Panasonic

EBL512 G3
V. 3.8.X

OPERATING INSTRUCTONS

Fire alarm solutions
5000S Series

www.panasonic-fire-security.com

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1. INTRODUCTION

This document is an operation instruction for the EBL 512 G3 system for 5000S series, S/W version 3.8.x.
It is intended to be used by the end-user and the fire brigade personnel as well as service- and commissioning engineers.

This document should be read in conjunction with:

- EBL512 G3 Planning Instructions MEW03039
- Technical descriptions, for the control and indicating equipment and all other units

Normally, information found in one of the documents is not found in another document. The documents complement each other.

DRAWINGS / CONNECTION DIAGRAMS

Resulting from continual development and improvement, all dimensions quoted are approximate only and subject to change without notice, as are other technical features and data.

More information on characteristics, mounting, connections and technical data for the control unit and all other units, is found in each Technical description respectively.

NATIONAL REGULATIONS

When planning a fire alarm installation, the national regulations must be obeyed. Detector coverage area and positioning of detector in the room / building are not described in this document.

EBL512 G3 is very flexible. Many functions / facilities are built-in the system, for example in the S/W and EBLWin. When downloading S/W and SSD, different settings, conventions, languages, and so on can be set to fulfil national regulations.

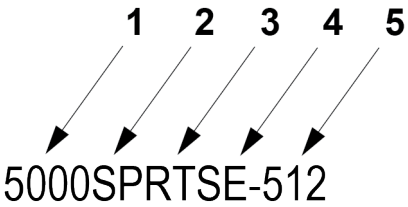
Since the EBL512 G3 control unit (CIE) is produced for many countries the look, the texts, the functions and so on might vary.

Some functions are adapted to different countries regulations and are described separately in special country specific documents.

TYPE NUMBER - ARTICLE NUMBER - PRODUCT NAME

A product consists of one or more parts (HW) according to a Product Parts List. A product has a type number.

An article number is often the same as the type no. but a country code can be added, S for main board 5012, or PRT for printer. The CIE can be configured for 128, 256 or 512 alarm points, which can be added in the article number.
Example of an article number:



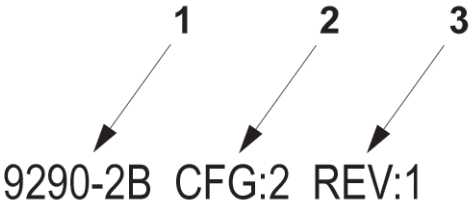
1) Type number (EBL512 G3 CIE with display)
2) With main board 5012
3) With printer
4) Country code
5) Configured for 512 alarm points

Example of a product name:
EBL512 G3 CU, 512 alarm points, with printer

Hardware (HW), for example a printed circuit board (PCB), has:

- a type number
- an article number
- a product name
- a PCB number
- sometimes a S/W

Example of a PCB number:



1) PCB number
2) Configuration
3) Revision

Software (S/W) has:

- a version number (for example V2.9.0)
- sometimes additional information, such as Convention, Language, Number of addresses.

PC S/W, a program used for programming, commissioning and so on, has:

- a version number (for example V2.9.0)

2. ABBREVIATIONS

PFSEU AB	Panasonic Fire & Security Europe AB
Alarm points	Units, which can generate a fire alarm (in the control unit), i.e. analog detectors (sensors), conventional detectors, manual call points, etc.
Smoke detector	Analog or conventional photoelectric (optical) smoke detector
Sensor	Sensor = Analog detector
Analog detector	Contains an A/D-converter. The Control Unit pick up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made by alarm algorithms in the CU. As from version 2.0.x the latest detector generation (440x) can be used in "Advanced mode", i.e. the alarm algorithms are in the detector instead. Analog detectors are addressable – an address setting tool 4414 is used for the detector's COM loop address and mode settings. An analog detector has to be plugged in an Analog Sensor Base (ASB).
Analog Sensor Base (ASB)	An analog detector is plugged in an ASB, which is connected to a COM loop (see below).
Conventional detector	A detector with only two statuses, i.e. normal or fire alarm. The detector has a "closing contact" and a series alarm resistor. Normally plugged in a conventional detector base CDB (see below), which is connected to a conventional zone line input. Some types (e.g. water proof types) are connected directly on zone line. An end-of-line device has to be connected in the last unit on the zone line.
Conventional Detector Base (CDB)	A conventional detector is plugged in a CDB, connected to a conventional zone line input.
Addressable	A unit with a built-in address device. Each unit is individually identified, handled and indicated in the Control Unit. (The unit can be an I/O unit with a zone line input, to which one or more conventional "alarm points" can be connected.)
Conventional zone line input / External line	Input intended for one or more conventional alarm points. End-of-line device in the last alarm point on the line.
Output unit	Addressable unit with programmable control outputs. Connected to a COM loop (see below).
Output / Control output	Defined or programmable function. Relay output or voltage output (supervised / monitored or not), in the Control Unit or an output unit connected on a COM loop.
Display unit (DU)	Addressable unit (RS485 line) for fire alarm presentation (incl. user definable alarm text), alert annunciation, etc.
COM loop	Loop = a cable, twisted pair, to which all the addressable units can be connected. Starts in the Control Unit and returns back to the CU.
Control Unit / CU / CIE	Control Unit = Control and Indicating Equipment (CIE) = Unit to which the alarm points are connected (via e.g. a COM loop). Indicates fire alarm, fault condition, etc. Fire Brigade Panel & Control Panel, i.e. the front, included or not included. Printer included or not included.
Control panel (CP)	A part of the control unit (a part of the front), intended for the building occupier / officer, service personnel, etc., to "communicate" with the Control Unit / the System.
System / Installation	One control unit or several control units connected via a network (co-operating control units).
Network with network board 5040	A network with network board 5040 is a redundant network. To connect a control unit to a network, two network board 5040 has to be plugged in each control unit. All network programming (configuration) is made in EBLWin

