Panasonic

Operating Instructions

MEW01163

Revision -

Fire Alarm System EBL512 G3
V1.0.x

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Table of contents

1 Introduction

EBL512 G3 Operating Instructions is a document intended to be used by the end-user and the fire brigade personnel as well as service / commissioning engineers.

Due to continual development and improvement, different S/W versions are to be found. This document is valid for **S/W version 1.0.x**. On the date / rev date of this document x = 0.

Since the EBL512 G3 control unit (c.i.e.) is produced for many countries the look, the texts, the functions, etc. might vary.

Products

Consists of one or more parts (HW) according to a **Product Parts List**. A product has:

- a **type number**

  5000 EBL512 G3 c.i.e. Configured for 128, 256 or 512 alarm points and with or without printer depending on article number.

  5001 EBL512 G3 c.i.e. No front panel and no Plexiglas in the door. Configured for 128, 256 or 512 alarm points depending on the article number.

- an **article number** is often the same as the type no. but a country code can be added (e.g. **SE** for Sweden). If the letters **PRT** also are added in the article number the product comes with a printer. If digits are added to the article number they are showing the number of alarm points configured (e.g. 5000PRTSE-**128**).
- a **product name** (e.g. **EBL512 G3 CU, 128 alarm points, with printer**)

HW

A HW (e.g. a **p**rinted **c**ircuit **b**oard) has:

- a **type number** (e.g. **5010**)
- an **article number**, often = the type no. and sometimes is a country code added (e.g. **5010SE**)
- a **product name** (e.g. **Main Board 128 alarm points**)
- a **p.c.b. number** (e.g. **9290-3B**) and can also have a configuration (e.g. **CFG: 2**) and a revision (e.g. **REV: 2**)
- sometimes a **S/W**

S/W

A S/W has:

- a **version number** (e.g. **V1.0.x**)

- sometimes additional information, such as **Convention** (different functions / facilities), **Language**, **Number of addresses**, etc.

PC S/W

A PC S/W is a program used for programming, commissioning, etc. It has a **version number**.

2 Definitions / Explanations

Definitions / explanations / abbreviations / etc. frequently used or not explained elsewhere in the document.

2.1 PEWN AB

Panasonic Electric Works Nordic AB

2.2 Alarm points

Units, which can generate a fire alarm (in the control unit), i.e. analog detectors (sensors), conventional detectors, manual call points, etc.

2.2.1 Smoke detector

Analog and conventional photoelectric (optical) smoke detectors are available.

2.2.2 Sensor

Sensor = Analog detector

2.2.3 Analog detector

Contains an A/D-converter. The **C**ontrol **U**nit pick up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made in the c.i.e. Analog detectors are addressable – an address setting tool is used for detector types **33**xx / **430**x.

An analog detector has to be plugged in an analog sensor base (**ASB**).

2.2.4 Analog (Sensor) Base (ASB)

A sensor is plugged in an ASB, which is connected to a COM loop (see below).

2.2.5 Conventional detector

Detector with only two statuses, i.e. normal and fire alarm. The detector contains a closing contact and a series alarm resistor. Normally plugged in a conventional detector base **CDB** (see below) connected to a conventional zone line input, with an end-of-line device. Some types are connected directly on zone line.

2.2.6 (Conventional Detector) Base (CDB)

A conventional detector is plugged in a CDB, connected to a conventional zone line input.

2.2.7 Addressable

A unit with a built-in address device, i.e. each unit is individually identified, handled and indicated in the c.i.e.

(The unit can be an I/O unit with a zone line input, to which one or more conventional "alarm points" can be connected.)

2.2.8 Conventional zone line input / External line

Input intended for one or more conventional alarm points. End-of-line device in the last alarm point.

2.3 Output unit

Addressable unit with programmable control outputs. Connected to a COM loop (see below).

2.4 Output / Control output

Defined or programmable function. Relay output or voltage output (supervised / monitored), in the c.i.e. or an output unit.

2.5 Short circuit isolator (ISO)

Addressable unit for automatic disconnection of a part (segment) of a COM loop (see below) in case of a short circuit on the loop. (According to EN54-2: One ISO is required per 32 alarm points on the COM loop.)

2.6 Display unit (DU)

Addressable unit for fire alarm presentation (incl. user definable text messages, if programmed).

2.7 COM loop

Loop = a cable, with two wires, to which all the addressable units can be connected. Starts in the c.i.e. and it returns back to the c.i.e.

2.8 Control Unit / C.U. / C.I.E.

Control **U**nit = **C**ontrol and **I**ndicating **E**quipment = Unit to which the alarm points are connected (via a COM loop). Indicates fire alarm, fault condition, etc. Fire Brigade Panel & Control Panel (see below) included or not included. Printer included or not included.

2.9 Fire Brigade Panel (FBP)

Unit intended for fire alarm presentation, etc. for the fire brigade personnel. Can be a part of the control unit (front) or a separate unit (external FBP).

In the ext. FBP, a printer can be included or not included.

2.10 Control panel (CP)

A part of the control unit (front), intended for the building occupier, service personnel, etc., to "communicate" with the control unit / system.

2.11 System

Several control units connected via a TLON network (co-operating control units).

2.12 Network / TLON® / LonWorks® / Echelon / Node / TLON Conn. board / Gateway / Sub net / Backbone net / Router / Repeater

Brief explanations to the words/expressions to be found in connection with a "network". See also separate TLON Technical description.

TLON® = TeleLarm Local Operating Network = a LonWorks®- based network for communication between several units/nodes. The protocol is LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a control unit to the network, a TLON connection board is plugged in the control unit. (Old installations: Some control units, not prepared for network connection, could be connected via a serial interface and a Gateway).

A network can be one sub net (FTT-10) or several sub nets, connected via routers. (In the TLON Network a sub net = a channel.)

Routers are also used to increase the maximum cable length, node to node, in a network.

All network programming (configuration) are made with the PC program "TLON Manager".

2.13 LED

LED (**L**ight **E**mitting **D**iode) = Yellow, green or red optical indicator ("lamp").

2.14 External Indicator (LED)

A unit with an LED. Connected to an ASB, CDB or a detector with a built-in LED. Old installations: Also connected to an ADB.
Lit when the built-in LED is lit.

2.15 Display / LCD

LCD (**L**iquid **C**rystal **D**isplay) = Display (in the c.i.e. or Display unit) for presentation of fire alarms, fault messages, etc. a graphical monochrome LCD (320 x 240 dots) and backlight.

2.16 Door open (Door / Key switch)

In EBL512 G3 there is a door switch, which is activated when the control unit door is open. In some other units this door switch is replaced with a key switch.
When the door is open a message "Door is open in this unit" is shown in the LCD.

2.17 Site Specific Data (SSD)

The SSD is unique for each installation. All alarm points, presentation numbers, user definable text messages, programmable outputs, etc. are created in the PC program **WinG3** and also downloaded in EBL512 G3 with **WinG3**.

2.18 Software (S/W) / System program

The S/W makes the control unit (the microprocessor) work. It is factory downloaded but a new version can be downloaded in EBL512 G3 on site.

3 Overview

3.1 The EBL512 G3 system

EBL512 G3 is a microprocessor controlled intelligent fire alarm system, intended for analog addressable smoke detectors, as well as conventional detectors and manual call points. Programmable control outputs and output units are available. Up to 1020 addresses (of which up to 512 can be alarm points) can be connected to each control unit (c.i.e.).
EBL512 G3 is available in several types, versions and configurations. It can be connected to a TLON network, a "system", with up to 30 control units. Each control unit has access to all information.

Product type no.	*Product name*
5000	EBL512 G3 c.i.e. with front and display
5001	EBL512 G3 c.i.e. without front and display

EBL512 G3 is designed according to the European standard EN54, part 2 and 4. The Swedish front conforms to SS3654.

3.1.1 Printer

The control unit EBL512 G3 type **5000** (with "PRN" included in the article number) comes with a printer. (The printer type number as a spare part is 5058.)
In Ext. Fire Brigade Panel 1826 it is possible to mount an optional Printer 1535.

3.1.2 Expansion boards

In the control unit (c.i.e.) it is possible to mount up to six expansion boards. The following types are available:

Product type no.	*Product name*	*Note*
4580	8 zones expansion board	
4581	8 relay outputs expansion board	
4583	Multipurpose I/O expansion board	

Regarding the expansion boards, see also the EBL512 G3 Planning Instructions and drawings.

3.1.3 Power supply

The main power source is a built-in rectifier (5037), 230 V AC / 24 V DC, 6.5 A.
The second power source is a backup battery (2 x 12 V). In the c.i.e. is space for two 27 Ah batteries. Larger batteries (up to 65 Ah) have to be placed outside the c.i.e.
The batteries and the rectifier are connected to the Main board (5010), which handles the charging of the batteries, etc. See the EBL512 G3 Planning Instructions, chapter "Power supply" for more information.

3.2 S/W versions

Due to continual development and improvement, different S/W versions can be found. When installing a new control unit in a system with "older" control units, you might have to update the S/W in the old control units. T**he same S/W version is required in all control units**.

3.3 Documents

The following documents (except this document) are available:

- Planning instructions
- Drawings

Normally information found in one document is not to be found in another document, i.e. the documents complement each other.

3.4 Applications

The EBL512 G3 system is intended for small, medium and large installations. The intelligent control units offer the system designer and end user a technically sophisticated range of facilities and functions. Programming (PC S/W WinG3 and TLON Manager) and commissioning of the control unit / system is very easy. Start with one control unit and then, when required, add more units. The TLON network makes it possible to install the control units in one building or in many buildings.

3.5 PC S/W

WinG3 is used for programming and commissioning of one or more control units:

- create / download / backup (upload) of site specific data (SSD)
- download of S/W / settings / conventions / configurations / C.U. & system properties / etc.
- create / download the user definable text messages (alarm texts) shown in the display in the C.U. and ext. FBP / Display units.

WinG3 shall have the same (or higher) version number as the EBL512 G3 S/W version number (e.g. **1.0**.x and **1.0**.x respectively). Backup require the same version number (in WinG3 and in EBL512 G3). Old files can be opened and saved in a newer version of WinG3 and thereafter downloaded.

TLON Manager is used for the network programming.

4 Control Unit

Figure 1. EBL512 G3 Control Unit 5000 with printer. The look might vary according to configuration, country, etc.

Depending on country, convention, configuration, etc. the look, language and functions might vary. Figure 1 shows an EBL512 G3 with an English front. EBL512 G3 is housed in a grey metal cabinet. The door has a Plexiglas ahead of the front and display, see Figure 1. A key is required to open the door to get full access to the push buttons on the front, i.e. the **F**ire **B**rigade **P**anel (**FBP)** and the **C**ontrol **P**anel (**CP**).

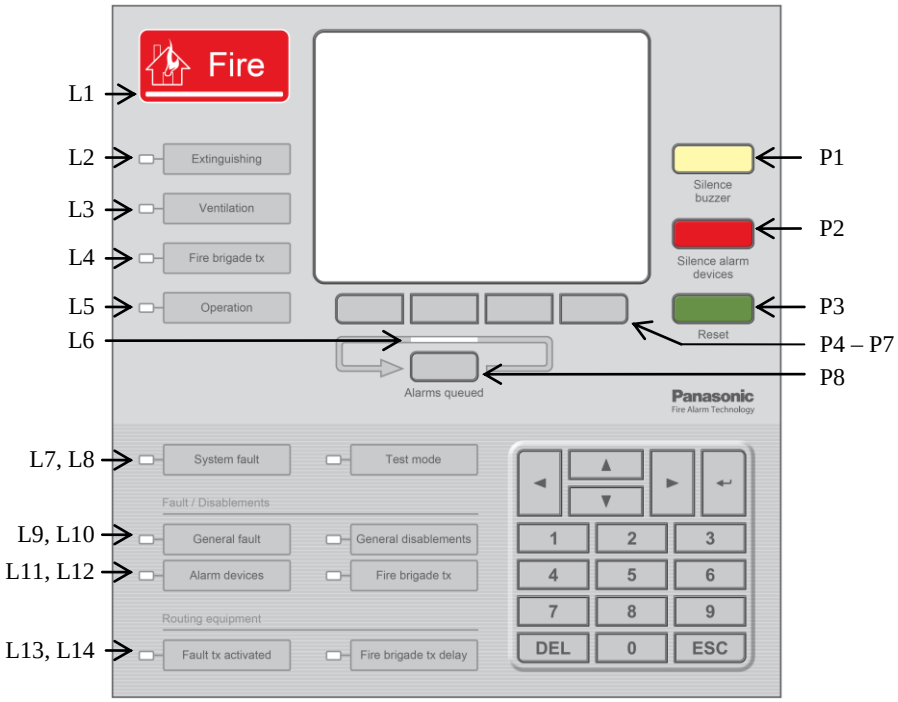


Figure 2. The EBL512 G3 front with display; FBP (upper part) and CP (lower part). The look might vary according to language. (An English front is shown in the figure). See also chapter "LED indicators and push buttons", page 15.

The fire brigade personnel use the **FBP** to see which alarm point / zone(s) having activated fire alarm and to take required operational control of the system. In the graphical display, the information in the upper part is depending on how many alarm points / zones having generated fire alarm. In the middle part a user definable text message (alarm text) is shown for each alarm point / zone in alarm - if programmed.

The **CP** is to "communicate" with the system, i.e. for commissioning, monthly tests, maintenance, etc. Access codes for different access levels are required. A keypad is used to get access to the system (a menu tree with main and sub menus) and for different manoeuvres. The CP has several LEDs for system status.

5 LED indicators and push buttons

LEDs and push buttons can vary according to type and configuration (convention / country / language).

See also Figure 2, page 14.

LED indicators on the Fire Brigade Panel (FBP)		
LED indicator		**Indicating**
L1	Fire (5 red)	Fire alarms (see below) Co-incidence alarm Pre-warning Quiet alarm (normally Australia only) Alarm Acknowledgement Facility (AAF) alarm (Australia only) See also chapter "Alarm types", page 34.
L2	Extinguishing (red)	Output(s) for extinguishing equipment activated. (Or a programmable input type "Extinguishing" is activated.)
L3	Ventilation (yellow)	Output(s) for fire/smoke ventilation equipment activated. (Or a programmable input type "Ventilation" is activated.)
L4	Fire brigade tx (red)	Output "Fire alarm" for fire brigade tx (routing equipment) and/or corresponding programmable output(s) of type "Routing equipment") is/are activated. (Or a programmable input type "Fire brigade tx" is activated.) Test of routing equipment in progress (see menu H1).
L5	Operation (green)	The c.i.e. is powered via the rectifier and/or the battery.
L6	Alarms queued (2 red)	More than one unit / zone have activated fire alarm. Use push button "Alarms queued" (P8) to scroll amongst the alarm points or soft key "Next zone" (P5) to scroll amongst the zones.

NOTE! Fire alarms are:
Fire alarm (incl. test mode alarm)
Heavy smoke/heat alarm
Alert Annunciation (AA) alarm
Key cabinet alarm

Push buttons on the Fire Brigade Panel (FBP)		
Push button		**Operation/function**
P1	Silence buzzer (yellow)	Used to silence the buzzer in the c.i.e.
P2	Silence Alarm devices (red)	Used to silence alarm devices / sounders (i.e. outputs for alarm devices will be de-activated).
P3	Reset (green)	Used to reset: Fire alarms (see below) Co-incidence alarms (if not automatically reset) For more information see "Alarm reset", page 44. **NOTE!** P3 has to be pressed for > 0.5 sec.
P4 – P7	Soft keys (grey)	The operation/function is shown above the key in the display (i.e. the soft key area). The function of a soft key may vary depending on the situation. If nothing is shown above the key in the display, the key has no function for the moment.
P8	Alarms queued (grey)	Used when LEDs "Alarms queued" (L6) are lit, to scroll/browse through the queued alarm points. Function, see chapter "Fire alarm", page 35, under **LEDs "Alarms queued"**.

NOTE! Fire alarms are:
Fire alarm (incl. heavy smoke/heat alarm)
Alert Annunciation (AA) alarm
Key cabinet alarm

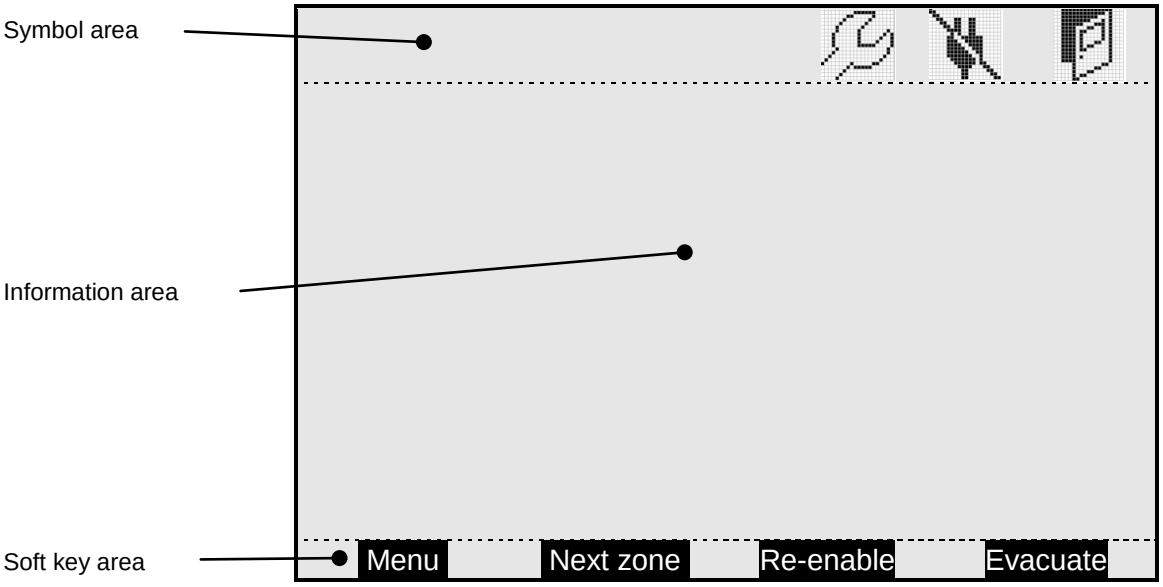
LED indicators on the Control Panel (CP)		
LED indicator		**Indicating**
L7	System fault (yellow)	EBL512 G3 is not running because of S/W, CPU or memory fault.
L8	Test mode (yellow)	One or more zones are in "test mode", see page 80 and 121.
	Fault / Disablements	
L9	General fault (yellow)	Fault(s) in the system, i.e. not acknowledged fault(s) and/or not corrected fault(s). See also page 120.
L10	General disablements (yellow)	Disablement(s) in the system. Also valid for "Single encapsulated reset", see page 45.
L11	Alarm devices (yellow)	**Steady / cont.**: Output(s) type "Alarm device" are disabled. **Blinking**: One or more supervised outputs type "Alarm device" have generated fault(s). This is also valid when the c.i.e. has no "contact" with a unit with such an output, e.g. 3377, 3379, 3364, etc.
L12	Fire brigade tx (yellow)	**Steady / cont.**: Output(s) for "Routing equipment" disabled via menu (H2/B3 or B9) or via open door. **Blinking**: Routing equipment power supply output[1] or one or more supervised outputs (of type "Routing equipment" have generated fault(s). This is also valid when the c.i.e. has no "contact" with a unit with such an output, e.g. 3361, etc.
	Routing equipment	
L13	Fault tx activated (yellow)	One or more not acknowledged faults. Output "Fault condition" for fault tx (routing equipment) is activated. Test of routing equipment in progress (see menu H1). Sensitive fault detection mode (see menu H5/A2) is on.
L14	Fire brigade tx delay (yellow)	The **A**lert **A**nnunciation function is enabled, i.e. time channel controlling this function is "on". The **AA** function is described in the EBL512 G3 Planning Instructions, chapter "Alert Annunciation". LED "L14" will be "on" if the **AA** function is enabled for at least one alarm point / zone. Normally is only one time channel used for this function but two or more channels can be used. The **AA** function can, as an alternative, be continuously "on".

[1] Main board 5010 term. block "J3:3-4", fuse F8 (T500mA L 250 V – TR5).

Push buttons / Keypad on the Control Panel (CP)		
Key/push button		**Operation/function**
	↵ (Enter)	Used to log on, i.e. to get access to the menu tree (via an access code) and to accept a menu and accept input of data.
	◄ ► ▲ ▼	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.
	1 – 9 and **0**	Numeric keys for the figures 0-9.
	DEL	Used to **clear** /delete just written data.
	ESC	Used to stop input of data, leave a menu ("one step up") and to log off.

6 The display (LCD)

6.1 Areas in the display



The display is divided in three areas:

- **The symbol area:** Some events are indicated with symbols, see 6.2 below.
- **The information area:** General area for all kind of information and the menu system.
- **The soft key area:** The function of a soft key is shown in this area. The function of a soft key may vary depending on the situation. If nothing is shown, the soft key has no function for the moment.

6.2 The symbol area

The symbol area is at the top of the display, see 6.1 above.

The symbol area	
Symbol	**Indicating**
	Door open. Any c.i.e. door in the system is opened. See also page 31. Also valid for ext. FBPs.
	Loss of mains. Any c.i.e. or ext. power supply in the system is out of 230 V AC.
	The week average sensor value is over the service level for one or more analog smoke detectors in the system. See also page 105.

Note that the symbol area may be suppressed see 6.3.

6.3 The information area priority order

When the control unit / system is in normal operation (quiescent state), i.e. no fire alarms, no faults, no disablements, no service signals, no zones in test mode, no activated interlocking in / outputs, and/or Alert Annunciation function not enabled, only the LED "Operation" (L5) should be lit and some **system information** is shown in the control unit display. However, the system information has the lowest priority and more important information suppresses less important. In some cases also valid for the symbol area.

