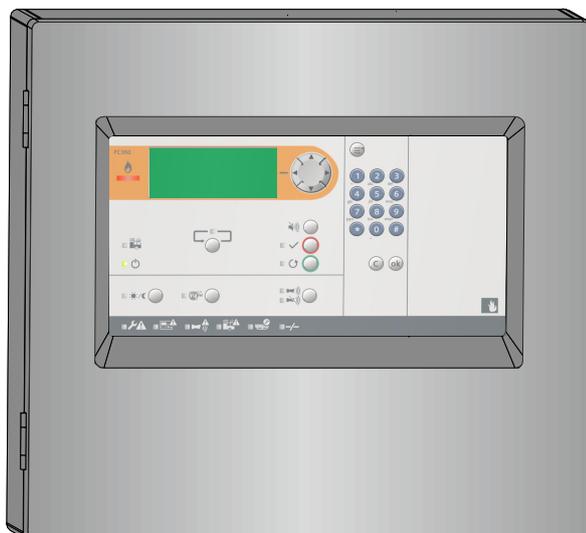


SIEMENS



FC361-xx

Fire control panel

Technical Manual

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1 About this document



- Specialist electrical engineering knowledge is required for installation.
 - Only an expert is permitted to carry out installation work.
- Incorrect installation can take safety devices out of operation unbeknown to a layperson.

Goal and purpose

The information provided in this manual is a summary of the key procedures and functions required to assemble, install, operate, commission and maintain the system.

It is intended to provide experienced and qualified personnel a guide on the required processes.

Scope

The technical manual applies to the Cerberus FIT fire control panel FC361-xx series.

Target groups

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

Target group	Activity	Qualification
Installation personnel	<ul style="list-style-type: none"> • Assembles and installs the product components at the place of installation. • Carries out a performance check following installation. 	<ul style="list-style-type: none"> • Has received specialist training in the area of building installation technology or electrical installations.
Commissioning personnel	<ul style="list-style-type: none"> • Configure the product at the place of installation according to customer-specific requirements. • Check the product operability and release the product for use by the operator. • Searches for and corrects malfunctions. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products. • Has attended the training courses for commissioning personnel.
Operating personnel	<ul style="list-style-type: none"> • Carries out procedures to correctly operate the product. 	<ul style="list-style-type: none"> • No particular basic training is needed. • Has been instructed by the commissioning personnel.
Maintenance personnel	<ul style="list-style-type: none"> • Carries out all maintenance work. • Checks that the products are in perfect working order. • Searches for and corrects malfunctions. 	<ul style="list-style-type: none"> • Has obtained suitable specialist training for the function and for the products.

Document identification

The document ID is structured as follows:

A6Vxxxxxxxx_aaAA_vv

A6Vxxxxxxxx_--AA_vv

A6Vxxxxxxxx_aa--_vv

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ID coding ¹	Description
A6Vxxxxxxxx x	STEP-ID generated by the STEP system
_	Separator
aa	Language abbreviation in accordance with ISO 639-1
AA	Country abbreviation in accordance with ISO-3166-1
--	Multilingual or international
vv	Document version, single or double digit: a, b, ...z; aa, ab, ...az; ba, bb, ...bz; etc.

- ¹ Some documents have different ID that are generated by an earlier system. There are also documents with up-to date ID codes along with additional features in the designation.

ID code	Examples
ID_languageCOUNTRY_version -- = multilingual or international	A6V10215123_deDE_a A6V10215123_en--_a A6V10315123_----_a

Date format

The date format in the document corresponds to the recommendation of international standard ISO 8601 (format YYYY-MM-DD).

Reference document and source language

- The source language of this document is English (en).
- The reference version of this document is the international version in English. The international version is not localized.

The reference document has the following designation:

ID_en--_x

x = version, en = English, -- = international

Conventions for text marking

Markups

Special markups are shown in this document as follows:

▷	Requirement for a behavior instruction
1. 2.	Behavior instruction with at least two operation sequences
–	Version, option, or detailed information for a behavior instruction
⇒	Intermediate result of a behavior instruction
⇒	End result of a behavior instruction
•	Numbered lists and behavior instructions with an operation sequence
[→ X]	Reference to a page number
'Text'	Quotation, reproduced identically
<Key>	Identification of keys
>	In addition to mathematical operator, for identification between steps in a sequence, e.g., 'Menu bar' > 'Help' > 'Help topics'

Supplementary information and tips



The 'i' symbol identifies supplementary information and tips for an easier way of working.

1.1 Applicable documents

The list below is used as a reference for the FC361-xx fire control panel and as a supplement to this document.

Number	Name
008250	Operation manual FDUL221 line tester
A6V10210416	FS720 Fire Detection System, Commissioning, Maintenance, Troubleshooting
A6V10419665	Datasheet FC361-xx fire control panel
A6V10421792	Installation FC361-xx fire control panel
A6V10421797	Operation manual FC361-xx fire control panel (short)
A6V10431009	Installation FTO3601-H1 evacuation module (NL)
A6V10431011	Installation FTO3602-Z1 LED indicator (16 zones)
A6V10431013	Installation FCA3601-Z1 / FCA3603-Z1 key switch
A6V10431015	Installation FCA3602-Z1 output card (4M)
A6V10450591	Installation FHD3601-Z1 door incl. PMI
A6V10450593	Installation FCM3601-Z1 mainboard

Number	Name
A6V10450595	Operation manual 'FC360 Panel Configurator'
A6V10882301	List of compatibility for FC361-xx fire control panel
A6V10893024	Installation FHA3602-Z1 semi flush mount bezel

1.2 Download center

You can download various types of documents, such as data sheets, installation instructions, and license texts via the following Internet address:

<http://siemens.com/bt/download>

- Enter the document ID in the 'Find by keyword' input box.



You will also find information about search variants and links to mobile applications (apps) for various systems on the home page.

1.3 Abbreviations

Abbreviations	Explication
AVC	Alarm Verification Concept
EOL	End of Line
MCP	Manual Call Point
PSU	Power Supply Unit
PMI	Person Machine Interface
EVAC	Evacuation
GUI	Graphical User Interface
EMC	Electro Magnetic Compatibility

1.4 History of changes

The reference document's version applies to all languages into which the reference document is translated.



The first edition of a language version or a country variant may, for example, be version 'd' instead of 'a' if the reference document is already this version.

The table below shows this document's history of changes:

Version	Edition date	Brief description
g	2016-11-18	Add information of mainboard FCM3601-Z1 and door incl. PMI FHD3601-Z1 in chapter 5.12 and chapter 12. Change default setting of relay 3 in chapter 5.9 and 5.5. Add 'Intended use' sub-chapter in chapter 2.1. Some minor editorial changes.
f	2016-08-23	Add technical information on output card (4M) concerning creeping open / creeping short when the output is configured as RT fault in chapter 5.11.4.
e	2016-08-18	Add technical information on output card (4M) concerning creeping open / creeping short in chapter 3.4.2 and 5.11.4.
d	2016-07-22	Completely update the document.
c	2016-04-08	Add RS485 / RS232 communication parameters in chapter 5.11.5. Change name of 'FC360 Tool' to 'FC360 Panel Configurator'. Change name of 'FC360 Editor' to 'FC360 Desktop Editor'. Change password of access level 3.1 in chapter 6.1. Add information of updating firmware of FT2010 / FT2011 / FDUL221 in chapter 9.7.
b	2016-02-23	Add sticker information in chapter 5.2. Add description to quit replace mode in chapter 8.3.4.3. Add how to adjust brightness in chapter 11.2. Update information in chapter 3.4.2 and chapter 5.8 about the total output current of configurable IOs and Aux power output is max. 0.2 A. Add access level 3.1 in chapter 6.1. Add action of P2 line overload in chapter 11.2. Add 'Shielded cable is required.' for RS485 application in chapter 5.11.5.
a	2015-06-08	First version

The table below shows the published language versions and country variants with the corresponding modification index:

Modification index	en_--	de_--	fr_--	it_--	es_--
g	X	-	X	X	X
f	X	-	-	X	-
e	X	-	-	-	-
d	X	-	-	X	-
c	X	-	-	-	-
b	X	-	-	-	-
a	X	-	-	-	-

X = published

- = no publication with this modification index

2 Safety

2.1 Intended use

The panel is intended to be mounted in a building to detect, evaluate and alarm in the event of fire, together with C-NET detector line.

2.2 Safety instructions

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

The safety notices in this document contain the following elements:

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

Symbol for danger

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

Additional danger symbols

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

	General danger		Explosive atmosphere
	Voltage/electric shock		Laser light
	Battery		Heat

Signal word

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

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

How risk of injury is presented

Information about the risk of injury is shown as follows:

	⚠ WARNING
	Nature and origin of the danger Consequences if the danger occurs <ul style="list-style-type: none"> • Measures / prohibitions for danger avoidance

How possible damage to property is presented

Information about possible damage to property is shown as follows:

	NOTICE
	Nature and origin of the danger Consequences if the danger occurs <ul style="list-style-type: none"> • Measures / prohibitions for danger avoidance

2.3 Safety regulations for the method of operation

National standards, regulations and legislation

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

Electrical installations

	⚠ WARNING
	Electrical voltage Electric shock <ul style="list-style-type: none"> • Work on electrical installations may only be carried out by qualified electricians or by instructed persons working under the guidance and supervision of a qualified electrician, in accordance with the electrotechnical regulations.

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



⚠ CAUTION

Noncompliance with the following safety regulations

Risk of injury to persons and damage to property

- Compliance with the following regulations is required.



- Specialist electrical engineering knowledge is required for installation.
- Only an expert is permitted to carry out installation work.

Incorrect installation can take safety devices out of operation unbeknown to a layperson.

Mounting, installation, commissioning and maintenance

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

Testing the product operability

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

Modifications to the system design and the products

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

Modules and spare parts

- Components and spare parts must comply with the technical specifications defined by Siemens. Only use products specified or recommended by Siemens.
- Only use fuses with the specified fuse characteristics.

- Wrong battery types and improper battery changing lead to a risk of explosion. Only use the same battery type or an equivalent battery type recommended by Siemens.
- Batteries must be disposed of in an environmentally friendly manner. Observe national guidelines and regulations.

Disregard of the safety regulations

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

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

2.4 Release notes

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

	⚠ WARNING
	<p>Limited or non-existent fire detection</p> <p>Personal injury and damage to property in the event of a fire.</p> <ul style="list-style-type: none"> • Read the 'Release Notes' before you plan and/or configure a fire detection installation. • Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

	NOTICE
	<p>Incorrect planning and/or configuration</p> <p>Important standards and specifications are not satisfied. Fire detection installation is not accepted for commissioning. Additional expense resulting from necessary new planning and/or configuration.</p> <ul style="list-style-type: none"> • Read the 'Release Notes' before you plan and/or configure a fire detection installation. • Read the 'Release Notes' before you carry out a firmware update to a fire detection installation.

2.5 Cyber security disclaimer

Products, solutions and services from Siemens include security functions to ensure the secure operation of building automation and control, fire safety, security management, and physical security systems. The security functions on these products, solutions and services are important components of a comprehensive security concept. Drafting, implementing and managing a comprehensive and up-to-date security concept, customized to individual needs, is nevertheless necessary, and may result in additional plant- or site-specific preventive measures to ensure secure operation of your site regarding building automation and control, fire safety, security management, and physical security. These measures may include, for example, separating networks, physically protecting system components, user training, multi-level defensive measures, etc. For additional information on security as part of building technology and our product, solution and service offerings, please contact your Siemens sales representative or project department. We strongly recommend to always comply with our security advisories on the latest security threats, patches and other related measures.

<http://www.siemens.com/cert/en/cert-security-advisories.htm>

3 System description

3.1 System overview

The panel is a compact panel with an integrated operating unit for processing signals from FD720 devices. See list of compatibility A6V10882301 in chapter 'Applicable documents [→ 9]'.
The panel is operated as standalone control panel.

The panel supports operation of the C-NET detector line in a loop or stub.

Automatic fire detectors (e.g. smoke and heat detectors), manual call points, I/O modules and other C-NET devices are connected to the C-NET detector line.

The picture below shows the FC360 system overview.

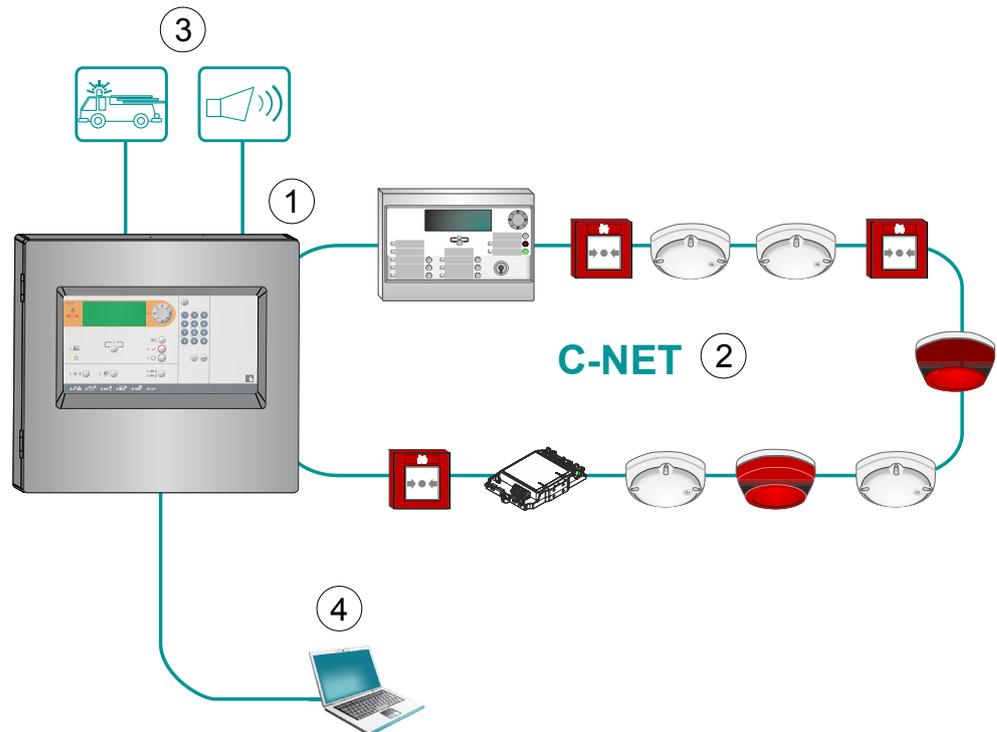


Figure 1: Overview of FC360 system

- 1 Fire control panel FC361-xx
- 2 C-NET detector line
- 3 Sounders, RT fire, RT fault, Fire controls, configurable IOs
- 4 FC360 configuration tools (i.e., 'FC360 Panel Configurator', 'FC360 Desktop Editor') for configuration via PC

3.2 Features

System

- Monitors detector and sounder lines
- Up to 126 addresses per loop
- LCD with 7 lines, max. 21 characters per line
- Up to 2000 events can be stored in history log with date and time stamp
- Alarm counter for up to 999 alarms
- Integrated configuration tool 'FC360 Panel Configurator'
- Automatic summer / winter time change
- Country specific settings
- Multilingual

3.3 Panel types

Overview of panels and options

FC361-ZZ	FC361-ZA
batteries max. 2x 12 Ah without LED indicator	batteries max. 2x 25 Ah without LED indicator
	
FC361-YZ	FC361-YA
batteries max. 2x 12 Ah with LED indicator (16 zones)	batteries max. 2x 25 Ah with LED indicator (16 zones)
	
<p>More options</p> <ul style="list-style-type: none"> • Output card (4M) • Evacuation module (NL) • LED indicator (16 zones) • Key switch • Key switch (Nordic) • RS232 module • Ext. printer DL3750+ • Output module FCA1209-Z1 • Semi flush mounting bezel 	

3.4 Technical data

Information on approvals, CE marking, and the relevant EU directives for this device (these devices) is available in the following document(s); see chapter 'Applicable documents':

- Document A6V10419665

3.4.1 General data

Detector line	
Number of detector lines	1 loop or 2 stubs
Number of addresses	Max. 126
Inputs / outputs	
Number of sounder circuits	2
Number of relay outputs	3
Number of configurable inputs / outputs	4
Options	
RS232 module	Max. 1
Ext. printer DL3750+	Max. 1
LED indicator (16 zones)	Max. 1
Evacuation module (NL)	Max. 1
Key switch / Key switch (Nordic)	Max. 1
Output card (4M)	Max. 1
Alarm counter	Max. 999 alarms
Event memory	Max. 2000 events

3.4.2 Electrical data

Rating detector line	
Operating voltage	DC 12...33 V
Operating current	Max. 0.5 A
Line resistance / capacitance	Max. 240 Ω / Max. 500 nF
Monitored for earth fault	Yes
Monitored for open / short circuit	Yes
Sounders on mainboard	
Voltage / current	DC 24 V / 0.5 A ¹
EOL element	Resistor 2.2 k Ω / 1 W / 0.5 %
AUX. power output (max.)	DC 24 V / 0.2 A
Configurable IOs on mainboard	
Voltage / current	DC 24 V / 0.1 A ²
Outputs on output card (4M) FCA3602-Z1	
Voltage / current	DC 26 V / 1.0 A ³
EOL element	Resistor 2.2 k Ω / 1 W / 0.5 %
Additionally for outputs on output card (4M) FCA3602-Z1 with the functionality 'creeping open / creeping short'	
Line resistance	Max. 74.3 Ω
Sounder voltage	Min. DC 16 V
Relay outputs on mainboard	DC 60 V / 2.0 A
Power supply	
Mains voltage	AC 97...127 V AC 196...253 V
Mains fuse	AC 250 V / 2.5 AT
Power consumption	70 W
Max. nominal output current with battery charging, $I_{\max a}$	0.9 A
Max. nominal output current without battery charging, $I_{\max b}$	2.5 A
Min. output current	0.05 A
System supply voltage	DC 20.5...28.6 V
Mains failure delay	1 min., 5 min., 10 min., 29 min.
Battery low discharge cut off	DC 20.5...21 V
Temperature compensation	Yes

Batteries	
Operating time	Up to 72 h
Battery capacity	2x 12 V, 7 Ah / 12 Ah / 25 Ah, sealed lead acid
Voltage	DC 20.5...28.6 V
Charging current	Max. 1.6 A
Load resistance R_{imax}	Max. 1 Ω

- ¹ Each sounder has an output current of max. 0.5 A. The total output current of both sounder lines is max. 0.5 A.
- ² Each configurable IO on the mainboard has an output current of max. 0.1 A. The total output current of configurable IOs and aux. power output is max. 0.2 A.
- ³ Each output on the output card (4M) has an output current of max. 1.0 A. The total output current of output card (4M) is max. 2.0 A.

3.4.3 Mechanical data

	FC361-ZZ / FC361-YZ	FC361-ZA / FC361-YA
Terminals	0.2...2.5 mm ²	
Dimensions (W x H x D)	402 x 372 x 132 mm	402 x 372 x 211 mm
Weight (without batteries)	5.24 kg	6.44 kg
Color - Housing, Cover	RAL Design 000 50 00	

3.4.4 Environmental conditions

Operating temperature	-5...+40 °C
Storage temperature	-20...+60 °C
Air humidity (no condensation permitted)	≤95 % rel.
Protection category (IEC 60529)	IP30

3.5 Structure

The figure below shows the structure of the panel with open front cover.

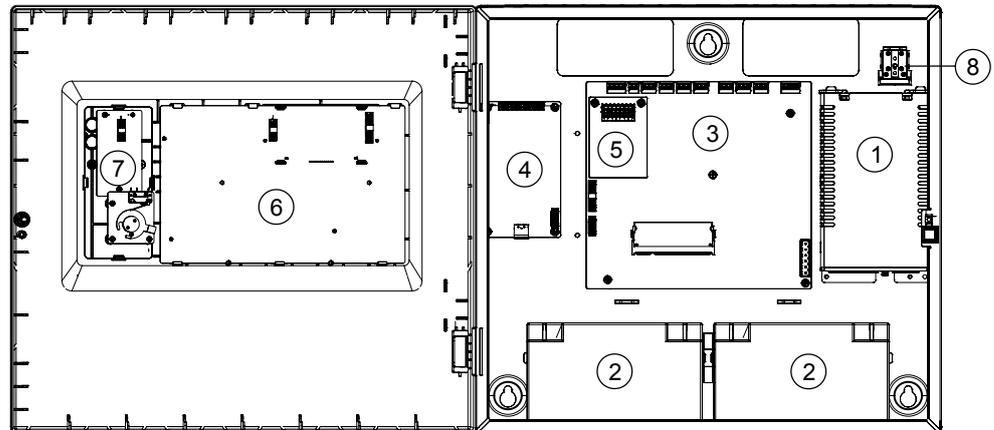


Figure 2: Structure of FC360 panel

- 1 Power supply
- 2 Batteries
- 3 Mainboard
- 4 Optional output card (4M)
- 5 RS232 module
- 6 PMI board
- 7 Space for options (e.g. Evacuation module (NL), LED indicator (16 zones), key switch)
- 8 Mains fuse holder

4 Options with requirements

The following options with requirements as defined in EN 54-2/A1 are available.