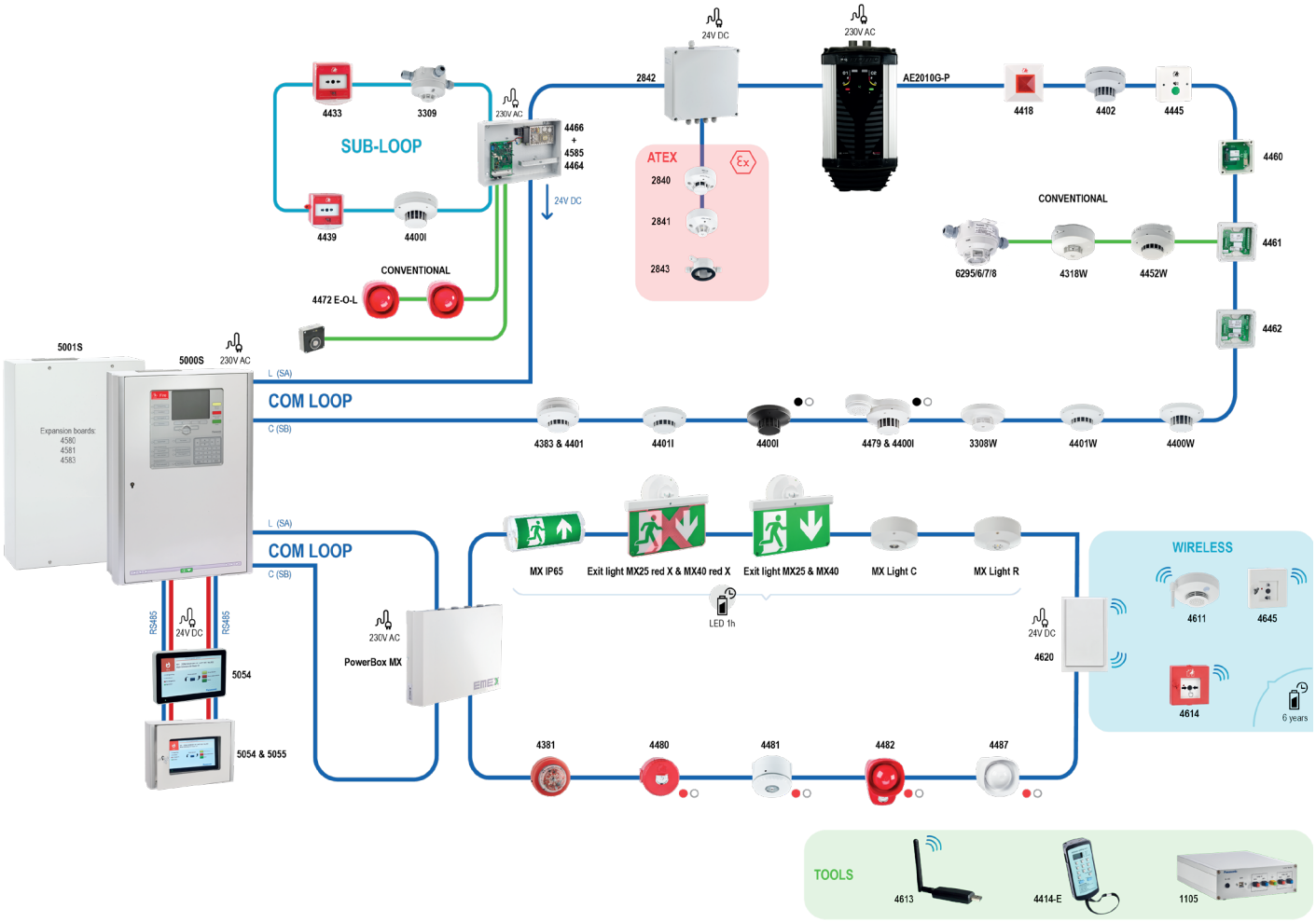
TLON®/ LonWorks® / Echelon / Node / TLON Conn. board/ Channel / Backbone net / Router / Repeater	Brief explanations to the words/expressions to be found in connection with a TLON network. See also separate TLON Technical description. TLON® = TeleLarm Local Operating Network = a LonWorks®- based network for communication between several control units/nodes. The protocol is called LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a control unit to a network, a TLON connection board has to be plugged in each control unit. EBL512 G3 also supports a redundant TLON Network. In this case two TLON connection boards have to be plugged in each control unit. A network can be one channel (FTT-10) or several channels, connected via routers. (In a TLON Network a sub net = a channel.) Routers are used for safety reasons in a single TLON Network (up to six control units per channel). Routers can also be used to increase the distance (cable length) between the end nodes in a channel. Router or Repeater is the same type of unit (different configuration). All network programming (configuration) is made with the PC program TLON Manager. See also separate TLON Manager Operating Instructions.
Nuisance alarms	False or unwanted alarms
LED	LED (Light Emitting Diode) = Yellow, green or red optical indicator ("lamp").
External Indicator (Ext. LED)	A unit with a red LED connected to a base (ASB / CDB) or a detector with an output for an ext. LED. Lit when the built-in LED in the detector / base is lit.
Exit light / Emergency light	Customized I/O units with built-in LED. MXE: Indicates recommended exit. MXER: Indicates recommended exit OR blocked exit. MXL: For corridors or open area
Fire Brigade Panel (FBP)	Intended for fire alarm presentation, etc. for the fire brigade personnel. Can be a part of the control unit (a part of the front) or a separate Display Unit (external FBP). In an ext. FBP, a printer can be included.
Display / LCD	LCD (Liquid Crystal Display) = Display (in the CIE or Display unit) for presentation of fire alarms, fault messages, etc. In EBL512 G3 it is a graphical monochrome LCD (320 x 240 dots) with backlight.
Door open (Door / Key switch)	In EBL512 G3 there is a door switch, which is activated when the door is open. An open door is indicated in the LCD (i.e. an "open door" icon).
Site Specific Data (SSD)	The SSD is unique for each installation. All alarm points, presentation numbers, user definable alarm texts, programmable outputs, etc. are created in the PC program EBLWin and also downloaded in EBL512 G3 unit(s) with EBLWin.
Short circuit isolator (ISO)	Addressable unit for automatic disconnection of a part (segment) of a COM loop (see below) in case of short circuit on the loop. (According to EN54-2, one ISO is required per 32 alarm points.)
Software (S/W) / Firmware / System program	The software (S/W) – also called Firmware and System program – makes the control unit (the microprocessor) work. It is factory downloaded but another / new version can, via the PC program EBLWin, be downloaded in EBL512 G3 on site.
EBLWin	PC program used to create and download the SSD in EBL512 G3 unit(s). Also used to upgrade the maximum number of alarm points in EBL512 G3. Can be used during commissioning / maintenance of the EBL512 G3 system (autogenerate COM loop SSD, acknowledge faults, etc.)
EBL Firmware Manager	PC program used to download another / new software version.
Gateway	The Gateway is used to get EBL512 G3 information as well as remote control via a PC (browser) and an intranet / internet. The Gateway is configured via the PC tool EBLWin.
EN54-13	Fire detection and fire alarm systems; Part 13: Compatibility assessment of system components.
Multi master system	Each control unit in a network has access to all information.