The priority order is:

Priority	Event	Symbol area is visible
1	Fire alarms (see below)	No
2	Co-incidence alarm	No
3	Pre-warning	No
4	Quiet alarm	No
5	AAF alarm[2]	Yes
6	Evacuate information[3]	Yes
7	Fault (not acknowledged)	Yes
8	Disablement	Yes
9	Zones in Test mode	Yes
10	Interlocking input / output active	Yes
11	SERVICE signal	Yes
12	System information	Yes

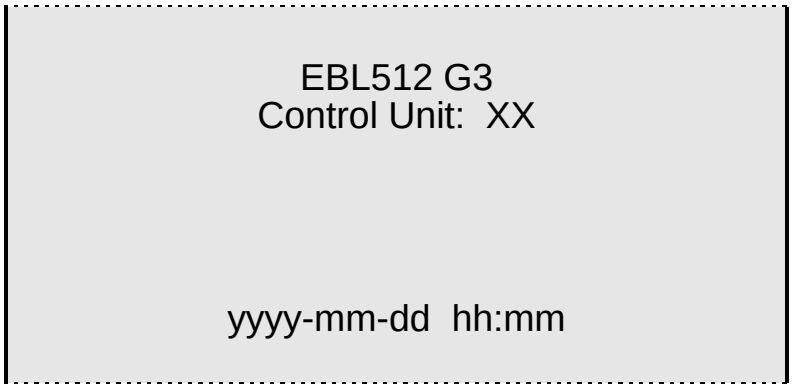
NOTE! Fire alarms are:
Fire alarm
Heavy smoke/heat alarm
Alert Annunciation (AA) alarm
Key cabinet alarm
The different type of events and the menu system are described in other parts of this document. Regarding "System information", see 6.4.

[2] The AAF function is used in conjunction with an AAF Control, which is available on the Australian market only.

[3] Only valid for Belgian, British Standard, Hungarian, Spanish and Ukrainian conventions.

6.4 System information in the LCD

EBL512 G3, control unit number, date and time are displayed. The exact look is convention / language dependent.
One example:

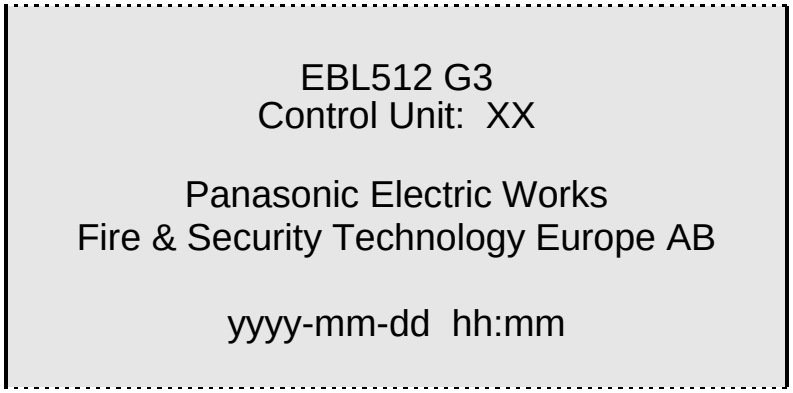


yyyy-mm-dd = (Date) Year-Month-Day
Control Unit; XX = 00-29
hh:mm = (Time) hour:minute

6.4.1 User definable system information

User definable system / installation information (created and downloaded via WinG3) can be displayed in the middle of the display. Two rows à 40 characters are available. This information is shown in all control units in the system.

One example:



7 Access levels

EBL512 G3 has different access levels (1-4) for different kind of users. Access levels 2 and 3 are divided in sub levels (A-B).

Access level	Access code (password)	Required action	Users	Action
1	N/A	None (Door closed).[4]	Anybody.	Scroll / browse through the queued alarms.
2A	N/A	Fire brigade key.	Fire brigade personnel.	Fire alarm handling.
2B	****	Fire brigade key + access code for level 2B (or 3A).	Building occupier / installation owner.[5]	Installation handling (daily duties), e.g. monthly tests, disablements, etc.
3A	****	Fire brigade key + access code for level 3A.	Service / maintenance personnel.	Service, maintenance, commissioning, etc.
3B	********	PC (WinG3) connected + PC access code for level 3B.	Service / maintenance / commissioning engineer.	Service, maintenance, commissioning, etc. via WinG3.
4	********	PC (WinG3) connected + PC access code for level 3B and level 4.	Manufacturer.	Changing factory settings.

The access codes can be changed. To change a code you have to use the valid code or use a code for a higher access level.

Retailers are informed regarding the default access code respectively.

[4] The c.i.e. door is closed but the Plexiglas in the door is provided with a hole for access to the "Alarms queued" button (P8), see Figure 1, page 14.

[5] Normally a person on site, trained in order to perform monthly tests, disablements, etc.

7.1 Access level 1

With the door closed[4], **anybody** has access to the push button "Alarms queued" (P8) to scroll / browse through the queued alarms.

7.2 Access level 2A

After the door has been opened ("Door open" symbol  in the symbol field), **the user / fire brigade personnel** have access to the push buttons / keypad to do the following:

Push button	**Operation/function**
P1	Silence the buzzer in the c.i.e.
P2	Silence all alarm devices (sounders).
P3	Reset fire alarms. (see below)

NOTE! Fire alarms are:
Fire alarm (incl. heavy smoke/heat alarm)
Alert Annunciation (AA) alarm
Key cabinet alarm
Co-incidence alarm (if not reset automatically)

7.3 Access level 2B

After the door has been opened ("Door open" symbol  in the symbol field), **the building occupier** has access to level 2A and after access code for level 2B (or 3A), access to the following menus:

H1 Perform monthly test
H2 Disable or re-enable
B1 Disable zone
B2 Disable zone / address
B3 Disable output
B4 Re-enable zone
B5 Re-enable zone / address
B6 Re-enable output
B7 Disable / re-enable output type
B8 Disable / re-enable alarm devices
B9 Disable / re-enable routing equipment
B10 De-activate alert annunciation function
H3 Set calendar and clock
H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Event log
U7 Information
H6 FAULT acknowledge
H7 Perform zone test (Test mode)
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs/inputs
C2 Activate interlocking output
C3 Reset interlocking output
C4 Disable interlocking output
C5 Re-enable interlocking output
H10 Change access code for daily duties

7.4 Access level 3A

After the door has been opened ("Door open" symbol  in the symbol field), **the service / maintenance personnel** have access to level 2A and after access code for level 3A, access to the following menus:

Same menus as in access level 2B **plus** the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in CU
A5 Display current consumption on COM-loop
A6 Display statistics for communication
A7 Activate address setting mode for DU
H8 Maintenance
S1 Disconnect loop / zone line input
S2 Re-connect loop / zone line input
S3 Acknowledge SERVICE signal
S4 Clear weekly average
S5 Test of alarm devices
S6 Safe shut down of control unit
S7 Activate address in alarm mode
S8 Synchronize the control units
S9 Change code for service / maintenance
S10 Change code for PC-communication

7.5 Access level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **WinG3**) is to be connected to EBL512 G3 for backup (upload), download of site specific data and/or download of software.

7.6 Access level 4

Used by manufacturer or by personnel authorised by the manufacturer when a PC is to be connected to the control unit, i.e. when WinG3 is to be used for re-initialisation of the alarm counter, change software configurations, on-line status checking, etc.

8 "Silence Alarm devices"

In the control unit front (the FBP part) there is a push button "Silence alarm devices" (P2).

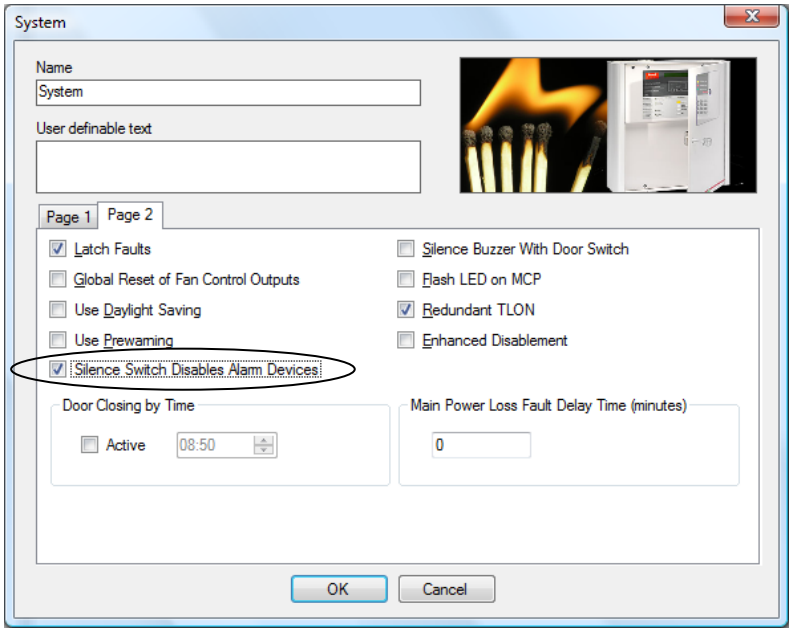
When the alarm devices are activated (sounding)[6] and the push button "Silence alarm devices" is pressed, the following will happen:

- The activated outputs programmed for sounders (type "Alarm devices", will be turned OFF (de-activated)[7]

If the push button "Silence alarm devices" is pressed again, the sounders will automatically sound again.

In case of a new alarm (Fire alarm, Co-incidence alarm or Pre-warning) the sounders will automatically sound again.

In WinG3, the function “Silence Switch Disables Alarm Devices” can be selected. In this case the button "Silence alarm devices" (P2) will have the same function as the menu “Disable / re-enable alarm devices (H2/B8)”. See also chapter "Disable / Re-enable alarm devices", page 27.



[6] E.g. during Fire alarm, Co-incidence alarm or Pre-warning, etc.

[7] Including Addressable siren 3377 and Addressable sounder base 3379.

9 Disable / Re-enable alarm devices

The outputs[7] programmed for sounders (type "Alarm devices") can via menu H2/B8 be collective disabled for one, several or all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10) and "Alarm devices" (L11) are steady ON.
In case of a fire, the sounders will **remain** disabled, i.e. the alarm devices will not sound.
They will remain disabled until they are re-enabled again via menu H2/B8.

See also chapter "Disable / re-enable alarm devices (H2/B8)", page 94.

10 "Silence buzzer"

The **buzzer** in the control unit will sound for:

- Fire alarm[8] (0.4 / 0.4 sec.)
- Co-incidence alarm (2-zone or 2-unit dependent fire alarm): When only one **zone** or one **zone / address** (alarm point) is in alarm status (0.8 / 5 sec.)
- Pre-warning (0.8 / 5 sec.)
- Quiet alarm (0.8 / 5 sec.)
- Fault (continuous)
- Disablements and Faults (1 sec. directly after the door to the c.i.e. is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via WinG3.

Press "Silence buzzer" (P1) **to silence the buzzer.**

In case of a new alarm (pre-warning, co-incidence alarm, etc.) or if the push button "Silence buzzer" is pressed again, the buzzer will automatically sound again.

Silence buzzer by open door

In WinG3 can the function "Silence Buzzer by Door Switch" be selected. The buzzer will then be turned off as long as the control unit door is open. (This function is a violation to the EN54-2 standard.)

EBL512 G3 c.i.e. type no. 5001

This unit has no front and no built-in buzzer.

[8] Incl. Heavy smoke/heat alarm, AA alarm, Key cabinet alarm and Acknowledged alarm (New Zealand only).

11 Disable / Re-enable all control, extinguishing and ventilation outputs

All control outputs programmed as type:

- Control (general)
- Fire ventilation
- Extinguishing system

… can via menu H2/B7 be collective disabled for one, several or all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10).

They will remain disabled until they are re-enabled again via menu H2/B7.

See also chapter "Disable / re-enable output type (H2/B7)", page 92.

12 Evacuate

This function is only valid for the Belgian, British Standard, Hungarian, Spanish and Ukrainian conventions.

When the soft key "Evacuate" (P7) is pressed[9], all outputs[7], programmed for sounders (type "Alarm devices"), will be collective turned ON (steady). This is indicated by the following information in the alphanumeric display:

Evacuate in progress

The sounders will remain turned ON until they are turned OFF by pressing the soft key "Evacuate off" (P7).[10]

NOTE 1! The alarm devices (sounders) will always be activated steady (sound continuously) irrespective of the fact that the outputs can be set to anything else for fire alarm (e.g. intermittent).

NOTE 2! The text “Menu” above the soft key (P4) is visible in the display only if the door in the c.i.e. is open, while the text "Evacuate" / "Evacuate off" above (P7) is always visible in the current conventions.

[9] Alt. when a programmable input is activated. One input per c.i.e.

[10] Alt. when the programmable input is de-activated.

13 Open door

A special key is used to open the control unit door to get access to the front / system. The same type of key is also used to open the ext. FBP door.

If any door in the system is open the following symbol is shown in the display's symbol area: 

See also chapter Open doors (H4/U3), page 101.

13.1 Outputs for routing equipment (Fire brigade tx and Fault tx)

Via WinG3 the following can be programmed (default settings shown):

Disable routing equipment by door switch

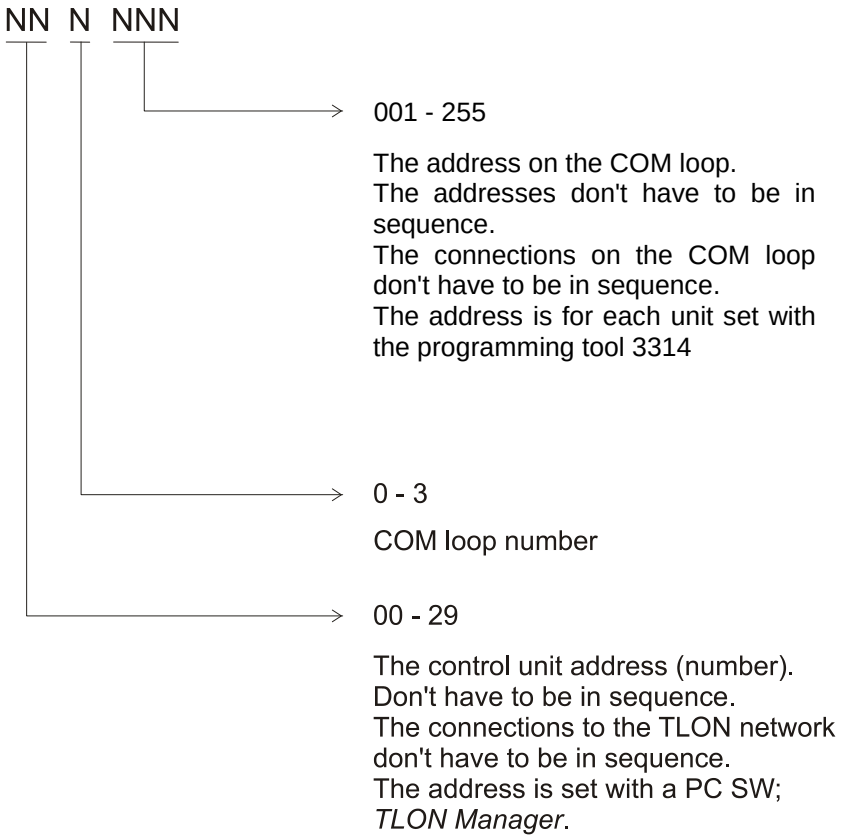
- ⊙ **None**: Open door in a C.U. or an ext. FBP will **not** disable the output(s) for routing equipment (Fire brigade tx and fault tx).
- ○ **Any control unit door**: Open door in any C.U. will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all C.U:s.
- ○ **Any door**: Open door in any C.U. or any ext. FBP will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all C.U:s.

Disabled outputs for routing equipment are indicated by the LEDs **Fault / Disablements** "General disablements" (L10) and "Fire brigade tx" (L12) and listed in menu H4/U1.

14 Technical number / Presentation number

14.1 Technical number for COM loop units

The technical number, NNNNNN, is used when programming all units connected to the COM loops.
Technical number is also used to identify which unit has generated a fault.



NOTE!

Totally **1020**[11] **COM loop addresses** can be used for one control unit, of which **up to 512** COM loop addresses can be used for **alarm points**.

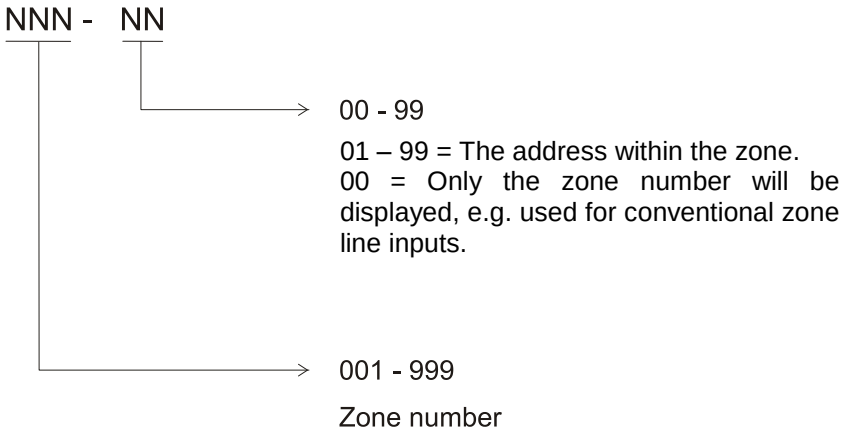
A brand new detector is factory set to COM loop address 000. Connected on the COM loop, the detector LEDs will start blinking every second, indicating that a COM loop address (001 - 255) has to be set before the detector will work.

[11] Since address 000 cannot be used, in fact the total number of addresses will be 4 x 255 = 1020

14.2 Presentation number

For each fire alarm point / input / zone, a presentation number, **NNN-NN**, has to be programmed. The presentation number is shown in the c.i.e. display and ext. FBP display[12], to identify the point / zone activating fire alarm. It is also used to disable / re-enable fire alarm points / zones and as trigger conditions in control expressions to activate programmable outputs.

Together with the presentation number, a user definable 40 characters text message (alarm text) can be displayed (if programmed).



NOTE! Zone **numbers** 001-999 can be used but not more than **512** alarm points and/or zones can be used per c.i.e.

This is in accordance with the EN54-2 standard.

[12] Also in the Alert Annunciation Units and Presentation Units ("Display Units").
The presentation number (**or** a user definable 40 characters text message) can also be shown in the old type of display units connected to the COM loops.

15 Alarm types

In case of a fire, analog detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can activate **fire alarm**. If somebody illegally breaks into a key cabinet, this will also activate a "fire alarm" (i.e. a key cabinet alarm).

A fire alarm could be an **Alert Annunciation alarm**, i.e. the activation of the routing equipment (fire brigade tx) is delayed during an acknowledgement time and an investigation time respectively.

The analog detectors can also activate two other types of "alarm", i.e. **Pre-warning** and **Heavy smoke alarm** / **Heavy heat alarm**.

"Two unit dependent" addressable alarm points (normally only smoke detectors) and "2-zone dependent" zones, can activate a **Co-incidence alarm**.

Quiet alarm is normally used on the Australian market only, for fan control.

In the Australian convention only, an **Alarm Acknowledgement Facility** function can be used. During the Acknowledgement Period and the Investigation Period respectively, there will only be an indication in the c.i.e. display. Special hardware is required.

Regarding the different alarm types, etc., see the following chapters.

NOTE!
In the following chapters are all different alarm types described.

The figures in this document show the essential information and **might not look exactly** as shown in the display.

15.1 Pre-warning

Activation of Pre-warning is an option that has to be enabled (via WinG3) for the whole system.

An analog detector will generate a pre-warning for a lower alarm level than the fire alarm level.[13] Pre-warning can be used when an early alarm and/or an early action is required (e.g. a "soft" computer shut down). Normal alarm devices (output type "Alarm devices"), routing equipment, etc. will not be activated.

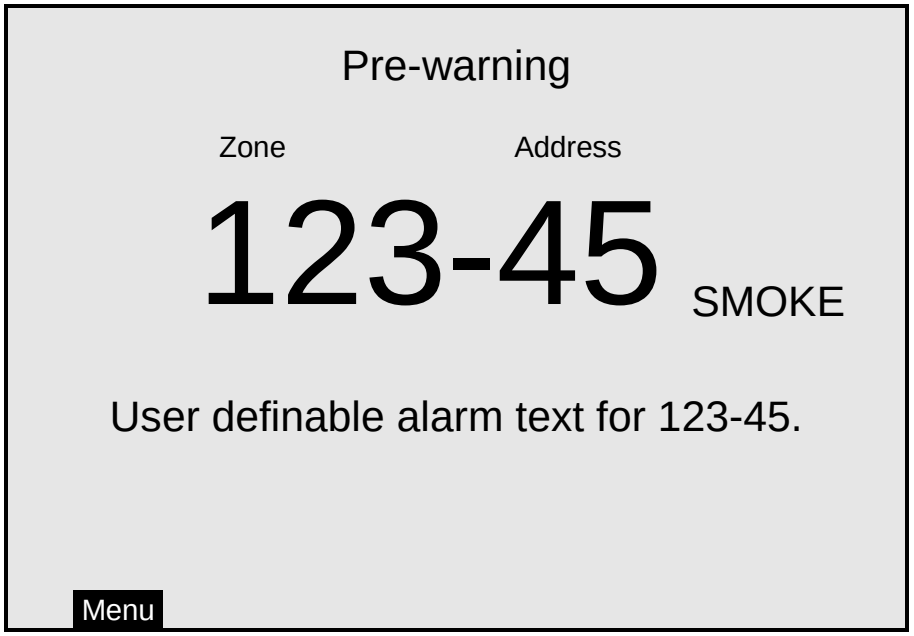
In case of a pre-warning, the following happens:

- The buzzer in the c.i.e. sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).