The table below explains how to realize these options in the panel.

The relevant sections according to EN 54-2/A1 are specified in the left column of the table.

EN 54-2 Options with requirements		Function in FC361-xx		
		Installation	Configuration ¹ / Operation	Chapter
7.8	Output C to fire alarm devices according to EN 54-1	Monitored output Sounder lines C-NET devices	Sounder control	5 6 7
7.9.1	Output E to fire alarm routing equipment according to EN 54-1	Monitored output card (4M)	RT fire	5.11.4
7.9.2	Alarm confirmation input from fire alarm routing equipment	Input	RT device confirmation signal; LED fire brigade activated via input	5.8
7.10.1	Outputs G to fire protection equipment according to EN 54-1	Monitored output card (4M)	Fire output	5.11.4
7.11	Delays to outputs	-	Alarm Verification Concept; 'Manned' / 'Unmanned'	-
7.12.1	Dependencies on more than one alarm signal, type A dependency	-	Type A inhibit time 30...60 sec. Reset of the first alarm after 90 sec.	-
7.13	Alarm counter	-	Alarm counter	-
8.3	Fault signals from points	-	RT fault	5.11.4
8.8	Output to fault warning routing equipment	Relay 2	RT fault	5.5
8.9	Output J to fault warning routing equipment according to EN 54-1	Monitored output card (4M)	RT fault	5.11.4
9.5	Disablement of addressable points	-	Disable	-
10	Test condition	-	Test	-

¹ You will find more information about configuration in document A6V10450595.

5 Installation

5.1 Instruction

	<p>⚠ WARNING</p> <p>Voltage Electric shock</p> <ul style="list-style-type: none"> Installation work may only be undertaken by qualified staff and when the system is de-energized.
	<p>NOTICE</p> <p>Electrostatics Damage to electronics</p> <ul style="list-style-type: none"> Suitable protective measures must be taken when working with electronics modules.
	<ul style="list-style-type: none"> Specialist electrical engineering knowledge is required for installation. Only an expert is permitted to carry out installation work. <p>Incorrect installation can take safety devices out of operation unbeknown to a layperson.</p>

The installation must comply with all applicable national and local regulations.

- The panel must be installed in a dry, clean and well vented room.
- The panel and its components must be protected against dampness and interfering external influences such as dust, great temperature fluctuations and mechanical stress.
- The panel must be installed in a place freely accessible to authorized staff and the emergency services.
- The panel must be fitted to a level, non-vibrating wall surface with load bearing capacity using suitable mounting materials (e.g. screws and plugs).
- The installation surface and selected wall must be suitable for the weight of the panel including the batteries used.
- Installation is not permitted in rooms with high levels of electromagnetic interference, e.g. in control rooms or right next to power cables and inductive loads.

Mounting options

There are two options for mounting the panel:

- Surface mounting [→ 28]
- Semi flush mounting, refer to document A6V10893024, see chapter 'Applicable documents [→ 9]'

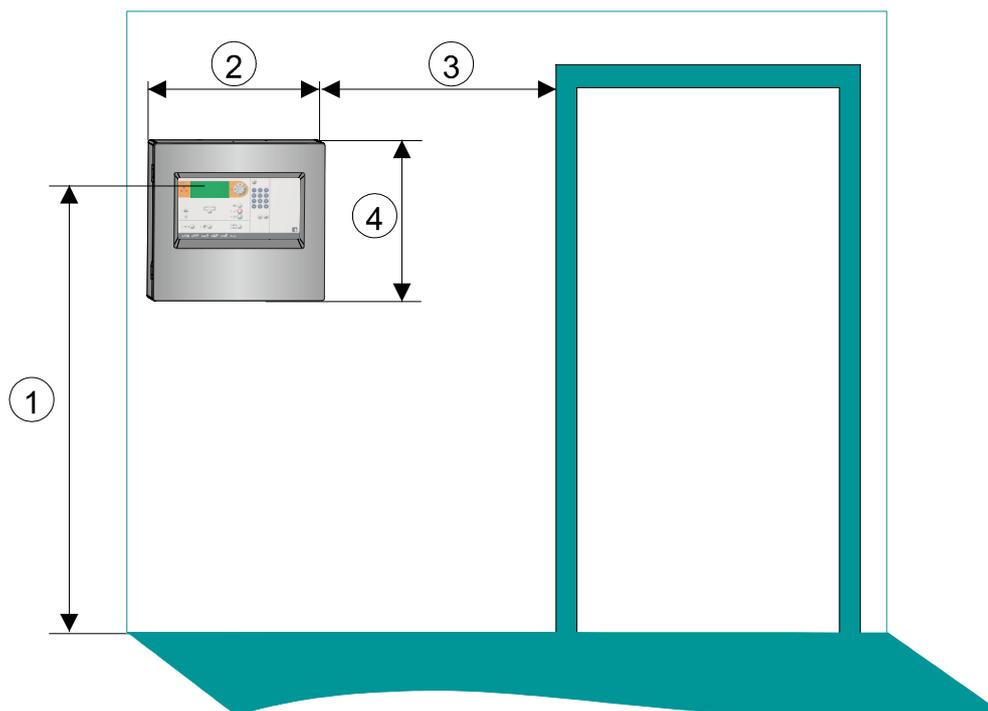


Figure 3: Mounting the panel

- 1 Recommended display height approx. 1.6 to 1.7 m
- 2 Panel width: 402 mm
- 3 Distance from door of at least one door leaf in width
- 4 Panel height: 372 mm

5.2 Surface mounting

Steps:

1. Define the mounting location.
2. Open the door of the panel using a screw driver.
3. Break out the required cable entries (A).
 - Screw cable glands (B) for all open entries. The cable glands are not included.
 - The mains cable must be fed into housing on the right from above. Signal and control cables can be fed into housing through the remaining entries.
4. Mark position of mounting holes (D) on the wall.
5. Drill the holes and insert rawl plugs (not included).
6. Attach and fasten the panel using screws ($\varnothing \geq 5$ mm, not included).
7. Stick the supplied aluminum stickers over all holes for wall mounting.
8. Optional: Mounting accessories (C). See 'Accessories [→ 44]'.
 - ⇒ The panel is ready for commissioning. See 'Commissioning [→ 96]'.
9. Switch off the mains supply AC 230 V and connect the mains cable. See 'Power supply - mains voltage [→ 29]'.
10. Connect signal and control cable (detector lines, sounder lines, inputs/outputs and relays). See 'C-NET detector line [→ 32]', 'Sounder [→ 38]', 'Inputs /outputs [→ 39]', 'Relay [→ 41]'.
11. Switch on mains supply AC 230 V.
12. Connect batteries. See 'Battery [→ 30]'.
13. Test the functionality of the panel.
14. Close the door of the panel.
 - ⇒ Handover the system to the customer.

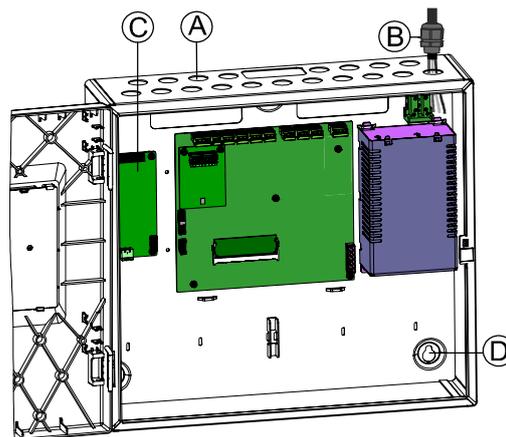


Figure 4: Details of mounting

- A Cable entries
- B Cable glands
- C Accessories
- D Mounting holes

5.3 Power supply - mains voltage

	<p>⚠ WARNING</p>
	<p>Electrical voltage! Electric shock</p> <p>Before connecting the mains voltage ensure that power is not switched on and is locked to prevent it from being switched on.</p>

1. Insert the mains cable (1) into the housing from the top right side. Use mains cable with cross section of 3*1.5 mm² up to 3*2.5 mm².
2. Insulate the mains cable (1) as needed and connect to the mains fuse holder (4).
3. Secure the cable with a cable tie.

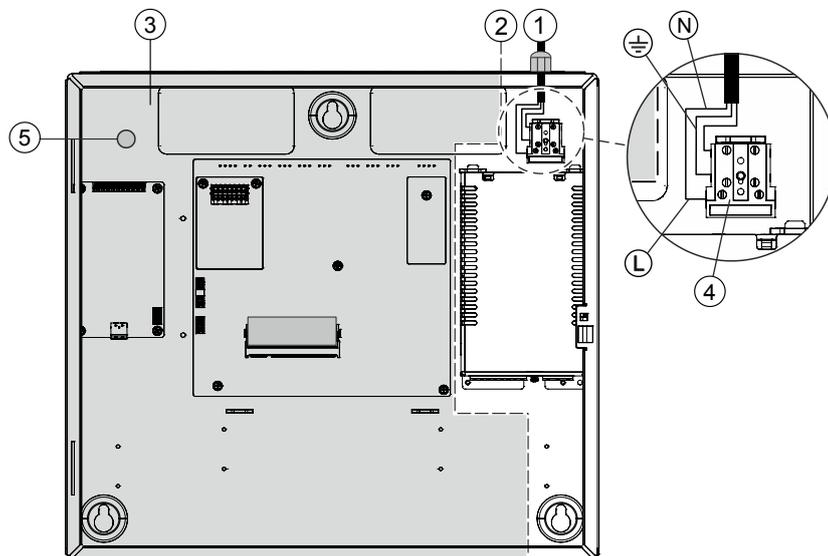


Figure 5: Connection of power supply

- | | |
|---|--|
| 1 | Mains cable |
| 2 | Boundary of mains zone |
| 3 | Safety zone (no 230 V power permitted) |
| 4 | Mains fuse holder |
| 5 | Ground terminal |

5.4 Battery

When the AC mains voltage fails, the emergency power supply will be provided by the connected batteries with no interruption. The emergency power bridging time is based on the control panels quiescent and alarm current as well as battery capacity.

!	NOTICE
	Error during configuration detection Additional effort for troubleshooting <ul style="list-style-type: none"> Only connect the battery connection cables (1) once all installation work is complete.

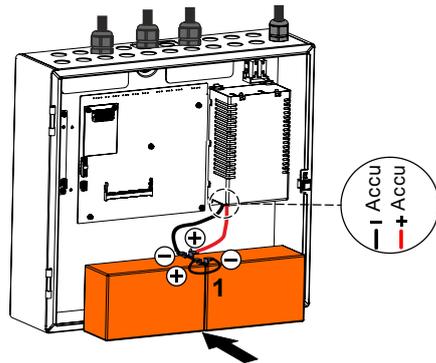


Figure 6: Connection of batteries

Emergency power bridging time

National and local regulations may require a bridging time of up to 72 hours for the emergency power supply. Use the 'FX3610 Cerberus FIT Quantities tool' to calculate the required battery capacity.



Fully discharged batteries may be unable to correctly recharge. Replace batteries that have been fully discharged.

Determining battery type

Determine the battery type based on the calculated battery capacity (see table).

Designation	Type	Capacity	Order number
Battery (12 V, 7 Ah, VdS)	FA2003-A1	7 Ah	A5Q00019353
Battery (12 V, 12 Ah, VdS)	FA2004-A1	12 Ah	A5Q00019354
Battery (12 V, 25 Ah, VdS)	BAT12-25	25 Ah	S54302-Z102-A1

Notes:

- Two batteries must be connected in series to achieve the system voltage of 24 V.
- Batteries are not supplied with the panels and must be ordered separately.
- Battery capacity determines charging current. The charging current must be taken into account when calculating the power supply.
- Battery dimensions determines the housing type.



The fire control panel is approved with the batteries listed above, use only Siemens provided batteries.

5.5 Connection overview

The picture below shows the overview of the panel connection.

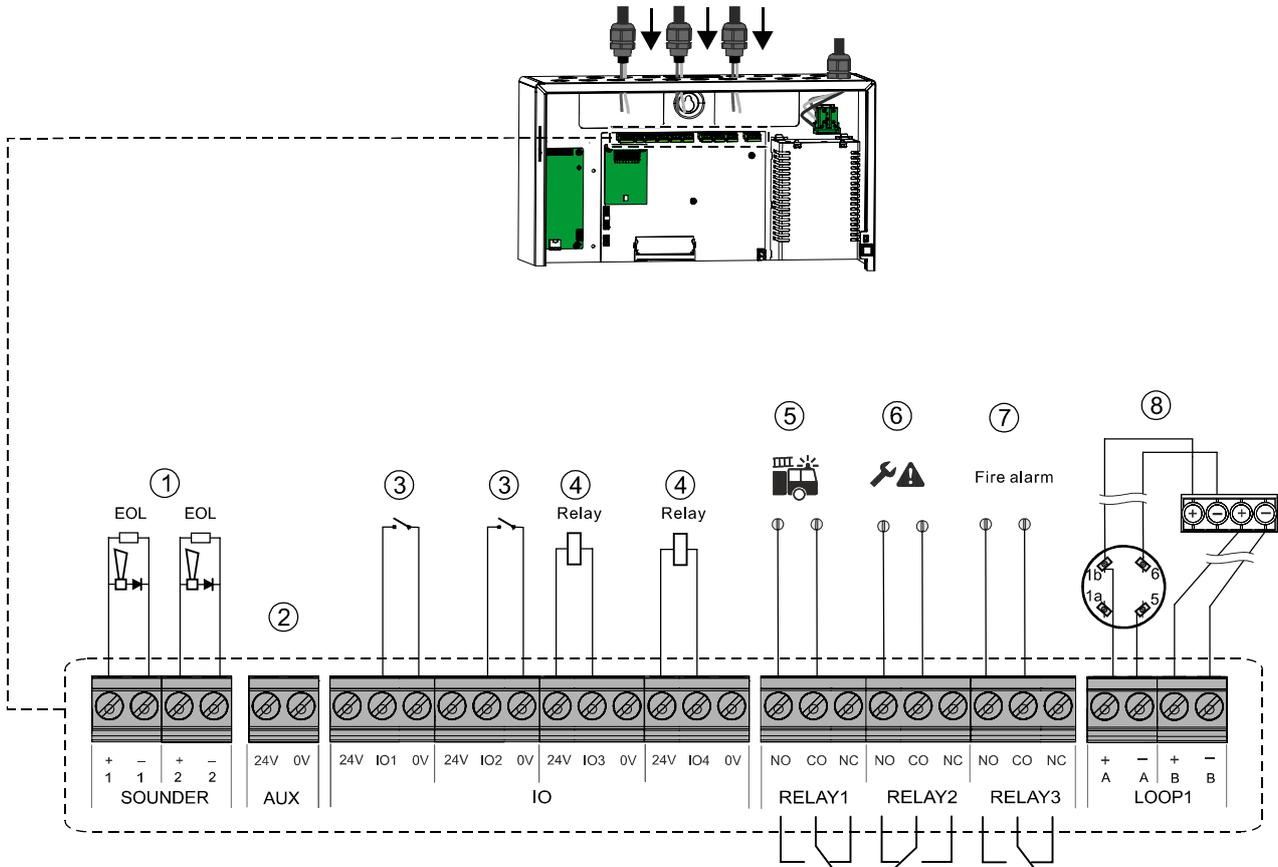


Figure 7: Connection overview of FC360 panel

EOL	Resistor 2.2 kΩ
Relay	Output module FCA1209-Z1
1	Connection of sounder lines
2	Aux. power supply DC 24 V / 0.2 A
3	Configurable IO, default setting as 'Input'
4	Configurable IO, default setting as 'Unmonitored output'
5	Output relay, default setting as 'RT fire'
6	Output relay, default setting as 'RT fault'
7	Output relay, default setting as 'Fire alarm'
8	Connection of detector lines (1 loop / 2 stubs)

5.6 C-NET detector line

Up to 126 devices, such as automatic fire detectors (e.g. smoke or heat detectors), manual call points, I/O modules and other C-NET components, can be connected to the C-NET detector line.

The connection for the C-NET detector line is on the main board. Most line devices, such as fire detectors, are supplied directly by C-NET with the required operating voltage. FDCI723 and special applications with I/O modules require an external power supply.

The picture below shows the C-NET detector line connection with peripheral devices.

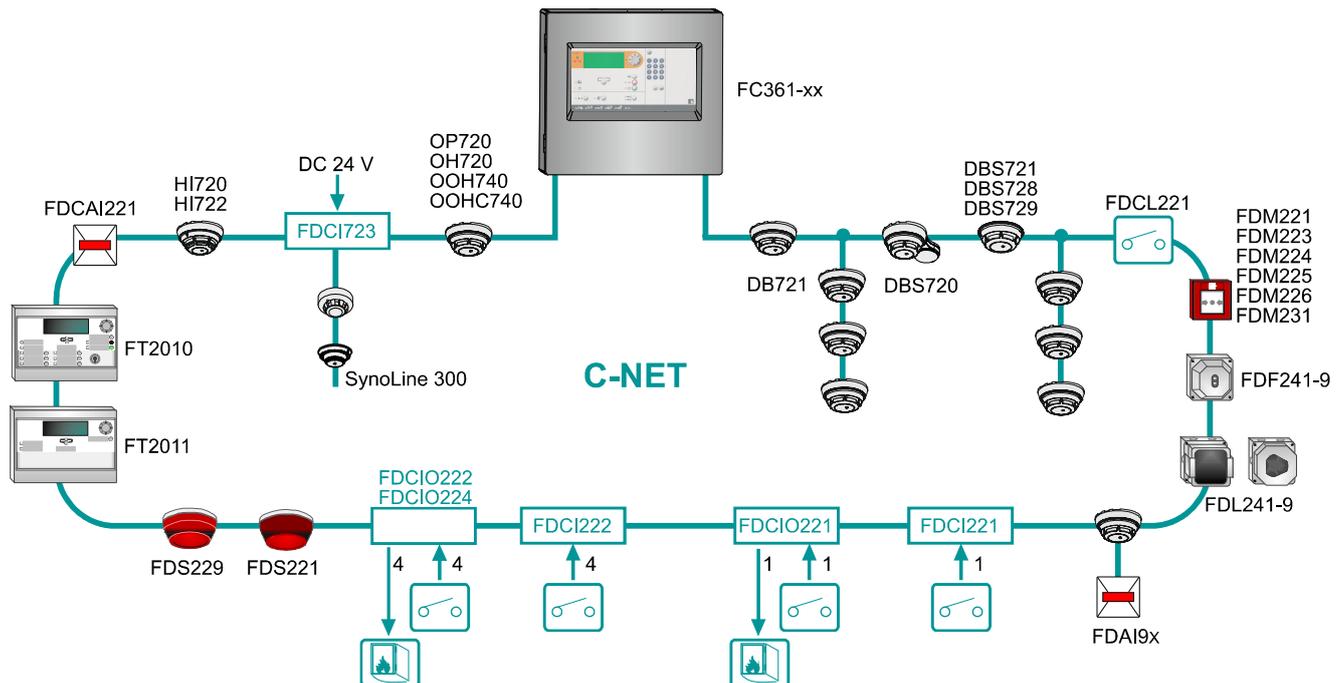


Figure 8: Overview of FC360 C-NET detector line

Line separator

All C-NET devices have an integrated line separator.

In the event of a short-circuit in the C-NET wiring, the line separators adjacent to the wiring fault are opened and the faulty cable segment is shut down. The C-NET devices remain functional and ready to detect. The fault is displayed on the panel.

Connection factor

The max. number of connectable C-NET peripherals (126 devices) and the max. line length (3300 m) depend on the device connection factor.

Details must be calculated using the 'FX3610 Cerberus FIT Quantities tool' A6V10885143.

5.6.1 Connectable C-NET devices

The table below contains a list of all devices which can be connected to the C-NET detector line. It also highlights the devices with an alarm indicator (AI) and to the devices an external alarm indicator (EAI) or a sounder base (DBS720) can be connected.

