.

Execute flash update

In the status bar at the bottom of the configuration software window the text "USB Solution F2" has to be displayed. By a click on "Flash" in the symbol bar the flash program for Solution F2 will be started. In the following "file open" dialog you then have to select the new firmware file (file extension xmot).



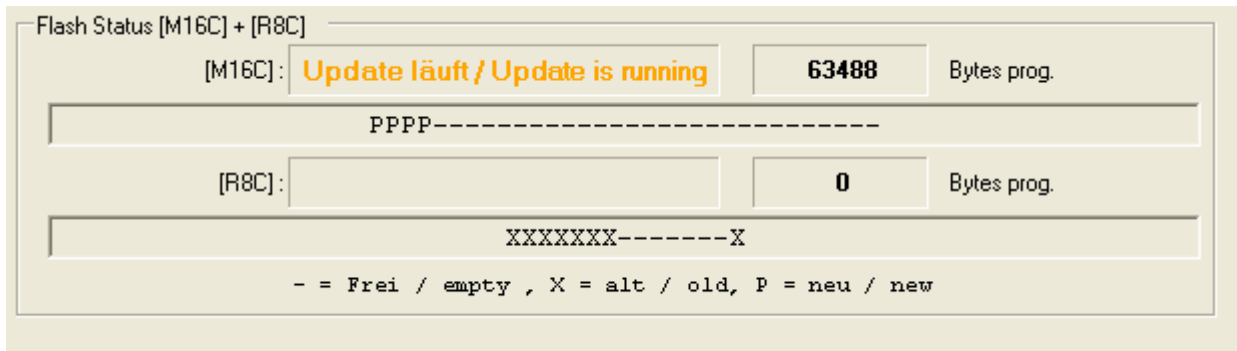
In the upper area of the window the status of the Solution F2 will be displayed. On the left side the actual firmware versions of the panel will be displayed, on the right side you can see the new versions from the firmware file.

In the middle a symbol is shown for the result of the version comparison. A green arrow '→' marks a different version and the recommendation for an update. A red '=' marks an unchanged firmware version. A click on the button "Solution F2 status request" actualizes the status display.

In the lower part of the window the possible flash functions are fixed. That means **Erase Flash** and **Program Flash** of each microcontroller.

Normally the presets don't have to be changed.

By a click on "Erase + Program" the selected flash functions will be executed.



During the updates a status display is shown in the lower part of the window. Here you can see the progress of the flash programming procedure.

After the updates have finished you can leave the program by pressing the "Ende / Exit" button.

At the panel Solution F2 you can leave the flash update routine by pressing the "ESC" key. Then you reach again the bootloader menu and you can start the firmware by pressing '1'. After a short time there should be the initialization display present followed by the display of recognized hardware modules. Now you just have to switch off DIP switch 1 again (down position). This can be done while the system is running.

After start of the new firmware you must do the following 2 steps.

- 1. Delete program and texts by "Prog" - "Installer" - "6 - settings" - "5 - Delete Program" and "6 - Delete texts"**
- 2. Download your programming file back to the panel.**

Errors and possible reasons

In case of any problems during flash update you should try one of the following proposals. If there are more than 1 proposal for any item you should always try no. 1 at first. If it is not successful you should continue with the next proposal.

Solution F2: Flash update routine "Communication Fault"

The communication between the 2 microcontrollers didn't work correctly.

- Remedy:
1. leave flash update routine by "ESC" and retry by pressing '2'
 2. press hardware reset button on main board and start flash routine by pressing '2'

Solution F2: Firmware doesn't start

The flash area with the FCP firmware doesn't contain valid data.

- Remedy:
- Please execute again the flash update. The main controller has to be erased and programmed in any case, the loop controller usually can remain as it is.

Solution F2: after flash update the panel doesn't recognize any detectors

The flash update of the loop controller has missed, or the controller did not start correctly.

- Remedy:
1. check that DIP switch 1 is off (down) and restart the panel by hardware reset button
 2. execute again flash update for the loop controller. The loop controller has to be erased and programmed in any case, the main controller usually can remain as it is.
 3. execute again the flash update for the main controller.

PC software "Invalid Handle"

The USB communication between Solution F2 and PC is not working.