[13] See EBL512 G3 Planning Instructions. Any programmable input can also be used to activate a pre-warning, e.g. for a High Sensitivity Smoke Detector system.

- Outputs programmed for pre-warning are activated.[14]
- In the c.i.e. display, a presentation number (zone/address) is shown (for the first pre-warning).
- In the c.i.e. display, a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

Example; pre-warning zone 123, address 45 (within zone 123):



"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

NOTE! The text "Menu" (P4) is visible in the display, only if the door in the CU is open.

If more than one pre-warning is activated, the LEDs "Alarms queued" (L6) are blinking and the pre-warnings will be automatically scrolled (each five seconds).
Pre-warnings are automatically reset see chapter "Alarm reset", page 44.

15.2 Fire alarm

The system can handle up to 15360 fire alarms but only 512 fire alarms can be shown in the c.i.e. display. If more than 512 fire alarms are activated, no more fire alarms will be shown until one or more of the 512 fire alarms are reset.

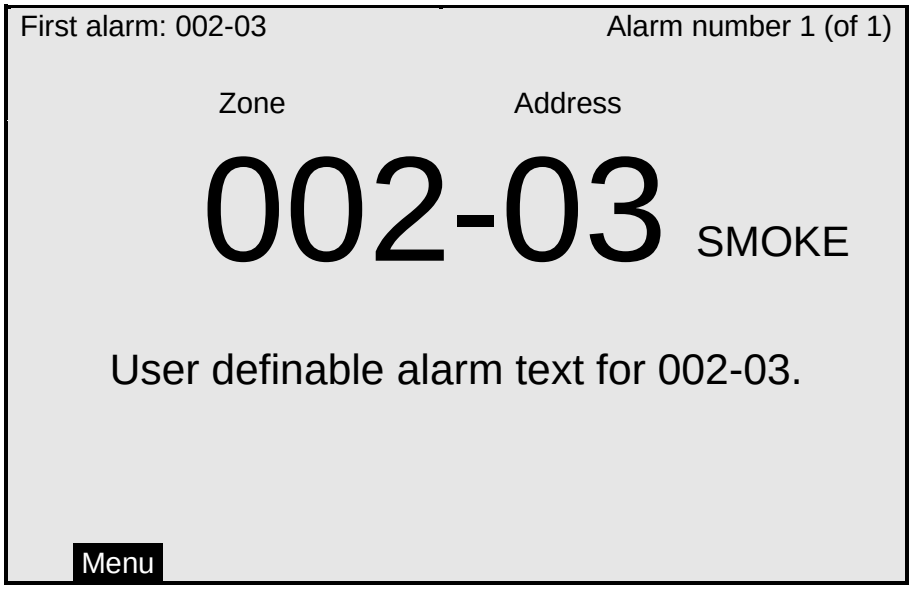
[14] Outputs programmed for General pre-warning and outputs programmed for the activated pre-warning(s).

See also chapter "The information area priority order", page 20. In accordance with the EN54-2 standard, the following happens in case of a fire alarm:

- The buzzer in the c.i.e. sounds 0.4 sec. each 0.4th sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire brigade tx) and outputs type "Routing equipment" are activated.
- Outputs for fire alarm are activated.[15]
- In the c.i.e. display, a presentation number (zone/address) is shown (for the first fire alarm).
- In the c.i.e. display, a user definable text message (alarm text) is shown (if programmed).
- In the c.i.e. display, is also some additional information presented.

One alarm point activating fire alarm.

Example; fire alarm zone 002, address 03 (within zone 002):

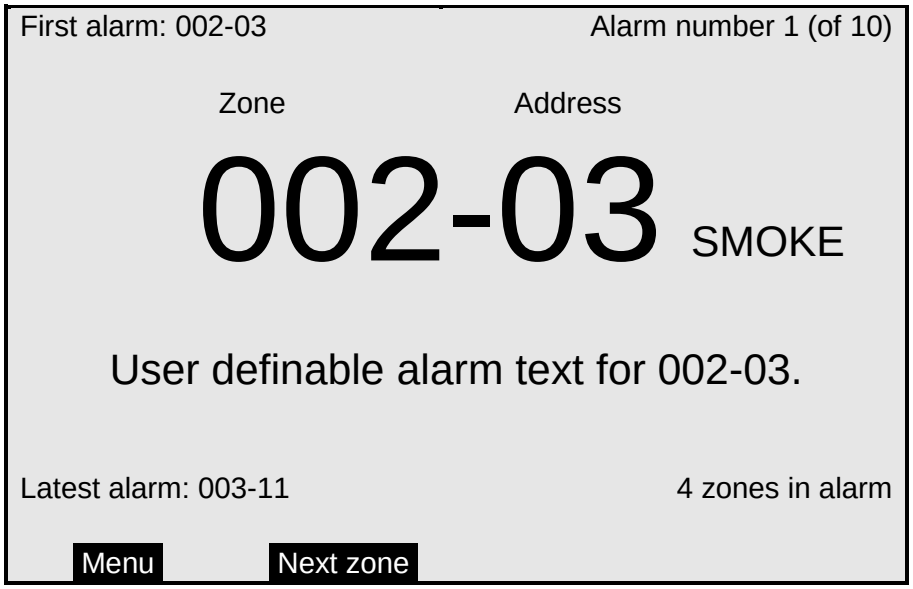


"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

[15] Outputs programmed for General fire alarm and outputs programmed for the activated fire alarm(s).

More than one alarm point activating fire alarm.

Example; fire alarm zone 002, address 03 (within zone 002) and nine other fire alarms in four different zones:



"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

User definable alarm text For each alarm point can an individual alarm text be shown (if programmed) or the default control unit alarm text (if programmed). For each zone it is an individual alarm text (if programmed). Up to 40 alphanumeric characters can be used.

Additional information

First alarm, **Latest alarm**, **Alarm number** and number of **zones in alarm**.

LEDs "**Alarms queued**" (L6) blinking (0.4 / 0.4 sec.) are indicating that more than one fire alarm is activated. To scroll through the alarms, use the push button "Alarms queued" (P8).

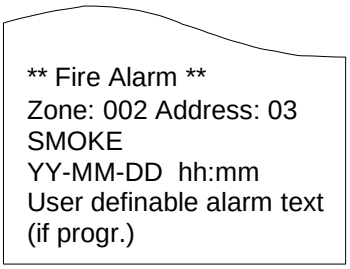
The fire alarms are stored in a circular buffer and when scrolling from the last to the first alarm, the LEDs "Alarms queued" will be turned off for three seconds.

Next zone. Use the soft key "Next zone" (P5)to scroll through the zones in alarm.

When scrolling through the zones, the first alarm point activated in the next zone will be shown. The "Next zone" button will be available only if there are alarms in more than one zone.

The first alarm will be automatically displayed again, 20 seconds after the latest time the "Alarms queued" or "Next zone" buttons where used.

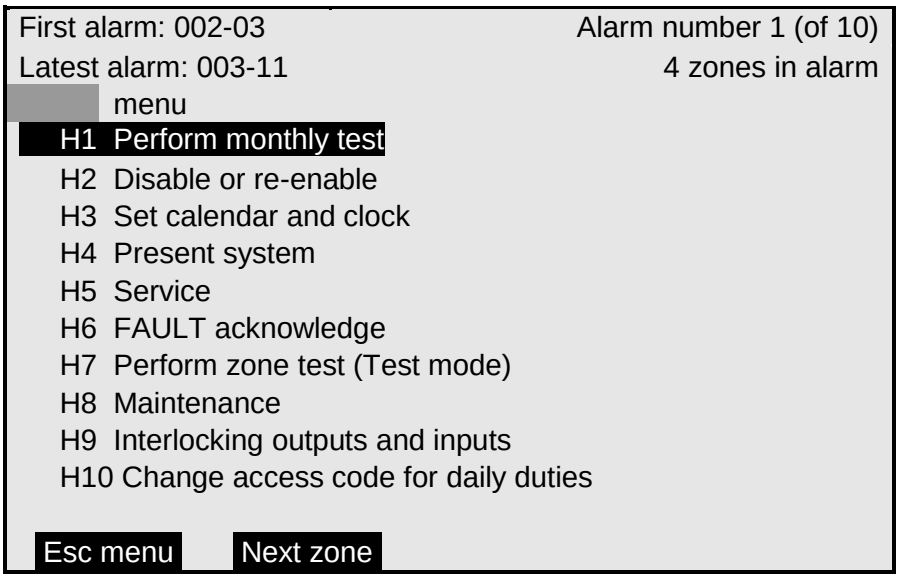
The printer (if available) will print each fire alarm, e.g.:



Reset of the fire alarms, see chapter "Alarm reset", page 44.

15.2.1 Enter the menu during fire alarm

By pressing the soft key "Menu" (P4) during fire alarm, you will get access to the menu system (see Access, page 78). In this case a part of the display's alarm window will be temporarily suppressed to permit the display of the menu system.



The normal alarm window will be automatically displayed again after the menu system is escaped or 20 seconds after the latest manoeuvre in the menu system.

The alarm window will also be automatically displayed again if any of the soft keys "Esc menu" (P4) or "Next zone" (P5) is pressed or push button "Alarms queued" (P8).

15.3 Heavy smoke alarm / Heavy heat alarm

An analog detector can activate a heavy smoke / heat alarm for a higher alarm level[17] than the normal fire alarm level, i.e. a normal fire alarm is already activated by a detector activating a heavy smoke / heat alarm.

Heavy smoke / heat alarm is a confirmation on that the smoke or heat is heavy / increasing and can be used for special actions, e.g. activation of smoke ventilation, etc.

The following happens in case of a heavy smoke / heat alarm:

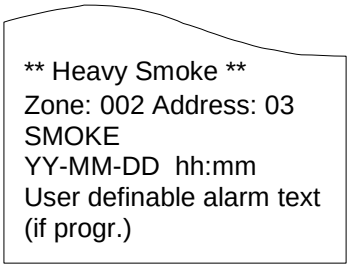
- Outputs programmed for heavy smoke / heat alarm are activated.[18]
- Each heavy smoke / heat alarm is presented, i.e. "Heavy smoke" or "Heavy heat" will be added to the normal fire alarm information:

[16] LED **Fault / Disablements** "General disablements" (L10) is indicating that one or more zones / alarm points are isolated (disabled).

[17] See EBL512 G3 Planning Instructions.

[18] General heavy smoke / heat alarm and individual alarm points / zones.

The printer (if available) will print each heavy smoke / heat alarm, e.g.:



Heavy smoke / heat alarm will be reset when the fire alarm respectively is reset, see chapter "Alarm reset", page 44.

15.4 Alert Annunciation alarm (AA alarm)

When the **AA** function is enabled, indicated by the LED **Routing equipment** "Fire brigade tx delay" (L14), the indications, print-outs, actions etc. are the same as for a normal fire alarm (see above) **except for the c.i.e. output for routing equipment (fire brigade tx), which will not be activated.** The **AA** alarm has to be acknowledged within an acknowledge time and reset within an investigation time, otherwise the output(s) for routing equipment (fire brigade tx) will be activated. See EBL512 G3 Planning Instructions for more information regarding the **AA** function. Acknowledgement and reset of the **AA** alarm can be done on an **AA** unit 1735 / 1736 or an **AA** controller 1740. See also chapter "Alarm reset", page 44.

15.5 Key cabinet alarm

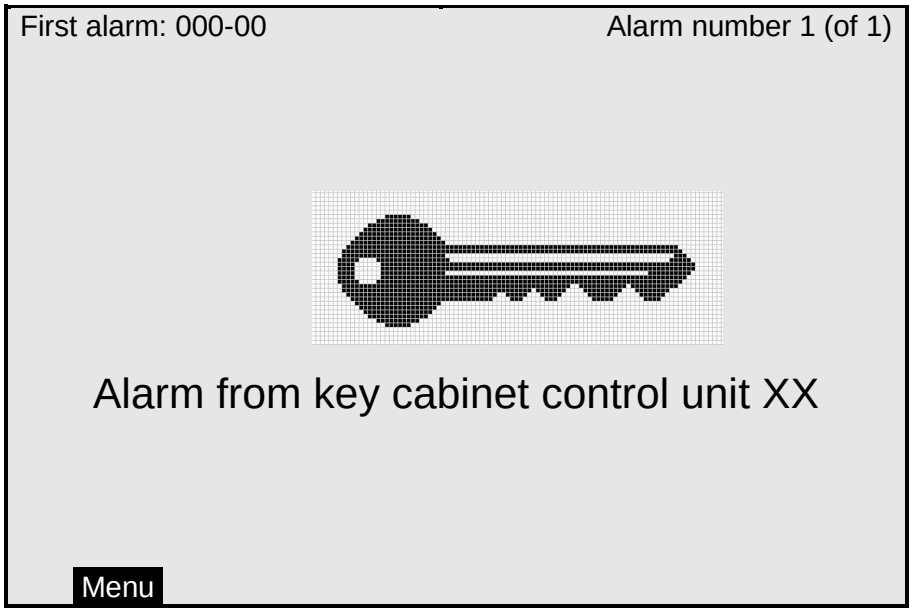
The fire brigade uses a key cabinet to store a key to the building.

One programmable input per c.i.e. can be used to connect a key cabinet.

15.5.1 Key cabinet opened before a fire alarm

If the key cabinet is opened before a fire alarm (e.g. if somebody illegally breaks into the key cabinet), a key cabinet alarm will be activated.

Example; Key cabinet alarm. xx = Control Unit number (00-29):



When printer is available the Key cabinet alarm will be printed like a normal fire alarm (see above).

Key cabinet alarm is reset like a normal fire alarm, see chapter "Fire alarm reset, page 44.

This alarm will also generate a fault message, see chapter "Key cabinet alarm reset", page 45. It is indicated by LED "Fault" (L9). **NOTE!** The "Fault tx" output(s) will **not** be activated by this fault.

15.5.2 Key cabinet opened in conjunction with a fire alarm

The fire brigade personnel can open the key cabinet if a normal fire alarm already is activated in the c.i.e. without activating any key cabinet alarm or fault.

15.5.2.1 Restoring the key after a fire alarm

When **all** fire alarms in the system are reset (see chapter "Alarm reset", page 44), the key has to be restored into the key cabinet **within 5 minutes**. If not, a fault will be generated, see chapter "Key cabinet alarm reset", page 45.

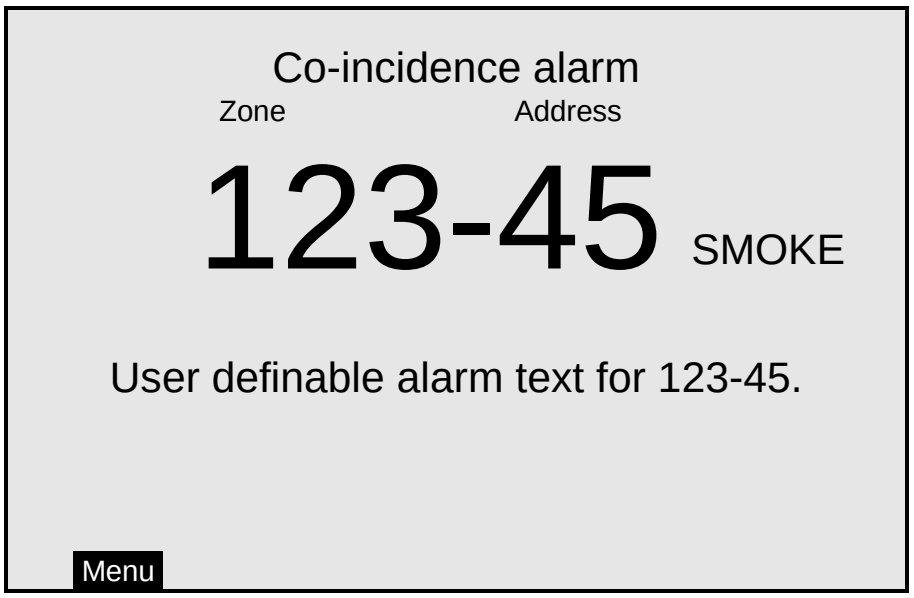
15.6 Co-incidence alarm (2-address / -zone dependence)

The co-incidence alarm function is programmed via WinG3 for the alarm points / zones in question.

When only one **zone** or one **zone / address** (alarm point) is in alarm status, the c.i.e. buzzer sounds (0.8 / 5 sec.) and there is a **Co-incidence alarm** presentation in the display. Note that LEDs "Fire" (L1) are not indicating a co-incidence alarm.

The co-incidence alarm will be automatically **Reset** after 5 minutes (i.e. if the zone / alarm point is no longer in alarm status) or via the "Reset" button (P3). See chapter "Alarm reset", page 44.

Example; Co-incidence alarm zone 123, address 45 (within zone 123):



If more than one Co-incidence alarm **not** dependent on each other are activated, the LEDs "Alarms queued" (L6) are blinking and the Co-incidence alarms will be automatically scrolled (each 5th second).

If two or more **zones** or **alarm points** (zone / addresses) dependent on each other are in alarm status at the same time, normal fire alarm (see above) will be activated in the system.

The co-incidence alarm function can be turned on / off via a time channel.

15.7 Quiet alarm

One or more smoke detectors, via WinG3 programmed for Quiet alarm, have passed the fire alarm level. Quiet alarm is used for fan control (stop / start depending on the type of fan).

Quiet alarm is normally used in conjunction with one I/O Matrix board 4582, one application board for fan control[19] and one I/O unit 3361, for control of each fan.

Indications and actions:

LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.), the buzzer sounds (0.8 / 5 sec.) and there is a **Quiet alarm** presentation in the display:

Quiet alarm detector ZZZ-AA (User definable alarm text for ZZZ-AA)

Programmable outputs for quiet alarm, e.g. 3361 outputs controlling supply air fans and standard fans, i.e. any output with a control expression containing the trigger conditions "Quiet Alarm Zone" or "Quiet Alarm Zone Address".

[19] The Fan control panel 4593 can be used for control of up to eight fans.

16 Alarm reset

16.1 Pre-warning reset

Pre-warning is automatically reset.

16.2 Fire alarm reset

NOTE! The detectors having activated fire alarm shall, after reset, be inspected, tested and replaced when required.

One of the following alarm reset alternatives is valid. This is selected via WinG3. "All" is default.

16.2.1 All

All activated fire alarms (alarm points / zones) will be reset by pressing "Reset" (P3) once. (This is in accordance with the EN54-2 standard).
NOTE! The push button has to be pressed for min. 0.5 sec.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L6) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 20.

All outputs (for fire alarm) are reset, i.e. de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset", page 45.

16.2.2 Single

Each fire alarm (alarm point / zone) has to be reset one by one.
NOTE! This function is available only if it is set in WinG3.

Press "Reset" (P3) to reset the fire alarm currently shown in the middle of the display with large digits.
NOTE! The push button has to be pressed for min. 0.5 sec.

Output(s) programmed for that fire alarm (alarm point / zone) will be reset, i.e. de-activated.

If more than one fire alarm is activated (i.e. LEDs "Alarms queued" (L6) are lit) the next fire alarm in the queue will be shown in the middle of the display. It has to be reset the same way as the first one.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L6) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 20.

All outputs (for fire alarm) are reset, i.e. de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset", page 45.

16.2.3 Single with automatic disablement

Like "Single reset" but incl. the so called encapsulation function:

Normally when an alarm point or zone having activated fire alarm is reset when it still is in alarm status, it will activate a new fire alarm within 20 seconds. (In accordance with the EN54-2 standard.)

When "Single with automatic disablement" reset is performed, an alarm point or zone, still in alarm status, will not only be reset but also disabled, i.e. it will not activate a new fire alarm within 20 seconds.
It has to be re-enabled via menu H2/B5 before it can activate a new fire alarm. (This function, set via WinG3, is a violation to the EN54-2 standard.)

LED **Fault / Disablements** "General disablements" (L10) is indicating one or more disablements in the system.

NOTE!
When "All" or "Single" reset is used, "automatic disablement" (encapsulation function) can be used by pressing "Reset" (P3) and approx. 0.1 sec. later also press "Alarms queued" (P8) and hold them pressed for > 0.5 sec.
The alarm point **or** the whole zone (conventional) currently shown in the middle of display with large digits will be reset and disabled.

16.3 Heavy smoke / heat alarm reset

If a heavy smoke / heat alarm has been activated, it will be reset at the same time as the corresponding fire alarm is reset. Also the output(s) will be reset, i.e. de-activated.

16.4 Alert Annunciation

Regarding the function, see chapter "Alert Annunciation alarm (AA alarm)", page 40 and EBL512 G3 Planning Instructions, chapter "Alert annunciation". Reset of the **AA** alarm(s) can be done via push button "Reset" on an **AA** unit 1735 / 1736 or an **AA** controller 1740 (or in the c.i.e.). If more than one **AA** alarm is activated, they will be reset all at a time.

NOTE! Reset via an external unit is possible only during the investigation time and **AA** alarm(s) only (not normal fire alarms).

16.5 Key cabinet alarm reset

A key cabinet alarm has to be reset like the normal fire alarms.

After reset a fault message is shown in the display to inform the user that the key cabinet has been opened.

```
FAULT: Key cabinet, control unit xx
yyyy-mm-dd  hh:mm
```

NOTE! The date is in the Ukrainian and the Australian conventions shown as **dd-mm-yyyy**. xx = control unit number.

If the key cabinet is closed again, the "status" information is changed to: "serviced"

This key cabinet fault message is to be acknowledged the same way as "normal" faults, see chapter "Fault acknowledge", page 63.

When the key cabinet fault is acknowledged, the LED **Fault / Disablements "**General fault" (L9) will be turned off (i.e. if the key cabinet is closed and if there are no other faults in the system).