- X possible / available
 – not possible / not available

Device type	Type	Description	AI	Ext. AI	DBS720
Point detectors	OP720	Smoke detector	X	X	X
	HI720	Heat detector (static+ROR)	X	X	X
	HI722	Heat detector (static) with temperature report support	X	X	X
	OH720	Multi-sensor smoke detector	X	X	X
	OOH740	Multi-sensor smoke detector; DualProtocol Collective	X	X	X
Special detectors	FDF241-9	Infrared flame detector (2 sensors / 1 photo diode); DualProtocol Collective	X	X	–
	FDL241-9	Linear smoke detector; DualProtocol Collective	X	X	–
	OOHC740	Neural fire and CO detector with ambient supervision	X	X	X
Manual call points	FDM221 FDM231	Manual call point, direct action	X	–	–
	FDM223	Manual call point, indirect action	X	X	–
	FDM224	Manual call point, direct action	X	X	–
	FDM225	Manual call point, direct action	X	–	–
	FDM226	Manual call point, direct action	X	–	–
Line modules	FDCI221	Input module (1 input)	X	–	–
	FDCI222	Input module (4 inputs)	X	–	–
	FDCI723	Zone module, ext. powered (1 collective line)	X	–	–
	FDCIO221	Input/Output module (1 input and 1 output)	X	–	–
	FDCIO222 FDCIO224	Input/Output module (4 inputs and 4 outputs)	X	–	–
	FDCL221	Line separator	X	–	–
	FDCL221-M	Multi line separator module (8...9 isolators)	X	–	–
Alarm devices	FDS221	Alarm sounder	X	X	–
	FDS229	Alarm sounder with supplementary optical indication	X	X	–
	DBS720	Sounder base	–	–	–
	DBS721	Sounder interbase	–	–	–
	DBS728	Sounder beacon interbase (supports EN 54-23)	–	–	–

Device type	Type	Description	AI	Ext. AI	DBS720
	DBS729	Sounder beacon interbase	–	–	–
Base	DB721	Detector base with loop contact	X	X	–
Operation and indication devices	FT2010	Floor repeater terminal (FRT)	X	–	–
	FT2011	Floor repeater display (FRD)	X	–	–
	FDCAI221	Addressable alarm indicator	–	–	–



The complete compatibility list is available in document A6V10882301. See chapter 'Applicable documents [→ 9]'.

!	NOTICE
	Influencing the earth fault monitoring <ul style="list-style-type: none"> • Devices on the C-NET with a separate supply, the supply must be electrically isolated.

See also

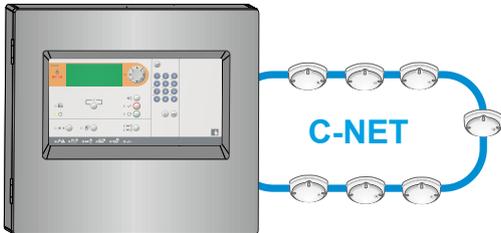
 About this document [→ 7]

5.6.2 C-NET topology

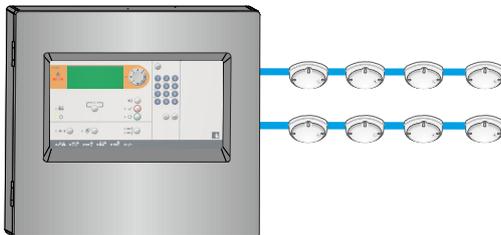
Permissible topology for the C-NET

The C-NET can be wired in the topology shown below. Regardless of the topology (loop, stub or loop with sub-stub), the C-NET system limits, such as length, cable resistance etc., must be observed.

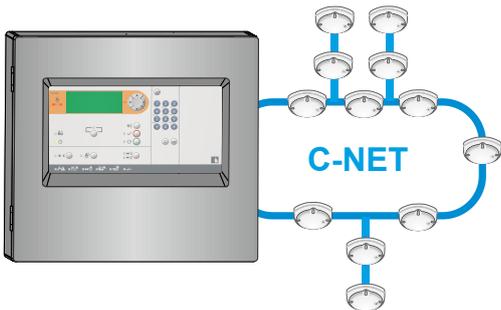
Either one loop or two stubs can be connected to the panel's C-NET detector line.



Loop
(1 loop, max. 126 devices)

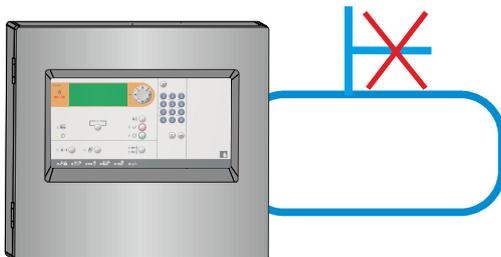


Stub
(2 stubs, max. 32 devices per stub)



Sub-stubs on loop
A sub-stub must only be connected between two devices or line separators as well as directly to the terminal connection.

Wiring NOT permissible



NOT permissible
Sub-stub on sub-stub of loop



NOT permissible
Sub-stub on a stub

5.6.3 Wiring on C-NET devices

The connection terminals for the loop (detector line, C-NET) are on the main board. The position is shown as below.

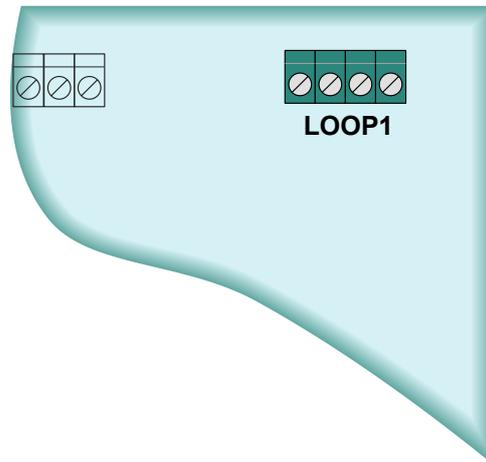
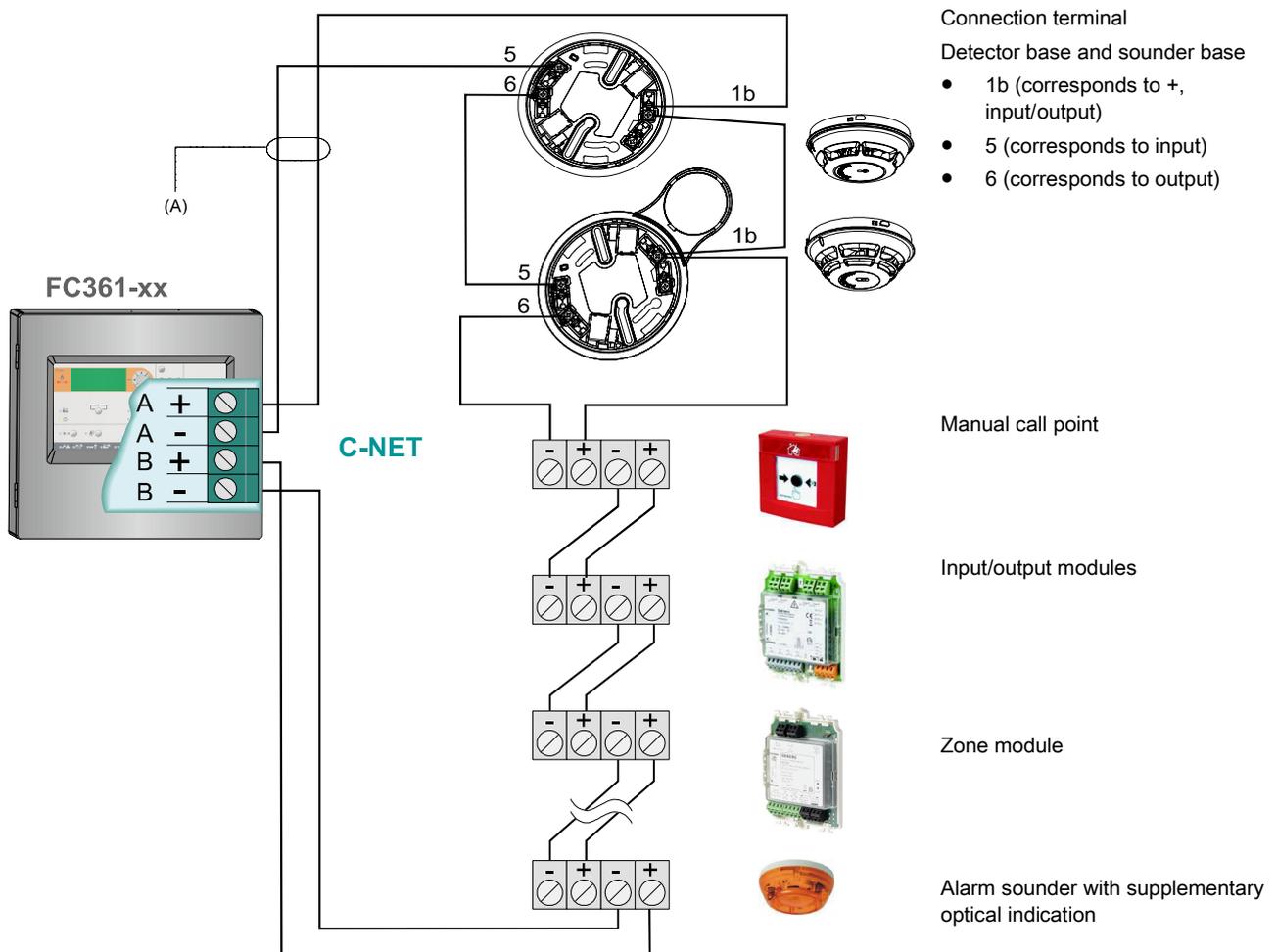


Figure 9: Position of C-NET detector line terminal

Each C-NET device has the terminals for directly connecting the C-NET wire.

Loop wiring



Stub wiring

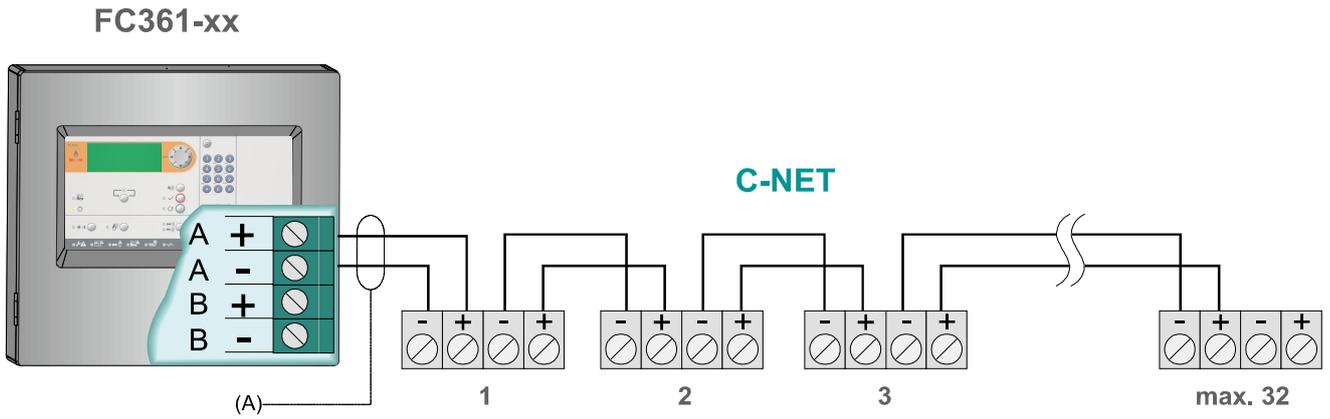


Figure 10: Stub connection of C-NET detector line

- (A) When using shielded connection cables: Cable shielding must be connected to the panel's earth terminal.



Max. 32 devices may be connected to a single stub as per EN 54-2.

5.7 Sounder

The panel mainboard has two sounder lines. They are monitored from the terminal to the EOL for open and short circuits.

Application:

Sounder control

Technical:

- Current of each sounder line: max. 0.5 A @ DC 24 V
- Total available current of both sounder lines: max. 0.5 A @ DC 24 V
- Each line must be terminated with an EOL element (Resistor 2.2 k Ω)

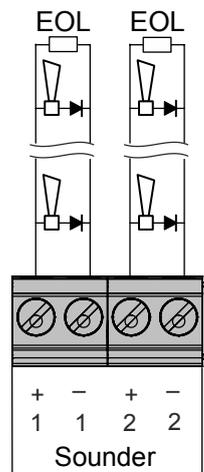


Figure 11: Connection of sounder line

5.8 Inputs / outputs

The panel mainboard has four configurable inputs / outputs. Each one can be configured as an input or output.

The default settings are:

- IO1 / IO2: input
- IO3 / IO4: output

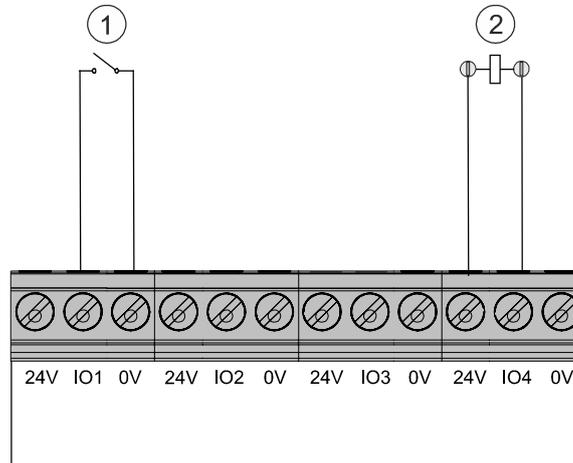


Figure 12: Connection of configurable IOs

- 1 Configured as input (Connect to '0V' and IO)
- 2 Configured as output (Connect to '24V' and IO)

Configured as 'input'

The inputs can be triggered by a potential-free contact. They can be configured as one of the control functions below:

Mode	Functionality
class change	Activates all sounder lines and addressable sounders as long as the input is closed ('Continuous' tone on sounder lines and 'Tone 1' on addressable sounders).
Evacuation usage	Activates all the sounder lines and addressable sounders as long as the input is closed. The silence / resound functions are available for the sounder lines and addressable sounders in this state.
Reset command	Resets the acknowledged alarm events if the input is closed (only after acknowledge command).
Access level 2	Enables access level 2 as long as the input is closed.
Disable RT Fire and RT Fault devices	Disables all the RT fire and RT fault devices as long as the input is closed. Disabled RT outputs cannot be enabled by the menu operation.
Activate manned	Switches to 'Manned' mode as long as the input is closed.
Toggle between manned/ unmanned	Toggles between 'Manned' / 'Unmanned' if the signal changes on the input.

Mode	Functionality
Initiate extra PSU fault	Activates external PSU fault as long as the input is closed.
Dialer (RT Fire Device) Fault	Activates RT fire device fault as long as the input is closed. The 'RT Fire Fault' LED and the 'General Fault' LED are ON.
Initiate fire brigade is called	Generates an 'Fire brigade is called' event as long as the input is closed. The 'Fire brigade' LED is ON.
Acknowledge command	Acknowledge all events as long as the input is closed.

Configured as 'output'

Configuration as 'output' allows the activation of external devices (e.g. relays) with 24 V voltage.

The line is not monitored.

Technical:

- Max. current of each output: 0.1 A
- Total max. current of four outputs (if configured) including AUX power output: 0.2 A.



The IO1 is configured as output by default if the country selection is 'NL: With FTO3601 H1 (EVAC field)'.

5.9 Relay

The panel mainboard has three relay outputs used for controlling without line monitoring.

They can be freely configured as:

- RT fire
- RT fault
- Fire control
- Fire alarm

The default settings are:

- Relay 1: RT fire
- Relay 2: RT fault
- Relay 3: Fire alarm

Technical:

Current of each relay: max. 2 A @ DC 60 V

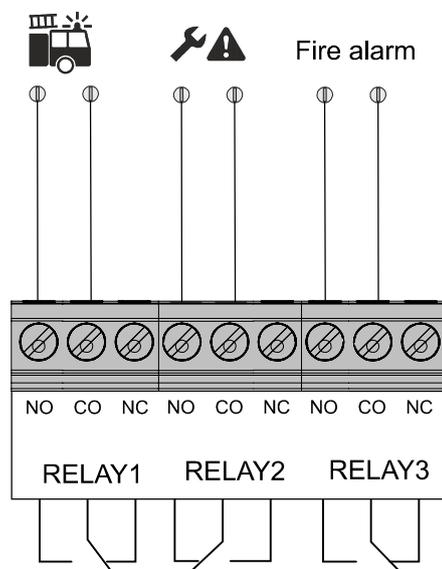


Figure 13: Connection of relays



The output "RT fault" is closed (inverse function) in quiescent mode. In case of fault, the contacts open.

5.10 Terminals and switches

The picture below shows the position of terminals and switches.

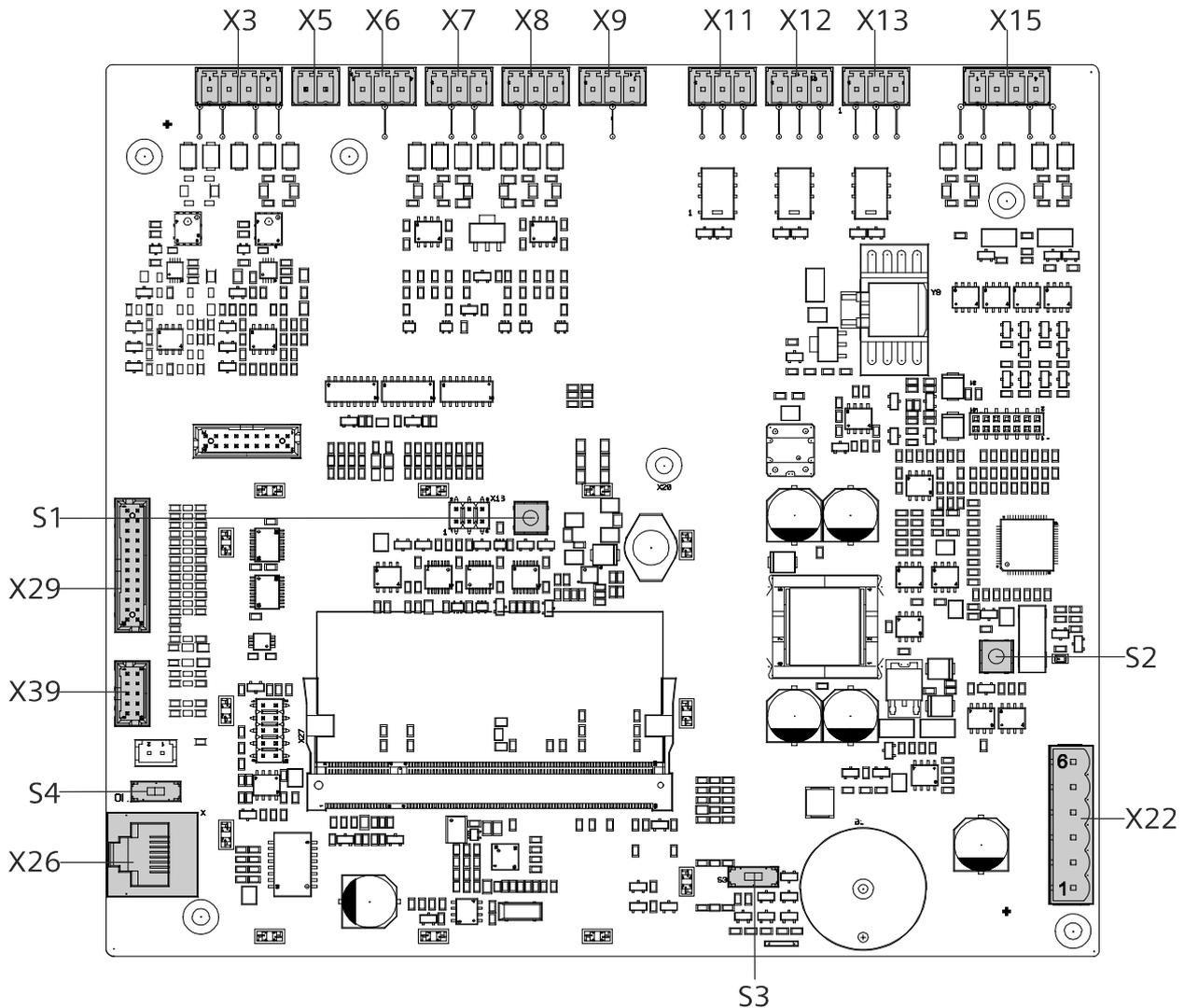


Figure 14: Position of terminals and switches

Terminals	Description
X3	Sounder lines
X5	Supply output (24 V)
X6...X9	Configurable inputs / outputs
X11...X13	Relay outputs
X15	Loop1 (C-NET detector line)
X29	Connection to PMI board
X39	Connection to output card (4M)
X26	Connection to PC
X22	Connection to power supply

X22 Pin assignment

Pin	Description
1	Message input from the power supply: Battery fault
2	Message input from the power supply: Mains fault
3	Supply input from the power supply (+)
4	Supply input from the power supply (+)
5	Supply input from the power supply (-)
6	Supply input from the power supply (-)

S1: Reset key for panel

Operation	Function
Press one time	Panel shuts down and restarts.

S2: Reset key for detection module (for factory use only)

Operation	Function
Press one time	<p>The C-NET detector line is powered off and the panel reports a fatal fault of detection module. You can power on the C-NET detector line and remove the fatal fault by 'Reset detection module' menu. Refer to chapter 'Reset detection module [→ 92]'.</p> <p>NOTICE! Do not use! For factory use only! Otherwise a fatal error will occur!</p>

S3: Switch for buzzer

Position	Function
<input type="checkbox"/> 	On Buzzer is on for an event (default).
<input checked="" type="checkbox"/> 	Off Buzzer is off for an event.