Remedy: 1. disconnect and connect again USB cable.
2. check the Windows system settings for display of any driver conflicts

PC Software "Timeout Solution F2 Response"

The Solution F2 doesn't answer to commands from PC

Remedy: leave flash update routine by "ESC" and retry by pressing '2'.

PC Software "Erase error"

If the FCP only displays "----" as status for any controller, erasing has been successful but probably a timeout has occurred on PC and success message has not been received.

Remedy: deactivate the erase function and program again that microcontroller.

If the flash memory is marked as "not empty" also at the Solution F2, the command hasn't been executed correctly.

Remedy: exit flash update routine at FCP by pressing 'ESC', restart by pressing '2' and retry programming from PC again.

PC Software "Update error"

During programming one or more errors occurred. The programmed firmware must not be used, probably the firmware file is damaged.

Remedy: 1. retry flash update with same firmware file
2. retry flash update with new firmware file

PC Software "Checksum F2 Response"

Communication error between PC and Solution F2


Remedy: retry the last executed function.

PC Software "Unexpected F2 Response : Cmd ="

The Solution F2 answered with unexpected data

Remedy: use latest version of PC configuration software.

5. Mounting instruction

1. First please remove the cover of the FCP. You will find the key on the backside of the panel housing.
2. In the FCP Solution F2 package you will find a drilling template for easier mounting. Please use this template for drilling the holes.
3. Please use 8mm dowels for fixing the screws. Start with the upper screws.
4. Please open the cover of the FCP. Don't put the batteries into the panel yet. Hang the FCP on the upper screws and then fix the screws of the lower holes.
5. The control panel can be opened by unscrewing the inner metal, lift up the panel a bit and turn it down then. Hereafter you get free access to the terminals for connecting the wires.
6. Don't connect the panel to Mains AC yet. Use the wiring diagrams for connecting loops, conventional zones and sounders / strobes.
7. If you are connecting the shielding of the loop wires (the FCP „Solution F1“ does NOT need that in any case but it can be advantageous to do so) then you have to connect the wire on both sides at the loop card.
8. Please connect peripheral components like LCD repeater panels, remote control panels etc.
9. Now you have to connect the Mains AC cable. Make sure that the Mains AC fuse on the power supply is plugged in.
10. Switch on Mains AC voltage.
11. If the internal buzzer sounds, please switch of by using push button  .
12. Put the batteries on the bottom of the panel housing and fix them by using the cable fixer.
Connect the batteries to the power supply by using the supplied cables (see wiring diagram).
13. Please follow the commissioning instruction.

6. Commissioning of Solution F2

Serial number	Date of delivery
Commission/ Sight	Installed by : date, technician

General

The commissioning according the national rules requires the complete and accurate installation of all components of fire control system, as it is specified in the engineering documents.

Checking the documentation

Document	available yes/no	Repository
Engineering order		
Final planning documents		
Updated planning documents		
Fire brigade documents		

Checking the system components

You have to compare the quantity of planned components with the quantity of actually installed components.

Component	Planned quantity	Installed quantity
Fire control panel		
Modules for addressable detectors		
Automatic detectors		
Manual call points		
Input-/output modules		
Sounder modules		
LCD repeater panel		
Fire brigade panel		
Fire brigade remote panel		
Transmission device		
Fire brigade key deposite box		
Additional power supply		
Sounder		
Flashlight		

Checking the wiring system

Before checking the wiring system you should disconnect all cables from the fire control panel by removing the pluggable terminals.

Measure cable resistance of loop wiring (without voltage)

If isolators are installed on the loop you only can measure the resistance of the minus wire.

You have to measure the cable resistance of each loop. The minimum operating voltage for each loop device will be calculated from the cable resistance and the loop current, which has to be measured later.

The resistance of the shielding also has to be written down in the following table. Additionally this measurement guarantees that the shielding isn't interrupted in any loop device. As long as the shielding hasn't been connected to earth in the FCP there must not be any other connection to earth potential (e.g. in a detector base). You can check this by measuring the resistance between the shielding and earth potential.