16.6 Co-incidence alarm

A Co-incidence alarm can be manually reset with the "Reset" button (P3) on the c.i.e. front **or** automatically reset after 5 minutes (i.e. if the alarm point / zone is no longer in alarm status). See also chapter "Co-incidence alarm (2-address / -zone dependence)", page 42.

16.7 Quiet alarm reset

Quiet alarms are non-latching, i.e. they will be automatically reset when the alarm point / zone is no longer above alarm level. Outputs activated by quiet alarm will be de-activated. (In some cases after a programmable delay time.)

17 Fault

All faults are delayed in order not to generate any unnecessarily faults, e.g. for COM loop and zone line input faults the delay time is approx. 45 seconds. [20]

In case of a fault condition, the following will happen in the control unit:

- The buzzer in the c.i.e. will sound continuously (steady).[21]
- The fault condition output for routing equipment (Fault tx) will be activated.
- Programmable output(s) for general fault will be activated and output(s) for general charge fault might be activated.
- LED **Routing equipment** "Fault tx activated" (L13) will be turned on (indicating that the fault condition output for routing equipment (Fault tx) is activated).
- LED **Fault / Disablements** "General fault" (L9) will be turned on.
- LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade tx" (L12) might be turned on as well.
- A fault message incl. date, time and status will be shown in the c.i.e. display.

Example; fault message:

```
FAULT: No reply zone: xxx address: xx
technical number xxxxxx
yyyy-mm-dd  hh:mm        serviced
```

NOTE! The date is in the Ukrainian convention and the Australian convention shown as **dd-mm-yyyy**.

- In the c.i.e. display can at least three fault messages be shown simultaneously. On the last row in the display the number of not acknowledged faults is displayed.
- If a fault has been corrected before it has been acknowledged, the status information is "serviced", see above.
- Fire alarm presentation has higher priority than the fault messages, however during fire alarm presentation the faults can be shown via the menu system, see page 38.

[20] Some units may also have an internal delay time, which makes the delay time even longer, e.g. the Multipurpose I/O unit 3361 has an internal delay time of 30 seconds, which results in 45+30=75 seconds delay time in total.

[21] The buzzer in the control unit can be suppressed for faults generated in other control units. "Suppressed buzzer during fault" is set via WinG3.

Faults have to be acknowledged, which is done via menu H6 (see page 120). This menu is a list of all not acknowledged and acknowledged but not corrected / serviced faults.

If a fault cannot be corrected, it is important to contact service personnel / engineer immediately.

NOTE!

As a reminder, faults (and disablements) are indicated by a 2-sec. beep when an open c.i.e. door is being closed.

17.1 Fault messages

Below follows a list of all fault messages, in alphabetical order. There is also an explanation to each fault.

FAULT: 24V for external equipment output x, control unit xx
x = 1-4. xx = 00-29. Check fuses F9, F10, F11 and F12 on the Main board 5010 in control unit no. xx. Fuse: T**4A** L 250V (TR5).

FAULT: 24V for routing equipment, control unit xx
xx = 00-29. Check fuse F8 on the main board 5010 in control unit no. xx. Also indicated by LED **Fault / Disablement** "Fire brigade tx" (L12) blinking. Fuse: T**500mA** L 250V (TR5).

FAULT: 24V out, output unit xxxxxx
This is valid for the external power supply 3366 connected on the COM loop. The output might be turned off or the current output limit (4A) is exceeded.

FAULT: AAU xx, control unit xx
AAU=1735 / 1736. (Alert Annunciation Unit.) The AAU unit xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: ASF COM-loop x, control unit xx

ASF = Addressable short circuit isolator 4313.

This message is only shown when the control unit works in Sensitive fault detection mode (menu H5/A2).

Short circuit on the COM loop, shorter / faster than the normal time delay for a fault has occurred. Can be used for commissioning / maintenance purposes.

```
FAULT: Battery charging
control unit xx
```

The battery charging function is not OK. The main board 5010 may have to be replaced.

```
FAULT: Battery not connected,
control unit xx
```

- Battery voltage is below 18.9 V.
- Batteries (2 x 12 V) are missing or not connected correctly.
- Fuse F2 on the Main board 5010 is blown.
- Other battery fuse is blown.

This check is done every 14th minute, i.e. after correcting the fault it might take up to 14 min. until it disappears from the fault list. Fuse: T6.3A H 250V (5x20 mm ceramic).

```
FAULT: Cables mixed COM-loop x,
control unit xx
```

The two wires L (SA) and C (SB) for COM-loop no. x (0-3), in control unit no. xx, have been mixed (alternated). Check / correct the wire connections.

```
FAULT: Charging external power supply,
control unit xx
```

The fault is to be found in the external power supply equipment, which has a charging fault output connected to a programmable input in control unit no. xx.

```
FAULT: Charging, technical number xxxxxx
```

The charging function in the external power supply 3366 connected on the COM loop. The unit is not OK. The p.c.b. has to be replaced.

FAULT: Checksum fault in downloaded data. Control unit will now restart
A fault in the downloaded Site Specific Data (SSD). After the restart a new fault will be generated: FAULT: Site Specific Data (SSD), control unit xx. A new SSD download will probably solve the problem.

FAULT: Checksum MMI program, control unit xx
A fault in the control unit xx MMI board 5011 software. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Checksum system program, control unit xx
A fault in the control unit xx Main board 5010 software. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Control unit xx has no contact with control unit xx, network x
network x = network 0 or network 1 Can be shown in conjunction with new S/W download. • Check the TLON network cable / connections. • Faulty TLON connection board 1590. • The control unit has no power.

FAULT: Control unit xx has wrong information
Can be shown in conjunction with new software download and/or when commissioning a system. This fault can be generated due to a bad TLON network, i.e. communication problems. One or more control units might have data stored that is not the same in all control units. If a control unit restarts in conjunction with this fault, a synchronization will start automatically, otherwise a synchronization has to be started via menu H8/S8 (or via WinG3). **NOTE!** It is important that all control units that are supposed to exist (SSD downloaded via WinG3) are running and are connected to the TLON network. The TLON network programming has to be done. It will take 90-120 seconds until this fault is corrected.

FAULT: Control unit xx high current consumption
The control unit current consumption is > 3.3A (> 6.5A in alarm state) and because of this, the battery charging is turned off and will be so until the current consumption has decreased to ≤ 3.3A (≤ 6.5 A) again.

FAULT: Cut-off loop x, control unit xx SCI **n** <-> SCI **n**
This fault is indicating a cut-off (break) on COM loop x or the COM loop voltage is too low at the end of the loop (i.e. < 12 V DC). SCI **n** <->SCI **n** describes between which **S**hort **C**ircuit **I**solators (4313) the cut-off is located. **n** = A, B, 0, 1, 2, 3, 4, 5, 6 or 7. A & B is the built-in isolator in the EBL512 G3 A-direction and B-direction respectively, i.e. if no SCI is used the information will always be: SCI **A** <-> SCI **B**. If only one SCI is used (i.e. 4313 no. 0), the information will be: SCI **A** <-> SCI **0** or SCI **0** <-> SCI **B** ...and so on. If it is a single break (cut-off) on the loop there will be no other fault messages. If there are several breaks on the loop the message shows the last isolator before the break in the A-direction (incl. the following isolator). There will also be a "FAULT: No reply ….." message for each unit that EBL512 G3 cannot find and "FAULT: Several faults …". **NOTE!** Each 10th minute a new attempt is made to communicate in one direction only. When all breaks are repaired (corrected) the communication automatically returns to communicate in one direction only.

FAULT: Earth fault (plus), control unit xx
FAULT: Earth fault (minus), control unit xx
Earth fault is detected in control unit no. xx. System voltage is normally 24 V DC. +24 V to earth is normally 12.5 V. 0 V to earth is normally 11.5 V. Voltage to earth < 3.4 V = Earth fault (minus). Voltage to earth > 18.3 V = Earth fault (plus). Check all cables (for damage, etc.). The function of the control unit cannot be guaranteed. Call for service personnel/engineer.

FAULT: Earth fault, Technical number xxxxxx
Check all cables (for damage, etc.) connected to the unit.

FAULT: EPU xx, control unit xx
EPU=1728 (Ext. Presentation Unit.) The EPU xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Expansion board x, loop x, control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x (0-3) in the control unit no. xx. There is some internal fault on the board, which has to be replaced.

FAULT: External fuses, control unit xx
The fault is to be found in the external power supply equipment, which has a fuse fault output connected to a programmable input in control unit no. xx.

FAULT: External power supply, control unit xx
The fault is to be found in the external power supply equipment, which has a fault output connected to a programmable input in control unit xx.

FAULT: Extinguishing system, control unit xx
The fault is to be found in the extinguishing system, which has a fault output connected to a programmable supervised input in the EBL512 G3 system, in control unit no. xx. Also check the input connections.

FAULT: Factory settings, control unit xx
The factory settings have been "changed", in control unit no. xx, e.g. because of some external disturbance. The main board has to be replaced.

FAULT: Fan xx, control unit xx
The LED "Fault" is lit on a fan control module connected to control unit xx. Fan no. xx has been activated but the corresponding I/O unit 3361 input has not been activated within 30 seconds. Check the fan and the cables / connections.

FAULT: Fault warning routing equipment, control unit xx
The fault is to be found in the Fault warning routing equipment. A routing equipment fault output is connected to a programmable supervised input in the EBL512 G3 system, in control unit no. xx. Check the input connections as well. (Normally used for German routing equipment connected to an expansion board 4583 input 0.)

FAULT: FB Silence switch active, control unit xx
Only valid in the New Zealand convention. New Zealand FB Silence switch ("outside switch") is turned on, in control unit no. xx, i.e. from not activated to activated state.

FAULT: Fire brigade panel xx, control unit xx
FBP=1826 / 1828 (Ext. Fire Brigade Panel) The ext. FBP xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Fuse on COM-loop x, control unit xx
Blown fuse F15 (Loop 0), F16 (Loop 1), F17 (Loop 2) or F14 (Loop 3) on the main board 5010, in control unit no. xx. Fuse T**1.6A** L 250V (TR5). **NOTE!** The fuse shall **not** be replaced. The main board 5010 shall be replaced, since more components are broken as well.

FAULT: Input x, control unit xx
A fault on the supervised input x in control unit xx. Check the cables / connections (cut-off or short-circuit).

FAULT: Input x expansion board x, control unit xx
A fault on the supervised input x on the expansion board 4583 with address x, in control unit no. xx. Check the cables / connections (cut-off or short-circuit).

FAULT: Interlocking input AAA/PP
An interlocking input is not activated within the time set for fault activation (5-255 seconds). The time is counted from the activation of the output in the interlocking combination, area AAA / point PP.

FAULT: Internal short circuit, COM-loop x control unit xx
Short-circuit on the connection (ribbon cable) to or between the expansion boards (458x) in the control unit xx (EBL512 G3).

FAULT: Key cabinet, control unit xx
The key cabinet has been opened without a prior fire alarm (i.e. if somebody has opened the key cabinet illegally). or The key cabinet has not been closed within 5 minutes after reset of all fire alarms in the system.

FAULT: Loop unit xxx-xx Technical number xxxxxx
The unit (xxx-xx = zone – address) is **not** all right, i.e. the unit is out of order / faulty. The detector's built-in self verification function has reported a fault status. The unit has to be replaced.

FAULT: Low battery capacity, control unit xx
Battery (in control unit no. xx) internal resistance > 0.6 Ω. • The battery might be too old. • Cables, fuses etc. for externally placed batteries might cause a voltage drop. • Check / adjust the rectifier (power supply) voltage (24 V DC). • Check the charging voltage over the battery respectively (13.5-13.8 depending on the actual charging step).

- Check the voltage over a disconnected battery (fully charged ≥ 13 V).
- **In the New Zealand convention only**: The battery charging is turned off 60 minutes every 24th hour. A battery voltage < 24.4 V during these 60 minutes will generate a fault. If a fault is generated it will automatically be **Serviced** after these 60 minutes.

The battery should normally be replaced. **NOTE!** The battery check is performed every 12th hour, i.e. it can take up to 12 hours until the fault status will be "corrected".

FAULT: Low voltage, control unit xx
System voltage < 21 V DC, in control unit no. xx. Check the power supply (rectifier) 5037 output voltage, which shall be 24 V DC. Replace 5037 if required.

FAULT: Low voltage, technical number xxxxxx
System voltage < 21 V DC in the external power supply unit 3366. Check the power supply (rectifier) 1537 output voltage, which shall be 24 V DC. Replace 1537 if required.

FAULT: Mains, control unit xx
The fault is activated 1-300 minutes[22] after: • Loss of mains, i.e. no 230 V AC • Blown mains fuse. • Blown fuse F1 on main board 5010. Fuse T**6.3A** H 250V (5x20 mm ceramic).

FAULT: Mains, external power supply, control unit xx
This is valid for an external power supply equipment, which has a fault output connected to a programmable input in the EBL512 G3 system. The fault is activated 1-300 minutes[22] after: • Loss of mains, i.e. no 230 V AC to the ext. power supply equipment.

[22] The time is programmable via WinG3. Max. 30 min. according to the EN54-2 standard. Default value depending convention.

- Blown mains fuse.
- Check the programmable input connections.

FAULT: Mains, technical number xxxxxx
This is valid for an external power supply unit 3366 connected on the COM loop. The fault is activated after 1-300 minutes).[22] after: • Loss of mains, i.e. no 230 V AC to the 3366 unit. • Blown mains fuse. • Fuse F1 blown on the charger board 3367. Fuse T**5A** L (5x20 mm).

FAULT: Multiple faults, COM-loop x, control unit xx
Break (cut-off) / short-circuit in more than one segment on the COM loop, in control unit no. xx.

FAULT: No connection with the MMI board, control unit xx
This fault message cannot be shown in the control unit display, only via WinG3 or via Web-server. Fault in the MMI board 5011 software or the MMI board. Check the cable between the boards. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: No reply expansion board x loop x control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x in the control unit no. xx. • Check the board's address, i.e. the I/O Matrix board no. (Jumpers JP1, JP2 and JP3 on the board). • Check if the board is disconnected from the loop.

FAULT: No reply xxx-xx Technical number xxxxxx
In spite of the control unit is communicating on the COM loop in both directions, the unit cannot be found. (xxx-xx = zone-address) • Check the unit's COM loop address (with the programming tool 3314).

- Check the downloaded site specific data (SSD).
- The unit might be faulty.
- The detector might be removed from its base.
- There might be a double break on the COM loop. (Note! A single break gives the fault message: FAULT: Cut-off …….).

`FAULT: No reply, alert annunciation unit xx, control unit xx`
`FAULT: No reply, external presentation unit xx, control unit xx`
`FAULT: No reply, fire brigade panel xx, control unit xx`
Alert Annunciation Unit 1735 / 1736. External Presentation Unit 1728 External Fire Brigade Panel 1826 / 1828 • The contact with the unit is interrupted. Check the cable, all connections,etc. Is correct / complete SSD downloaded (via WinG3)? Check the address and SW mode settings. • If there is a program memory fault in the unit, there will be a fault message in the unit's display: **`"Memory fault in program area (n)"`** (n=1 or 2). The unit will <u>not</u> work.

`FAULT: No reply, expansion board x, control unit xx`
Valid for the 8 zones exp. board 4580, the 8 relays exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in the control unit no. xx. EBL512 G3 cannot communicate with the board. Check / change the address. Check the cables / connections.

`FAULT: Output x expansion board x, control unit xx`
A fault on the supervised output x on the expansion board 4583 with address x, in control unit no. xx. If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking. If the output is programmed for fire brigade tx (type Routing

equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking.

- Calibration not performed via menu H5/A1.
- Short-circuit / break on the connected cable / equipment.
- Blown fuse F1 (Output 0) or F2 (Output 1) on the 4583 board. Fuse T**200mA** L 250V (TR5).
- Connected equipment might be "missing".
- End-of-line resistor(s) missing or not correct value, 1-5 resistors (33K).

NOTE! The calibrated value has to be in the range 4K7-50K.

```
FAULT: Output x,
technical number xxxxxx
```

This fault message is valid for a COM loop output unit 3364 output.

If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking.
If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking.

- Calibration not performed via menu H5/A1.
- Short-circuit / break on the connected cable / equipment.
- Connected equipment might be "stolen".
- End-of-line capacitor(s) missing or not correct value, 1-5 capacitors (470 nF).

NOTE! The calibrated value has to be in the range 470 nF – 5 x 470 nF (2350 nF).

```
FAULT: Read/write site data (SSW),
control unit xx
```

SSW = the data that is changed during operation, i.e. week average sensor values, access codes, calibration values and event logs, in control unit no. xx.

- If the C.U. was made powerless (i.e. mains and battery disconnected) without first doing a Safe shut down of control unit via menu H8/S6 (see page 131), this fault might be generated when the C.U. is powered again. After fault acknowledge the SSW will get default values and the fault will be corrected (serviced). Supervised outputs have to be calibrated via menu H5/A1.
- Some external influence has caused a fault in the SSW. This is very serious. Call for service personnel/engineer.

FAULT: Restart control unit nn, code xx, address yyyyyyyyyy
Control unit restart has occurred in control unit no. nn. See also page 74. **xx=00: Power up Restart. (Power supply connected)** xx=01: Watchdog Reset. xx=02: Accidental jump to reset vector. **xx=03: Restart after SSD / Software / text file download** xx=04-19: Unexpected interrupt. xx=20: S/W monitoring fault **NOTE!** **xx=00 and 03 are normal**. Acknowledge the "fault". xx=01, 02 or 04-20 appearing often: call for service personnel / engineer. yy…y = memory address (before restart). Write down the address and inform the service personnel/engineer.

FAULT: Short circuit loop x, control unit xx, SCI**nn**<->SCI**nn**
SCI **nn** <-> SCI **nn** describes between which **S**hort **C**ircuit **I**solators 4313 the short-circuit is located. **nn** = A, B, 00, 01, 02, 03, 04, 05, 06, 07 - - 15. A & B is the built-in isolator in the EBL512 G3 c.i.e. A-direction and B-direction respectively. If no SCI is used the information will always be: SCI **A** <-> SCI **B.** If one SCI (no. 0) is used, the information will be: SCI **A** <-> SCI**00** or SCI**00** <-> SCI **B** ...and so on. There will also be a "FAULT: No reply ….." message for each unit not found by the c.i.e. If there are several short-circuits on the loop the message shows the isolator just before the break in the A-direction (incl. the following isolator). There will also be shown "FAULT: Multiple

faults ...".
NOTE! Each 10th minute a check is performed if all short-circuits are corrected (repaired). If so, the communication automatically returns to communicate in the A-direction only.[23]

FAULT: Site specific data (SSD), control unit xx
The Site Specific Data (SSD) in control unit no. xx is not downloaded correctly (a checksum fault, etc.). A new SSD download (via WinG3) is required.

FAULT: Site specific data, alert annunciation unit xx, control unit xx
FAULT: Site specific data, external presentation unit xx, control unit xx
FAULT: Site specific data, fire brigade panel xx, control unit xx
Alert Annunciation Unit 1735 / 1736 . Ext. Presentation Unit 1728. Ext. Fire Brigade Panel 1826 / 1828. There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Supervised output x, control unit xx
If the output is programmed for sounders (type "Alarm devices"), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking. If the output is programmed for fire brigade tx (type "Routing equipment"), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking. **x=0** (S0): Short circuit/break on the connected cable/ equipment and/or blown fuse F4 on the main board 5010. **x=1** (S1): Short circuit/break on the connected cable/ equipment and/or blown fuse F5 on the main board 5010. **x=2** (S2): Short circuit/break on the connected cable/ equipment and/or blown fuse F6 on the main board 5010.

[23] **NOTE!** The fault has to be acknowledged, i.e. and it can last up to 10 minutes after the acknowledgement before the communication returns to communicate in the A-direction only.

x=3 (S3): Short circuit/break on the connected cable/ equipment and/or blown fuse F7 on the main board 5010.
Fuse T**500mA** L 250V (TR5).

- Calibration not performed via menu H5/A1.
- Connected equipment might be "stolen".
- Resistor(s) missing or not correct value. (1-5 resistors 33K)

NOTE! The calibrated value has to be in the range 4K7-50K.

```
FAULT: TLON-board 1590 (Channel 0),
control unit xx
```

```
FAULT: TLON-board 1590 (Channel 1),
control unit xx
```

TLON connection board 1590.

No communication / connection with the TLON network. The board for Channel 0 or 1 in control unit no. xx has to be replaced.

```
FAULT: Wrong type expansion board x
loop x control unit xx
```

This is valid for the I/O Matrix board 4582 no. x connected on COM loop x in the control unit no. xx.

Check the board type, set with jumpers JP4 and JP5 on the I/O Matrix board. The type should be the same as programmed via WinG3.

```
FAULT: Wrong type, expansion board x,
control unit xx
```

Valid for the 8 zones exp. board 4580, the 8 relay outputs exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in control unit no. xx.

Check the type of board, which should be the same as programmed via WinG3.

```
FAULT: Wrong type of unit xxx-xx
Technical number xxxxxx
```

Check the type of unit, which should be the same as programmed via WinG3. (xxx-xx = zone – address)

```
FAULT: Zone line input, xxx-xx
input x, expansion board x, CU xx
```

Valid for the 8 zones exp. board 4580 zone line input x (xxx-xx = zone – address). The board is mounted in control unit xx.
Break on the zone line, wrong / no end-of-line device / short-circuit (if not programmed for fire alarm at short-circuit).

FAULT: Zone line input, xxx-xx technical number xxxxxx
Valid for the Multipurpose I/O unit 3361 monitored zone line input Z. Break on the zone line or wrong / no end-of-line capacitor (470 nF) or short-circuit (if not programmed for fire alarm at short-circuit).

No contact with main board
Fault in the Main board 5010 software or the Main board. Check the cable between the boards. This is a very serious fault. Call for service personnel/engineer immediately.