S4: Switch for earth fault detection

Position	Function
<input checked="" type="checkbox"/> 	On Earth fault monitoring activated (default).
<input type="checkbox"/> 	Off Earth fault monitoring deactivated.

5.11 Accessories

5.11.1 Key switch (FCA3601-Z1) / Key switch (Nordic) (FCA3603-Z1)

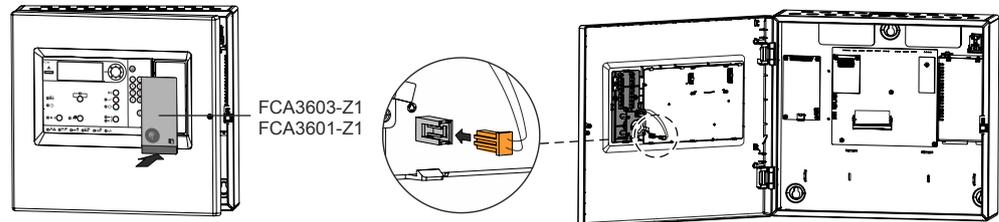


Figure 15: Installation of key switch

Function:

The key switches directly enable access level 2 operations.

Installation:

Detailed information on installation is available in document A6V10431013. See chapter 'Applicable documents [→ 9]'.

Configuration:

No configuration is required.

5.11.2 Evacuation module (NL) (FTO3601-H1)

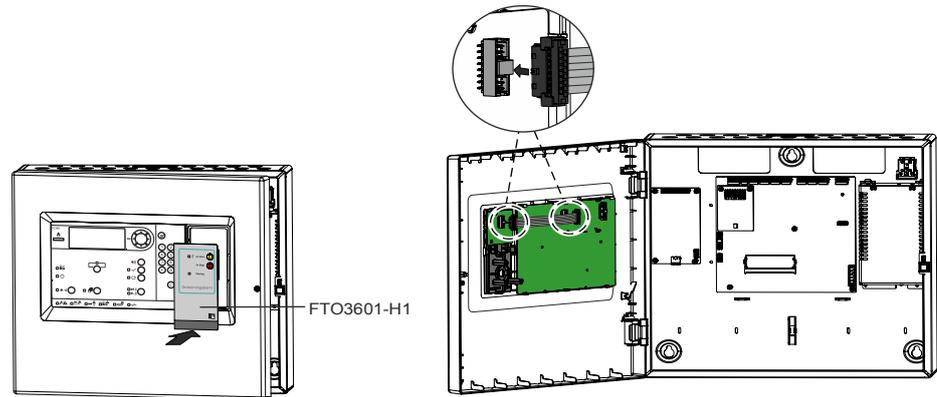


Figure 16: Installation of evacuation module (NL)

Function:

The evacuation module (NL) provides the Dutch special function. It activates the EVAC zone by pressing the <START> button twice and deactivates the EVAC zone by pressing the <STOP> button twice.

Installation:

Detailed information on installation is available in document A6V10431009. See chapter 'Applicable documents [→ 9]'.

Configuration:

The evacuation module (NL) is configured by default when starting up with country setting 'NL: With FTO3601 H1 (EVAC field)'.

Operation:

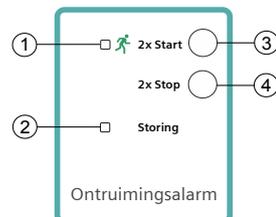


Figure 17: PMI of evacuation module (NL)

No.	Description	Status	Function
1	LED: EVAC zone active	On	EVAC zone 1 is activated.
2	LED: EVAC fault	Flashing	One or more sounders are in fault.
		On	All sounder devices are disabled.
3	Button: 'START'	-	Press twice quickly to start all sounder devices.
4	Button: 'STOP'	-	Press twice quickly to stop all sounder devices.



The LED and button 'Silence/Resound'  on panel PMI are deactivated if the evacuation module (NL) is installed and configured.

5.11.3 LED indicator (16 zones) (FTO3602-Z1)

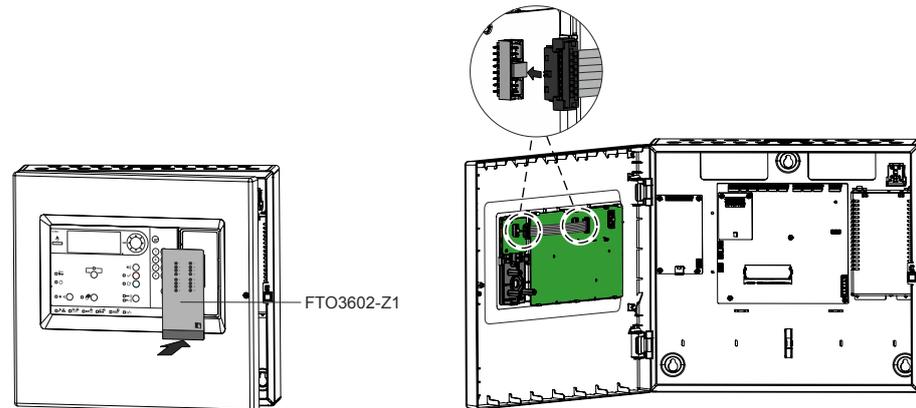


Figure 18: Installation of LED indicator (16 zones)

Function:

The LED indicator (16 zones) shows the actual alarm status of each section (max. 16 sections of a panel).

- Flashing LED indicates first section in alarm.
- Static LED on indicates further sections in alarm.

Installation:

Detailed information on installation is available in document A6V10431011. See chapter 'Applicable documents [→ 9]'.

Configuration:

No configuration is required.

5.11.4 Output card (4M) (FCA3602-Z1)

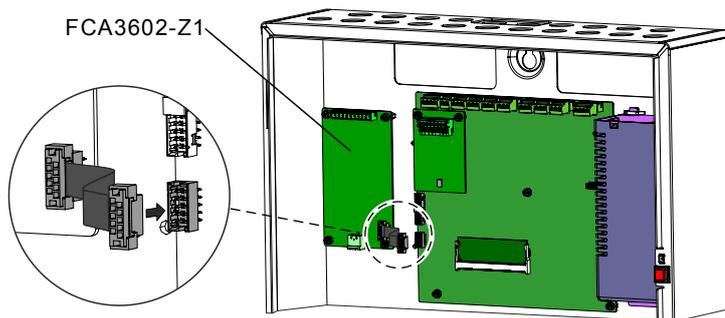


Figure 19: Installation of output card (4M)

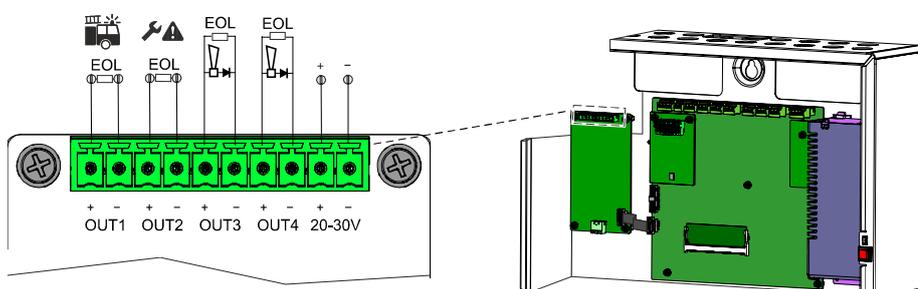


Figure 20: Connection overview of output card (4M)

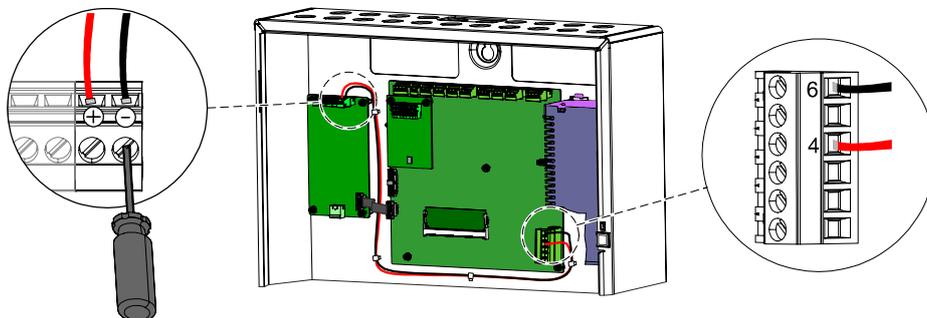


Figure 21: Connection of internal power

Function:

The output card (4M) has four monitored outputs: OUT1...OUT4.

The default settings for the outputs are:

- OUT1: RT fire
- OUT2: RT fault
- OUT3 / OUT4: Sounder line

DC 24 V @ 2 A power supply is required. There are two options for power connection:

- Internal connection, see Fig. 'Connection of internal power'.
- External connection, power is provided via external power supply (FP120-Z1). Connection terminals on the output card (4M), see Fig. 'Connection overview of output card (4M)'.

In addition to the default monitoring (short and open) the outputs can be configured to monitor the output lines for creeping open and creeping short circuits.

The table below can be used for this check, they display the maximum values.
Details must be calculated individually.

I_{max}	R Line [Ω] @ U_{min} = 16 V
0.1 A	0...74.3
0.2 A	0...34.1
0.4 A	0...14
0.6 A	0...7.2
0.8 A	0...3.9
1 A	0...1.9

Counteractive measures: Reduction of I Load or R Line

5.11.5 RS232 module

The RS232 module (FCA2001-A1) is used to connect an event printer.

Installation:

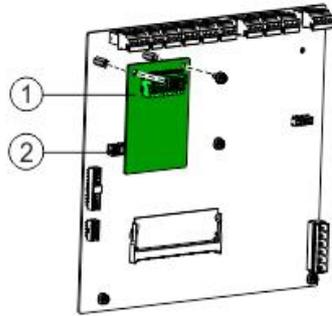


Figure 23: Installation of RS232

- 1 RS232 module
- 2 X10, slot for connection of the modules

1. Insert the module into the slot X10.
2. Secure the module to the mainboard using the two screws.
3. Wire up the module according to the pin assignment.

PIN assignment:

RS232		
PIN	Designation	Description
8	← DCD	Data carrier detected
7	← DSR	Data set ready
6	← CTS	Clear to send
5	0 V	Ground
4	← RXD	Received data
3	DTR →	Data terminal ready
2	TXD →	Transmitted data
1	RTS →	Ready to send

Configuration:

No configuration is required.

Communication parameter settings:

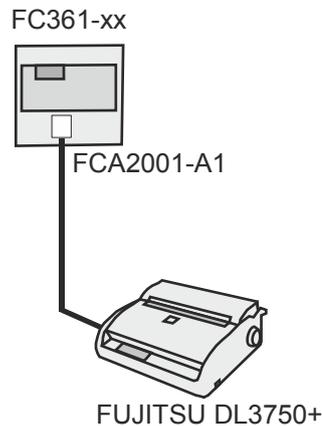
- Baudrate: 9600
- Parity: None
- Data bits: 8
- Stop bits: 1
- Flow control: None

5.11.6 Event printer (Optional)

The RS232 module connects one external printer Fujitsu DL3750+ to the panel. Detailed information on the printer is available on the CD supplied with the printer.

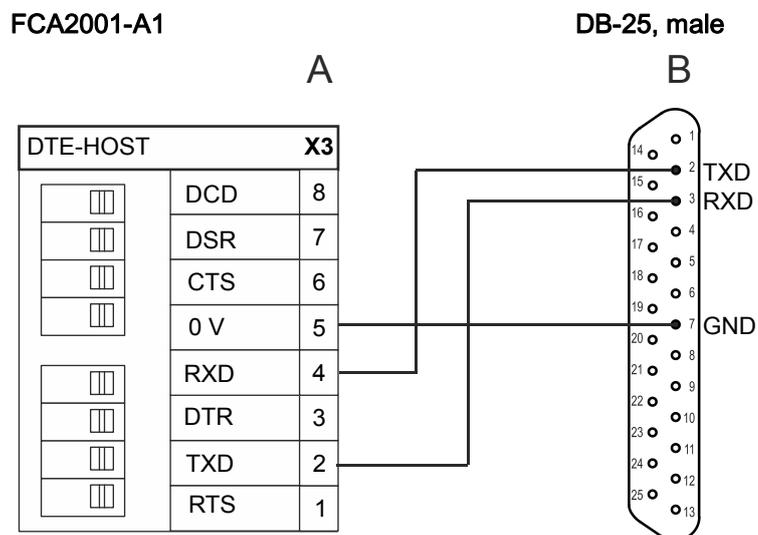
Connection:

Precondition: RS232 module is installed. See chapter 'RS232 module [→ 50]'.
The picture below shows the connection between printer and panel.



The connection cable is wired as per the following connection diagram.

- The connection cable has a maximum length of 15 meters.
- Use shielded cables.



- A: Screw connection on RS232 module (FCA2001-A1)
- B: 25-pole connector (DB-25, male) for Fujitsu DL3750+ printer

Configuration:

No configuration is required.

5.12 Spare Parts

5.12.1 Mainboard FCM3601-Z1

The mainboard FCM3601-Z1 is already mounted in the fire control panel in the factory and only has to be replaced in the event of a repair.

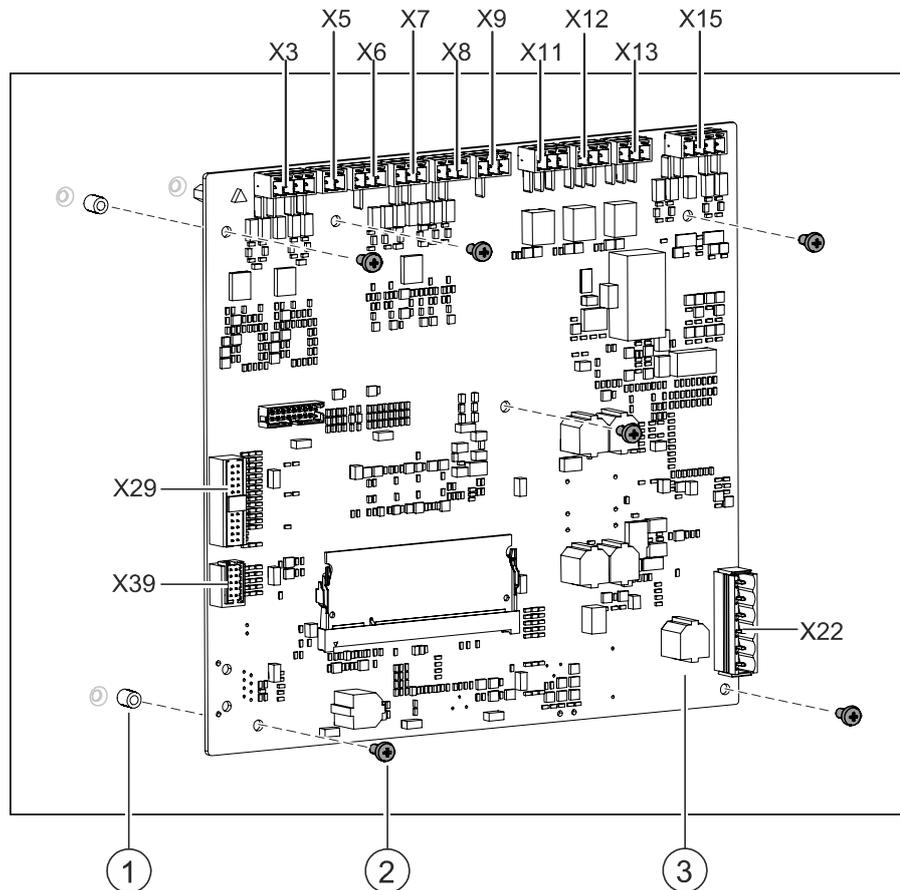


Figure 24: Installation of mainboard

1	Threaded bolts
2	6 screws
3	Mainboard FCM3601-Z1
X22	Connector for power supply
X29	Connector for cable to PMI
X39	Connector for output card (4M)
X3	Connector for sounder line
X5	Connector for Aux. power supply
X6-X9	Connectors for configurable IOs
X11-X13	Connectors for relays
X15	Connector for C-NET detector line

5.12.2 Door incl. PMI FHD3601-Z1

The door incl. PMI FHD3601-Z1 is already mounted in the fire control panel in the factory and only has to be replaced in the event of a repair.

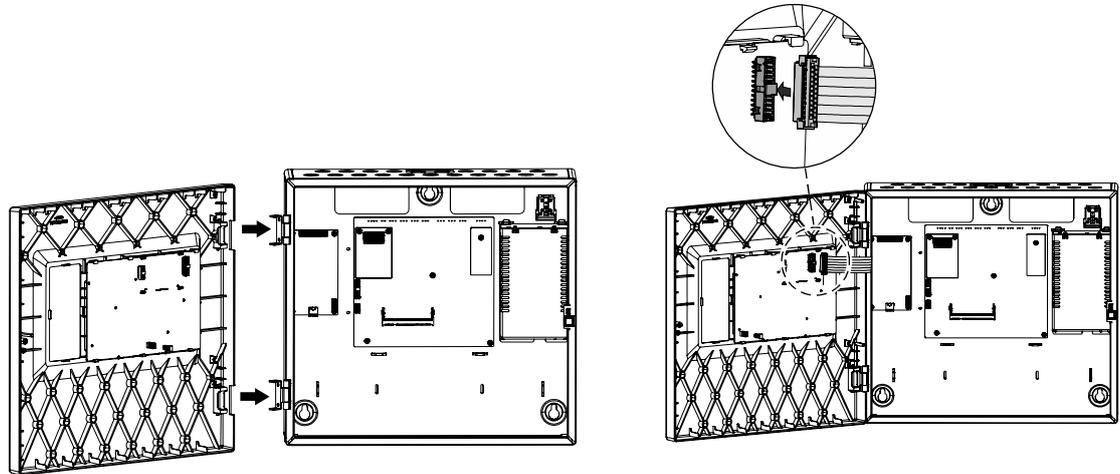


Figure 25: Installation of door incl. PMI

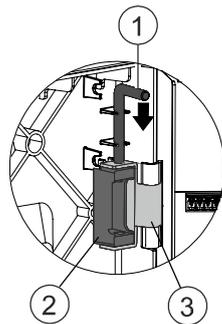


Figure 26: Details view of installation

- 1 Bolt
- 2 Bolt pin
- 3 Hinge

- ▷ The power supplies (mains and battery) are disconnected.
- ▷ Connector to mainboard is disconnected.
- ▷ The old door incl. PMI is removed. Refer to document A6V10449593, see chapter 'Applicable documents [→ 9]'.
 1. From the right side insert the bolt pin on the door into the hinge (3) on the rear panel, aligning the hole on the bolt pin (2) with the hole on the hinge (3).
 2. Secure the door with two bolts (1).
 3. Insert the connector to the mainboard into the PCB board on the door.



The panel recovers the previous status after the new door incl. PMI is replaced.

6 Function overview

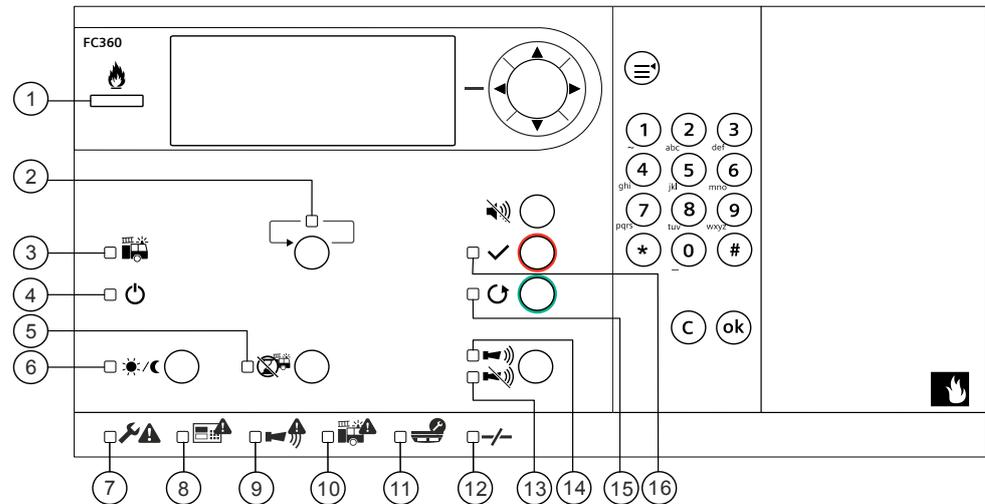
6.1 Access levels

The panel is protected against unauthorized operation by access levels.

The authorization passwords for access level 2, access level 3 and access level 3.1 can be changed either directly on panel or with 'FC360 Panel Configurator'.