3. GENERAL DESCRIPTION

EBL512 G3 is a microprocessor controlled intelligent fire alarm system, intended for analog addressable detectors, as well as conventional detectors and manual call points. It is possible to connect four loops for addressable units. On each COM loop it is possible to connect up to four SUB-loops. Programmable control outputs and output units are available.

G3 can have up to 1012 addresses, of which up to 512 can be alarm points - according to EN54-2.
EBL512 G3 can be used as a stand-alone control unit or connected to a network. A network can have up to 30 control units.

EBL512 G3 is available in several types, versions and configurations.



TECHNICAL NUMBER

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.

PRESENTATION NUMBER

Each fire alarm point / input / zone has a presentation number, NNN-NN. The presentation number is shown in the CIE display to identify the point / zone activating fire alarm.

COM LOOP UNITS

Addressable COM loop units are connected directly to a COM loop.

ADDRESS AND MODE

Most of the addressable units must have both address and mode set. This is done in different ways for different units, for example address setting tool, DIP switches, jumpers, or via the CIE display. For more information, please read the Technical descriptions for each unit respectively.

SOFTWARE (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 upgrade the S/W in the old control units, or download an older S/W version in the new control unit. The same S/W version is required in all control units in a network.

EBLWin

The PC program EBLWin is used for programming and commissioning of one or more control units.

TLON Manager

The PC program TLON Manager is used for the TLON Network programming and installation.

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 with the PC programs EBLWin and TLON Manager, and commissioning the system is very easy. Start with one control unit and later when it is required, add more units. The network boards makes it possible to install the control units in one building or in different buildings.

4. EBL512 G3

1) EBLG3 Control Unit 5000
2) EBL G3 Control Unit 5001

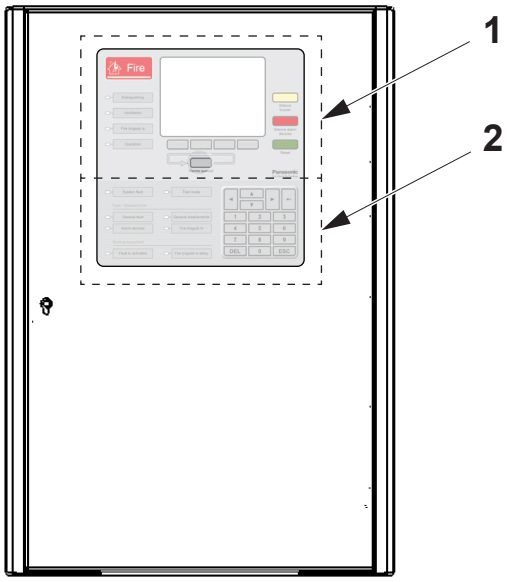
EACH CONTROL UNIT HAS THE FOLLOWING BASIC CONFIGURATION:

For drawings and connection diagram, see Technical description for the CIE.

- Grey metal cabinet
  - DIN rail for Gateway (5088)
- MMI board (5015) (Not in 5001S)
  - EBL512 G3 front with display (not in 5001S)
- Main board (5012)
  - Four COM loops (0-3) to which the loop units are connected
  - Four programmable supervised voltage outputs (S0-S3)
  - Two programmable relay outputs (R0-R1)
  - Four programmable supervised / not supervised inputs (I0-I3).
  - Six 24 V DC outputs (power supply outputs for RS485 for redundancy, routing equipment and external equipment)
  - Two not programmable relay outputs for routing equipment (Fire alarm output for Fire brigade tx and Fault condition output for Fault tx)
  - Connectors for two network boards (5040, 5090)
  - One RS485 and 24 V DC outputs for Display units (5054 V3)
  - One RS485 for redundancy
  - Connector for expansion boards (4580, 4581 & 4583)
  - Connectors for Gateway.
  - Battery charger
  - Connectors for power supply (rectifier) and batteries
  - Connectors for four COM loop boards 5017
- Built-in power supply
  - Switched power supply (rectifier), 230 V AC / 24 V DC (LS150-24/PAN)
  - Space and connection cables for two Sealed Lead-Acid backup batteries (12 V, 28 Ah)
  - Batter temperature sensor
- Space for up to six expansion boards 458x

The control unit can be configured for up to 128, 256 or 512 alarm points. Normally this is factory set but can be upgraded on site (via EBLWin). This action requires a special download password.