(User programmable text; External fault)
Programmable input is connected to any external equipment's fault output. User definable fault message programmed via WinG3.

17.2 Fault acknowledge

The LEDs **Routing equipment** "Fault tx activated" (L13) and **Fault / Disablements** "General fault" (L9) are turned on[24].
(LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade tx" (L12) might be turned on as well.

Output(s) for routing equipment (Fault tx) is (are) activated.

Output(s) for general fault is (are) activated.

Output(s) for general charge fault might be activated.

One or more fault messages incl. date and time are shown in the control unit display.

If **Fault latching** is selected in WinG3 (default), after the time might be shown `"serviced"` = the fault is already serviced / corrected.

Example: Fault messages shown in the control unit display:

```
FAULT: No reply zone: 123 address: 01
technical number 000025
2009-10-02   15:22          serviced

FAULT: No reply zone: 123 address: 03
technical number 000027
2009-10-06   09:25

FAULT: No reply zone: 234 address: 01
technical number 002112
2009-11-06   15:25


Number of not ackn. faults in system: 5
```

- Login, according to chapter "Access", page 78.
- Use **menu H6** (access level 2B) for fault acknowledge, see chapter "FAULT Acknowledge (H6)", page 120. Menu H6 is a list showing a maximum of 200 faults (not acknowledged faults and/or acknowledged but not serviced / corrected faults).
- All faults have to be individually acknowledged one by one by the key pad button ↵ . Use ▲ or ▼ to scroll.
- If a fault has been corrected before it has been acknowledged, the text `"serviced"` is added after the time. It still has to be acknowledged.
- When a fault is corrected / serviced and acknowledged, it will disappear from the list (H6).

[24] Indicating that output for routing equipment (Fault tx) is activated.

- When **all** faults have been acknowledged, output(s) for routing equipment (Fault tx) is (are) reset (i.e. the LED **Routing equipment** "Fault tx activated" (L13) will be turned off).
- As long as there are faults (i.e. not acknowledged faults and/or acknowledged but not corrected faults) the LED **Fault / Disablements** "General fault" (L9) will be lit and general fault (and maybe general charge fault) output(s) are activated.
- Faults, corrected faults and acknowledged faults are shown in the General event log (menu H4/U6).

18 Commissioning an installation

Before you connect the power supply to a control unit, all other cable connections shall be made. Check once more that they are correct.

18.1 Single Control Unit

1. Take away the rectifier fuse (F1) and the battery fuse (F2) on the main board 5010.
2. Connect the batteries to the main board 5010, terminal block "J2".
   NOTE! There shall be an in line fuses (F) on the cable between the batteries, see drawing 512 G3 – 21.
   CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY INCORRECT TYPE. DISPOSE USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
3. Connect the rectifier to the mains (230 V AC).[25]
   NOTE! It shall be connected to a household removable fuse for the fire alarm c.i.e. only, via a two-way circuit breaker.[26]
   The mains cable shall be securely clamped and the wires shall be as short as possible. The mains safety earth (ground) shall, however, be longer than the other wires, to ensure that it is the last to be disconnected if the mains cable clamp should fail.
   The lid protecting the screw terminals shall after the installation be correctly applied.
4. Replace the rectifier fuse (F1) and the battery fuse (F2) on the main board 5010.
5. LED "Operation" (L5) indicate that the 24 V DC power supply (rectifier or battery) is okay.
6. The c.i.e. will now restart (see chapter "Restart", page 74).
7. The site specific data (SSD) – created in WinG3 - can now be downloaded, see chapter "Programming (SSD download)", page 68.
8. See also chapter "Calibration of supervised outputs (H5/A1)", page 111.

18.2 Control Units in a TLON network

The EBL512 G3 system can be build up as a single TLON Network or a redundant TLON Network.

[25] Cable tie shall be mounted to keep the mains wires well separated from the 24 V DC wires.

[26] Follow National regulations.

In the **single TLON Network**, one TLON connection board (1590) has to be plugged in each control unit (Network no. 0) whereas in the **redundant TLON Network**, two connection boards (1590) have to be plugged in each control unit.

The redundant TLON Network supports full functionality also in case of a network fault (i.e. open circuit or short circuit) in one of the TLON networks.

First install Network no. 0. When the 1590 board is on place and the network cables are connected[27], **for each control unit**, do as for a single control unit, see 1-6 above.

When all control units are powered, the TLON network installation have to take place **before** the site specific data (SSD) can be downloaded, see chapter "Programming (SSD download)", page 68.

If you know that one or more of the control units are to be started-up later, do as follows:
- In WinG3 create the SSD only for the control units that shall be connected now. Wait to download the SSD until the TLON Network installation is ready.
- In TLON Manager, do the TLON Network programming for the project, i.e. only the control units that shall be connected now.
- When the TLON Network installation is ready, download the SSD.

Later, when one or more control units shall be added to the TLON Network:

- Open the project in **TLON Manager**, add the control unit(s) and install (download) it according to the separate TLON network documentation.
- Open the SSD in WinG3 and add the control unit(s) and download the SSD to all control units.

18.2.1 TLON network installation

A project (a system with two or more control units) is created in the PC program **TLON Manager** or has been created earlier. A PC is connected to the modular connector "J10" (Network no. 0) in the control unit (main board 5010). Open the project in **TLON Manager** and install (download) the project, see separate TLON network documentation.

In case of a redundant TLON system a PC is connected to the modular connector "J11" (Network no. 1) and the same procedure is repeated for the redundant network.

[27] The TLON connection board is mounted on the main board 5010. Network cable connections are made on the main board 5010, terminal block "J4".

18.3 Add a Control Unit in a TLON network

When adding a control unit to a "running" installation you have to have the same software (S/W) version in all control units. Often the new control unit has a newer version than the existing control units. Normally the latest version is the best to use, i.e. the control units in the "running" installation have to be upgraded. As an alternative, it is possible to download an earlier S/W version in the new control unit. Both alternatives are described in chapter "New system program (S/W) version download", page 70.

Open the current project in **TLON Manager**, add one control unit and install (download) it according to the separate TLON network documentation. Also see 18.2.1 above.

Open the SSD for the current system via WinG3. Add one control unit (and the units connected to it) and download the new SSD according to chapter "Programming (SSD download)", page 68.

18.4 Make two TLON networks one.

It is very important that two or more presentation numbers (Zone-Address) in the systems are not the same. The system properties have to be the same.

Use one of the systems, e.g. the largest and add to it the control units etc. from the other system.[28]

If it is known from the beginning that two systems shall be one in the future, it is possible to give the control units in the system respectively, the "final" control unit numbers right from the beginning in order to get the correct technical numbers in the system documents.
NOTE! Two or more presentation numbers (Zone-Address) in the systems must not be the same.

18.5 Delete a Control Unit in a TLON network

Physically disconnect the control unit. This action will generate faults in the other control units. Acknowledge the faults.

Open the current project in **TLON Manager**, delete the control unit according to the separate TLON network documentation.

Open the SSD for the current system via WinG3. Delete the control unit (and the units connected to it) and download the new SSD according to chapter "Programming (SSD download)", page 68.

[28] It is not possible to merge two TLON Networks into one or copy one system and paste into another system.

19 Programming (SSD download)

The PC program **WinG3** is used for programming of the site specific data (SSD) and to download it into the EBL512 G3 control unit(s) and/or 1728, 1735, 1736, 1826 & 1828 units.

When the units are running, i.e. the power is turned on and the TLON network is running, the SSD download can take place.

The PC has to be connected to the USB port (type "B") in a control unit. Start WinG3. Log on to the control unit, access code for level 3B shall be entered via the PC (WinG3).

In WinG3 (menu "Tools" | "Download SSD..."), you select the unit(s) to which the SSD shall be downloaded.[29] For security reasons the SSD (i.e. the installation) will be automatically saved after the download.

19.1 Check All Loop Units

In the WinG3 COM loop icon pop-up menu select "Check Loop". This function can be used after (or before) the download of SSD. The function is as follows:
The control unit will find all units that are connected on the COM loop. The addresses (1-255) will be reported to WinG3. For all units the address and the type of unit will be reported. All differences compared to the WinG3 SSD will be listed in WinG3 and can be saved and/or printed out.
NOTE! During this check the COM loop will be disconnected (disabled) and no alarms or faults can be activated. Disconnected COM loop is indicated by the LED **Fault / Disablements** "General disablements" (L10).

19.2 Single Control Unit

Start the downloading from WinG3. A text message will be shown in the control unit display “Downloading SSD”.

When the download is completed the control unit will restart (see chapter "Restart", page 74.

After the restart another text message will be shown in the display:

```
FAULT: Restart control unit nn, code 03
YYYY-MM-DD  HH:MM
```

If the download was not ok another fault will be generated.

[29] After SSD download the control unit will restart. A number of faults might then be generated, e.g. due to not connected units. This will cause "heavy traffic" on the network, which might affect (delay) the SSD download to the other units.

FAULT: Site specific data (SSD), CU nn
YYYY-MM-DD HH:MM

This text message means that the SSD have **not** been downloaded properly, i.e. a new download has to be performed.

19.3 Control Units in a TLON network

The SSD for all control units can be downloaded via a PC (WinG3), connected to one control unit. The download will be performed to the control units, one at a time, according to the chapter "Single Control Unit" above. The download is performed in a consecutive order, i.e. 0-1-2-3-4-……-29 amongst the selected control units **but** the control unit where the PC is connected will automatically be the last one to get the SSD downloaded.

When the SSD download to a control unit is completed, that control unit will automatically restart, see chapter "Restart", page 74.

19.4 User definable text messages download

When a fire alarm is activated (e.g. an addressable alarm point), the presentation number (Zone - Address) will be shown in the control unit display as well as in the ext. FBP 1826 / 1828 display[30]. There will also be shown a user definable alarm text, if programmed. See page 36.

Each alarm point can have a unique text message.

Each zone can have a unique text message.

Each zone line input can have a unique text message.

The user definable text messages will be printed out when a printer is available.

See also chapter "Fire alarm", page 35.

All user definable text messages, up to 40 alphanumeric characters each, are created and downloaded via **WinG3**. See Planning Instructions, chapter "User definable text messages".

[30] This is also valid for the Ext. Presentation unit 1728 and the Alert Annunciation units 1735 / 1736.

20 New system program (S/W) version download

The latest software (S/W) version of the EBL512 G3 system program is factory downloaded before the delivery. Due to continual development and improvement, different S/W versions can be found.

The valid S/W version for the Main board 5010 and the MMI board 5011 respectively, can be read in menu H4/U7 (system information) or via WinG3. On site, new S/W can be downloaded via WinG3. See also the WinG3 help chapter (help topic) "Download Software".

EBL512 G3 type **5000** has both a Main board 5010 and an MMI board 5011. EBL512 G3 type **5001** has only a Main board 5010.

On site, new S/W for the 1728, 1735, 1736, 1826 & 1828 units can be downloaded via WinG3. See the "Technical Description" for the unit respectively.

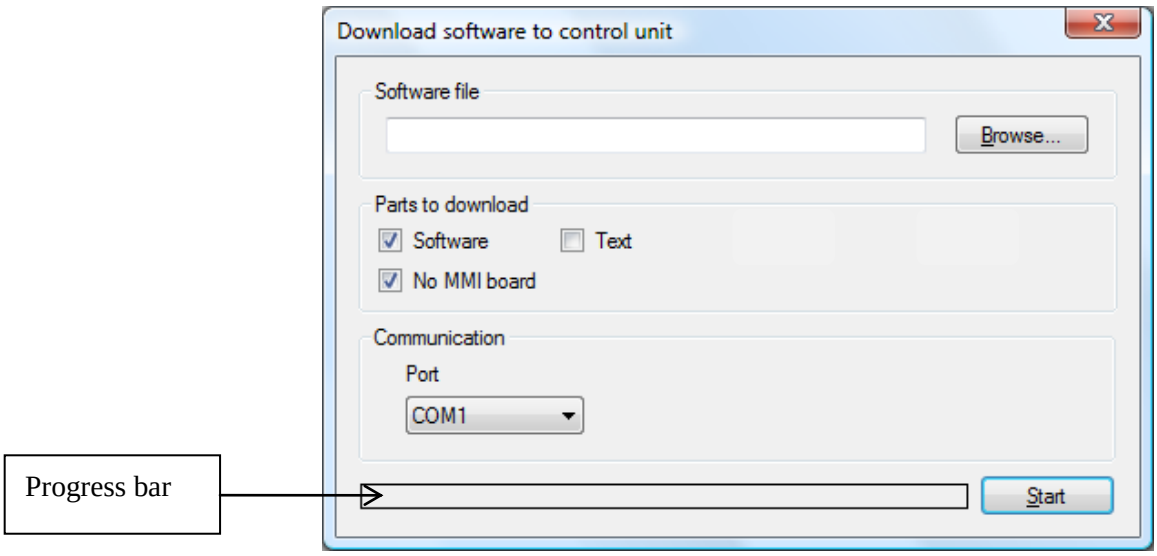
20.1 Single control unit (c.i.e.)

In a single c.i.e. shall not have a TLON connection board 1590 mounted. (When a c.i.e. has a TLON connection board 1590 mounted, it is expected to be one c.i.e. in a TLON network and TLON network programming is required.)

To download a new software (system program) version, a PC and **WinG3** are used. The BIN file that shall be downloaded contains software for the main board 5010, software for the MMI board 5011 and a text file, i.e. there is one BIN file for each language / country.

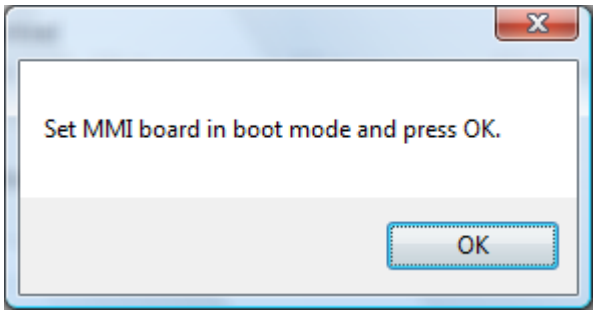
1. Connect the PC to the USB connector in the c.i.e. and start WinG3. In the "Tools" menu select "Download Software…" to open the dialog box and do the required settings:
   - Select the path and the software file name, e.g. *English_EBL512G3_100.BIN* (100 = version 1.0.0.)
   - Mark the checkbox "Software" to download both the main board and the MMI software.
   - Mark the checkbox "Text" to download the text file.[31]
   - Mark the checkbox "No MMI board" if it is an EBL512 G3 type **5001**, i.e. the MMI software and the text file will **not** be downloaded.
   - Select the COM port to be used on your PC.

[31] The text file contains all the text that will be shown in the c.i.e. display. Normally a new text file will come together with new software.
NOTE! If only the text file shall be downloaded, do not mark the checkbox "Software".



2. Set the Main board 5010 in "boot" mode, i.e. hold the "Boot" button (SW2) down and push the "RESET" button (SW1) momentarily until the Main board 5010 is in "boot" mode, indicated by the LED "D24" turned off.

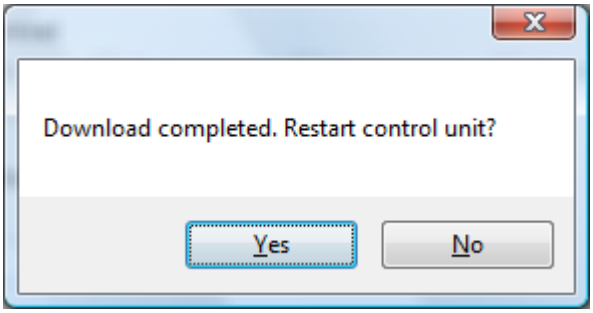
3. Start the download, i.e. click "Start".
   LED "Operation" (L5) will be turned off.
   LED **Fault / Disablements** "General fault" (L9) is turned on, indicating that EBL512 G3 is in the "boot" mode.
   LED "System fault" (L7) will be turned on.
   If it is an EBL512 G3 type **5000**, another dialog box opens,



   Set the MMI board 5011 in "boot" mode, i.e. hold the "BOOT" button (SW2) down and push the "RESET" button (SW1) momentarily until the MMI board 5011 is in "boot" mode, indicated by the LED "D18" turned off.

4. Click "OK".
   The download status is indicated by the progress bar.

5. When the progress bar has gone from "red to green" the download is completed and the following dialog box opens:



Click "Yes" and the control unit will restart. Regarding the restart, see also chapter "Restart", page 74.

6. LED "Operation" (L5) will be turned on and the other LEDs will be turned off.
7. Close [X] the "Download" dialog box.

Follow the same procedure in each control unit.

20.2 Control Units in a TLON network

All control units connected to a TLON network **shall** have the same software version.

For download of new software in each control unit, follow the procedure described above.

Since some control units do not have contact with some control units during the downloading, the following faults might be generated:

```
FAULT: Control unit xx has no contact with control unit xx,
network x
yyyy-mm-dd   hh:mm
```

```
FAULT: CU xx has wrong information
yyyy-mm-dd   hh:mm
```

The faults have to be acknowledged.

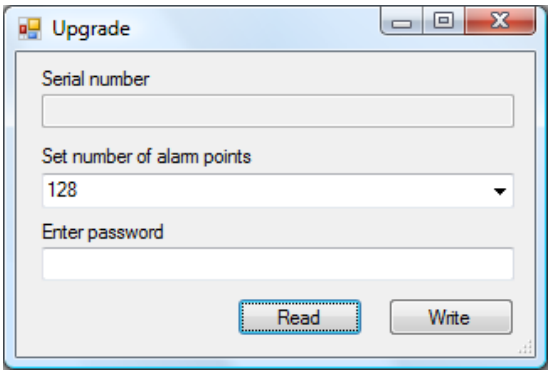
21 Upgrade number of alarm points

All EBL512 G3 settings are normally factory downloaded before the delivery. It is however, possible to do the following on site:

- Upgrade the maximum number of alarm points (128 → 256 → 512) **NOTE!** The maximum number of COM loop addresses is always 1020, i.e. address 1 – 255 on each COM loop.

If you wish to upgrade the number of alarm points, a PC and **WinG3** are used. Before download, the PC has to be connected to the USB connector.

1. Logon to the control unit.
2. In the control unit icon pop-up menu select "Upgrade number of alarm points" and a dialog box opens.



3. Click "Read" to get the data for the control unit you are connected to.
4. Report the serial number to the producer in order to get the password.[32]
5. Write the new number of alarm points and the received password in the field respectively and click "Write".

Follow the same procedure in each control unit.

21.1 Control Units in a TLON network

All control units connected to a TLON network do not have to have the same max. number of alarm points set.

[32] To upgrade the maximum number of alarm points, a separate password is required. The password will be unique for every upgrade (and downgrade). This password will be available from the producer after you have reported the serial number. A special PC program (with a hardware lock) has to be used.

22 Restart

A restart will delete or not delete the data in EBL512 G3. Here follows an explanation of the different data, abbreviations and a table showing how the data respectively is affected (**cold** or **warm restart**).

FF = **F**ire alarms and **F**aults.
D = **D**isablements
FFD = **F**ire alarms, **F**aults and **D**isablements.
SSW = Sensor values, access codes, supervised output calibration values and event logs.
WASV = **W**eek **A**verage **S**ensor **V**alues
SSD = **S**ite **S**pecific **D**ata, i.e. all the installation programming created and downloaded via WinG3.
S/W = Software, i.e. the EBL512 G3 system program.

Safe shut down of control unit (menu H8/S6) will save the SSW data (except the week average sensor values) in a Flash ROM **before you power off** (de-energize) **EBL512 G3**. Before the first "Safe shut down" this memory is empty. After each "Safe shut down" the latest SSW data is saved. When EBL512 G3 is powered up, the RAM (working memory) will, after the restart, read the SSW data saved in the Flash ROM.

The date & time and alarm counter value is stored in the memory of the real time clock, i.e. the value will be retained also after the c.i.e. has been de-energized.

NOTE! After any restart, a new week average sensor value will be calculated within two minutes, for all the analog smoke detectors. During these two minutes all fire alarms from analog smoke detectors will be suppressed. Thereafter a new average sensor value will be calculated each week.

Here follows a table describing different reset alternatives and how the data respectively is affected:

Action	Data, etc. which will be deleted	Data, etc. which will be not deleted	Restart code
Power down (de-energize) [33] and then **power up** again. ("Cold restart")	SSW FFD, WASV	SSD, S/W	00
Via menu H8/S6 Safe shut down of control unit. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	00 alt. 03
Via **RESET** button on Main board and MMI board respectively.[34]	FFD, WASV	SSD, S/W, SSW[35]	
Reset command via WinG3 or TLON Manager.	FFD, WASV	SSD, S/W, SSW[35]	
Automatically after download of site specific data (SSD) via a PC & WinG3. ("**Warm restart**")	FFD, WASV	SSD, S/W, SSW	03
Automatically after download of S/W and/or text file via a PC & WinG3. ("Cold restart")	FFD, WASV	SSD, S/W[36], SSW	00 alt. 03
Automatically due to external disturbance.[37] ("Cold restart")	FFD, WASV	SSD, S/W, SSW[38]	01, 02 alt. 04-20

NOTE! During the restart, the fault alarm relay for Fault tx will be "activated", the supervised 24 V DC outputs S0-S3 will be not supervised and S0-S3 programmed as normally high will be low for a few seconds.

During the "restart", no fire alarm can be activated and the following is show in the display:

[33] Both rectifier (mains) and battery disconnected.

[34] First press the **RESET** button on Main board momentarily then the **RESET** button on MMI board momentarily.

[35] If in the middle of a process, also the SSW might be deleted.

[36] The old S/W and/or text file will be deleted.

[37] If this happens, call for service personnel / engineer.

[38] Depending on the restart reason, also the SSW might be deleted.