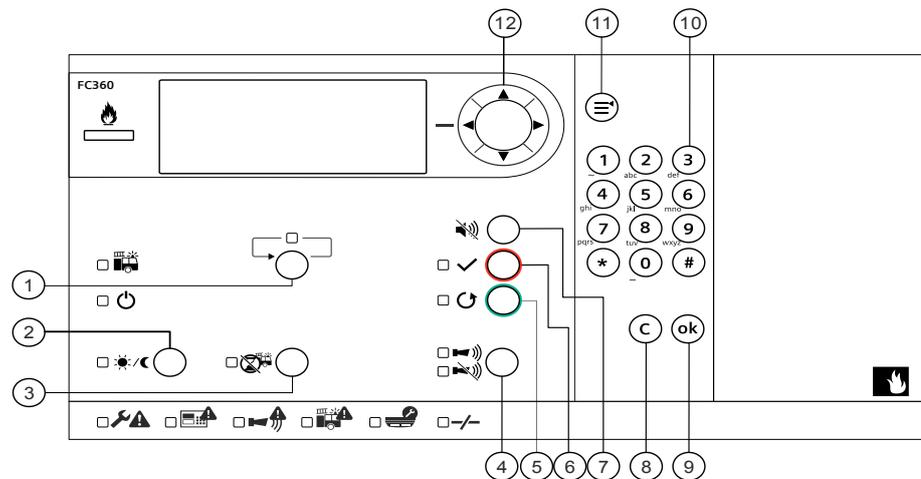
Access level	Personnel	Password (Default)	Function
1	Anybody	No	<ul style="list-style-type: none"> View pending events.
2	Authorized user	1234 or key switch or input	Operate the system, e.g. <ul style="list-style-type: none"> Acknowledgement, operation and reset of events Disable / enable section, zone, device, sounder, RT alarm, RT fault. View history log. Automatically logout after a period of no operation. Access code is not necessary if a key switch is used. Access code is not necessary if the input which is configured as 'access level 2' is activated.
3	Commissioning engineer	9999	<ul style="list-style-type: none"> Configure system. Automatic logout after a period of no operation.
3.1		9999	<ul style="list-style-type: none"> Restart detector line
4		66666666	<ul style="list-style-type: none"> Reset alarm counter.

6.2 LED indicators



No.	Description	Color	Status	Function
1	Alarm	Red	On	The panel is in 'Alarm' condition.
2	More alarm	Red	Flashing	More than two alarm events happen.
3	Fire brigade	Red	On	Depends on the configuration: Option 1: Fire brigade was called. Option 2: RT fire output relay is activated. Call the fire brigade.
4	System on	Green	On	The panel is in operation.
5	Alarm delay off	Yellow	Flashing	The panel is in investigation time (T2) of AVC process.
6	Manned / Unmanned	Yellow	On	The panel is in 'Manned' operation.
			Off	The panel is in 'Unmanned' operation.
7	General fault	Yellow	On	Indicate any fault event in the system.
8	System fault	Yellow	On	Indicate CPU failure.
9	Sounder fault	Yellow	On	All sounder devices are disabled.
			Flashing	One or more sounders are in fault.
10	RT fire fault	Yellow	On	All RT fire devices are disabled.
			Flashing	One or more RT fire devices are in fault.
11	Test condition	Yellow	On	Indicate one or more zones are in test mode.
12	Isolation	Yellow	On	Indicate there are isolation events.
13	Silence	Red	On	All sounder devices are silenced.
14	Resound	Red	On	All sounder devices are activated.
15	Reset	Yellow	Flashing	There are acknowledged alarm events which are waiting for reset.
16	Acknowledge	Yellow	Flashing	There are alarm / fault events need to be acknowledged.

6.3 Keys

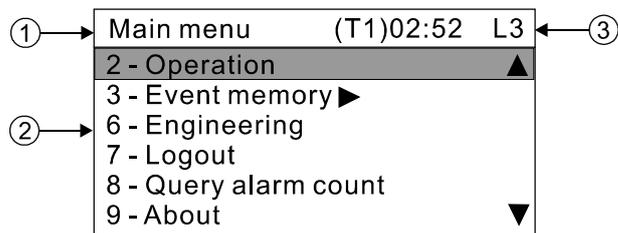


No.	Description	Function
1	More Alarm	Moves to the next 'fire alarm' event when the 'More Alarm' LED is flashing.
2	Manned / Unmanned ¹	Switches between 'Manned' / 'Unmanned'.
3	Alarm Delay Off ¹	Stops the 'Alarm delay time'. The panel generates directly a global alarm.
4	Silence ¹	Silences the sounders in the event of alarm.
	Resound ¹	<ul style="list-style-type: none"> Manually re-activate the sounders during alarming. If configured, activation of all sounders.
5	Reset ¹	Resets the acknowledged events.
6	Acknowledge ¹	<ul style="list-style-type: none"> Acknowledges all unacknowledged events (alarm and faults) in system. Starts the investigation time T2 (AVC). Silences the buzzer until a new alarm event occurs. Silences the sounder until a new event occurs (if programmed).
7	Silence buzzer	Silences the buzzer until a new event (alarm or fault) occurs.
8	Cancel	<ul style="list-style-type: none"> In view mode: Returns to upper level. In input / edit mode: Cancels input and return to previous context.
9	Ok	<ul style="list-style-type: none"> In view mode: Jumps to selected sub menu or confirm the selection. In input / edit mode: Confirms the input and returns to upper level.
10	Keypad	<ul style="list-style-type: none"> In view mode: Directly jumps to the selected sub menu. In input / edit mode: Enters digits / letters.
11	Menu	Displays the main menu.
12	Navigation	<ul style="list-style-type: none"> ▲: Scrolls up. ▼: Scrolls down. ◀: In view mode: Returns to upper level; In input / edit mode: Deletes last input; Edit time: Selects previous value. ▶: In view mode: Jumps to sub menu. In input / edit mode: Confirms the input and returns to upper level.

¹ Only available in access level 2 and access level 3

6.4 LCD

The LCD is divided into 3 areas.



1: Title

This line displays the title of the view window.

2: View window

This window displays the menu list, event list or its property.

'▼': Indicates that there are other items below the bottom item. (the bottom item is NOT the last item.)

'▲': Indicates that there are other items above the top item. (the top item is NOT the first item.)

'▶': Indicates that there are further items to be extended to.

3: AVC timer / system time and access level

Normal status without fire alarm:

- Access level
- System time

Fire alarm:

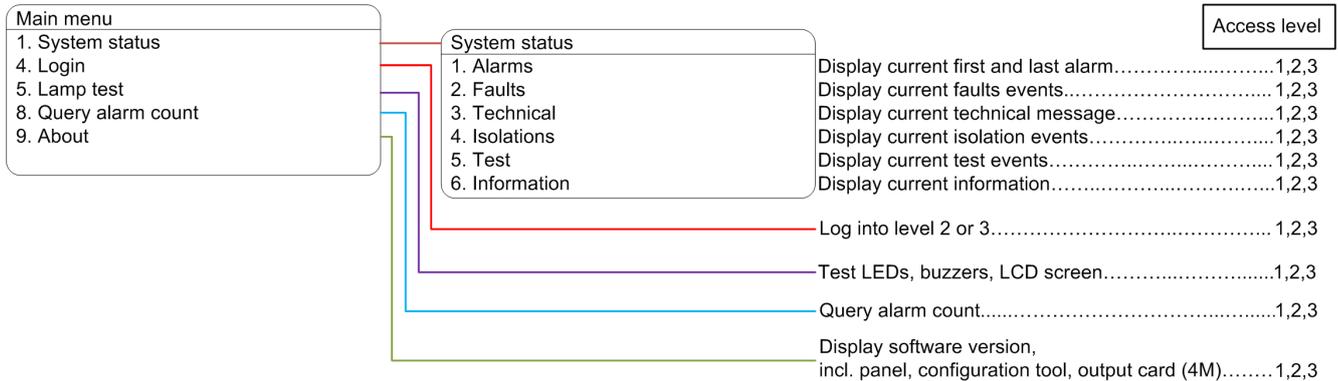
- Countdown of the AVC timer T1 and T2
- Access level

LCD indication priority

Events	Priority (High [1] → Low [7])
Alarm	1
Operation at access level 2 and access level 3	2
Fault	3
Technical	4
Isolation	5
Test	6
Information	7

6.5 Operating menu overview

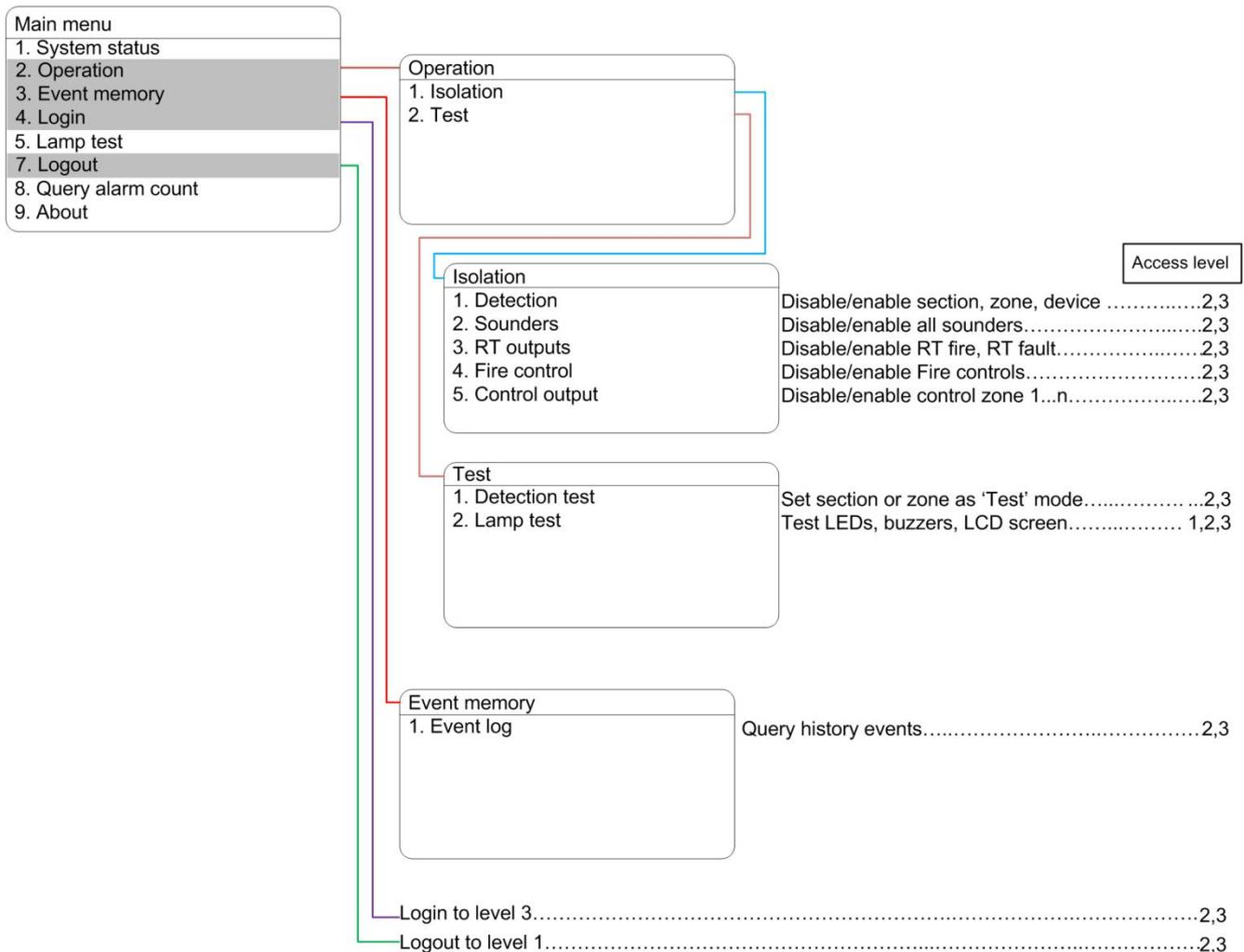
Access level 1:



'Lamp test activation possible at access level I' function can be configured by 'FC360 Panel Configurator'. The default setting is unavailable at access level 1.

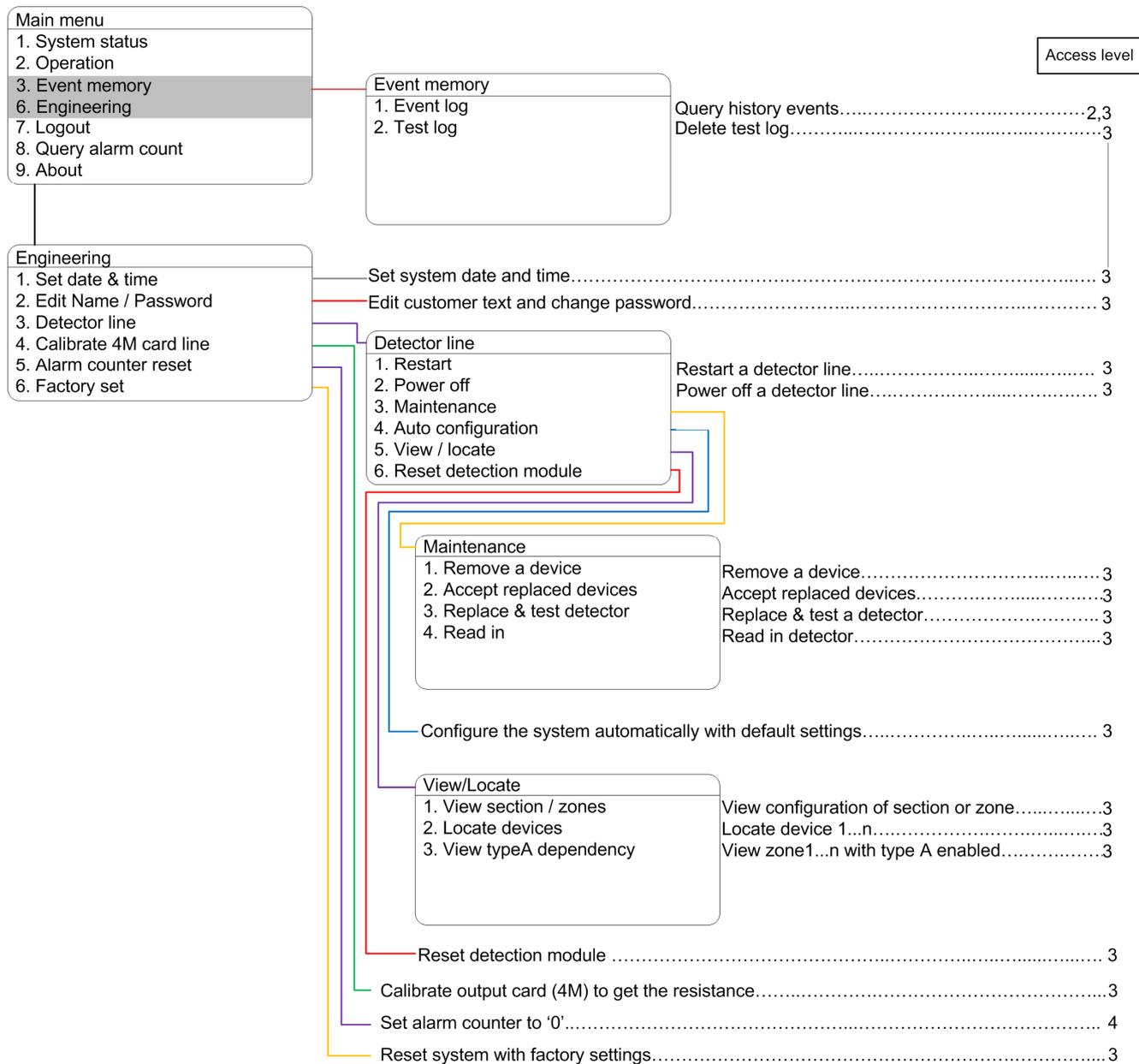
Access level 2:

The highlighted items differ from access level 1. Refer to the access level 1 for other items.



Access level 3:

The highlighted items differ from access level 1 and access level 2. Refer to the access level 1 and access level 2 for description of the other items.



6.6 Entry of numbers and letters

Numerals

Press desired numeral to enter it.

Letters

Use the numeral keys to enter letters. Press the numeral key with the desired letter (displayed at the lower left corner of key), all included letters (upper case and lower case) and the numeral are displayed in order. Release the key as soon as you arrive at the desired letter. It is now entered.

For example, to enter 'S', press down numeral <7> key, the numeral '7' and letters 'P' / 'p' / 'Q' / 'q' / 'R' / 'r' / 'S' / 's' are displayed in order. Release as soon as 'S' is displayed. 'S' is now entered.

Punctuation marks

Enter punctuation marks by key <0>, <1>, <*>, <#>. For example, press numeral <1> key, the punctuation marks '~' / '.' / ',' / ';' / ':' / '@' are displayed in order. Release as soon as the desired mark is displayed. The punctuation mark is entered.

Press <←> to delete the previous character of cursor.

Press <OK> to finish entry.

Press <C> to cancel entry and return to previous interface.

Key	Included numbers and letters
0	0 / _ / space
1	1 / ~ / . / , / ; / : / @
2	2 / A / a / B / b / C / c
3	3 / D / d / E / e / F / f
4	4 / G / g / H / h / I / i
5	5 / J / j / K / k / L / l
6	6 / M / m / N / n / O / o
7	7 / P / p / Q / q / R / r / S / s
8	8 / T / t / U / u / V / v
9	9 / W / w / X / x / Y / y / Z / z
*	*
#	#

6.7 Event views

FC361-xx fire control panel displays different event views with different formats. The picture below is the event views format:

①	②	③
④	⑤	⑥
⑦		
⑧		
⑨		
⑩		
⑪		

No.	Description	Samples
1	Series number of the event / total number of the events	1/1
2	Event type	Alarms
3	Access level	L3
4	Series number of the event	001
5	Detailed event type	ManualAlarm
6	Optional, Zone number	Zone 3
7	Optional, Customer text or line number, or 'Control Panel'	Meeting room 808
8	Optional: Customer text of section or Date and time	8 th Floor
9	Optional: Section number	Section 1
10	Optional: Date and time	12-09-2016 08:08:08
11	Optional: Device technical information (Line number +Logical number +Device ID)	1: Add 003/004A08B0

6.7.1 Sample of Alarm view

1/1 ①	Alarms ②	L3 ③
001 ④	Manual alarm ⑤	Zone 3 ⑥
Meeting room 808 ⑦		
8 th floor ⑧		
Section 1 ⑨		
12-09-2015 08:08:08 ⑩		
1: Add 003/ 004A08B0 ⑪		

6.7.2 Sample of Fault view

1/1 ①	Faults②	L3 ③
001 ④	Manual alarm⑤	Zone 3 ⑥
Meeting room 808 ⑦		
8 th floor ⑧		
Section 1 ⑨		
12-09-2015 08:08:08 ⑩		
1: Add 003/ 004A08B0 ⑪		

6.7.3 Sample of Isolation view

1/1 ①	Isolations②	L3 ③
001 ④	Disable⑤	Zone 3 ⑥
Meeting room 808 ⑦		
8 th floor ⑧		
Section 1 ⑨		
12-09-2015 08:08:08 ⑩		

7 Operation

This chapter describes detailed operation workflow on important fire detection system functions.

7.1 Alarm procedure in unmanned mode

- Display provides fire information. See chapter 'Event views [→ 62]'.
 • Immediate activation of panel states 'Any Fire' and 'Global Alarm'.
 • If configured: RT fire is activated by 'Global Alarm'.

1/1 Alarms	L1
001 Auto.ALARM Zone 3	
Meeting room 808	
8th Floor	
Section 1	
12-09-2015 08:08:08	
1:Addr 003/004A08B0	



Press <Acknowledge>  to confirm attendance.

(Access level 2 password is required.)

→ Buzzer is off.

1/1 Alarms	L1
001 Auto.ALARM Zone 3	
Meeting room 808	
8th Floor	
Section 1	
12-09-2015 08:08:08	
1:Addr 003/004A08B0	



Optional: Press <Silence/Resound>  to silence/resound all sounders.

1/1 Alarms	L1
001 Auto.ALARM Zone 3	
Meeting room 808	
8th Floor	
Section 1	
12-09-2015 08:08:08	
1:Addr 003/004A08B0	

Read the alarm event information on the LCD and go to the indicated fire location to verify the incident.



Examine the fire location and decide whether it is a MAJOR INCIDENT or MINOR INCIDENT.

MAJOR INCIDENT: A real fire emergency

1/1 Alarms	L1
001 Auto.ALARM Zone 3	
Meeting room 808	
8th Floor	
Section 1	
12-09-2015 08:08:08	
1:Addr 003/004A08B0	

Ensure the fire brigade is called.

Call fire brigade if no remote transmission is implemented!

If remote transmission to fire brigade is

implemented, the 'Fire Brigade' LED  indicates 'RT fire' status. See chapter LED indicators [→ 56].