5. FRONT



1) Fire brigade panel
2) Control panel

5.1. FIRE BRIGADE PANEL

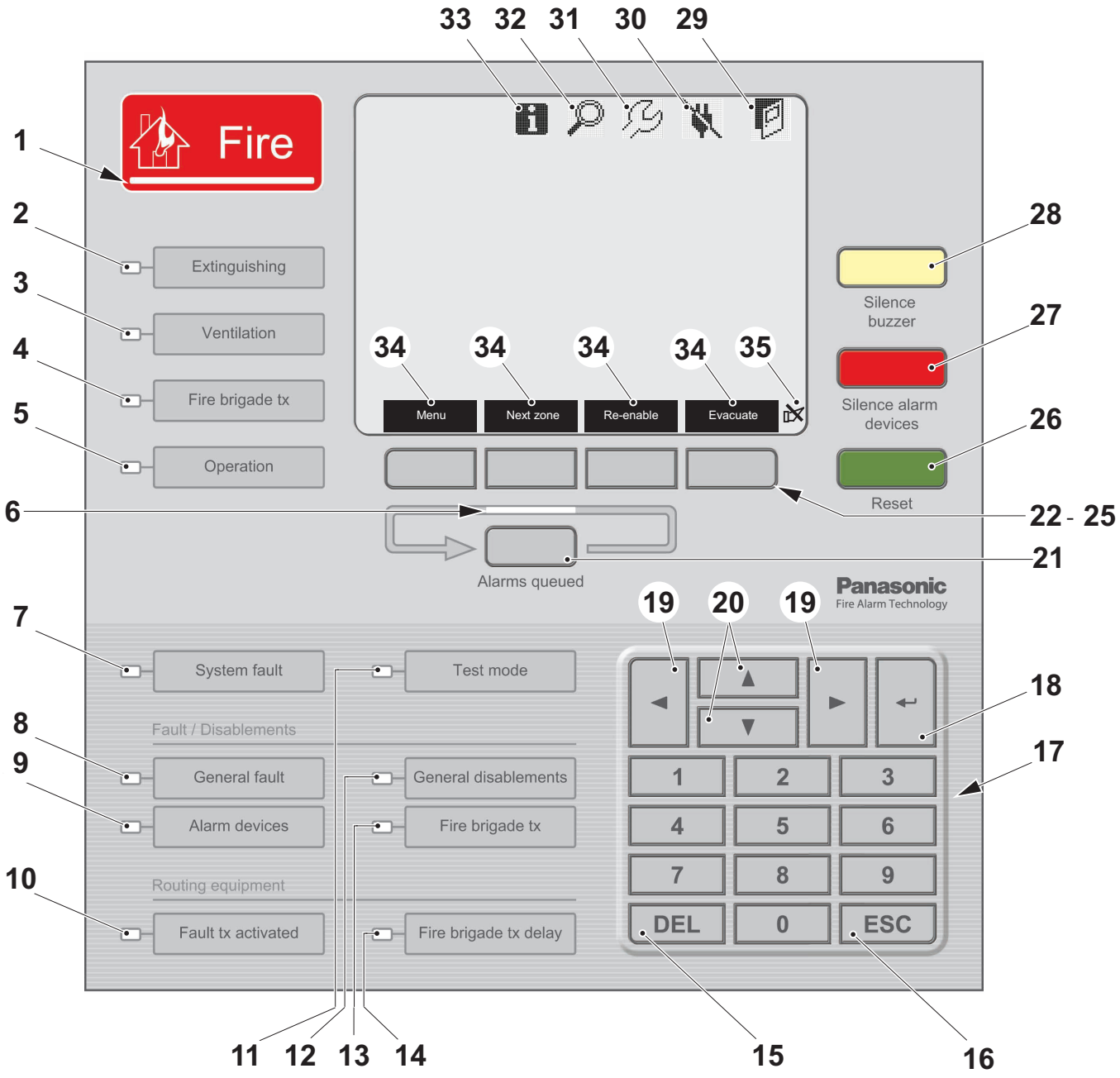
The fire brigade panel is used by the fire brigade personnel to see which alarm point(s) / zone(s) having activated fire alarm and to take required operational control of the system.

In the graphical display, the information displayed in the upper part is depending on how alarm points / zones having activated fire alarm. In the middle part will the fire alarms be shown, one alarm point or one zone together with user definable alarm text (if programmed).

5.2. CONTROL PANEL

The control panel is used to communicate with the system, for commissioning, monthly tests, and maintenance. To get access to the system and for operational control, a user account is required. Up to ten user names can be used for three different user level types. A password (six digits) for each user name is required.

5.3. DETAILED DESCRIPTION OF THE FRONT



5.3.1. LED INDICATORS

See reference picture 5.3. DETAILED DESCRIPTION OF THE FRONT on page 14.