And after a few seconds (if everything is all right, else see Memory fault below):

```
Booting.....
```

A **fault** will be generated and the following text message will be shown in the display and the buzzer will sound:

```
FAULT: Restart control unit nn, code xx,
address yyyyyy
```

Regarding code **xx** and address **yyyyyy**, see page 59. This fault is also indicated by LEDs **Routing equipment** "Fault tx activated" (L13) and **Fault / Disablements** "General fault" (L9).

After the fault is acknowledged (via menu H6), the LEDs will be turned OFF if there are no other faults.

After a "cold restart", required disablements have to be done.

Memory fault

In case of a fault in the Main board 5010 S/W (system program) or the MMI board 5011 S/W, the following fault message might be shown:

```
FAULT: Checksum system program, control unit xx
```

(Main board software.)

```
FAULT: Checksum MMI program, control unit xx
```

(Main board software.)

```
FAULT: No connection with MMI board, control unit xx
```

(Not showed in the display, only via WinG3 or the Web-server.)

```
No contact with Main board
```

This is also indicated by LED "System fault" (L7) and the buzzer sounds steady (continuous). The Fault tx output is "activated".
A new download of the S/W (system programs) are required and/or the Main board and/or the MMI board have to be replaced.

NOTE! After **SSD download** - see chapter "Programming (SSD download)" - page 68, the following messages might be shown:

```
FAULT: Checksum fault in downloaded data.
Control unit will now restart.
```

After restart:

FAULT: Restart control unit nn, code xx,
address yyyyyyyyy

FAULT: Site specific data (SSD)

This means that the SSD have **not** been (correctly) downloaded. A new SSD download has to be performed.

23 Access

To use the key pad in the control unit (to get access to the menu tree), it is necessary to logon with an access code for level 2B or 3A. See also chapter "Access levels", page 22.

Open the door in the control unit (= level 2A), press the soft key "Menu" (P4) and continue as follows:

Action	Text in display	Comments
	 EBL512 G3 Control Unit: XX User definable text. User definable text. yyyy-mm-dd hh:mm Menu	
"Menu"	Access code:	
Enter the code (4 digits)	Access code: ****	The digits are replaced by **** in the display.
	NO ACCESS!	The access code was not correct. Try again.
	 menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change access code for daily duties Esc menu	The access code was correct. A main menu list is displayed. Press "↵ " to accept (menu H1) **or** scroll / jump to the wanted menu (H2-H10) and press "↵ ".

Explanations:
Action (in the table) = use push button / key (e.g. "↵ ").
Text in display (in the table) = what is shown in the display in the control unit (c.i.e.).
Comments (in the table) = Comments to the text in the "Action" and "Text in display" columns.

Use "▲" and "▼" to scroll between the main menus H1-H10. Use "↵ " ("Enter") to accept.
Some main menus have sub menus. Use "▲" and "▼" to scroll between the sub menus (e.g. B1-B9). Use "↵ " to accept.

NOTE! The menus are circular, i.e. if you scroll with "▼" and the last menu is reached, the first menu comes up next.

Quick jump can be used within each menu, e.g. in menu H1 press "6" for a quick jump to menu H6. ("1" and then "0" within 1 sec. = 10).

In some cases a cursor appears e.g. `Disable zone: 000`
It is then possible to type in digits with the numeric keys 0 – 9.

Use "◄", "►", "▲" and "▼" to move the cursor in a menu.
Use "ESC" to return from a sub menu to the main menu (H1-H10).

Use "ESC " or the soft key "Esc menu" to log off from a main menu (H1-H10).

Use the soft key "Esc menu" to log off. It is always possible to log off whenever the soft key "Esc menu" is available.

There will be an automatic log off 60 minutes after the last action (i.e. if the key pad or a push button has not been used for 60 min.) and also when you close the door.

NOTE!
In the following chapters are all the menus described.

The "Text in display" column shows the essential text and might **not look exactly** as shown in the display.

24 Perform monthly test (H1)

The control unit and the installation shall be tested on a regular basis. If one twelfth of the alarm points are tested each month, the whole installation will be tested after one year.
In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S5.)

If a real fire alarm is activated, for example by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "The information area priority order", page 20.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) might be disabled (if set so in WinG3).

There will be an automatic ending of the test mode one hour after the latest tested alarm point / zone.
See also chapter "Perform ZONE TEST (Test mode) (H7)", page 121.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
	H1 Perform monthly test	
"↵"	Check that all LEDs light up! Press ↵	
"↵"	[All dots are lit up]	The buzzer (in the C.U.) sounds and all dots in the display are shown. All LEDs light up, incl. LEDs in units connected via I/O Matrix board 4582. If printer 5058 - an option for control unit 5000 – is mounted, it will print out: ABCDE……Z abcde……z
"↵"	Zones to be set in test mode: ??? ??? ??? ??? Start test: ↵	

Write zone numbers (e.g. 001, 002, 003, 004)	Zones to be set in test mode 001 002 003 004	Press "↲ " to start the test mode.
"↲"	Zones in test mode: 001 002 003 004 End test: ↲	LED "Test mode" (L8) will light up. Perform the tests.

The zone(s) will stay in test mode until the test mode is ended but after 60 minutes or if you press "Esc menu", you will be logged out from menu H1.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normally.

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the c.i.e. will light up approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

A sensor in test mode will not be able to activate fault.

After 60 minutes **or** "Esc Menu"	Zones in test mode: 001 002 003 004 End test: ↲ *(NOTE! See chapter "The information area priority order", page 20 regarding priority order.)*	You are no longer in menu H1 but still in test mode.
(When required: "Menu", "code")	Zones in test mode: 001 002 003 004 End test: ↲	Press "↲ " to end test.
"↲ "	Please wait....	
	Test of routing equipment? No Yes	The LED "Test mode" is turned OFF.

Some national regulations also require a routine test of the routing equipment.
Press press "↲ " (i.e. select "No") for no test. If so, the monthly test is completed (see below).
or
Press "▼" and "↲ " (i.e. select "Yes") to start such a test. If so, the following will happen in the system:

- The c.i.e. "Fault tx" output will be de-activated (note that this output is **activated** in normal state), indicated by the LED "Fault tx activated" (L13).
  60 seconds count-down starts.
- After 30 seconds, also the c.i.e. "Fire brigade tx" output (and corresponding programmable outputs type "routing equipment") will be activated, indicated by the LED "Fire brigade tx delay" (L14).
- After another 30 seconds, the test will be ended and the outputs and LEDs will return to "normal".

"▼" and "↲ "	Test of routing equipment in progress. nnn seconds left.	"nn" starts at 060 and will count down to 000.
	Monthly test is completed! Press ↲	
"↲ "	▒▒ menu	Scroll to another menu or

	H1 Perform monthly test H2	press "ESC".

NOTE_1! During the test, the following information will be shown in all other c.i.e. displays:
Zones in test mode: 001, 002, 003, 004

NOTE_2! If an alarm point (e.g. a manual call point) is in alarm state when the test mode is ended, there will not be a fire alarm activated. Instead the alarm point will be disabled and has to be re-enabled again via menu H2/B5.

NOTE_3! When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.

25 Disable or re-enable (H2)

A whole zone, one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B3. This possibility can be used when a temporary disablement is wanted (e.g. craftsmen working in the premises, etc.).

The function **Enhanced disablement** is enabled as default i.e. disabled alarm points cannot activate Pre-warning, fire alarm or fault.

If this function is not enabled (via WinG3), fault can be activated but not pre-warning or fire alarm. (This is a violation to the EN54-2 standard.

Addressable manual call points can be disabled (but shall normally not be disabled). However, when a whole zone is disabled, the addressable manual call points will not be disabled for safety reasons. (This function can depend on convention / country.)

Up to 512 whole zones can be disabled via menu H2/B1.
Up to 200 alarm points (zones / address) can be **individually** disabled via menu H2/B2 and/or COM loops, zone interface inputs and/or MIO inputs can be disabled via menu H8/S1. (Alarm points disabled via time channels are not limited and must not be counted!)
Up to 200 outputs can be **individually** disabled via menu H2/B3. Disabled output will stay in (or return to) the normal condition for the output respectively. (Disabled outputs via menus H2/B7 - B9 are not limited and must not be counted!)
Up to 200 Interlocking outputs can be **individually** disabled via menu H9/C4.

It is not possible to exceed the limits. A warning will be shown:

```
Max. disablements reached!
Disablement not performed.
```

Don't forget to re-enable (via menus H2/B4-B9, H8/S3, H9/C5 or use automatic re-enablement for zones and alarm points.
Disablements are indicated by LED **Fault / Disablements** "General disablements" (L10) and are also shown in the display. An example:

```
Zone 001 is disabled
Zone 002 is disabled

....

....

More...
```

More… is indicating more disablements.

NOTE! See chapter "The information area priority order", page 20, regarding priority order.

Disablements (and faults) are indicated by a 2-sec. beep when you close the control unit door.

25.1 Disable zone (H2/B1)

When a whole zone is disabled, all alarm points within the zone are disabled except the addressable manual call points. (This function can depend on convention / country.)

Disabled zones are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
"↲ "	Disable zone: 000 (press ↲)	
Write the zone number (e.g. 001)	Disable zone: 001 (press ↲)	Press "↲ " to disable.
"↲ "	Re-enable time: HH:MM No Yes *(Default is current time + 3 hours)*	Press "↲ " to disable without automatic re-enablement. or Accept the time (+ 3 hours) or set another time (max + 24 hours), select "Yes" and press "↲ " to disable with automatic re-enablement.
"↲ "	Disable zone: 000 (press ↲)	LED **Fault / Disablements** "General disablements" (L10) will light up. Disable another zone or press "ESC". Scroll to another menu or press "ESC".

25.2 Disable zone / address (H2/B2)

Addressable alarm points (also addressable manual call points), connected to the COM loop, can be individually disabled.

Disabled alarm points, zone / addresses, are listed in menu H4/U1 from which it is also possible to get a print-out.

Regarding disabled analog smoke detector: The sensor values will not be saved, i.e. only the values saved before and after the disablement will be used when calculating the week average sensor value.

Disabled alarm points, zone / addresses, have to be re-enabled via menu H4/B2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B2.	B2 Disable zone / address	
"↲ "	Disable zone: 000 address: 00 (press ↲)	
Write zone number and the address (e.g. 001 and 01)	Disable zone: 001 address 01 (press ↲)	Press "↲ " to disable.
"↲ "	Re-enable time: HH:MM No Yes *(Default is current time + 3 hours)*	Press "↲ " to disable without automatic re-enablement. or Accept the time (+ 3 hours) or set another time (max + 24 hours), select "Yes" and press "↲ " to disable with automatic re-enablement.

"↲ "	Disable zone: 000 address: 00 (press ↲)	LED **Fault / Disablements** "General disablements" (L10) will light up. Disable another zone or press "ESC". Scroll to another menu or press "ESC".

25.3 Disable output (H2/B3)

Outputs can be individually disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↵ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B3.	B3 Disable output	
"↵ "	Disable output type: 3361/3364/4364 3377/3379 S R Expansion board	Select output type. **S**=CU voltage output S0-S3. **R**=CU relay output R0-R1. Press "↵ " to accept.
"↵ " Depending on the selected type the following will be shown:	Disable 000000 output 0 (press ↵)	Write the data for the output respectively. Press "↵ " to accept. Regarding the 3377 (ASI) & 3379 (ASB) units: Priority output "all" will disable the high, medium and low priority outputs for the selected unit. LED **Fault / Disablements** "General disablements" (L10) will light up.
	Disable 000000 priority output high medium low all	
	Disable CU: 00 S: 0 (press ↵)	
	Disable CU: 00 R: 0 (press ↵)	
	Disable control unit: 00 exp. board: 0 output: 0	
"↵ "	Disable output type: 3361/3364/4364 3377/3379 S R Expansion board	Disable another output or press "ESC". Scroll to another menu or press "ESC".

Re-enable zone (H2/B4)

Disabled zones are listed in menu H4/U1 from which it is also possible to get a print-out.

Re-enabling via this menu has higher priority than automatic re-enabling.

When all zones have been re-enabled, The LED **Fault / Disablements** "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

NOTE! It is not possible to collectively re-enable a number of alarm points (zone-address) that are individually disabled via menu H2/B2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B4.	B4 Re-enable zone	
"↲ "	Re-enable zone 001 zone 002 zone 006 zone 073	If there are no zones to re-enable, menu B4 will be shown again. The disabled zones will be shown in a list. Use "▼" or "▲" to select the zone and press "↲ ".
"↲ "	Re-enable zone 002 zone 006 zone 073	Re-enable another zone or press "ESC". Scroll to another menu or press "ESC".

25.4 Re-enable zone / address (H2/B5)

Disabled alarm points, zone / addresses, are listed in menu H4/U1 from which it is also possible to get a print-out.

Alarm point(s) and/or zones disabled via the "Single reset with automatic disablement ("encapsulation function"), see page 45, have to be re-enabled via this menu. A **zone** will be displayed as ZZZ-00 (i.e. zone number and address 00).

Re-enabling via this menu has higher priority than automatic re-enabling.

When all zone / addresses have been re-enabled, The LED **Fault / Disablements** "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ " Scroll to menu B5.	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
"↲ "	B5 Re-enable zone / address	
"↲ "	Re-enable zone / address 001-02 zone / address 002-01 zone / address 006-03 zone / address 073-01	If there are no zone / addresses to re-enable, menu B5 will be shown again. The disabled zone / addresses will be shown in a list. Use "▼" or "▲" to select the zone / address and press "↲ ".
"↲ "	Re-enable zone / address 002-01 zone / address 006-03 zone / address 073-01	Re-enable another zone / address or press "ESC". Scroll to another menu or press "ESC".

25.5 Re-enable output (H2/B6)

Disabled outputs are listed in menu H4/U1 from which it is possible to get a print-out.

When all outputs have been re-enabled, The LED **Fault / Disablements** "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B6.	B6 Re-enable output	
"↲ "	Re-enable output type: 3361/3364/4364 3377/3379 S R Expansion board	Select output type. **S**=CU voltage output S0-S3. **R**=CU relay output R0-R1. Press "↲ " to accept.
"↲ " Depending on the selected type the following will be shown:	Re-enable 000001 output 0 000001 output 1	If there are no outputs to re-enable, menu B6 will be shown again. Use "▼" or "▲" to select the output in the list and press "↲ ". Regarding the 3377 (ASI) & 3379 (ASB) units: 0=high priority output 1=medium priority output 2=low priority output 3=all
	Re-enable 010001 priority 0 010001 priority 3	
	Re-enable control unit: 00 S0 control unit: 00 S1	
	Re-enable control unit: 00 R0 control unit: 00 R1	
	Re-enable CU: 00 exp. board 0 output 0 CU: 00 exp. board 0 output 1	

"↲ "	Re-enable output type:	3361/3364/4364 3377/3379 S R Expansion board	Re-enable another output or press "ESC". Scroll to another menu or press "ESC".

25.6 Disable / re-enable output type (H2/B7)

All outputs[39] programmed as type control (general), fire ventilation and extinguishing system[40] can for the type respectively be disabled all at the same time or all outputs of these types can be disabled all at the same time.

All outputs programmed as type interlocking can be disabled all at the same time.

Disabled control output means that even if the control expression (trigger condition) for the output respectively is fulfilled (true), the output will not be activated.

The outputs in one or more control units can be disabled or the outputs in all control units.

Disabled control outputs are indicated by LED **Fault / Disablements** "General disablements" (L10) and shown in menu H4/U1 from which it is possible to get a print-out.

When all outputs have been re-enabled, The LED **Fault / Disablements** "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

The outputs will be disabled until re-enabled again (via this menu).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↵ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B7.	B7 Disable/re-enable output type	

[39] Including Addressable siren 3377 and Addressable sounder base 3379.

[40] Also the "Extinguish equipment output" on the German FBP interface board 4583.

"↲ "	Select output type control extinguishing ventilation contr/exting/vent interlocking	Use "▼" or "▲" to select the output type in the list and press "↲ ".
"↲ "	Select control unit 00 All [Blank space] Esc menu Disable Re-enable	Write the CU number or press "►" and select "All" (all CUs)[41]. Press "Disable" or "Re-enable".
"Disable" or "Re-enable".	Select control unit 00 All [Blank space] Esc menu Disable Re-enable	Disable or Re-enable another output type / control unit (the procedure is similar for all types) or press "ESC". Scroll to another menu or press "ESC".

[41] **NOTE!** Outputs disabled for a specific control unit (e.g. CU 03) can not be collectively re-enabled via all CUs. You have to re-enable the outputs for the specific control unit(s), e.g. CU 03.

25.7 Disable / re-enable alarm devices (H2/B8)

Outputs[39] programmed as type alarm device (sounder) can be disabled all at the same time. **Disabled alarm devices** means that even if the control expression (trigger condition) for the output respectively is fulfilled (true), the output will not be activated.

The outputs in one or more control units can be disabled or the outputs in all control units.

Disabled alarm devices are indicated by LEDs **Fault / Disablements** "Alarm devices" (L11) and "General disablements" (L10) and shown in menu H4/U1 from which it is possible to get a print-out.

When all outputs have been re-enabled, The LEDs **Fault / Disablements** "Alarm devices" (L11) and "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

The outputs will be disabled until re-enabled again (via this menu).

NOTE! This function **may / may not** be the same as push button "Silence alarm devices" (P2), see chapter ""Silence Alarm devices"", page 26.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↵ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B8.	B8 Disable/re-enable alarm devices	

"↵ "	Select control unit 00 All [Blank space] Esc menu Disable Re-enable	Write the CU number or press "►" and select "All" (all CUs)[42]. Press "Disable" or "Re-enable".
"Disable" or "Re-enable"	Select control unit 00 All [Blank space] Esc menu Disable Re-enable	Disable or Re-enable alarm devices in another control unit or press "ESC". Scroll to another menu or press "ESC".

[42] **NOTE!** Alarm devices disabled for a specific control unit (e.g. CU 03) can not be collectively re-enabled via all CUs. You have to re-enable the outputs for the specific control unit(s), e.g. CU 03.

25.8 Disable / re-enable routing equipment (H2/B9)

Disabled outputs are listed in menu H4/U1 from which it is possible to get a print-out.

Outputs for routing equipment (fire brigade tx / fault tx) can be disabled and re-enabled via this menu. Can be useful during an installation and test period, when only local alarms are required.

Disabled output is indicated by LEDs **Fault / Disablements** "General disablements" (L10) and "Fire brigade tx" (L12).

Disabled output will stay disabled until re-enabled again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B9.	B9 Disable/Re-enable routing equipment	
"↲ "	Routing equipment for Fire Fault Fire and fault [Blank space] Esc menu Disable Re-enable	Use "▼" or "▲" to select output type(s). Press "Disable" or "Re-enable".
"Disable" or "Re-enable"	Routing equipment for Fire Fault Fire and fault [Blank space] Esc menu Disable Re-enable	Disable or Re-enable another output type or press "ESC". Scroll to another menu or press "ESC".

25.9 De-activate Alert Annunciation function (H2/B10)

Normal function:

For alarm points / zones programmed for **A**lert **A**nnunciation (via WinG3) is normally the **AA** function enabled via a time channel, e.g. enabled daytime (during working hours) and disabled night time.
As an alternative, the **AA** function can be continuously enabled.

Off

Via this menu (H2/B10) it is possible to de-activate (disable) the **AA** function, i.e. the **AA** function will be disabled for the alarm points / zones programmed for **A**lert **A**nnunciation in spite of the time channel is "on" or if they are programmed to be continuously enabled.

The **AA** function will stay de-activated (disabled) until re-activated (re-enabled) again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Disable zone B2 Disable zone / address B3 Disable output B4 Re-enable zone B5 Re-enable zone / address B6 Re-enable output B7 Disable / re-enable output type B8 Disable / re-enable alarm devices B9 Disable / re-enable routing equipment B10 De-activate alert annunciation function	
Scroll to menu B10.	B10 De-activate alert annunciation function	
"↲ "	Alert annunciation function: Normal Off	Select "Normal" or "Off".
"↲ "	B10 De-activate alert annunciation function	Scroll to another menu or press "ESC".

26 Set calendar and clock (H3)

The RTC component has a capacitor as a backup power supply. Normally, date, day of the week and time only have to be set when the power is turned on the control unit for the first time.[43] If required, the clock might be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct.

The calendar and clock can be set in any c.i.e. for the whole system. Every day (at midnight) the calendar and clock will be synchronised.

NOTE! If you don't want to change anything, press "ESC" instead of "↲ " to return to menu H3.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H3.	H3 Set calendar and clock	
"↲ "	YYYY-MM-DD hh:mm Monday Tuesday Wednesday Thursday Friday Saturday Sunday	The date & time shown was valid when this menu was opened. When required, change the date, time and/or weekday (press "▼" or "▲" to select the weekday). The "clock" starts again as from the date, time, etc. *shown in the display* when you press "↲ ". **If no changes shall be done, press "ESC" instead of "↲ ".**
"↲ "	H3 Set calendar and clock	Scroll to another menu or press "ESC".

[43] The capacitor can supply the RTC for a couple of days. When the power has been turned off, it is recommended to check / set the date and time in menu H3.

27 Present system status (H4)

If printer 5058 - an option for control unit 5000 – is mounted, it is possible to get a print-out from menu U1-U7 respectively. In this case the soft key "Print" (P5) shall be used.

27.1 Disablement (H4/U1)

This is a list of all disablements in the system. Also alarm point(s) and/or zones disabled via "Single reset with automatic disablement" (encapsulation function, see page 45) are shown in the list. In this case a **zone** will be displayed as ZZZ-00 (i.e. a zone number and address 00).