Loop	ML-Wire [Ω]	Shielding [Ω]	Earthless wiring	
1 (ML-1-/ML-2-)			yes <input type="checkbox"/>	no <input type="checkbox"/>
2 (ML-3-/ML-4-)			yes <input type="checkbox"/>	no <input type="checkbox"/>

If the cable resistance is correct please plug the terminals in the FCP.

Measurement of the end of line resistors of the monitored power outputs (without voltage)

Power output	Key deposit box	Sounder/flashlight	Transmission device	
1 main board	-	1KΩ/1W tolerance 10%	-	O fault O ok
2 main board	-	1KΩ/1W tolerance 10%	-	O fault O ok
3 I/O extension	-	1KΩ/1W tolerance 10%	depends on type	O fault O ok
4 I/O extension	depends on type	1KΩ/1W tolerance 10%	-	O fault O ok

The end of line resistor has to be mounted in the last device of the power output cable. The adaption of open circuit and short circuit thresholds for the connected devices has to be done directly at the FCP. Please go to "Installer" -> "more" (F3) -> "Power outputs".

Measurement of the end of line resistors of the monitored inputs (without voltage)

Input line	End of line resistor	
Key deposit box alarm I/O extension	2,2KΩ/0,5W tolerance 10%	O fault O ok
Extinguish interface main board	3,3KΩ/0,5W tolerance 10%	O fault O ok

Checking the end of line resistor on the RS485 bus

End of line resistor activated at first and last device (jumper matched)? O o.k. O fault

Commissioning of the power supply

- plug 230VAC mains cable or check already plugged cable!
- switch on power supply for fire control panel!

The internal buzzer will be on: please switch off by pressing



Scanning of internal and external components

Detector modules

After scanning process and uploading of the programming out of the flash memory all recognised components will be displayed in a list.

Exampel:

```
Hardware modules
1. Loop module HOCHIKI ESP      : 02
2. Loop module Apollo XP/DISCOV: 00
3. Conventional detector module: 00
4. Input-/output extension     : 00↓
Cancel                          Details
```

Number of mounted detector modules correctly recognised? O o.k. O fault

By pressing the "Details" key **F3** the addresses of the modules can be checked.

Exampel:

```
Hardware modules                                01/02
>01 Detector module HOCHIKI ESP
  02 Detector module HOCHIKI ESP
Cancel                                          Details
```

Serial devices

Afterwards the serial interfaces will be scanned for connected components. The result with the number of recognized devices will be noticed in the module list.

Exampel:

```
Hardware modules
5. RS485 extension           : 00
6. Modem                     : 00
7. FRP/LCD repeater panel   : 00
8. RF interface              : 00
Cancel                       Details
```

Number of installed serial devices correctly recognized?	O o.k. O fault
--	----------------

By pressing the „Details“key **F3** the addresses of the modules can be checked.

Exampel:

```
Internal Modules           01/63
>01 FRP with FBC          A B
02 Remote LCD Panel       A
03 Remote LCD Panel       A
04 FRP                     A B
05 -
06 -
zurück                    Details
```

By letters "A" und "B" will be displayed, on which channel of the redundant RS485 bus each device has been connected.

Addresses of the RS485 devices correctly set?	O o.k. O fault
Wiring of the RS485 devices correct?	O o.k. O fault

Addressable detectors/modules

During the initialisation permanently a counter will be displayed which is counting the total number of all detectors and modules. After scanning the loop devices, a list of these devices will be displayed. This list will be visible each time the number of recognised detectors/modules has changed after scanning the loops. Therefore after first time initialisation process all new recognised detectors/modules will be listed.

Exampel:

```
Detector configuration      0001/0065
 Seg.  Add  Error  Zone  Detect
>01 o 1|001| new   | 0000 | 000
01 o 1|002| new   | 0000 | 000
01 o 1|003| new   | 0000 | 000
01 o 1|004| new   | 0000 | 000
01 o 1|005| new   | 0000 | 000
continue all ok ok
```

In line 1 the number of all recognised detectors and modules will be displayed. In the table for each device will be displayed :

- Segment (loop), where the device is connected to
- Symbol for loop "o" or spur wiring "-"
- number of loop/spur

- configured device address
- error code ("new" in this example)
- programmed zone and detector number

By pressing the "ok" key each single detector can be stored in the FCP programming, by pressing "all ok" all connected devices will be stored in the FCP flash memory simultaneously.