1	Fire	Fire alarms. See 18 ALARM
2	Extinguishing	Output(s) for extinguishing equipment activated. (Or a programmable input type "Extinguishing" is activated.)
3	Ventilation	Output(s) for fire/smoke ventilation equipment activated. (Or a programmable input type "Ventilation" is activated.)
4	Fire brigade tx	Output "Fire alarm" for fire brigade tx (routing equipment) activated. Or a programmable input type "Activated routing equipment" is activated. Or test of routing equipment in progress. See menu 27. PERFORM MONTHLY TEST (H1) on page 87.
5	Operation	Steady light: CIE is powered via the rectifier and/or the battery. Flashing light: CIE start up, and if loops are disconnected at start up, until the loops are re-connected.
6	Alarms queued	More than one alarm point / zone have activated fire alarm. Use push button "Alarms queued" (21) to scroll amongst the alarm points (zone-address) or the soft key "Next zone" (23) to scroll amongst the zones.
7	System fault	EBL512 G3 is not running because of: S/W fault CPU fault Memory fault No contact between main board and MMI board CIE restart (fault code ≠ 00 / 03 /25 / 50 / 53).
8	General fault	Fault(s) in the system.
9	Alarm devices	Steady light: Output(s) type "Alarm device" are disabled. Flashing light: Output(s) type "Alarm device" have generated fault(s). This is also valid when the CIE has no "contact" with a unit with such an output, for example 4487, 4479, and so on.
10	Fault tx activated	Not acknowledged fault(s): Output "Fault condition" for fault tx (routing equipment) is activated. Test of routing equipment in progress (see menu H1). Sensitive fault detection mode is on. See menu 31.2. SENSITIVE FAULT DETECTION MODE (H5/A2) on page 105.
11	Test mode	Zones are in "test mode" (see menu H7).
12	General disablements	Disablement(s) in the system.
13	Fire brigade tx (Fault/Disablements)	Steady light: Output(s) for "Routing equipment" disabled via menu H2 / B5 or via open door. Flashing light: Routing equipment power supply outputs or supervised outputs of type "Routing equipment" have generated fault(s) or the CIE has lost contact with a unit with such an output, for example 4461.
14	Fire brigade tx delay	The Alert Annunciation function is enabled.

5.3.2. PUSH BUTTONS

See reference picture 5.3. DETAILED DESCRIPTION OF THE FRONT on page 14.

15	DEL	Used to clear / delete all visible entry fields.
16	ESC	Used to stop input of data or to step upwards in the menu system.
17	Key pad	Numeric key pad for the digits 0-9.
18	Enter	Used to accept / select a menu or input of data. Also used to acknowledge fault signal and service signal.
19	Left / right keys	Used to move the cursor in a menu.
20	Up / down keys	Used to scroll between the menus.
21	Alarms queued	Used when LEDs "Alarms queued" are lit. Scroll through the queued alarm points or zone addresses. See also 18.1.2. FIRE ALARM on page 38. NOTE! To scroll/browse through the queued zones, use the soft key "Next zone" (23).
22 - 25	Soft keys	The function is shown in the display above the soft key. The function of a soft key may vary. If nothing is shown above the key in the display, the key has no function for the moment.
26	Reset	Used to reset: Fire alarms, co-incidence alarms. NOTE! Has to be pressed for > 0.5 sec.
27	Silence alarm devices	Used to silence alarm devices / sounders. If “silence alarm devices” is activated, it is indicated by a symbol in the display, see (35).
28	Silence buzzer	Used to silence the buzzer in the CIE when it is sounding.

5.3.3. DISPLAY

See reference picture 5.3. DETAILED DESCRIPTION OF THE FRONT on page 14.

29	The door is open in any CIE (not valid for 5055) in the system. See also section 17. OPEN DOOR on page 35.
30	Loss of mains in any CIE. or external power supply unit in the system. The unit is currently power supplied via batteries.
31	Service signal. The week average sensor value is over the service level, or detector is outdated, for one or more analog smoke detectors in the system. See also menu 30.5. SENSORS ACTIVATING SERVICE SIGNAL (H4/U5) on page 100. (Symbol flashing): The system is in service mode: • A COM loop is disconnected • A COM loop is in service mode • A Zone line input is disconnected • Check loop, Autogenerate loop or Auto-addressing function etc. is in progress
32	The CIE is set into “Sensitive fault detection mode” via menu 31.2. SENSITIVE FAULT DETECTION MODE (H5/A2) on page 105.
33	One or more “Technical warnings” are generated in the system. See also menu 30.6. TECHNICAL WARNING (H4/U6) on page 100
34	The functions of the soft keys will vary depending on the situation, convention and language.
35	“Silenced Alarm devices” is indicated by this symbol.

The soft key "25" has the function Evacuate in the following conventions: Belgian, British Standard, Dutch, Hungarian, Spanish and Ukrainian. In all other conventions it has the function Alert Annunciation Acknowledge.

5.4. INFORMATION PRIORITY ORDER

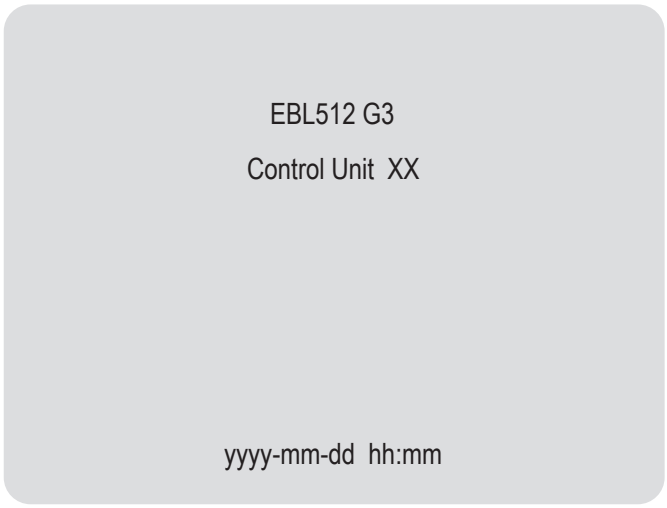
When the control unit / system is in normal operation (quiescent state), which means no fire alarms, no faults, no disablements, no service signals, no zones in test mode, no activated interlocking in / outputs, and/or Alert Annunciation function not enabled, only the LED "Operation" should be lit and 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.