Disablements by time channels are listed in menu H4/U2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	Press "↲ " to show all disablements in the system (U1).
"↲ "	*(When "↲ " is pressed, the disablements will be shown in the display. Some examples:)* Zone XXX address XX disabled Zone XXX is disabled automatic re-enablement HH:MM Alarm points are disabled by time channel in CU XX .... Esc menu Print	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out. If there are no disablements when "↲ " is pressed, the list view will not open.
"ESC"	U1 Disablement	Scroll to another menu or press "ESC".

27.2 Disablement by time channel (H4/U2)

A list of all disablements by time channel(s) in the system.

NOTE! All other disablements are listed in menu H4/U1.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U2.	U2 Disablement by time channel	
"↲ "	*(When "↲ " is pressed, the disablements will be shown in the display. Some examples:)* Zone XXX address XX disabled by time channel Zone XXX address XX disabled by time channel. .... Esc menu Print	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out. If there are no disablements when "↲ " is pressed, the list view will not open.
"ESC"	U2 Disablement by time channel	Scroll to another menu or press "ESC".

27.3 Open doors (H4/U3)

If any door in the system is open the following symbol is shown in the display's symbol area: 

See also chapter "Open door", page 31.

This menu is a list of all open doors in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U3.	U3 Open doors	
"↲ "	*(When "↲ " is pressed, the disablements will be shown in the display. Some examples:)* Door open control unit 00 Door open FBP x CU xx .... Esc menu Print	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out. If there are no open doors when "↲ " is pressed, the list view will not open.
"ESC"	U3 Open doors	Scroll to another menu or press "ESC".

27.4 Sensor values (H4/U4)

The very first week average sensor value is calculated within 2 minutes after SSD download & restart. During these 2 minutes can no fire alarm be activated and the sensor value "000" will be shown.
The "Performance factor" and "Min. / Max." values are updated each night (00:00), i.e. the values shown are from the previous day.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U4.	U4 Sensor values	
"↲ "	Start sensor: 000000	Write the technical number and/or press "↲ " to start as from sensor 000001.
"↲ "	*(When "↲ " is pressed, the sensor values will be shown in the display. An examples which shows the values from an analog multi detector 4300 and an analog heat detector 3308:)* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: X-XX Max: XX.X%/m Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out. If there are no sensors (analog detectors) when "↲ " is pressed, the list view will not open.
	Sensor: 001-03 (technical address 000002) Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C Esc menu Print	
"↲ "	Start sensor: 000000	Write another technical number and press "↲ " or press "ESC".
"ESC"	U4 Sensor values	Scroll to another menu or press "ESC".

Regarding the Performance factor:

≥ 0.00 = The detector is mounted in a "stable" environment. (The momentary sensor values during the day are not differing a lot.)

≤ 2.55 = The detector is mounted in an "unstable" environment. (The momentary sensor values during the day are differing a lot.)

The Performance factor should normally be as low as possible.

See also Planning Instructions, chapter "Performance factor".

Table showing the algorithms and the shortenings respectively:

Algorithm	**Short name**[44]
Normal sensitivity (3%/m) & Normal detection (**15** s)	**N-15**
High sensitivity (2.4%/m) & Normal detection (15 s)	H-15
Low sensitivity (3.6%/m) & Normal detection (15 s)	L-15[45]
Normal sensitivity (3%/m) & Slow detection (35 s)	N-35[45]
High sensitivity (2.4%/m) & Slow detection (35 s)	H-35[45]
Low sensitivity (3.6%/m) & Slow detection (35 s)	L-35[45]
Heat algorithm, Class A1	A1
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec[46]

Default is N-15 and A1 respectively.

27.4.1 Reset of a week average sensor value

If a sensor (analog smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be cleared, i.e. set to the default value. If not, the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually, see chapter "Clear weekly

[44] If some other short name is wanted, it can be changed in WinG3. Up to six characters can be used. In the DBI (Danish) convention, up to five characters.

[45] Low sensitivity and/or slow detection (35 s) might not fulfil the EN54-7 specifications.

[46] Analog multi detector 4300 only.

average (H8/S4)", page 128. See also chapter "Acknowledge SERVICE signal (H8/S3)", page 126.

NOTE! Authorised service personnel only, must do the reset to default value. Used incorrectly it can cause nuisance fire alarms.

27.5 Sensors activating SERVICE signal (H4/U5)

When SERVICE signal is generated in the system, following symbol is shown in the display's symbol area: 

Regarding the SERVICE signal levels, see Planning Instructions, chapter "SERVICE signal".

Menu H4/U5 is a list of the sensor(s) activating SERVICE signal.

NOTE! SERVICE signal is only information that the sensor has to be replaced with a new/clean sensor soon. The SERVICE signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S3)", page 126.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U5.	U5 Sensors activating SERVICE signal	
"↲ "	Sensor : ZZZ-AA (technical address xxxxxx) needs service .... Esc menu Print	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out. If there are no sensors having generated SERVICE signal when "↲ " is pressed, the list view will not open.
"ESC"	U5 Sensors activating SERVICE signal	Scroll to another menu or press "ESC".

27.6 Event log (H4/U6)

Three event logs are available:

1. Alarm log (only alarm events, e.g. fire alarm, fire alarm reset, etc.)

2. Interlocking log (only interlocking events)
3. General event log (all events except alarm and interlocking events)

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U6.	U6 Event log	
"↲ "	Select event log: Alarm log Interlocking log General event log	Use "▼" or "▲" to select a log. (E.g. the "Alarm log".)
"↲ "	*(When "↲ " is pressed, the events will be shown in the display. The most recent event is on top of the list. Some examples are shown below.)* Command: Reset all alarms 2009-12-03 09:25 FIRE ALARM zone 123 address 45 2009-12-03 09:09 FIRE ALARM zone 123 address 46 2009-12-03 09:07 Esc menu Print	A list in which you can scroll with "▼" or "▲". If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of the three events shown in the display. Scroll with "▼" or "▲" to view three more events and press "Print" for a new print-out. If there are no events in the list when "↲" is pressed, the list view will not open.).
"ESC"	U6 Event log	Scroll to another menu or press "ESC".

27.7 Show information (H4/U7)

Menu H4/U7 can be used to show the following information for that specific control unit:

Main board version The S/W (system program) version of the Main board 5010.

MMI board version The S/W (system program) version of the MMI board 5011.

Alarm counter The alarm counter is increased with "1" every time the c.i.e. enters a real "fire alarm condition" (Fire alarm indication in the display, LEDs "Fire" are lit and the c.i.e. buzzer is sounding), i.e. not for zones in test mode. It starts on 000 and goes to 999. It can be reset to 000 via WinG3 (Control unit menu "Reset alarm counter…"). It is stored in an EEPROM, i.e. the value will be retained also after the c.i.e. has been de-energized.

Max. number of allowed alarm points that can be used in this control unit, i.e. 128, 256 or 512.
Note, that max. number of COM loop addresses is always **1020**.

Convention Different countries have different conventions, i.e. country specific functions, default settings, etc. The convention is set in conjunction with the installation of WinG3. (The convention can, if required, be changed via WinG3).[47]

Serial number The manufacturer's serial number (year, month, number).

Installation name As written in the WinG3 dialog box "System Properties" (Name).

Date and time when the site specific data (SSD) was downloaded.

Control unit number 00-29.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H4.	H4 Present system status	
"↵ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Event log U7 Information	
Scroll to menu U7.	U7 Information	

[47] To change the convention in WinG3, "Level 2" has to be selected, which require a special password.

"↲ "	Main board version: vvvvvvvvvvv MMI board version: vvvvvvvvvvv Alarm counter: nnn Max number of allowed alarm points: xxx Convention: ccccccccc Serial number: xxxxxxx sssssssssssssssssssssss YYYY-MM-DD hh:mm Control unit: NN Esc menu Print	If printer 5058 is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out.
"ESC"	U7 Information	Scroll to another menu or press "ESC".

28 Service (H5)

When commissioning an installation and by maintenance (e.g. when you power on and when you are programming a control unit / system), menu H5 can be used for certain information and help.

Only authorised personnel have access to the level 3A menus.
Access code for level 3A is required.

Via a PC[48] and WinG3 (+ access code for level 3B) you can:

- download / backup (upload) the site specific data (SSD)
- create and download software (S/W), settings, configurations, control unit and system properties.
- create and download the user definable text messages (alarm texts) shown in the display in the control unit, ext. FBP and other Display units.

Via a PC[49] and **TLON Manager** you can create and download (install) the TLON network configuration (project).

[48] Connected to the "USB" connector above the front panel.

[49] Connected to the modular connectors J10 (TLON network 0) or J11 (TLON network 1) on the main board 5010.

28.1 Access code for service / maintenance (H5 and H8)

Access code to level 3A is required.

If login to level 2B was made with code for level 3A, no code is required here.

Action	Text in display	Comments
"Menu"		According to chapter "Access", page 78
Scroll to menu H5 or H8	H5 Service H8 Maintenance	
"↲ "	Access code:	If login was made with code for level 3A, no code is needed.
Enter code for level 3A (4 digits)	Access code: ****	The digits are replaced with **** in the display
	NO ACCESS!	This info. is shown if you enter a not correct access code. Try again.
H5 Code for level 3A (4 digits)	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	The access code was correct. Press "↲ " or scroll to the wanted menu and press "↲ ".
alt.		
H8 Code for level 3A (4 digits)	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	The access code was correct. Press "↲ " or scroll to the wanted menu and press "↲ ".

28.2 Calibration of supervised outputs (H5/A1)

Supervised (monitored) outputs
The voltage outputs (S0-S3) in each control unit.
The voltage outputs (VO0-VO1) in the COM loop output unit 3364.

When all alarm devices (sounders, etc.) have been connected, including required end-of-line devices[50] and when the SSD is downloaded, a calibration has to be done.

Function: The calibrated range is 4K7 – 50K and 470 – 5x470 nF respectively. If the actual value at any time differs from the calibrated value ± a small tolerance or if the calibrated value is outside the calibration range, a fault will be generated.

NOTE!
Each output's logic is programmable via WinG3, i.e. normally low (default) or normally high (24V). During the calibration the outputs have to be low, i.e. a normally high output will be low a few seconds during the calibration.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
"↵ "	Calibration in progress Please wait.....	
	A1 Calibration of supervised outputs	Calibration is ready. Scroll to another menu or press "ESC".

NOTE! After the calibration it is recommended do a "Safe shutdown of the control unit" (see menu H8/S6). This will save the SSW data (e.g. the calibration values) in a Flash ROM (see page 131).

[50] Control unit outputs S0-S3: One end-of-line resistor (33K) in the last unit or one resistor (33K) in up to five units.
3364 outputs (VO0-VO1): One end-of-line capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

28.3 Sensitive fault detection mode (H5/A2)

To increase the possibilities to detect faults during the commissioning, it is possible to use the "Sensitive fault detection mode". The time delay for each fault will then be reduced, i.e. you might find some faults now instead of in the future.

The "Sensitive fault detection mode" turned on is indicated by the LED **Routing equipment** "Fault tx activated" (L13) and the "Fault" output for routing equipment is "activated".

NOTE! Don't forget to turn off this mode after the commissioning.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A2	A2 Sensitive fault detection mode	
"↲ "	Sensitive fault detection mode: Off On	Press "↲ " to turn off or select "On" and press "↲ " to turn on the sensitive fault detection mode.
"On" "↲ "	A2 Sensitive fault detection mode	Scroll to another menu or press "ESC".

28.4 Service mode for COM-loop (H5/A3)

This mode can be used when commissioning an installation and by maintenance. The COM loop communication (polling) will be turned off but there is still voltage (24 V DC) on the loop in the A-direction only, in the B-direction only **or** in both directions at the same time.

A volt meter can be used, e.g. to check the voltage / voltage drop on different places on the loop or to find a single break on the loop.

It is recommended to do this check also when EBL512 G3 is power supplied via the backup battery only, since the voltage can be up to 3 V lower (compared with the rectifier voltage) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED **Fault / Disablements** "General disablements" (L10).

If you log off this menu, the "Service mode for COM-loop" will be terminated automatically.

NOTE! If short-circuit is detected when a COM loop is in service mode, the loop will be disabled and a fault message will be displayed:

```
FAULT: Short-circuit SCI A <-> SCI B,
loop x, control unit xx
```

…independent of where on the loop the short-circuit is situated.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A3	A3 Service mode for COM-loop	
"↲ "	Service mode for COM-loop: 0 CU: 00 A Direction B Direction Both	Write COM-loop number and control unit number, then select "A-direction", "B-direction" or "Both". Press "↲ ".

E.g. COM-loop 3, CU 03 and "A-direction". "↲ "	Service mode for control unit 03 COM-loop 3 Supplied from A-direction only Esc menu	Press "↲ ", "ESC" or "Esc menu" to terminate the service mode.
"↲ " or "ESC"	A3 Service mode for COM-loop	Scroll to another menu or press "ESC".

28.5 Display current consumption in unit (H5/A4)

The resolution is not very high, i.e. the displayed values give only a rough idea of the current consumption.

Control unit: The total current consumption (including the charging current at 24V) for the selected control unit (c.i.e.) when it is connected to the mains (230 V AC), i.e. this function is not working by battery backup.

Charging: The battery charging current for the selected control unit (c.i.e.). This is at 24 V, i.e. before the DC/DC converter for battery charging voltage etc.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A4	A4 Display current consumption in unit	
"↲ "	Select control unit: : 00 (press ↲)	Write control unit number and press "↲ "
"↲ "	Wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.
	Current consumption in control unit 00: From rectifier: xxxx mA Charging: xxxx mA (battery temperature xx°C)	
"↲ " or "ESC"	A4 Display current consumption in unit	Scroll to another menu or press "ESC".

28.6 Display current consumption COM-loop (H5/A5)

The resolution is not very high, i.e. the displayed values give only a rough idea of the current consumption.

The current consumption (an average value) for each COM loop can be displayed.

NOTE! No or very small current consumption can not be presented correctly / precisely.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A5	A5 Display current consumption on COM-loop	
"↲ "	Display current consumption on COM-loop: 0, control unit: 00 (press ↲)	Write loop number and control unit number and press "↲ ".
"↲ "	Wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.
	Current consumption on COM-loop: 0 control unit 00 is xxxx mA	The current consumption accuracy is ±5 mA.
"↲ " or "ESC"	A5 Display current consumption on COM-loop	Scroll to another menu or press "ESC".

28.7 Display statistics for communication (H5/A6)

The statistics can be used during commissioning, service, etc.

Number of pollings is the number of pollings / "questions" sent out by the control unit to all the units connected on the COM loop.
Parity fault is the received number of parity faults and % (faults in relation to pollings).
Number of bit faults is the received number of bit faults and % (faults in relation to pollings).
No answer is the received number of answer faults / no answers and % (faults in relation to pollings).

Bit length fault is the received number of bit length faults and % bit length faults in relation to the pollings.

The number of Parity faults, Number of bit faults, No answer and Bit length faults shall normally be "0" or as close to "0" as possible. If not, there are some communication problems that have to be investigated. Check the COM loop, connections and the loop units.

All values are set to "0" after restart and/or after re-connection of COM loop (via menu H8/S2).

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A6	A6 Display statistics for communication	
"↲ "	Display statistics for control unit: 00 COM-loop: 0	Write control unit number and loop number and press "↲ ".
"↲ "	Please wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.

	Number of pollings: nnnnnnn Parity fault: 000000 00.0% Number of bit faults: 000000 00.0% No answer: 000000 00.0% Bit length fault: 000000 00.0%	Note! The values are not live updated.
"↲ " or "ESC"	A6 Display statistics for communication	Scroll to another menu or press "ESC".

28.8 Activate address setting mode for DU (H5/A7)

This function can be used by commissioning / service engineer to activate the address setting mode in the following Display Units connected to the c.i.e.:

- Ext. Presentation unit 1728
- Alert Annunciation units 1735 & 1736
- Ext. FBPs 1826 & 1828

A specific unit or all units connected to one c.i.e. can be activated for address setting.

NOTE! The units have to be in operation and in quiescent condition, i.e. the units have to have an address already.

Action	Text in display	Comments
"Menu"		According to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU	
Scroll to menu A7	A7 Activate address setting mode for DU	
"↲ "	Activate address setting mode for DU: Control unit: 00, display unit: 00 All	Write control unit number, and the unit's address or select (press "►") "All" (i.e. all display units on the selected control unit).
"↲ "	A7 Activate address setting mode for DU	Scroll to another menu or press "ESC".

The address is thereafter edited in the display unit (DU) respectively.

29 FAULT Acknowledge (H6)

Regarding fault indication, etc., see chapter "Fault", page 47.

See also chapter "Fault acknowledge", page 63.

All faults (i.e. not acknowledged faults, acknowledged faults and corrected faults) are stored in the event log and can be listed, see chapter "Event log (H4/U6)", page 105.

In menu H6 can up to 300 faults (not acknowledged and not corrected faults) be listed.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H6.	H6 Acknowledge FAULTS	
"↲ "	*Some examples of fault messages:* FAULT: Low battery capacity, control unit 00 yyyy-mm-dd hh:mm FAULT: No reply zone: 045 address: 06 technical number 000005 yyyy-mm-dd hh:mm serviced FAULT: No reply zone: 021 address: 05 technical number 000114 yyyy-mm-dd hh:mm acknowledged	This is a list in which you can scroll. The most recent fault is on top of the list. A corrected fault is indicated by **serviced**. An acknowledged fault is indicated by **acknowledged**. To acknowledge a fault, select it and press "↲ ". The selected fault has a boarder around it.
"↲ " "↲ "	FAULT: Low battery capacity, control unit 00 yyyy-mm-dd hh:mm acknowledged FAULT: No reply zone: 021 address: 05 technical number 000114 yyyy-mm-dd hh:mm acknowledged	A corrected / serviced fault that is acknowledged will disappear from this list.[51]
"ESC"	H6 Acknowledge FAULTS	Scroll to another menu or press "ESC".

[51] When the list is empty, i.e. when all faults are acknowledged and corrected, you will automatically return to menu H6:

30 Perform ZONE TEST (Test mode) (H7)

Normally, zones are tested during the monthly test via menu H1. Via this menu (H7) it is possible to perform the zone test solely.
In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S5.)

If a real fire alarm is activated by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "The information area priority order", page 20.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) might be disabled (if set so in WinG3).

There will be an automatic test mode ending one hour after the latest tested alarm point.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H7.	H7 Perform ZONE TEST	
"↲ "	Zones to be set in test mode: ??? ??? ??? ???	
Write the zone numbers (e.g. 001, 002, 003, 004).	Zones to be set in test mode: 001 002 003 400	Press "↲ " to start the test mode.
"↲ "	Zones in test mode: 001 002 003 004 End test: ↲	LED "Test mode" (L8) will light up. Perform the tests.
The zone(s) will stay in test mode until the test mode is ended but after 60 minutes or if you press "Esc menu" you will be logged out from menu H7. Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled). In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normally. In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the c.i.e. will light up, approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM). A sensor in test mode will not be able to activate fault.		
After 60 minutes **or**	Zones in test mode:	You are no longer in menu

"Esc Menu"	001 002 003 004 End test: ↲ *(NOTE! See chapter "The information area priority order", page 20 regarding priority order.)*	H7 but still in test mode.
(When required: "Menu", "code") Scroll to menu H7 "↲ "	Zones in test mode: 001 002 003 004 End test: ↲	Press "↲ " to end test.
"↲ "	Please wait....	
"ESC"	H7 Perform ZONE TEST	The LED "Test mode" (L8) is turned OFF. If more zones are to be tested, continue as above. If not, scroll to another menu or press "ESC".

NOTE_1! During the test, the following information will be shown in all other c.i.e. displays:
Zones in test mode: 001, 002, 003, 004

NOTE_2! If an alarm point (e.g. a manual call point) is in alarm state when the test mode is ended, there will not be a fire alarm activated. Instead the alarm point will be disabled and has to be re-enabled again via menu H2/B5.

NOTE_3! When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.

31 Maintenance (H8)

31.1 Access code for service / maintenance

Access code to level 3A is required for menu H8.

31.2 Disconnect loop (H8/S1)

Before physical connection / disconnection of loop units, etc. the loop (or zone line) shall be disconnected (disabled), i.e. there will be no voltage on the "loop", to avoid damage on the units and the c.i.e.

Zone line input requires an 8 zones expansion board 1580 in the control unit or an Addressable multipurpose I/O unit 3361 connected on a COM loop.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
"↲ "	Disconnect type: COM-loop Zone line input Addr zone interface	Use "▲" or "▼" to select a type and press "↲ ".
"↲ " Depending on the selected type, the following will be shown:	Disconnect COM-loop COM-loop: 0, control unit: 00 Disconnect zone line input Zone line input: 0, exp board: 0, control unit: 00 Disconnect addressable zone interface Input technical number: 000000	Write the required data and press "↲ ".
"↲ "	Disconnect type: COM-loop Zone line input Addr zone interface	Continue to disconnect or press "ESC" to menu S1.
"ESC"	S1 Disconnect loop / zone line input	LED **Fault / Disablements** "General disablements" (L10) will light up.

		Scroll to another menu or press "ESC".

Don’t forget to re-connect the loop / zone line again, via menu H8/S2.

31.3 Re-connect loop (H8/S2)

Disconnected (disabled) loops / zone lines (via menu H8/S1) are indicated by LED **Fault / Disablements** "General disablements" (L10) and listed in menu H4/U1.

NOTE! When you re-connect a COM loop all the statistics shown in menu H5/A7 will be erased and set to "0".

When all loops / zone lines have been re-enabled, The LED **Fault / Disablements** "General disablements" (L10) will be turned OFF, if there are no other disablements in the system.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S2.	S2 Re-connect loop	
"↲ "	Re-connect type: COM-loop Zone line input Addr zone interface	Use "▲" or "▼" to select a type and press "↲ ".
"↲ " Depending on the selected type, the following will be shown:	Re-enable COM-loop: 0, control unit: 00 --- Re-enable zone line input Zone line input: 0, exp board: 0, control unit: 00 --- Re-enable addressable zone interface Input technical number: 000000	Write the required data and press "↲ ".
"↲ "	Re-connect type: COM-loop Zone line input Addr zone interface	Continue to re-connect or press "ESC" to menu S2.
"ESC	S2 Re-connect loop	Scroll to another menu or press "ESC".