Checking of earth fault

A constant voltage must not be measurable between potential earth and fire control panel potential there

Voltage between PE / - accumulator	O o.k. O fault ->V
Voltage between PE / + accumulator	O o.k. O fault ->V

In case of an earth fault this has to be localised by disconnecting single cables in the fire control panel. Then the earth fault has to be removed. The supervision of an earth fault can be deactivated by system parameter 13.

Measurement of loop voltage and current

Dependent of the used multimeter the voltage and the current will vary differently. This is caused by the modulated protocol between the FCP and the loop devices. For the measurement of the current the loop has to be separated on one side in the FCP and on the other side the current has to be measured on the ML+ or ML- wire. At the same time the loop devices have to be in the quiescent state. Decisive for a faultless operation is the fact, that all loop devices are supplied by a sufficient voltage (17V). The voltage drop on the cable has to be calculated from the quiescent current and the cable resistance measured under point 4.2.

Loop	Voltage 33V ± 3V	Quiescent current [mA]	Voltage drop[V] (quiescent current x cable resistance)
1 (ML-1-/ML-2-)			
2 (ML-3-/ML-4-)			

Configure power outputs

Load resistance	Tolerance
Power output 1 (0480)	: 0476 : 060
Power output 2 (1045)	: 1059 : 060
Power output 3 (0958)	: 0960 : 060
Power output 4 (0721)	: 0740 : 060
Cancel	Calib. save

The thresholds depend on the load resistance of the connected device inclusive the line resistance. This total resistance can be ascertained automatically for each power output individually by pressing "calib." **F3**. The software then calculates the thresholds for open circuit and short circuit. The resistance can also be measured with a multimeter and typed in directly using the keyboard.

Configuration of the fire control system

The configuration of the fire control system is very comprehensive and is mainly dependent of the largeness of installation. The details have to be specified in the planning documents. The following checklist describes the individual steps of the programming of the fire control panel:.

Programming	Menu topic		
Zones	by PC software	<input type="radio"/>	ok.
Detector configuration	by PC software	<input type="radio"/>	ok
- sensitivity		<input type="radio"/>	not used
- mode of multisensors		<input type="radio"/>	not used
- timer program		<input type="radio"/>	not used
- prealarm		<input type="radio"/>	not used
- alarm delay		<input type="radio"/>	not used
Detector texts	by PC software	<input type="radio"/>	ok
<input type="radio"/>	not used		
Programming	Menu topic		
Zone parameters	by PC software	<input type="radio"/>	ok
- cross detection		<input type="radio"/>	not used
- internal alarm zone		<input type="radio"/>	not used
- fault zone		<input type="radio"/>	not used
- manual call point (only for conventional detectors or modules)		<input type="radio"/>	not used
Cross zoning	by PC software	<input type="radio"/>	ok
Timer programs	by PC software	<input type="radio"/>	not used
- for delay		<input type="radio"/>	not used
- for detector sensitivity		<input type="radio"/>	not used
Delay	by PC software	<input type="radio"/>	ok
Power outputs	by PC software	<input type="radio"/>	not used
- key deposit box		<input type="radio"/>	not used
- sounders/flashlights		<input type="radio"/>	not used
- transmission device		<input type="radio"/>	not used
Controlling of relays, outputs or output modules	by PC software	<input type="radio"/>	ok
Loop sounders	by PC software	<input type="radio"/>	not used
Controlling by special keys	by PC software	<input type="radio"/>	ok
Systemparameters	Configuration	<input type="radio"/>	not used
Holidays	by PC software	<input type="radio"/>	ok
Interfaces	Configuration -> more	<input type="radio"/>	not used
Thresholds for conventional zones	Configuration -> more	<input type="radio"/>	ok
		<input type="radio"/>	not used