MINOR INCIDENT: No fire alarm



Press <Reset>  to return into normal operation.

(Access level 2 password is required.)

If fire brigade was called automatically (i.e. RT fire), inform the fire brigade about the actual situation.



The fire alarm reoccurs if any device remains in fire condition.

7.2 Alarm procedure in manned mode

- Display provides fire information. See chapter 'Event views [→ 62]'.
 • Immediate activation of panel states 'Any Fire'.

In the event of an automatic fire alarm in manned mode, the attendance check countdown T1 starts if AVC is on.



The Alarm Verification Concept (AVC) for automatic detectors can be deactivated for special applications. In this case, the alarm procedure follows the description in chapter Alarm procedure in unmanned mode [→ 64] (i.e. no attendance check T1 and no investigation time T2).

1/1 Alarms (T1)02:57	L1
001 Auto.ALARM Zone 3 Meeting room 808 8th Floor Section 1 12-09-2015 08:08:08 1:Addr 003/004A08B0	



Press <Acknowledge> to confirm attendance check.

(Access level 2 password is required.)

→ Buzzer is off.

1/1 Alarms (T2)04:59	L1
001 Auto.ALARM Zone 3 Meeting room 808 8th Floor Section 1 12-09-2015 08:18:08 1:Addr 003/004A08B0	



The investigation time T2 is started.

Optional: Press <Silence/Resound> to silence / resound all sounders.

1/1 Alarms (T2)04:59	L1
001 Auto.ALARM Zone 3 Meeting room 808 8th Floor Section 1 12-09-2015 08:18:08 1:Addr 003/004A08B0	

Read the alarm event information on the LCD and go to the indicated fire location.



During the investigation time, examine the fire location and decide whether it is a **MAJOR INCIDENT** or **MINOR INCIDENT**.

MAJOR INCIDENT: A real fire emergency

1/1 Alarms	L1
001 Auto.ALARM Zone 3 Meeting room 808 8th Floor Section 1 12-09-2015 08:08:08 1:Addr 003/004A08B0	



Activate the nearest manual call point
OR

Press <Alarm Delay Off> to cancel the investigation time and activate the panel state 'Global Alarm' immediately.

(Access level 2 password is required.)

→ If configured, RT fire is activated by 'Global Alarm'.

MINOR INCIDENT: No fire alarm



Press <Reset>  to return into normal operation.

(Access level 2 password is required.)

Check  and ensure that the fire brigade was not called accidentally



The fire alarm reoccurs if any device remains in fire condition.

7.3 Procedure in case of fault

A fault event is displayed on LCD if a fault occurs.

As an option, the configured outputs can be activated (example, RT fault).

1. Press  on the PMI.
2. Read message / fault location on the display.
3. Go to the fault location.
4. Eliminate the cause of the fault.



A list of possible faults and solutions can be found in the chapter 'Trouble shooting [→ 109]'. Please contact your service provider if the fault cannot be eliminated.



The fault is reported again if it is acknowledged but not eliminated.

7.4 Access level 1

These functions are available without a password.

7.4.1 System status

The fire detection system evaluates received signals and indicates them as events.

There are the following event categories:

- Alarm
- Fault
- Technical
- Isolation
- Test
- Information

The 'System status' function is used to display all pending events.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
 2. Select 'System status' and press .
⇒ The 'System status' window is open. All event types are listed with numbers of pending events.
 3. Select one event type and press .
- ⇒ All pending events of the selected type are indicated. You can check each of the events by pressing  / .

The picture below shows the details of an event as an example.

4/4 Faults	L1
Short	
Monitored output	
Output card 4M	
Circuit 02	
03-01-2015 18:08:08	

7.4.2 Login

The 'Login' function is used to access higher levels using a password.

The password entry window displays automatically if you require a higher access level operate on the PMI.

The picture below shows the password entry window.

Login	L1
Password: (4 digits)	
<input type="text"/>	

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Login' and press .
⇒ The password entry window is open.
3. Enter password and confirm with .
⇒ The corresponding access level is enabled.
⇒ The main menu with corresponding commands opens.



For example, access level 1 can log into access level 2 or access level 3 with the appropriate password; access level 2 can log into access level 3 with the appropriate password.

7.4.3 Query alarm count

The panel counts all alarm events. The total number of alarm events is displayed by querying alarm count.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
 2. Select 'Query alarm counter' and press .
- ⇒ The total number of alarm events is indicated.

The picture below shows the alarm counter.

Query alarm counter	L1
Alarm count: 10	

7.4.4 About

The 'About' function displays software version for:

- Panel
- FC360 Panel Configurator
- Output card (4M) ¹

¹ If installed

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
 2. Select 'About' and press .
- ⇒ The following information is indicated.

About	L1
Version info	
FW version	: 01.01.01(70)
Config. version	: 01.00.19(71)
Output card 4M	: 01:00.18(68)

7.5 Access level 2

These functions are available with an access level 2 password.

7.5.1 Isolation

The 'Isolation' function is used to enable / disable section, zone, device, sounders, RT output, control output.

In certain situations, e.g. maintenance or decoration etc., you can disable parts of a building to avoid false alarms or fault messages. The 'Isolation' LED is on if the part of the building is disabled.

	<p>⚠ WARNING</p>
	<p>Disabling system parts render it impossible to acquire and process alarms or faults!</p> <p>Fire may spread unhindered.</p> <ul style="list-style-type: none"> • Deploy staff to monitor the disabled area. • You must enable the disabled area as soon as possible.

The procedure below indicates the steps to disable a section as an example. Refer to the procedure to enable / disable sections, zones, devices, sounders, RT outputs, control output.

Disable a section

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status 2 - Operation 3 - Event memory 4 - Login 7 - Logout 8 - Query alarm counter	

2. Select 'Operation' and press , the 'Operation' window is open.

Operation	L2
1 - Isolation 2 - Test	

3. Select 'Isolation' and press ►, the 'Isolation' window is open.

Isolation	L2
1 - Detection	
2 - Sounders	
3 - RT outputs	
4 - Fire control	
5 - Control output	

4. Select 'Detection' and press ►, the 'Detection' window is open.

Isolation- Detection	L2
1 - Section	
2 - Zone	

5. Select 'Section' and press ►, a list of all sections is displayed.

Isolation - Section	L2
01 Section 1 (ON)	
02 Section 2 (ON)	
T1 Section T1 (ON)	

6. Select the desired section and press ►, a confirmation dialog window is open.

Do you want to disable section?
Yes (OK) or No (C)

7. Press  to confirm. The selected section is disabled and the isolation LED is on.

7.5.2 Test

7.5.2.1 Detection test

This function sets a section or a zone to 'Test' mode. The panel provides two kinds of test modes:

- Silent: All sounders remain silent in fire alarm condition during testing. Only the LCD screen displays the test event.
- Audible: All sounders sound for a period of 10 seconds in fire alarm condition during testing. The LCD screen displays the test event.

The procedure below indicates how to set a section to 'Test' mode as an example.

Set a section to 'Test' mode

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status	
2 - Operation	
3 - Event memory	
4 - Login	
7 - Logout	
8 - Query alarm counter	

2. Select 'Operation' and press , the 'Operation' window is open.

Operation	L2
1 - Isolation	
2 - Test	

3. Select 'Test' and press , the 'Test' window is open.

Test	L2
1 - Detection test	
2 - Lamp test	

4. Select 'Detection test' and press ►, the 'Detection test' window is open.

Test - Detection test	L2
1 - Silent 2 - Audible	

5. Select one item, e.g. 'Silent' and press ►, a list of all sections is displayed.

Detection test - Silent	L2
01 Section 1(OFF) 02 Section 2(OFF) T1 Section T1(OFF)	

6. Select the desired section and press ►, 'Entire section' and a list of all zones under the section are displayed.

Detection test - Silent	L2
Entire section (OFF) 001 Auto alarm zone 1(OFF) 002 Auto alarm zone 2(OFF) 003 Auto alarm zone 3(OFF)	

7. Select e.g. 'Entire section' and press ►, a confirmation dialog window is open.

Do you want to activate test on section? Yes (OK) or No (C)

8. Press  to confirm, the selected section is set to 'Test' mode and the 'Test' LED is on.

9. You can start testing devices installed in the section.



Refer to the steps above to exit test mode after finishing testing.

7.5.2.2 Lamp test

The lamp test checks the following functions:

- LEDs
- Buzzer
- LCD

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status 2 - Operation 3 - Event memory 4 - Login 7 - Logout 8 - Query alarm counter	

2. Select 'Operation' and press , the 'Operation' window is open.

Operation	L2
1 - Isolation 2 - Test	

3. Select 'Test' and press , the 'Test' window is open.

Test	L2
1 - Detection test 2 - Lamp test	

4. Select 'Lamp test ' and press , a confirmation dialog window is open.

Do you want to activate lamp test? Yes (OK) or No (C)

5. Press  to confirm, test starts:

- LEDs: on 10 s
- Buzzer: on 10 s
- LCD: on 5 s, then off

The panel returns to the previous status after finishing check.

7.5.3 Event memory

7.5.3.1 Event log

All events that happened in the fire detection system are stored in the event memory. There are 8 event categories:

- Alarm
- Fault
- Technical
- Isolation
- Test
- Activation
- Information
- Operation

The event lists are sorted chronologically and can be filtered by category and time.



When you view event log, the displayed view is almost the same as 'Event view'. In addition, the symbols '+', '-', 'c' are displayed in front of the event type to indicate the processing status of the event:

1. '+': event in
2. '-': event out
3. 'c': operation on PMI

View all events

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status	
2 - Operation	
3 - Event memory	
4 - Login	
7 - Logout	
8 - Query alarm counter	

2. Select 'Event memory' and press , the 'Event memory' window is open.

Event memory	L2
1 - Event log	

3. Select 'Event log' and press ►, the 'Event log' window is open.

Event log	L2
1 - Show log 2 - Advanced	

4. Select 'Show log' and press ►, all events stored in the event memory are displayed. Scroll by using ▼ / ▲.

Rec. 001 of 008	L2
+ Short Monitored output Output card 4M Circuit 02 03-01-2015 18:08:08	

View filtered events

1. Press  on the keypad, the 'Main menu' is open.

Main menu	L2
1 - System status 2 - Operation 3 - Event memory 4 - Login 7 - Logout 8 - Query alarm counter	

2. Select 'Event memory' and press ►, the 'Event memory' window is open.

Event memory	L2
1 - Event log	

3. Select 'Event log' and press **▶**, the 'Event log' window is open.

Event log	L2
1 - Show log 2 - Advanced	

4. Select 'Advanced' and press **▶**, the 'Advanced' window is open.

Advanced	L2
Type:	All
Start time:	08-01-2015
End time:	08-01-2015
Print:	×
	Query

5. Select 'Type:', enter 'Start time:' / 'End time:' and select 'Query' and press **▶**, all filtered events are displayed. Scroll by using **▼** / **▲**.

Rec. 001 of 008	L2
+ Short Monitored output Output card 4M Circuit 02 03-01-2015 18:08:08	



The explanation of number on the top line 'Record XXX of YYY':
 XXX: Series number of event, the first event is '001', the last event is 'YYY'.
 YYY: Total number of all events.

For detailed information on the LCD display, please refer to chapter 'Event views [→ 62]'.



To print filtered events, select 'Print:' with '√' in step 4.

7.5.4 Logout

The 'Logout' function returns to access level 1 from access level 2 or 3.

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status	
2 - Operation	
3 - Event memory	
4 - Login	
7 - Logout	
8 - Query alarm counter	

2. Select 'Logout' and press , a confirmation dialog window is open.

<p>Do you want to logout?</p> <p>Yes (OK) or No (C)</p>

3. Press  to confirm, the panel returns to access level 1.



The panel automatically logs out and returns to access level 1 if no action is taken within 5 minutes.

7.6 Access level 3

This function is available with access level 3 password.

7.6.1 Test log

The 'Test log' function deletes all test log on the panel.

1. Press  on the keypad, the 'Main menu' window is open.

Main menu	L2
1 - System status	
2 - Operation	
3 - Event memory	
4 - Login	
7 - Logout	
8 - Query alarm counter	

2. Select 'Event memory' and press , the 'Event memory' window is open.

Event memory	L2
1 - Event log	
2 - Test log	

3. Select 'Test log' and press , the 'Test log' window is open.

Test log	L2
1 - Delete log	

4. Select 'Delete log' and press , a confirmation dialog window is open.

Confirm delete?
Yes (OK) or No (C)

5. Press  to confirm, all test logs are deleted.



To view test logs, upload it to a PC by 'FC360 Panel Configurator'.

8 Engineering



All 'Engineering' functions request access level 3 password.

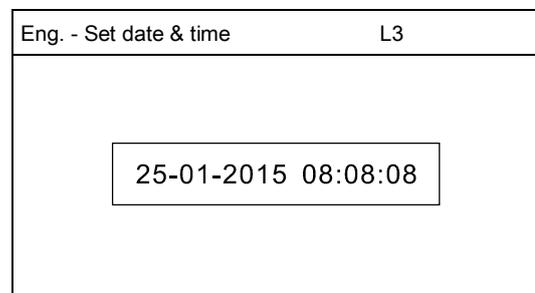
8.1 Set date & time

The 'Set date & time' function adjusts date and time.

In countries with central European summer time (CEST), the system clock automatically switches between daylight savings time and regular time.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Set date & time' and press .
⇒ The 'Set date & time' window is open.
4. Enter the correct date and time and confirm with .
⇒ A confirmation dialog window is open.
5. Press  to confirm.
⇒ The date and time are set.

The picture below shows the 'Set date & time' window.



8.2 Edit zone and section name

The 'Edit name' function is used to edit the name of a zone or a section. The new name is shown when the zone or the section is reaccessed.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Edit name / password' and press .
⇒ The 'Edit name / password' window is open.
4. Select 'Edit name' and press .
⇒ The 'Edit name' window is open. A list of all sections is displayed.
5. Select a desired section and press .
⇒ The selected section and its below zones are listed.
6. Select the section and press  or select a zone and press .
⇒ A name entry dialog window is open.
7. Enter a name and confirm with .
⇒ A confirmation dialog window is open.
8. Press  to confirm.
⇒ The name of the section or the zone is changed.

The picture below shows the name entry window.

Eng. - Edit name	L3
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">ABCDEF GH</div>	

8.3 Change password

The 'Passwords' function is used to change the password for access level 2, access level 3 and access level 3.1.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Edit name / password' and press .
⇒ The 'Edit name / password' window is open.
4. Select 'Passwords' and press .
⇒ The 'Passwords' window is open.
5. Select one access level which need to change the exiting password and press .
⇒ The password entry window is open.
6. Enter a new password and confirm with .
⇒ A verify password window is open.
7. Repeat the entry and confirm with .
⇒ A new password is created.

The picture below shows the password entry window.

Eng. - Change password	L3
Password: (4 digits)	
<input type="text"/>	

8.4 Detector line

8.4.1 Restart

The 'Restart' function is used to restart a detector line.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Restart' and press .
⇒ The 'Restart' window is open.
5. Select one desired detector line and press .
⇒ A confirmation dialog window is open.
6. Press  to confirm.
⇒ The line is restarted.
⇒ The message 'Line startup is in progress...' is displayed. The panel returns to previous status after restart.

8.4.2 Power off

The 'Power off' function is used to power off a detector line.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Power off' and press .
⇒ The 'Power off' window is open.
5. Select one desired detector line and press .
⇒ A confirmation dialog window is open.
6. Press  to confirm.
⇒ The detector line is powered off.



Restart the detector line to power it on.

8.4.3 Read in

The 'Read in' operation must be executed after performing one of the following actions:

- Change topology of detector line, e.g. merge two stubs into one loop.
- Add new device(s).

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Read in' and press .
⇒ The 'Read in' window is open.
5. Select the first detector line and press .
⇒ A confirmation dialog window is open.
6. Press  to confirm.
⇒ The detector line starts to read in.
⇒ The message 'Read in is ongoing...' is displayed. The panel returns to previous status after reading in.
⇒ The panel reports an 'Unassigned Zone' fault for each new device if new devices are connected. The new devices need to be assigned to zones by 'FC360 Panel Configurator'.



When two stubs are merged into one loop, always select the first stub in step 5. The second stub is adopted automatically.



When a sub-stub is connected to a loop, the topology is also detected as a loop. The 'Read in' operation is requested to add the new sub-stub.



The 'Read in' operation does not succeed if a device is missing.



Panel need to be restarted manually after read in. Otherwise, the devices on the detector line are under configuration mode and cannot report fault event.

See also

-  Power off [→ 84]

8.4.4 Maintenance

8.4.4.1 Remove a device

The device must be uninstalled with the base (if necessary) if it needs to be removed from the system. Reconnect the wires of the detector line, then operate on PMI as outlined below. The device is deleted from the system.

▷ A device is removed and a 'Missing device' fault is reported in fault view.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Maintenance' and press .
⇒ The 'Maintenance' window is open.
5. Select 'Remove a device ' and press .
6. Select a line and press .
⇒ If there are missing devices, a list of all missing devices is displayed.
7. Select a desired device and press .
⇒ A confirmation dialog window is open.
8. Press  to confirm.
⇒ The device is deleted from the configuration.



Pressing  in fault view and pressing  in confirmation window, deletes a missing device.

8.4.4.2 Accept replaced devices

If several devices of the detector line need to be replaced, power off the line first and then uninstall the old devices. Replace the new devices with the same type and then operate on PMI as per the procedure below. The new devices inherit all features and parameters settings from the old devices.



Do not change the topology when replacing devices.

- ▷ The detector line is powered off. Refer to chapter 'Power off [→ 84]'.
 1. Press  on the keypad.
 - ⇒ The 'Main menu' window is open.
 2. Select 'Engineering' and press  .
 - ⇒ The 'Engineering' window is open.
 3. Select 'Detector line' and press  .
 - ⇒ The 'Detector line' window is open.
 4. Select 'Maintenance' and press  .
 - ⇒ The 'Maintenance' window is open.
 5. Select 'Accept replaced devices' and press  .
 - ⇒ A list of all lines is displayed.
 6. Select a line and press  .
 - ⇒ A confirmation dialog window is open.
 7. Press  to confirm.
 - ⇒ The replaced devices are accepted.

8.4.4.3 Replace and test a detector

If a detector needs to be replaced with the same type, set the detector to replace mode on the PMI as per the procedure below.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Maintenance' and press .
⇒ The 'Maintenance' window is open.
5. Select 'Replace & test detector' and press .
⇒ A list of all lines is displayed.
6. Select a line and press .
⇒ A list of all detectors is displayed.
7. Select a detector and press .
⇒ A confirmation dialog window is open.
8. Press  to confirm.
⇒ The detector is in replace mode. The LED on the old detector is flashing.
⇒ The panel reports an information event and two disable events: the detector is disabled and the zone which the detector is assigned to is also disabled. You cannot enable the detector and the zone manually before the detector exits the replace mode.
9. Uninstall the old detector and wait for approximately 20 s, then insert a new one with the same type.
⇒ The LED on the new detector flashes for 10 s.
10. After the LED stops flashing, exit the replace mode. Refer to step 1...8.
⇒ The information event and disable events disappear automatically.



The detector exits replace mode automatically if the old detector is not uninstalled within one hour.

A missing message is reported in fault view if the old detector is uninstalled but the new one is not installed within one hour.

8.4.5 Auto configuration

The 'Auto configuration' function is used to commission a newly installed panel immediately.

	NOTICE
	Overwrite the old configuration The old configuration is overwritten. <ul style="list-style-type: none">• Save the old configuration before executing auto configuration.

- ▷ The detector line is powered off. Refer to chapter 'Power off [→ 84]'.
 1. Press  on the keypad.
 - ⇒ The 'Main menu' window is open.
 2. Select 'Engineering' and press  .
 - ⇒ The 'Engineering' window is open.
 3. Select 'Detector line' and press  .
 - ⇒ The 'Detector line' window is open.
 4. Select 'Auto configuration' and press  .
 - ⇒ A warning window is open.
 5. Press  to confirm.
 - ⇒ The detector line starts auto configuration.
 - ⇒ The detector line restarts and all connected devices are found and added to the detector line according to the topology.
 - ⇒ Set all the devices to the default settings. (see 'Appendix D: Default setting for panel/devices [→ 117]')
 - ⇒ The devices are assigned to the corresponding zones automatically. (see 'Appendix B: Zone type list [→ 115]')
 - ⇒ Auto restart the panel for the configuration to take effect.
 - ⇒ All the devices can be viewed on the PMI. (see chapter 'Locate devices [→ 91]')



The 'Auto configuration' process takes a few minutes, depending on the installation size.



A FDCI723 zone module connected to the system is not automatically assigned to a zone after auto configuration. The fault 'Unassigned zone' is reported. It must be assigned to a zone manually by 'FC360 Panel Configurator'.



If the auto configuration process is terminated by fault the old configuration is recovered on the panel!