31.4 Acknowledge SERVICE signal (H8/S3)

When SERVICE signal is generated in the system, following symbol is shown in the display's symbol area:  See also chapter "Sensors activating SERVICE signal (H4/U5)", page 105.

When service signal from a sensor is acknowledged, the sensor is given a default sensor value (same as for a new / clean sensor), i.e. **first** replace the sensor and **then** acknowledge the service signal **as soon as possible**. The first week average sensor value (after acknowledge) will be calculated within one hour, then each week.

NOTE! If a sensor is replaced without having generated service signal, it has to be reset to the default sensor value via menu H8/S4, page 128.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S3.	S3 Acknowledge SERVICE signal	
"↲ "	Sensor : xxx-xx (Technical number xxxxxx) needs service Sensor : yyy-yy (Technical number yyyyyy) needs service Sensor : zzz-zz (Technical number zzzzzz) needs service	This is a list in which you can scroll. The most recent service signal / sensor is on top of the list. Use "▼" or "▲" to select a sensor (the selected sensor has a boarder around it). Press "↲ " to acknowledge the sensor.

"↲ "	*(The service signal for the selected sensor is now acknowledged and the next sensor will be shown.)* Sensor : yyy-yy (Technical number yyyyyy) needs service Sensor : zzz-zz (Technical number zzzzzz) needs service	Continue like above or press "ESC" to menu S3.
"ESC"	S3 Acknowledge SERVICE signal	Scroll to another menu or press "ESC".

The "Service symbol"  and the "Service message" will be turned off when all sensors have been acknowledged.

31.5 Clear weekly average (H8/S4)

If a sensor (analog smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be cleared and set to the default value otherwise the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually via this menu.

NOTE! First replace the sensor and **then** clear the week average value **as soon as possible**. Authorised service personnel only, must do this. Used incorrectly it can cause nuisance fire alarms.

The first week average sensor value (after clearing) will be calculated within one hour, then each week.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S4.	S4 Clear weekly average	
"↲ "	Clear weekly average zone: 000 address: 00 (press ↲)	Write the wanted zone and address and press "↲ ".
"ESC"	S4 Clear weekly average	Continue like above or scroll to another menu or press "ESC".

31.6 Test of alarm devices (H8/S5)

The programmable outputs[52] of type "Alarm device" can be collectively activated via this menu (H8/S5), which makes it possible to test the alarm devices.

The test cannot be started if a fire alarm already is activated in the system.

One or all control units can be selected. When the test starts, the alarm devices will sound continuously (steady) for approx. 5 seconds, be silent for approx. 25 seconds, sound for approx. 5 seconds and so on.[53]

NOTE! Also disabled (and silenced) alarm devices will be tested.

The test will continue for one hour if not stopped via this menu (H8/S5) or if a fire alarm is activated in the system.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S5.	S5 Test alarm devices	
"↲ "	Test alarm devices control unit: 00 All	Write control unit number or press "►", i.e. select "All". Press "↲ " to start the test.

[52] Including Addressable siren 3377 and Addressable sounder base 3379.

[53] For the alarm devices 3377 and 3379 the tone with the highest priority level (and type "alarm device") will be automatically selected.

"↲ "	Test of alarm devices in progress. End test?	The test will continue for one hour if not stopped via this menu (S5) or if a fire alarm is activated in the system. Press "↲ " to stop the test.
"↲ "	Test alarm devices control unit: 00 All	Continue (like above) to test alarm devices in other control units or press "ESC".
"ESC"	S5 Test alarm devices	Scroll to another menu or press "ESC".

31.7 Safe shut down of control unit (H8/S6)

It's not recommended to power off a control unit (i.e. no 230 V AC and no battery) without first doing a safe shut down of control unit.[54] Safe shut down will save the SSW and put the CPUs at rest. See also chapter "Restart", page 74.

It's recommended to do a safe shut down after commissioning the installation and after the calibration of supervised outputs, change of access code etc. in order to save the new values, codes etc.

Safe shut down can be performed from any control unit and any control unit can be selected. A control unit without a front has to be shut down from another control unit.

NOTE! By restart and power off, the Fault tx output(s) will be "activated".

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S6.	S6 Safe shut down of control unit	
"↲ "	Shut down control unit 00? No Yes	Write control unit number and press "▼", i.e. select "Yes".
"▼" "↲ "	Ready for shut-down, break the power. Automatic restart within xxx seconds! ***xxx** will start at 300 seconds and countdown to 000 before the control unit will restart automatically.*	The SSW is now saved and the Main board and MMI board CPUs are at rest. You can now power off the control unit. If not, the control unit will restart automatically after 5 minutes (300 seconds).

[54] If not, a fault ("FAULT: Read/write site data (SSW), CU xx") might be generated when you power up the control unit again.

Power off / Power on or after 5 min.	FAULT: Restart control unit nn, code xx, address yyyyyyyyyy yyyy-mm-dd hh:mm	After a restart / power on (see page 74), there will always be a fault generated. The code will be 00 and the address 0. This fault has to be acknowledged, see chapter "FAULT Acknowledge (H6)", page 120.

31.8 Activate address in alarm mode (H8/S7)

One alarm point (zone-address), not a whole zone, can be set in alarm. The built-in LED in the alarm point (detector) will be turned on to indicate the alarm.

NOTE! All outputs, standard and programmable, which would have been activated by a real fire alarm from the same alarm point, will now also be activated.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S7.	S7 Activate address in alarm mode	
"↲ "	Select zone: 000 address: 00 (press ↲)	Write the zone number and address (e.g. 123-45). Press "↲ " to start the fire alarm.

"↲ "	First alarm: 123-45 Alarm number 1(of 1) Test mode Zone Address 123-45 SMOKE 1 zone in alarm Menu	This manually activated fire alarm will be presented in all control unit displays and all ext. FBP displays and indicated by the LEDs "Fire" (L1) and "Fire brigade tx" (L4). This manually activated fire alarm has to be reset by the push button "Reset" (P3)

31.9 Synchronize the control units (H8/S8)

After any control unit restart, synchronization will start automatically.

Synchronization can also be started via WinG3 and via this menu (H8/S8).

The control units have to be synchronized when the following fault message is shown: FAULT: Control unit xx has wrong information.

During the synchronization there will be information displayed for all control units in the system.

↻ (rotating clockwise) = Synchronization in progress for the control unit (CU).

✓ = Synchronization completed successfully for the control unit (CU).

<Blank> = Synchronization failed for the control unit (CU).

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S8.	S8 Synchronize the control units	
"↲ "	Start synchronization? No Yes	Press "▼", i.e. select "Yes". Press "↲ " to start the synchronization.

"▼" "↲ "	Synchronization in progress... CU00 ↻ CU10 ↻ CU20 ↻ CU01 ↻ CU11 ↻ CU21 ↻ CU02 ↻ CU12 ↻ CU22 ↻ CU03 ↻ CU13 ↻ CU23 ↻ CU04 ↻ CU14 ↻ CU24 ↻ CU05 ↻ CU25 ↻ CU06 ↻ CU26 ↻ CU07 ↻ CU17 ↻ CU27 ↻ CU08 ↻ CU18 ↻ CU28 ↻ CU09 ↻ CU19 ↻ CU29 ↻ Esc menu	During the synchronization the progress symbol for each control unit is shown. In the example are CU15 & CU16 not programmed.
After a few minutes	Synchronization completed yyyy-mm-dd hh:mm CU00 ✓ CU10 ✓ CU20 ✓ CU01 ✓ CU11 ✓ CU21 ✓ CU02 ✓ CU12 ✓ CU22 ✓ CU03 ✓ CU13 ✓ CU23 ✓ CU04 ✓ CU14 ✓ CU24 ✓ CU05 ✓ CU25 ✓ CU06 ✓ CU26 ✓ CU07 ✓ CU17 ✓ CU27 ✓ CU08 ✓ CU18 ✓ CU28 ✓ CU09 ✓ CU19 ✓ CU29 ✓ Esc menu	Date and time for the latest completed synchronization. The symbol "✓" means that the synchronization succeeded. If the symbol "✓" is missing the synchronization has failed.
"ESC"	S8 Synchronize the control units	Scroll to another menu or press "ESC".

31.10 Change code for service / maintenance (H8/S9)

For security reasons, the default code should be changed.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S9.	S9 Change code for service / maintenance	
"↲ "	Access code: New code: Verify:	
Enter the old code, the new code and the new code again.	Access code: **** New code: **** Verify: ****	The digits are replaced by **** in the display.
	Incorrect access code, NO change	The access code was not correct. Try again.
	S9 Change code for service / maintenance	The access code was correct and is now changed to the new code. Scroll to another menu or press "ESC".

NOTE! After change of access code it is recommended do "Safe shutdown of the control unit" (see menu H8/S6). This will save the SSW data (e.g. the new code) in a Flash ROM (see page 131).

If the valid access code is unknown a "back door code" is available.

31.11 Change code for PC-communication (H8/S10)

As a protection against unauthorised personnel programming the system (via WinG3), an access code (level 3B & 4) for PC-connection is required. For security reasons, the default code should be changed.

NOTE! This code requires eight (8) digits.

Action	Text in display	Comments
"Menu"		Procedure according to chapter "Access code for service / maintenance (H5 and H8)", see page 110.
"↲ "	S1 Disconnect loop / zone line input S2 Re-connect loop / zone line input S3 Acknowledge SERVICE signal S4 Clear weekly average S5 Test of alarm devices S6 Safe shut down of control unit S7 Activate address in alarm mode S8 Synchronize the control units S9 Change code for service / maintenance S10 Change code for PC-communication	
Scroll to menu S10	S10 Change code for PC-communication	
"↲ "	Access code: New code: Verify:	
Enter the old code, the new code and the new code again.	Access code: ******** New code: ******** Verify: ********	The digits are replaced by ******** in the display.
	Incorrect access code, NO change	The access code was not correct. Try again.
	S10 Change code for PC-communication	The access code was correct and is now changed to the new code. Scroll to another menu or press "ESC".

NOTE! After change of access code it is recommended do "Safe shutdown of the control unit" (see menu H8/S6). This will save the SSW data (e.g. the new code) in a Flash ROM (see page 131).

32 Interlocking outputs and inputs (H9)

32.1 Activated interlocking outputs / inputs (H9/C1)

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate interlocking output C3 Reset interlocking output C4 Disable interlocking output C5 Re-enable interlocking output	
Scroll to menu C1	C1 Activated interlocking outputs / inputs	
"↲ " Depending on activated output and/or input, the following will be shown:	Interlocking area AAA point PP output active User definable text message (if progr.) yyyy-mm-dd hh:mm --- Interlocking area AAA point PP input/output active User definable text message (if progr.) yyyy-mm-dd hh:mm --- Interlocking area AAA point PP input active User definable text message (if progr.) yyyy-mm-dd hh:mm	Menu C1 is a list in which you can scroll. Press "ESC" to menu C1.
"ESC"	C1 Activated interlocking outputs / inputs	Scroll to another menu or press "ESC".

32.2 Activate interlocking output (H9/C2)

The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression.

Reset has to be performed via menu H9/C3.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate interlocking output C3 Reset interlocking output C4 Disable interlocking output C5 Re-enable interlocking output	
Scroll to menu C2.	C2 Activate interlocking output	
"↲ "	Activate interlocking output area: 000 point: 00 (press ↲)	Write the area number and point. Press"↲ ".
"↲ "	C2 Activate interlocking output	Scroll to another menu or press "ESC".

32.3 Reset interlocking output (H9/C3)

All activated interlocking outputs are listed in this menu.

- If the interlocking output is activated via its programmed control expression and with latching output selected (in WinG3), the output **has to** be reset via this menu.

- If the interlocking output is activated via its programmed control expression and with latching output **not** selected, the output **can** be reset via this menu.

- If the interlocking output is activated via menu H9/C2, the output **has to** be reset via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate interlocking output C3 Reset interlocking output C4 Disable interlocking output C5 Re-enable interlocking output	
Scroll to menu C3.	C3 Reset interlocking output	
"↲ "	Reset interlocking output area 001 point 10 area 001 point 11 area 001 point 12 ... ... Esc menu Reset All	Menu C3 is a list in which you can scroll. If there are no activated outputs, menu C3 will not open. Press "↲ " to reset the selected output. Press "Reset All" to reset all interlocking outputs. Press "ESC" to menu C3.
"↲ " (reset) alt. "ESC"	C3 Reset interlocking output	Scroll to another menu or press "ESC".

32.4 Disable interlocking output (H9/C4)

Interlocking outputs (Type = Interlocking) can be individually disabled via this menu but not via menu H2/B3.

All interlocking outputs can be collectively disabled via menu H2/B7.

The "Interlocking Combination" (Area / Point) is to be entered to disable the output. Up to 200 interlocking outputs can be disabled.

Disabled interlocking outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

The LED **Fault / Disablements** "General disablements" (L10) is also indicating one or more disabled interlocking outputs.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate interlocking output C3 Reset interlocking output C4 Disable interlocking output C5 Re-enable interlocking output	
Scroll to menu C4.	C4 Disable interlocking output	
"↲ "	Disable interlocking output area: 000 point: 00 (press ↲)	Write the area number and point and press "↲ ". If more interlocking outputs shall be disabled continue the same way. Press "ESC" to menu C4.
"↲ " (disable) alt. "ESC"	C4 Disable interlocking output	Scroll to another menu or press "ESC".

32.5 Re-enable interlocking output (H9/C5)

Disabled interlocking outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Interlocking outputs (Type = Interlocking) can be re-enabled via this menu but not via menu H2/B6.

If a**ll** interlocking outputs have been collectively disabled via H2/B7 they have to be re-enabled via H2/B7.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 78.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate interlocking output C3 Reset interlocking output C4 Disable interlocking output C5 Re-enable interlocking output	
Scroll to menu C5.	C5 Re-enable interlocking output	
"↲ "	Re-enable interlocking output area 001 point 01 area 004 point 01	This is a list in which you can scroll. If there are no disabled outputs, menu C5 will not open. Press "↲ " to re-enable the selected output. Press "ESC" to menu C5.
"↲ " alt. "ESC"	Re-enable interlocking output area 004 point 01	Scroll to another menu or press "ESC".

33 Change access code for daily duties (H10)

For security reasons, the default code should be changed.

Action	Text in display	Comments
"Access"		According to chapter "Access", see page 78.
Scroll to menu H10.	H10 Change access code for daily duties	
"↵ "	Access code: New code: Verify:	
Enter the old code, the new code and the new code again.	Access code: **** New code: **** Verify: ***	The digits are replaced by **** in the display.
	Incorrect access code, NO change	The access code was not correct. Try again.
	H10 Change access code for daily duties	The access code was correct and is now changed to the new code. Scroll to another menu or press "ESC".

NOTE! After change of access code it is recommended do "Safe shutdown of the control unit" (see menu H8/S8). This will save the SSW data (e.g. the new code) in a Flash ROM (see page 131).

If the valid access code is unknown a "back door code" is available.

34 Annual control

The building occupier is highly recommended, once a year, to do some tests, beside the monthly tests. To avoid the Fault tx output(s) to be activated, they can be disabled via menu H2/B9 (or via an open door, se chapter "Open door", page 31.).
Regarding the fault condition, see chapters "Fault", page 47 and "Fault messages", page 48.

NOTE! Most of the faults have a delay.

Each control unit should be tested as follows:

- Perform monthly test (menu H1).
- Remove one battery fuse (e.g. F2 on the Main board 5010). The following fault message is to be shown:

  FAULT: Battery not connected CU xx
  NOTE! xx is depending on control unit (xx=00-29).
- Put back the fuse and acknowledge the fault (menu H6).
- Remove fuse F4 on the Main board 5010.
  The following fault message is to be shown:

  FAULT: Supervised output 0, CU xx
  NOTE! xx is depending on control unit (xx=00-29).
- Put back the fuse and acknowledge the fault.
- Check the manual call points (the glass). Take required measures. Use the manual call point test key to activate fire alarm.
- Check some control outputs. Are they activated according to programmed control expressions?

35 How to change paper in the printer

When the paper roll is almost empty, a red line appears on one edge of the paper. Change the paper roll before it is completely empty! Always have a spare paper roll on site (paper width 58 mm).

Change the paper roll as follows:

- Read all instructions before changing the paper roll.
- Open the control unit door.
- Open the printer cover, i.e. press the green illuminated release button (in the middle) on top of the printer front.
- Remove the remains of the old paper roll.
- Place the new paper roll in the printer. Make sure that it unrolls in the proper direction – like the old one.
- Pull out 50 mm paper and close the cover.
- Tear off the paper, then press the Paper feed button (to the right) on top of the printer front, to check the paper feed function and tear off the paper.
- Close the control unit door.

36 Replacing a TLON connection board and/or the Main board

By the TLON network programming, some unique data will be stored in a memory on the 1590 TLON connection board and some will be stored in a memory on the 5010 main board.

Replacing a TLON connection board 1590
After replacing the board, do "Replace", "Update" and "Save" in TLON Manager.

Replacing a TLON connection board 1590 and also the Main board 5010
After replacing the boards, do "Replace", "Update" and "Save" in TLON Manager.

Replacing the Main board 5010
After replacing the board, put back the TLON connection board(s) in the same position as on the replaced main board, do "Update" and "Save" in TLON Manager.

37 Battery maintenance

The batteries - 2 x 12 V, 28 Ah (e.g. Panasonic LC-P1228AP) - are placed inside the control unit. Larger batteries (≤ 65 Ah) have to be placed outside the control unit, e.g. in a separate battery cabinet, etc.

The control unit supervise and charge the batteries and a fault will be generated for any trouble with the batteries.

The batteries, rechargeable Sealed Lead-Acid batteries, shall fulfil UL94V-0. The batteries are normally maintenance-free but the producer's instructions shall always be followed.

The ambient temperature affects the battery's capacity, self discharge and life span. The temperature should preferably not be higher than normal room temperature (approx. 20-22°C).
For highest safety, the batteries used in a fire alarm installation should not be more than four years old.

CAUTION
Risk of explosion if battery is replaced by incorrect type.
Dispose used batteries according to the producer's instructions and national regulations.

38 How to avoid unnecessary (nuisance) fire alarms

We all realise, when life, buildings, production facilities, etc. shall be saved, it is of utmost importance that an initial fire is detected as soon as possible. That's why more and more automatic fire alarm systems are installed.

In an automatic fire alarm installation, especially if smoke detectors (sensors) are used, everybody in the building needs to be informed how to avoid so called unnecessary (nuisance) fire alarms.

To avoid trouble and unnecessary expenses there are a couple of things to bear in mind. Here are some advice and tips.

Tobacco smoke

The detectors (sensors) can not sense the difference between "smoke" and "smoke". They can not separate tobacco smoke from smoke from a fire. Intensive tobacco smoking in conjunction with bad ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling

These kind of jobs cause smoke.

Carpet welding

Welding of plastic carpets causes a smoke that can be almost invisible, but it still influences the smoke detectors (sensors).

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc. Warning! Be careful when smoke detectors (sensors) are mounted near / close to such activities.

Special environments

In certain premises a special environment can exist, which can influence smoke detectors (sensors) and cause alarm. It can be ions (from plastics), flour dust, oil haze, aerosols, strong perfumes, strong ventilation, insecticides, disinfecting sprays, etc. If many odd and unnecessary alarms occur, the environment must be examined and perhaps other detector types have to be chosen.

Steam / hot air

Smoke and heat detectors are influenced by steam and hot air, e.g. from an oven, dry-blower, heater, etc.

Exhausts

Exhausts from cars / trucks, lift trucks, lawn mowers, etc. influences smoke detectors (sensors). If windows and doors are open, exhausts can "slip in" that way.

Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an analog system (like EBL512 G3) a Service signal is given when it is time to exchange the smoke detectors (sensors) to new ones. The alternative is to exchange detectors at given periods, to be on the safe side.

Change in activities or wrong choice of detector

If the activities in the premises are altered, the detector choice might also need to be altered. Due to special environments, see above, an in-appropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.

Miscellaneous

Choosing another type of detector can solve certain problems. Bear also in mind, that the coverage area can be different for different types of detectors.

It is however not always the best action to change detector type. Here is a list of other actions, programmed via WinG3, which can be used:

- Another alarm algorithm can be used (e.g. during working hours).
- Alarm delay for smoke detectors / sensors can be used.
- Two-zone or two-unit dependent (co-incidence) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. EBL512 G3), the affected detectors can be individually disabled (or whole zones) for temporary work in the premises. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors / zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2/B1-B2). Automatic re-enabling can be used.
- If there is an alarm organisation for the personnel on site, the alert annunciation function can be used.
- Pre-warning can be used as information before a fire alarm is activated.

39 Information regarding radioactive radiation source

The installation might contain old smoke sensors / detectors of the ionization type. They contain a small radioactive radiation source, normally Americium 241.

When the sensor / detector gets dirty and when service signal has been activated in the system, contact your local dealer for cleaning / replacement of the sensors / detectors.

Metal objects must absolutely not be stuck into the sensor / detector. Static electricity might destroy the detector.

Defective / faulty, discarded and replaced sensors / detectors shall be taken care of as radioactive waste. They shall be packed in chock absorbing material to make a stable parcel.

PLEASE NOTE!
Damaged sensors / detectors shall also be packed in a sealed packet whose surface must not be contaminated, that is, not be soiled with loose radioactive dust.

National regulations have to be followed.

40 Revision history

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Panasonic ideas for life

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