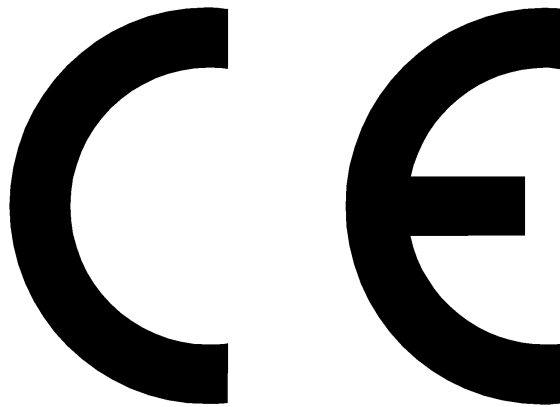
Functional tests

Test	Measured value	Test result
Normal operation - green LED „Operation“ lights - green LED „Night“ lights		O ok. O fault
Fire condition - Test of all automatic detectors - Test of all manual call points The fire condition can be generated in the installer level by functions "testalarm" or "simulation". Check display at FCP, remote panels and printer		O ok. O fault O ok. O fault
Fault condition - loop - power outputs - monitored inputs - RS485 bus - battery - mains fault (mains fault delay) Check display at FCP, remote panels and printerMin	O ok. O fault O ok. O fault O o.k. O fault O o.k. O fault O o.k. O fault
Disabled condition - detector - zone - power output Check display at FCP, remote panels and printer		O o.k. O fault O o.k. O fault O o.k. O fault
Alarm devices - transmission device activation - flash lights - sounders		O ok. O fault O ok. O fault O ok. O fault
Fire outputs - relays - outputs - output modules		O ok. O fault O ok. O fault O ok. O fault
Current of FCP at mains fault Required bridge over time Required battery capacitymAhAh	O ok. O fault O ok. O fault

7. Technical specifications :

Main AC voltage :	230V AC, -15% bis +10%, 50 – 60 Hz
Operating voltage :	24V DC (21,0 – 29,2 V DC)
Output supply current Solution F2 (Art. B01070-00) :	Max. 2,5 A
Battery charging current Solution F2 (Art. B01070-00) :	Max. 1,3 A
Output supply current Solution F2 (Art. B01080-00) :	Max. 3,5 A
Battery charging current Solution F2 (Art. B01080-00) :	Max. 1,3 A
Quiescent current FCP w/o additional modules:	101 mA
Quiescent current loop extension: B01100-00 :	9 mA (ohne Melder)
Quiescent current RS485 extension: B01115-00 :	8 mA
Quiescent current I/O extension B01110-00 :	16 mA
Battery charging voltage :	27,6 V (bei 20°C)
Battery low voltage:	21,0 V
Ripple voltage:	0,8 V pp
Operating temperature :	-5 bis +40°C
Humidity :	Max. 95 % rel. Luftfeuchtigkeit
Housing :	Stahlblech, RAL 7035
IP rating :	IP 42
Dimensions housing A :	370 x 320 x 128 mm (B x H x T)
Weight FCP Solution F2 with housing A :	6,0 kg
Dimensions housing B :	500 x 440 x 175 mm (B x H x T)
Weight FCP Solution F2 with housing B :	11,6 kg

8. CE marking :



0786

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0786-CPD-20670

EN54-2:1997 + A1:2006
EN54-4:1997 + A1:2002 + A2:2006

Fire control panel for fire equipment inside of buildings

Solution F2

Available options:

- Output to the triggering of alarm devices (EN54-2, Cl. 7.8)
- Triggering of transmission devices for fire detections (EN54-2, Cl. 7.9)
- Output for the triggering of fire protection devices (EN54-2, Cl. 7.10)
- Fault surveillance of fire protection devices (EN54-2, Cl. 7.10.4)
- Delay of transmission (EN54-2, Cl. 7.11)
- Dependence of the fire detection condition on more than one alarm signal – dependence type A, B (EN54-2, Cl. 7.12)
- Alarmcounter (EN54-2, Cl. 7.13)
- Fault signals from points (EN54-2, Cl. 8.3)
- Output to the routing devices for fault signals (EN54-2, Cl. 8.9)
- Disablement of addressable points (EN54-2, Cl. 9.5)
- Test condition (EN54-2, Cl. 10)
- Standardized I/O interface (EN54-2, Cl. 11)

For technical data see chapter 7 of this manual.