PRIORITY ORDER TABLE

Priority	Event	Symbol area is visible
1	Fire alarms: • Fire alarm • Heavy smoke/heat alarm • Alert Annunciation (AA) alarm • Key cabinet alarm	No
2	Quiet alarm	No
3	Co-incidence alarm	No
4	Delayed alarm	No
5	Pre-warning	No
6	Test mode alarm	No
7	LAA alarm	Yes
8	Evacuate information	Yes
9	Fault	Yes
10	Disablement	Yes
11	Zones in "Test mode"	Yes
12	Interlocking input / output active	Yes
13	System information	Yes

5.5. SYSTEM INFORMATION IN THE LCD

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



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

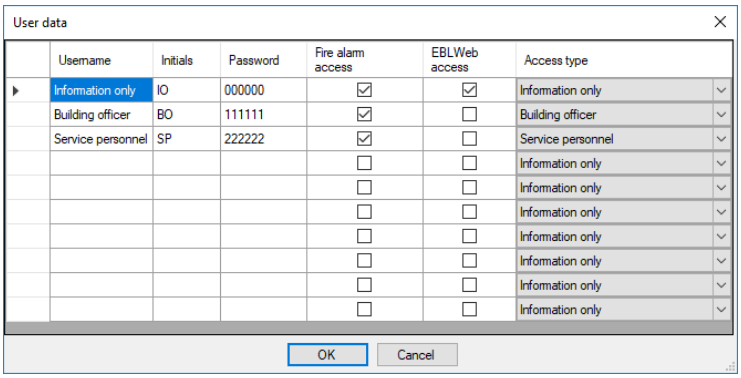
When the Spanish, Norwegian, Ukraine, Australian, or the New Zealand language is selected the date is shown as follows: dd-mm-yyyy.

5.5.1. USER DEFINABLE SYSTEM INFORMATION

User definable system / installation information (created and downloaded via EBLWin) can be displayed in the middle of the display. Two rows are available. In total 38 characters. This information is shown in all control units in the system. One example:

6. USER DATA

EBL512 G3 has different user levels for different kind of users. To log on to an EBL512 G3 a user name and a password are required. Ten different User names with individual Passwords can be used.
Via EBLWin (menu “System”) ten different User names with individual Passwords are possible to define in the "User data" dialog box. One of three different levels /Types can be selected for each user name. They have to be used to log on to an EBL512 G3 and/or for Gateway access.
Three User names and Passwords are default:



It is highly recommended to change the default user names and passwords and to add a number of new user names and passwords. Also the Fire alarm access and EBLWEB access columns have to be filled in, depending on how the user names and passwords shall be used.

In a new CIE (i.e. before any Site Specific Data has been downloaded), only user "0" is available. No password is required and you have access to all menus. After download of SSD the downloaded user names and passwords will be valid.

6.1. USER NAME

Up to ten users, 0 to 9, may be programmed. By default at delivery, three users are available:

- 0 = Information only
- 1 = Building officer
- 2 = Service personnel

6.2. PASSWORD

Each user has a password for an access level, for example. "Information only", "Building officer" or "Service personnel".

6.2.1. CHANGE OF PASSWORD

Normally the user names and passwords are downloaded / changed via EBLWin and SSD download. A logged on person (user name) can also change his/her password via menu H10.

If the valid password(s) are unknown, EBLWin must be used to change the password(s).

CHANGE VIA MENU H10

See chapter 36. CHANGE PASSWORD (H10) on page 128.

6.2.2. PASSWORD FOR GATEWAY ACCESS ONLY

Normally a password consists of 6 digits. This allows the same user to get access to the control unit as well as to the Gateway if both are selected.
If a user should have access to the Gateway only, it is possible to choose a stronger password. It consists of 6 to 10 characters and digits as well as letters can be used.

The letters are case sensitive.

7. ACCESS

To use the key pad in the control unit and get access to the menus, it is necessary to log in with a user name and a password for level 2B, 2C or 3A. See section 8.1. USER LEVEL ACCORDING TO EN54-2 on page 23.

Before any SSD is downloaded (e.g. in a brand new control unit), only "0" is shown and no password is required. After SSD download, the downloaded user names and passwords are valid.

7.1. HOW TO LOG ON

a) Open the door. Press the soft key Menu .
b) On the keypad, press 0, 1, 2 - - 8 or 9 to select a user. Press ↵.
c) Type the password for that user. (Six digits. * * * * * *)

After typing a correct password, a main menu list with the available menus will be displayed.
For "0", Information only, no password is required.

NO ACCESS!
No access will be shown if the password was not correct. Try again.

After three wrong passwords the log in function will be blocked for one hour for the user name respectively.

7.2. NAVIGATION / GENERAL PROCEDURES

- Scroll in lists or menus with ▼ ▲.
- Press ◀ ▶ to toggle between different choices.
- Press soft key →| to toggle between different functions.
- Press ↵ to select / accept.
- Press the digits on the numeric pad to choose a menu or enter data.
- A successful disablement is indicated by a beep and a "√". It will also be shown in the Re-enable list.
- A not successful disablement is indicated by another beep and a "X".
- To leave a menu press ESC.
- To leave the menu system, press the soft key Escape menu.
- To logout, close the door.