8.4.6 View / Locate

8.4.6.1 View sections / zones

The 'View section / zones' function is used to view all sections, zones and devices that are connected to the panel.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'View / locate' and press .
⇒ The 'View / locate' window is open.
5. Select 'View section / zones' and press .
⇒ A list of all sections is displayed.
6. Select one section and press .
⇒ A list of all zones is displayed.
7. Select one zone and press .
⇒ A list of all devices is displayed.
8. Select one device and press .
⇒ The device details are displayed as follow.

View section / zones	L3
FDM225_6 4E7A1FD	
Product ES: 4	
Zone no.: 002	
Section no.: 01	

8.4.6.2 Locate devices

The 'Locate devices' function is used to find a device on site.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'View / locate' and press .
⇒ The 'View / locate' window is open.
5. Select 'Locate devices' and press .
⇒ A list of all lines is displayed.
6. Select one desired detector line and press .
⇒ A list of all devices is displayed.
7. Select one desired device and press .
⇒ Two commands are listed.
8. Select 'Locate' and press .
⇒ A confirmation dialog window is open.
9. Press  to confirm.
⇒ The device is located.
⇒ The LED indicator on the device is flashing.



The above procedure can also be used to exit locate status if the device is found.

8.4.6.3 View type A dependency

The 'View typeA dependency' function is used to view all devices which have type A dependency activated.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'View / locate' and press .
⇒ The 'View / locate' window is open.
5. Select 'View typeA dependency' and press .
⇒ A list of all zones with activated type A dependencies is displayed.
6. Select one zone and press .
⇒ The details of the type A zone are displayed as follows.

View typeA dependency	L3
Auto alarm zone 5	
Type A inhibit time(sec) 30	



The 'Type A function' can be configured by 'FC360 Panel Configurator'.

8.4.7 Reset detection module

The 'Reset detection module' function is used to reset the detection module from the menu when the detection module reports a fatal fault.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Detector line' and press .
⇒ The 'Detector line' window is open.
4. Select 'Reset detection module' and press .
⇒ A confirmation dialog window is open.
5. Press  to confirm.
⇒ A message 'Line startup is in progress...' is displayed.
⇒ The detection module is reset and the fatal fault disappears once the above message disappears.

8.5 Calibrate output card (4M)

The transmission paths must be calibrated per EN 54-13. The 'Calibrate 4M card line' function is used to calibrate the line on output card (4M). Line calibration is needed to achieve supervision. The line resistance is indicated for calculation resulting from the calibration.



Configure the function 'Monitor creeping open / short' in 'Output card 4M' tab by 'FC360 Panel Configurator' before the line of output card (4M) is calibrated.

To calibrate RT fault line:

- ▷ EOL or relay needs to be connected at the end of the line.
- 1. Press  on the keypad.
 - ⇒ The 'Main menu' window is open.
- 2. Select 'Engineering' and press .
- ⇒ The 'Engineering' window is open.
- 3. Select 'Calibrate 4M card line' and press .
- ⇒ All outputs are listed.
- 4. Select one output and press .
- ⇒ A confirmation dialog window is open.
- 5. Press  to start calibrate the output.
- ⇒ If calibration is successful, the resistance and / or line current is indicated.
- ⇒ The LCD automatically returns to previous display.

To calibrate RT fire, Fire control and sounder line:

1. Connect EOL at the terminal of output card (4M).
2. Carry out calibration of the line, refer to above steps 1...5.
3. Disconnect the EOL from the terminal of output card (4M), connect it to the end of the line.
4. Carry out calibration of the line again, refer to above steps 1...5.
- ⇒ The calibration is finished.

8.6 Reset alarm counter

The 'Alarm counter reset' function is used to reset the alarm counter to '0'.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Alarm counter reset' and press .
⇒ A password entry window is open.
4. Enter the password (66666666) and press .
⇒ A confirmation dialog window is open.
5. Press  to confirm.
⇒ The alarm counter is reset to '0'.

8.7 Restore factory settings



NOTICE

Restoring factory settings on the panel

The configuration of the panel is deleted!

- Save the configuration data for the panel before restoring to factory settings.



The restore process takes a few minutes, depending on the size of site.

1. Press  on the keypad.
⇒ The 'Main menu' window is open.
2. Select 'Engineering' and press .
⇒ The 'Engineering' window is open.
3. Select 'Factory set' and press .
⇒ A confirmation dialog window is open.
4. Press  to confirm.
⇒ A message 'Factory set is ongoing...' is displayed.
⇒ The panel restarts.
5. Select country and language.
⇒ The panel is reset to factory settings.

8.8 Configuration tools

Two tools are used to configure FC360 system easily and conveniently:

- FC360 Panel Configurator
- FC360 Desktop Editor

The below table describes the functions of the tools:

Tools	Functions
FC360 Panel Configurator	<ul style="list-style-type: none"> • Online configuration • Apply configuration • Backup configuration • Restore configuration • Reset alarm counter • Synchronize system time
FC360 Desktop Editor	<ul style="list-style-type: none"> • Update firmware • Modify configuration file

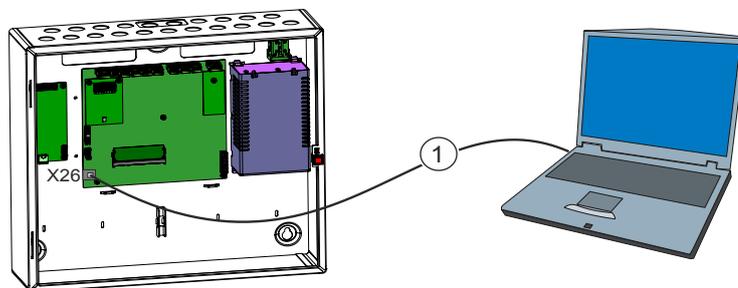
'FC360 Desktop Editor' is available at www.siemens.com/buildingtechnologies/Cerberus-fit.

'FC360 Panel Configurator' is integrated in the panel.

Detailed information about tools operation is available in document A6V10450595. See chapter 'Applicable documents [→ 9]'.

8.8.1 Connect PC to panel

A PC is required for most commissioning, maintenance and repair work. The figure below shows the connection between PC and panel.



X26 Terminal of PC connection

1 Cable, type CAT 5 or CAT 7, crossover, max. 100 m



WARNING

Risk to system integrity through unauthorized access

Malfunction and not ready for alarm activation

- Access to the station only with direct PC connection according to document A6V10421795 and A6V10450595.
- Connection to networks is expressly prohibited.



Adobe Flash Player is required on PC.

9 Commissioning

This chapter describes initial commissioning of the fire control panel FC361-xx.

9.1 Install and check the detector line

Install devices



Before inserting or connecting a device, stick the ID number onto the layout plan. The adhesive strip with the ID number can be found on the bottom of the device.

- ▷ The detector line is not connected to the control panel.
 - ▷ The power supply is disconnected from all devices with external power supply.
1. Install and wire the devices and stick the ID number for each device onto the layout plan.
 2. Mount the detector dust caps on the optical point detector if necessary.
 3. Install the designation plate if necessary.

Check the detector line



NOTICE

Simultaneous connection of line tester and detector line to the control panel

Damage to line tester or control panel

- Do not connect the line tester and the detector line to the control panel at the same time.

- ▷ The detector line is not connected to the control panel.
1. Connect the Line Tester FDUL221 to the newly installed detector line.
 2. Test the detector line for short-circuits, open lines and earth faults.
 3. Check the number of the devices on the detector line using the display on the line tester.
 4. Check the branch-off position of the stubs and the number of devices at the stubs.
 5. Check the type of all devices.
 6. Remedy any errors and carry out the acceptance test again.



Detailed information about the Line Tester FDUL221 is available in document 008250. See chapter 'Applicable documents [→ 9]'.

9.2 Install panel

- ▷ The fire control panel FC361-xx is mounted.
- 1. Insert the cables for the detector lines and the mains supply into the panel and connect them to the panel. Refer to chapter 'Power supply - mains voltage [→ 29]'.
 - ⇒ The panel executes first startup.
 - ⇒ During startup, the fault LED and system fault LED are on and the display shows no information.
- 2. Place the batteries and connect them to the power supply. Refer to chapter 'Battery [→ 30]'.

9.3 Startup panel

1. Connect the cables for the detector lines.
2. Connect the power supply (mains and batteries).
 - ⇒ The panel executes first startup.
 - ⇒ During startup, the fault LED and system fault LED are on and the display shows no information.
3. Wait until the display indicates the selection of the country and language.
4. Press ▼ / ▲ to select your country and press ► and confirm with .
5. Press ▼ / ▲ to select your language and press ► and confirm with 
 - ⇒ The panel starts loading your country and language default settings.
 - ⇒ The display indicates the progress status.
6. Wait for the start-up progress to be terminated.
 - ⇒ The panel is ready for commissioning.

	NOTICE
	Report 'configuration fault' during the first system startup The detector line is detected as two stubs during the first system startup even if they are connected as a loop. <ul style="list-style-type: none">• Carry out 'Auto configuration' during commissioning and the fault disappears.

9.4 General commissioning steps

9.4.1 Auto configure detector line

Refer to chapter 'auto configure detector line [→ 89]'.

After finishing auto configuration:

- All devices on the detector line are read in and added to the detector line as per the topology.
- All the devices are configured with the default settings. (see 'Appendix D: Default setting for panel/devices [→ 117]')
- Some devices are assigned to corresponding zones automatically. (see 'Appendix B: Zone type list [→ 115]')
- Create default control logics as per predefinition.

9.4.2 Configure the system manually

Modify using 'FC360 Panel Configurator'

1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.
 2. Open a web browser.
 3. Enter web address with 'fc360.siemens.com' and press <Enter>.
 - ⇒ 'FC360 Panel Configurator' is open.
 4. Enter access level 3 password to login to level 3.
 5. Modify configuration as needed.
 - ⇒ Generally the following configuration may be modified in 'FC360 Panel Configurator':
 - Customer texts
 - Properties and the parameter settings
 - Allocation of zones and sections
 - Control logics
 6. After finishing modification, click 'Apply'.
 - ⇒ A confirmation window is open.
 7. Click 'OK' to download the modified configuration to the panel. (The panel is at access level 3.)
 - ⇒ The panel restarts automatically.
 - ⇒ The configuration finishes.

Modify using 'FC360 Desktop Editor'

1. Connect the panel to the PC installed with 'FC360 Desktop Editor'.
2. Backup configuration to PC first. Refer to chapter 'Backup configuration to PC [→ 104]'.
3. Open 'FC360 Desktop Editor'.
4. Select language and click 'Enter'.
5. Click 'Open an existing configuration'.
6. Select the file name of backup configuration and click 'Open'.
 - ⇒ The configuration is open in 'FC360 Desktop Editor'.
7. Modify configuration as needed.
 - ⇒ Generally the following configuration needs to be modified:
 - Customer texts
 - Properties and the parameters
 - Allocation of zones and sections
 - Control logics
8. After finishing modification, click 'Save as' to save the modified configuration.
9. Restore the configuration to the panel by 'FC360 Panel Configurator'. Refer to chapter 'Restore configuration to panel [→ 104]'.
 - ⇒ The panel restarts automatically if the panel is in access level 3.
 - ⇒ The configuration finishes.

Detailed information about operation of 'FC360 Panel Configurator' and 'FC360 Desktop Editor' is available in document A6V10450595. Refer to chapter 'Applicable documents [→ 9]'.



The topology must not be changed (e.g. add or delete devices on the detector line) when using the 'FC360 Desktop Editor' to modify the configuration. Otherwise you will fail in downloading the configuration.

9.4.3 Function test



⚠ WARNING

Alarming and RT transmission are activated during testing.

You must do the follow:

- Inform fire brigade.
- Inform owner of the building.

1. Execute lamp test. Refer to chapter 'Lamp test [→ 75]'.
2. Test each device (detector, MCP, etc.) individually and check the correctness of the system behavior (e.g. sounder activation, RT fire, RT fault, fire controls, etc.). Refer to chapter 'Detection test [→ 73]'.
3. Make sure that the panel is in normal operation, the buzzer and all system parts are enabled.
- ⇒ The function test is finished.

9.4.4 Completing work

1. Check date and time on the panel display. If they are not correct, modify them. Refer to chapter 'Set date & time [→ 81]'.
2. Secure the housing cover with a screwdriver.
3. Complete the installation label (top right of the housing) with the commissioning date.
- ⇒ The system can now be handed over to the customer.

9.5 Set Windows firewall

The aim of changing the firewall settings is to establish a functioning Ethernet connection between the configuration tools on the PC and the control panel.

The Windows firewall may prevent the PC from connecting to the panel. In this case, the firewall must be switched off in Windows XP or firewall rules set in Windows 7 when working with the fire detection installation.

Proceed as follows:



You must have administrator rights for the following settings.

Windows XP

1. Open the Windows start menu.
2. Select 'Settings' > 'Control panel' > 'Administrative Tools' > 'Services'.
3. Right-click 'Windows Firewall/Internet Connection Sharing (ICS)' in the new window.
4. Select 'All Tasks' > 'Exit' in the context menu.
5. Once the work is complete, reactivate the firewall. To do this, proceed as described above but select 'All Tasks' > 'Start' in the context menu.



NOTICE

Security vulnerability in operating system due to deactivated firewall

Unauthorized access to your PC

- Activate the firewall after the firmware update.

Windows 7



There are different ways of adjusting the firewall rules in Windows 7. The following settings apply for Siemens PCs which use group guidelines controlled by the domain.

Set the following for the Windows 7 firewall:

- ▷ You have administrator rights on your PC.
 - ▷ The PC is connected to the Siemens intranet.
1. Open the Windows start menu.
 2. Select 'Control Panel' > 'All Control Panel Items' > 'Administrative Tools' > 'Local Security Policy' > 'Windows Firewall with Advanced Security'.
 3. Expand the menu.
 4. Right-click 'Inbound Rules' > 'New Rules'
 - ⇒ The 'New Inbound Rule Wizard' window is open.
 5. Select 'Rule Type' and activate 'Program'.

6. Click 'Next >' to confirm and enter the program path to 'WebEngineeringServer.exe'.
 - Example: D:\Program Files\Siemens\Offline Web Tool\offline_server\api\thrift\WebEngineeringServer.exe
7. Click 'Next >' to confirm and then confirm the default setting 'Allow the connection' in the next step ('Action').
8. In the next step 'Profile', remove the check mark from the 'Domain' checkbox.
 - ⇒ The 'Private' and 'Public' checkboxes are checked.
9. Click 'Next >' to confirm and enter an appropriate name in the next step ('Name'), such as 'FC360 Desktop Editor-application'.
10. Click 'Finish' to complete the process.
 - ⇒ A 'New Rule' has now been set and appears in the 'Inbound Rules' list.

Additional settings are required for the new rule:

1. Right-click the new rule and select 'Properties'.
2. Select the 'General' tab in the 'Rule Name Properties' window.
3. Set the following values:
 - 'General': 'Activated'
 - 'Action': 'Allow connection'
4. Select the 'Protocol and Ports' tab.
5. Set the following values:
 - 'Protocol type': 'UDP'
 - 'Local port': 'Specific Ports', and enter the value range '69' in the box.
 - 'Remote port': 'All Ports'
6. Confirm with 'OK'.
 - ⇒ The new firewall rule is now configured.



NOTICE

Unauthorized access to your PC

- Deactivate the firewall rule configured above after the firmware update.

9.6 Update firmware



▲ WARNING

Fire detection installation is deactivated during the firmware update

Fire may spread unhindered.

- Supervision by people is required.
- Re-activate the fire detection installation as soon as possible.



When the panel firmware is updated, the firmware of output card (4M) (if installed) and the detection module are also updated automatically.



NOTICE

Firmware update on the panel

The configuration of the panel may be affected depending on the update type!

- Create backup of the configuration data for the panel before updating firmware. See chapter 'Appendix C: Flash file behaviors [→ 116]'.

- ▷ Ensure that the latest firmware version is installed on the PC. The latest firmware version ('FC360 Desktop Editor') is installed on the PC.
1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.
 2. Set Windows firewall. Refer to chapter 'Set Windows firewall [→ 101]'.
 3. Enter access level 3 password to login to level 3 on panel.
 4. Open 'FC360 Desktop Editor'.
 5. Click 'Update Firmware'.
 - ⇒ The panel starts to update firmware.
 - ⇒ A successful message is indicated. Otherwise, a failure message is indicated.
 6. Check the version on the panel. See menu item 'About'.
 7. Disconnect PC from the panel.

Detailed information about updating firmware is available in document A6V10450595. See chapter 'Applicable documents [→ 9]'.



To update the firmware of FT2010 / FT2011 / FDUL221, please refer to the document A6V10210416. See chapter 'Applicable documents [→ 9]'.

9.7 Backup configuration to PC

1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.

2. Open a web browser.
3. Enter web address with 'fc360.siemens.com' and press <enter>.
⇒ 'FC360 Panel Configurator' is open.
4. Enter access level 3 password to login to level 3 on panel.
5. Click 'Backup'.
6. Enter a path and a file name and click 'OK'.
⇒ A configuration backup is stored to the PC.
7. Disconnect PC from the panel.

9.8 Restore configuration to panel

1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.

2. Open a web browser.
3. Enter web address with 'fc360.siemens.com' and press <enter>.
⇒ 'FC360 Panel Configurator' is open.
4. Enter access level 3 password to login to level 3 on panel.
5. Click 'Restore'.
6. Select the configuration file and click 'OK'.
⇒ The configuration is downloaded to the panel.
⇒ 'FC360 Panel Configurator' logs out automatically.
7. Disconnect PC from the panel.

9.9 Backup event log to PC

1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.

2. Open a web browser.
3. Enter web address with 'fc360.siemens.com' and press <enter>.
⇒ 'FC360 Panel Configurator' is open.
4. Click 'Administration' tab.
5. Click 'Event memory -Upload to PC'.
6. Enter a path and a file name and click 'OK'.
⇒ The event log is stored to the PC.
7. Disconnect PC from the panel.

9.10 Backup test report to PC

1. Connect PC to the panel. Refer to chapter 'Connect PC to panel [→ 95]'.
 2. Open a web browser.
 3. Enter web address with 'fc360.siemens.com' and press <enter>.
⇒ 'FC360 Panel Configurator' is open.
 4. Click 'Administration' tab.
 5. Click 'Test report-Upload to PC'.
 6. Enter a path and a file name and click 'OK'.
⇒ The test report is stored to the PC.
 7. Disconnect PC from the panel.

9.11 Factory reset

If the wrong country or language setting was selected during the start-up of the panel, execute a factory reset to restart.
Refer to chapter 'Restore factory settings [→ 94]'.

9.12 Add output card (4M)

- ▷ Output card (4M) is installed correctly. Refer to chapter 'Output card (4M) (FCA3602-Z1) [→ 47]'.
1. Connect PC to the panel.
 2. Open a web browser.
 3. Enter web address with 'fc360.siemens.com' and press <enter>.
⇒ 'FC360 Panel Configurator' is open.
 4. Enter access level 3 password to login to level 3 on panel.
 5. Configure output card (4M). Refer to the document A6V10450595. See chapter 'Applicable documents [→ 9]'.
 6. Check output card (4M) function.
 7. Disconnect PC from the panel.

10 Maintenance

10.1 General

Regular maintenance of the system is necessary to ensure the reliable operation. The panel has a reminder function that can inform you of imminent maintenance. When the service reminder is displayed, regular maintenance by the service technician is required.



Maintenance intervals may differ from the following maintenance recommendations depending on national regulations.



The reminder function can be configured through 'FC360 Panel Configurator'.

	NOTICE
	<p>Non-observance of rules during maintenance work Insufficient maintenance and damage to the site or parts thereof.</p> <ul style="list-style-type: none"> • Always de-energize the panel first before connecting, fitting or removing components. • Prevent electrostatic discharge. • An EMC mat must be used if working on components. • Do not touch the modules with your bare hands where possible. • Do not switch off the site or parts thereof for long periods of time.

10.2 Preparatory work

Inform system owner

Inform the system owner about the scope and expectation of maintenance work.

Disable system components

Disable the following system components as needed:

- Alarm transmission
- Fire controls and sounder lines

10.3 Function test

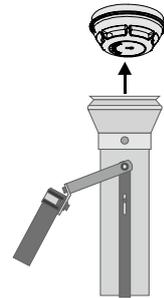
The following schedule is recommended for the function test. However, local regulations have priority.