Quick jump can be used within each menu, for example press "6" for a quick jump to menu H6.

You will be automatically logged out 15 minutes after the last action, and directly when you close the door. A new login is then required. If you leave the menu system without closing the door, you have access to the menu system again only by using the soft key "Menu". A new login is not required.

8. USER LEVELS

Each user level type has access to specific menus according to the following table.

INFORMATION ONLY
H4 Present system status
H6 Display faults
H9 Interlocking outputs and inputs
H10 Change password

BUILDING OFFICER
H1 Perform monthly test
H2 Disable or re-enable
H3 Set calendar and clock
H4 Present system status
H6 Fault acknowledge
H7 Perform zone test
H9 Interlocking outputs and inputs
H10 Change password

SERVICE PERSONNEL
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 password

8.1. USER LEVEL ACCORDING TO EN54-2

User level EN54-2	User level type	Required action / equipment	Access to
1	-	No. (Hole in the Plexiglas.)	Alarms queued button.
2A	-	Fire brigade key. (To open the door.)	Like 1 + Silence buzzer, Silence alarm devices & Reset buttons.
2B	Information only	Like 2A + log on as “Information only”	Like 2A + keypad. Menu H4, H6[1], H9[2] & H10
2C	Building officer	Like 2A + log on as “Building officer”	Like 2A + keypad. H1-H4, H6, H7, H9 & H10
3A	Service personnel	Like 2A + log on as “Service personnel”	Like 2A + keypad. H1-H10
3B	-	PC + EBLWin + H/W key (EBLWin key)	SSD & S/W download
4	-	PC + EBLWin + H/W key (EBLWin key) + a special password	SSD & S/W download + reset of alarm counter.

1) Information only, i.e. the faults cannot be acknowledged.
2) Menu H9/C1 only.

8.1.1. USER LEVEL 1

With the door closed, anybody has access to the push button "Alarms queued" to scroll / browse through the queued alarms.

8.1.2. USER LEVEL 2A

After the door has been opened with the fire brigade key ("Door open" symbol in the symbol area), the user / fire brigade personnel have access to the following push buttons:

26) Reset
27) Silence alarm devices
28) Silence buzzer

8.1.3. USER LEVEL 2B

After the door has been opened with the fire brigade key ("Door open" symbol  in the symbol area), you have access to level 2A and after log on as “Information only” (level 2B), access to the following menus:

H4 Present system status

- U1 Disablement
- U2 Disablement by time channel
- U3 Open doors
- U4 Sensor values
- U5 Sensors activating SERVICE signal
- U6 Technical warning
- U7 Event log
- U8 Information

H6 FAULT acknowledge.

Information only!

H9 Interlocking outputs and inputs

- C1 Activated interlocking outputs / inputs

H10 Change password (In this case for “Information only”.)

8.1.4. USER LEVEL 2C

After the door has been opened with the fire brigade key ("Door open" symbol  in the symbol area), you have access to level 2A and after log on as “Building officer” (level 2C), access to the following menus:

H1 Perform monthly test

H2 Disable or re-enable

- B1 Zone or Zone / Address
- B2 Output
- B3 Output type
- B4 Alarm devices
- B5 Routing equipment
- B6 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 Technical warning
- U7 Event log
- U8 Information

H6 FAULT Acknowledge

H7 Perform ZONE TEST ("Test mode")

H9 Interlocking outputs and inputs

- C1 Activated interlocking outputs / inputs
- C2 Activate / deactivate interlocking output
- C3 Disable / re-enable interlocking output

H10 Change password (In this case for “Building officer”.)

8.1.5. USER LEVEL 3A

After the door has been opened with the fire brigade key ("Door open" symbol  in the symbol area), the service / maintenance personnel have access to level 2A and after log on as “Service personnel” (level 3A), access to all menus, i.e. like level 2C and also to the following menus:
Same menus as in access level 2C 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 control unit
- A5 Display current consumption on COM-loop
- A6 Display statistics for communication
- A7 Activate address setting mode for DU
- A8 Setup wireless detectors
- A9 SSD information

H8 Maintenance

- S1 Dis- / Re-connect loop / zone line input
- S2 Acknowledge SERVICE signal
- S3 Clear weekly average
- S4 Test of alarm devices
- S5 Safe shut down of control unit
- S6 Activate address in alarm mode
- S7 Synchronize the control units
- S8 Activate / Reset outputs

H10 Change password (In this case for “Service personnel”.)

8.1.6. ACCESS LEVEL 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. EBLWin) is to be connected to EBL512 G3 for backup (upload), download of site specific data (SSD) and/or download of software. EBLWin require an EBLWin key (5094) to be plugged in the PC.

8.1.7. ACCESS LEVEL 4

Used by manufacturer or by personnel authorised by the manufacturer for re-initialisation (reset) of the alarm counter, change software configurations, on-line status checking, etc. An EBLWin key (5094)
is required to be plugged in the PC.

9. TECHNICAL NUMBER

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.

NN	N	NNN
00-29	**0-3**	**001-253**
The control unit address (number), Don't have to be in sequence. The connections to the network don't have to be in sequence. The address is set with a PC SW; in case of a 5040 network with EBLWin and in case of a TLON network with TLON Manager	COM loop number	The technical address on the COM loop. The addresses don't have to be in sequence. The connections on the COM loop don't have to be in sequence. The address for each unit is set during auto addressing or with the programming tool 4414E.

Totally 1012 COM loop (technical) addresses can be used for one control unit, of which up to 512 addresses can be used for alarm points.