Function	Activity	Interval (years)		
		1	2	5
Detector line	Activate all automatic detectors and all manual call points.		X	
	Activate a detector or manual call point per line	X		
	Check all detectors and manual call points for dirt and check that usage is in accordance with regulations.	X		
	Activate a fault, short circuit and open line, for each line and check that usage is in accordance with regulations.			X
Outputs	Check sounder controls and all acoustic alarm devices.	X		
	Activate fire outputs and check the application.	X		
	Activate RT alarm and check the RT transmission.	X		
Inputs	Activate each input and check the application.	X		
Alarm organization	Mode Manned. Activate a detector and manual call point and check the timer V1 and V2 and the RT transmission.	X		
	Mode unmanned. Activate a detector and check the RT transmission.	X		
Panel	Check date and time.	X		
	Check the display, button and LEDs.	X		
	Check earth connections.	X		
	Activate mains and battery fault condition and verify the application.	X		

10.4 Device test

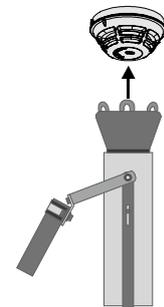
Smoke detector

1. Enable test mode for the line.
2. Place detector tester RE6 on detector head.
3. Release test gas.
4. Remove detector tester.
5. Confirm the alarm was triggered. Alarm indicator is flashing.
6. Wait until alarm indicator is off.
7. Set the line to normal mode operation.



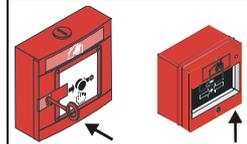
Heat detector

1. Enable test mode for the line.
2. Place detector tester RE6T on detector head and turn on heater.
3. Remove detector tester.
4. Confirm the alarm was triggered. Alarm indicator is flashing.
5. Wait until alarm indicator is off.
6. Set the line to normal mode operation.



Manual call point

1. Enable test mode for the line.
2. Depending on type of call point, insert test key or open cover to activate.
3. Confirm the alarm was triggered. Alarm indicator is flashing.
4. Remove test key or close door.
5. Wait until alarm indicator is off.
6. Set the line to normal mode operation.



Printer

1. Initiate a printer test and check the print out for legibility and correct printing.
2. Check whether the events are correctly printed out.

10.5 Completion of work

1. Activate a test alarm through the system operator with remote transmission.
2. Change all 'OFF' status to 'ON'.
3. Have the system owner confirm the revision.

11 Trouble shooting

11.1 Fault message indication

No.	Description	Cause	Action
1	General fault	The system has a fault.	Check whether another fault LED is flashing, if not: <ul style="list-style-type: none"> • Check the display • Check whether the fault control input is activated.
2	System fault	Failure of the main CPU	Visual check of the cable connections <ul style="list-style-type: none"> • Switch power off and restart. If the fault is still displayed, replace the mainboard.
3	Sounder fault	Fault on sounder line	Check the sounder line for <ul style="list-style-type: none"> • Short circuit • Open circuit • Missing EOL element or defective
4	RT fire fault	Fault on RT fire line	Check remote transmission

See also

📖 Restore factory settings [→ 94]

11.2 Panel

Description	Cause / Action
Date and time fault	Power down, reset date and time refer to chapter 'Set date & time [→ 81]".
Buzzer not working	Check the position of the buzzer switch on the mainboard. If the buzzer still does not work, replace the mainboard.
Brightness of LCD screen is low	Press keys <ok> + <#> simultaneously. With each press the brightness increases one grade. The brightness has 5 grades and it is a cyclic process.
Detector line overload	<ol style="list-style-type: none"> 1. Power off detector line first, then restart it. 2. If the error still occurs, check the load on the detector line by using the 'FX3610 Cerberus FIT Quantities tool'

11.3 Accessories

Description	Cause / Action
DC 24 V too low	Check voltage input '24V' on the output card FCA3602-Z1.
Outputs from output card (4M) indicates a fault	Check the cable connection and output line.
EVAC fault	Check the cable connection. Replace the device if still not working.
Key switch does not work	Check the cable connection. Replace the device if still not working.
LED indication module does not work	Check the cable connection. Replace the device if still not working.



Please contact your service provider if you cannot eliminate the fault.

11.4 Recover short fault of detector line

- ▷ A short fault message is displayed.
 1. Restart detector line. Refer to chapter 'Restart [→ 84]'.
 2. Read information view to find the two devices with open isolators. Refer to chapter 'System status [→ 68]'.
 3. Go to the fault location to eliminate it.
 4. Restart detector line.
- ⇒ Short fault message and isolator open information message disappear.

12 Components and spare parts

Components

Type	Part no.	Designation
FC361-ZZ	S54433-C112-A1	Fire control panel (1L, Compact)
FC361-ZA	S54433-C111-A1	Fire control panel (1L, Comfort)
FC361-YZ	S54433-C110-A1	Fire control panel (1L, Compact, LED)
FC361-YA	S54433-C109-A1	Fire control panel (1L, Comfort, LED)

Accessories

Type	Part no.	Designation
FTO3601-H1	S54433-B116-A1	Evacuation module (NL)
FTO3602-Z1	S54433-B117-A1	LED indicator (16 zones)
FCA3602-Z1	S54433-A114-A1	Output card (4M)
FCA3601-Z1	S54433-N113-A1	Key switch
FCA3603-Z1	S54433-N115-A1	Key switch (Nordic)
FCA2001-A1	A5Q00005327	RS232 module
FCA2002-A1	A5Q00009923	RS485 module
FHA3602-Z1	S54433-N118-A1	Semi flush mount bezel

Additional power supply

Type	Part no.	Designation
FP120-Z1	S54400-S122-A1	Power supply kit A 70 W

Batteries

Type	Part no.	Designation
FA2003-A1	A5Q00019353	Battery 7 Ah
FA2004-A1	A5Q00019354	Battery 12 Ah
BAT12-25	S54302-Z102-A1	Battery 25 Ah

Spare parts

Type	Part no.	Designation
FP2015-A1	S54400-B121-A1	Power supply (70 W)
FCM3601-Z1	S54443-A115-A1	Mainboard
FHD3601-Z1	S54443-B118-A1	Door incl. PMI

13 Environmental protection and disposal



This device is manufactured using materials and procedures which comply with current environmental protection standards as best as possible. More specifically, the following measures have been undertaken:

- Use of reusable materials
- Use of halogen-free plastics
- Electronic parts and synthetic materials can be separated

Larger plastic parts are labeled according to ISO 11469 and ISO 1043. The plastics can be separated and recycled on this basis.



Electronic parts and batteries must not be disposed of with domestic waste.

- Take electronic parts and batteries to local collection points or recycling centers.
- Contact local authorities for more information.
- Observe national requirements for disposing of electronic parts and batteries.

14 Appendix A: Alarm Verification Concept (AVC)

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

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

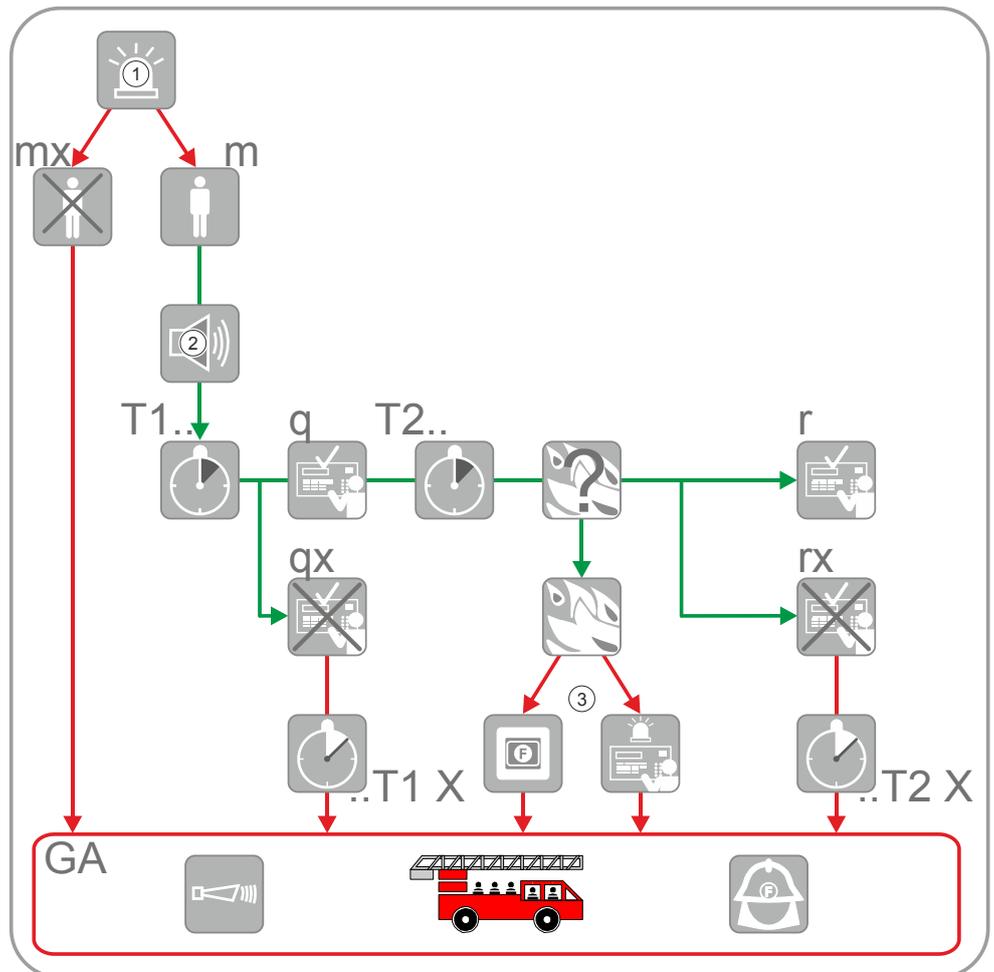


Figure 27: Alarm verification

1	Alarm event	q	Acknowledge at panel
2	Alarming	qx	Not acknowledged
3	Manual call point or <Alarm delay off> on panel	T2..	Time T2 to investigate the source of alarm / the fire location
mx	'Unmanned operation' operation mode	..T2 X	Time T2 has expired
m	'Manned operation' operation mode	r	Reset on panel
T1..	Time T1 for attendance check	rx	Not reset
..T1 X	Time T1 has expired	GA	Alarming (Global alarm)

Alarm verification proceeds as follows:

- An alarm event activates local alarming and starts the time T1 for attendance check.
- Operating personnel acknowledges alarm event on the panel prior to the expiry of T1. Acknowledging normally silences local alarming.

If there is no acknowledgement, global alarming is activated after T1 expires.

- After acknowledgement, the investigation time T2 starts. During time T2 operating personnel investigates the fire location.
 - In the case of a minor incident the operator resets the alarm event at the nearest operating terminal. The alarming process stops, and no global alarming is activated.
 - In the event of a fire, the nearest MCP or <Alarm delay off> button on panel must be pressed.

Global alarming is also activated after T2 expiry if there is no reset.

Manned operation

Manned operation enables the responsible personnel to examine the fire alarm before initiating the intervention force. This may avoid hassles in case of false alarms.

Attendance check (T1)

In case of a fire incident, the responsible personnel may acknowledge the alert at the panel by pressing the acknowledge button (ACK) within time T1. After acknowledgement, the investigation time T2 starts.

Real 'ALARM' is activated if nobody confirms the alert state within the given time T1.

Investigation time (T2)

During the investigation time T2 the operating personnel may examine the indicated source of alarm and check the cause of the alarm:

- Is it a real fire (MAJOR INCIDENT)?
- Is it a smoldering waste-paper basket (MINOR INCIDENT)?
- Has the installation detected a deceptive phenomenon (MINOR INCIDENT)?

In the event of a major incident, the nearest manual call point or <Alarm delay off> must be pressed. Alarm is then triggered.

The operator may reset the panel for a minor incident or false alarm.



A real alarm is activated if the alarm is not reset within the given time T2.
Allowed time per EN 54-2 is $T1 + T2 \leq 10$ min.

15 Appendix B: Zone type list

Up to 200 zones can be assigned to 1...17 sections. Two kinds of sections are available as below:

- Section (T1): used for technical zones
- Section (1...16): used for alarm events

Zone type	Parameters	Values	Optional section	Optional devices
Auto Alarm Zone	AVC function	ON (default)	Section 1...16	FDF241-9, FDL241-9, HI722, HI720, OH720, OOH740, OP720, Fire sensor on the OOH740, Collective input on FDCI723; General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
		OFF		
	Type A function	ON OFF (default)		
	Type A inhibit time(sec)	30...60 60 (default)		
Manual Alarm Zone	AVC function	ON	Section 1...16	FDM221, FDM223, FDM224, FDM225, FDM226, FDM231, Collective input on FDCI723, General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
		OFF (default)		
Sprinkler Zone	-	-	Section 1...16	General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
Technical Zone	-	-	Section T1	General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
Technical Latching Zone	-	-	Section T1	General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
Gas Zone	-	-	Section T1	CO sensor on the OOH740
Fault Zone	-	-	Section T1	General input on FDCI221, FDCIO221, FDCI222, FDCIO222, FDCIO224
Control Zone	-	-	-	General output on the FDCIO221, FDCIO222, FDCIO224
EVAC Zone	-	-	-	2 sounder lines on mainboard Max. 4 configurable sounders on output card (4M) All addressable sounders on detector line



The FDCI723 CANNOT report a Glass Broken event even if it is assigned to a manual alarm zone.

16 Appendix C: Flash file behaviors

Actions	Effects				
	Alarm Counter	Configuration File	Event Memory	PMI Status	Password of 'FC360 Panel Configurator'
Update firmware	Unchanged	Unchanged ¹	Unchanged	Unchanged	Unchanged
Download an existing configuration file	Unchanged	Modified	Unchanged	Unchanged	Unchanged
Download a new created configuration file	Unchanged	Modified	Unchanged	Modified	Unchanged
Reset to factory settings	Unchanged	Modified	Unchanged	Modified	Modified

¹ Depends on the update type.

17 Appendix D: Default setting for panel/devices

Panel site information:

Items	Default settings
Name	Site
Installer name	Siemens
Contact tel.	-
Service reminder enable	No
Timed channel active	23:00:00
Timed channel inactive	23:00:15
Addressable sounders tone 1	Continuous tone
Addressable sounders tone 2	1s Intermittent
AVC T1 time	3mins
AVC T2 time	5mins
Timed switching to unmanned	No

Inputs / Outputs on mainboard

Items	Programmable type	Input usage / Output usage	Tone	Activation condition (cause)
Sounder 1	-	-	Continuous	Any fire
Sounder 2	-	-	Continuous	Any fire
Configurable IO 1	Digital Input	Class change	-	-
Configurable IO 2	Digital Input	Ext. PSU fault	-	-
Configurable IO 3	Digital Output	Control output	-	-
Configurable IO 4	Digital Output	Control output	-	-
Relay 1	-	RT fire	-	-
Relay 2	-	RT fault	-	-
Relay 3	-	Fire alarm	-	-

Outputs on Output card (4M)

Items	Output usage	Monitor creeping open / short	Tone	Activation condition (cause)
Configurable OUT1	RT fire	No	-	-
Configurable OUT2	RT fault	No	-	-
Configurable OUT3	Sounder line	No	Continuous	Any fire
Configurable OUT4	Sounder line	No	Continuous	Any fire

Special panel settings

Items	Default settings
MCP broken glass message ¹	Yes
Sounder outputs activation via silence/resound button	No
Resound sounders on new alarm	Yes
Lamp test activation possible at access level I	Yes
Acknowledge used as silence	No
Acknowledge availability at access level I	No
Block ackn./reset if RT is active	No
RT Fire LED activated by	RT fire
Internal AI operation in idle mode	Normal: Off
Main power fault delay function	ON
Main power delay time	10mins
Automatically adjust clock for daylight saving time	Yes
Enable DHCP server	Yes
Panel IP address:	192.168.251.100
Subnet mask	255.255.255.0
Default gateway	192.168.251.19
MCP cannot be disabled	No

¹ The 'Glass Broken Device' message from an activated MCP disappears automatically 15 seconds after reset (i.e. replacement of glass).

Detector parameters

Devices	Sensitivity	Detection method	Parameter set	Attach AI
OP720	01: Standard	-	-	No
HI720	-	02: A2R	-	No
HI722	-	01: A2S	-	No
OH720	01: Robust	-	-	No
OOH740	-	-	04 (OOT): Balanced	No
OOHC740 (fire sensor)	-	-	10 (OOT): Balanced CO	No
OOHC740 (CO sensor)	-	-	-	No
FDL241-9	01: Robust	-	-	No
FDF241-9	01: Standard	-	-	No

Manual call points parameters

Devices	Attach AI
FDM221	-
FDM223	No
FDM224	No
FDM225	-
FDM226	-
FDM231	-

Input parameters of input modules / I/O modules

Devices	Short circuit monitoring enabled	Inversion
FDCI221	Yes	Normal
FDCI222	Yes	Normal
FDCIO221	Yes	Normal
FDCIO222	Yes	Normal
FDCIO224	Yes	Normal

FDCI723 zone modules parameters

Items	Default settings
Response time setting	Alarm: 0s / Malfunction: 10s
Line type	Voltage limiting alarm load
EOL type	20V tranzorb diobe
Zone type	Auto alarm zone
AVC function	ON
Type A function	OFF

Outputs parameters of I/O modules

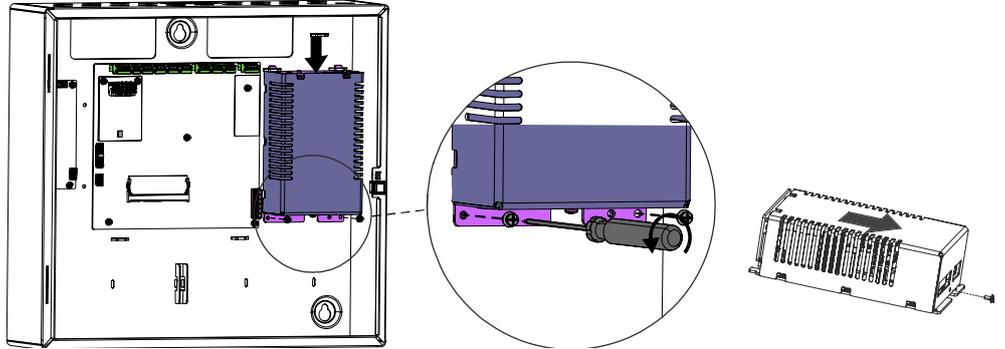
Devices	Output mode	Fail safe	Output style
FDCIO221	Inactive: Off / Active: On	Freeze	Monitored output
FDCIO222	Inactive: Off / Active: On	Freeze	-
FDCIO224	Inactive: Off / Active: On	Freeze	-

Sounder bases / sounders parameters

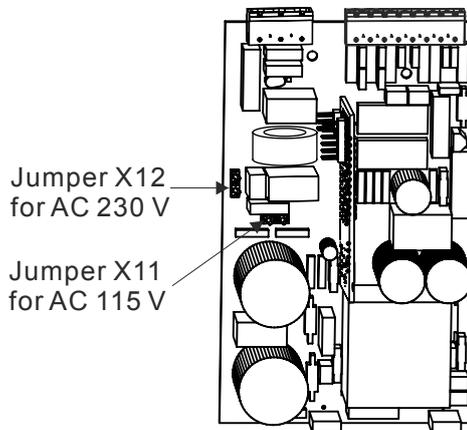
Devices	Volume	Silent sounder
DBS721	High	-
DBS728	High	Yes
DBS729	High	Yes
FDS221	High	-
FDS229	High	Yes

18 Appendix E: Switch mains to AC 115 V

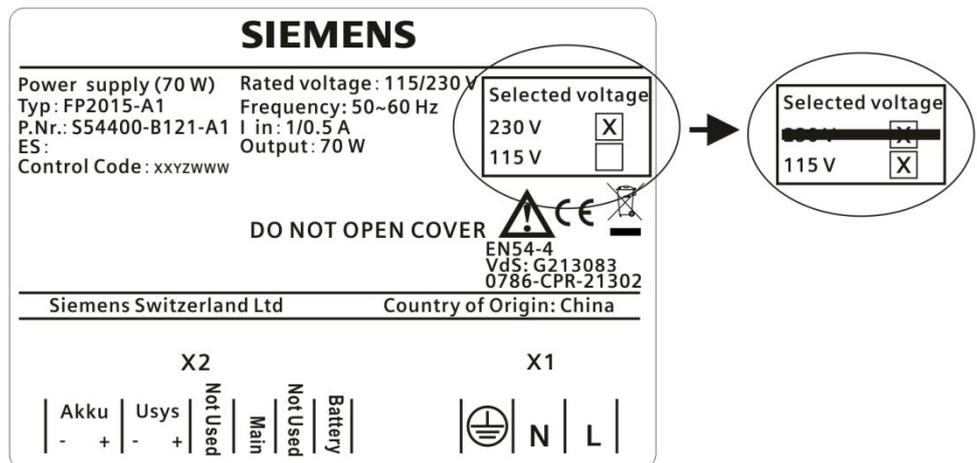
1. Remove power supply FP2015-A1 from the panel and open it.



2. Move the jumper from X12 to X11 on the PCB board.



3. Mark '115 V' with 'x' and '230 V' with '-----' on the label indicated as below.



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