A brand new detector is factory set to COM loop (technical) address 000. Connected on the COM loop, the detector LEDs will start blinking every second, indicating that an address (001 - 253) has to be set before the detector will work.

Since (technical) address 000 cannot be used, the total number of addresses is 4 x 253 = 1012

10. 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 CIE display and the external display units, 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).

NNN	NN
001-999	**00-99**
Zone number	01 – 99 = The address within the zone. 00 = Only the zone number will be displayed, e.g. used for conventional zone line inputs.

Zone numbers 001-999 can be used, but in accordance with the EN54-2 standard not more than 512 alarm points and/or zones can be used per CIE.

11. SILENCE ALARM DEVICES

In the control unit front (the FBP part) there is a push button "Silence alarm devices".
(No.27, see reference 5.3. DETAILED DESCRIPTION OF THE FRONT on page 29).
When the alarm devices are activated (sounding) and the push button "Silence alarm devices" is pressed, the following will happen:

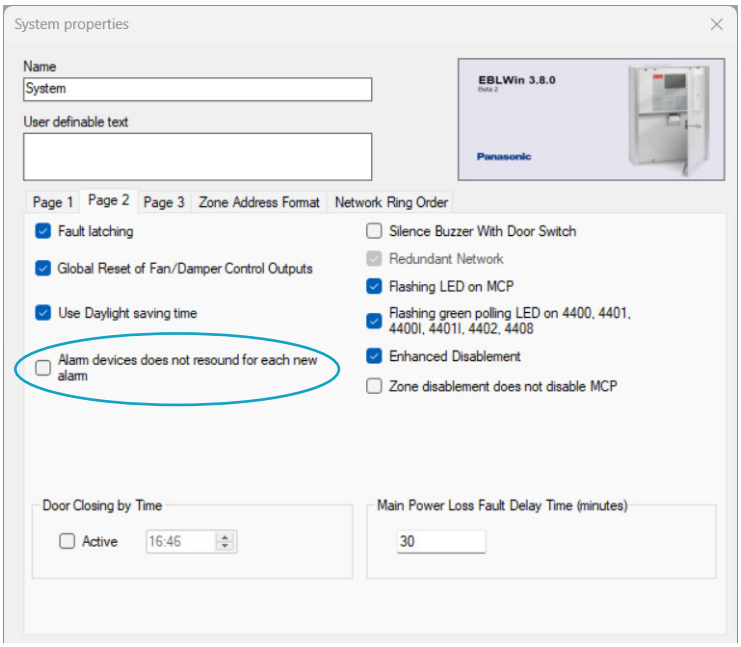
- is shown in the display.

The activated outputs programmed for sounders, type "Alarm devices", will be turned OFF (de-activated). This includes Addressable sounder base 3379 / 4479, Light indicator 4383, Wireless smoke detector 4611, and all alarm devices 448X.

If the push button "Silence alarm devices" is pressed again, the sounders will automatically sound again. In case of a new alarm the sounders will automatically sound again.

If sounders are programmed with type "Alarm devices for evacuation" they will not be silenced by the silence alarm devices button.

In EBLWin, the option "Alarm devices does not resound for each new alarm" disables alarm devices can be selected.



In this case the button "Silence alarm devices" will have the same function as in the menu H2/B4, see section 28.4. ALARM DEVICES (H2/B4) on page 29. See also chapter 12. DISABLE OR RE-ENABLE ALARM DEVICES on page 29.

12. DISABLE OR RE-ENABLE ALARM DEVICES

Outputs programmed for sounders can be collectively disabled for all control units during Fire alarm or Alert Annunciation alarm. This is done via menu H2/B4. The disablement is indicated by LED Fault / Disablements "General disablements" and "Alarm devices", which are steady ON.
In case of a fire, the sounders will remain disabled, which means the alarm devices will not sound until they are re-enabled again via menu H2/B4.

Outputs of type "Alarm devices" cannot be individually disabled, not even via menu H2/B2 Disable or Re-enable Output. See also chapter 34.4. TEST OF ALARM DEVICES (H8/S4) on page 119. All outputs of type "Alarm device" for a specified control unit or all control units, can be activated for an alarm device test.

Also sounders programmed with type "Alarm devices for evacuation" will be disabled by H2/B4.

13. SILENCE BUZZER

The buzzer in the control unit will sound for:

- Fire alarm (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 CIE is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.
- Activated technical warning (0.5 / 10 sec.), if this option is selected via EBLWin.

PRESS "SILENCE BUZZER" TO SILENCE THE BUZZER

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

SILENCE BUZZER BY OPEN DOOR

In EBLWin the function "Silence Buzzer by Door Switch" can 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 CIE TYPE NO. 5001

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

14. DISABLE OR RE-ENABLE OUTPUT

All control outputs (except outputs of type “Alarm devices” and "Alarm devices for evacuation") can via menu H2/B2, be individually disabled:

- Loop unit xxxxxx output x
- Control unit xx Sx
- Control unit xx Rx
- Control unit xx expansion board x output x

This is indicated by LED Fault / Disablements "General disablements".
They will remain disabled until they are re-enabled again via menu H2/B2.
See also section 28.3. OUTPUT TYPE (H2/B3) on page 92.
See also section 34.8. ACTIVATE / RESET OUTPUTS (H8/S8) on page 124.
An output can be activated for an output test, even if it is disabled.

15. DISABLE OR RE-ENABLE CONTROL OUTPUTS

All control outputs programmed as type:

- Control (general)
- Ventilation (Fire ventilation)
- Extinguishing
- Interlocking

… can via menu H2/B3 be collectively disabled for a specified control unit or all control units. This is indicated by LED Fault / Disablements "General disablements".

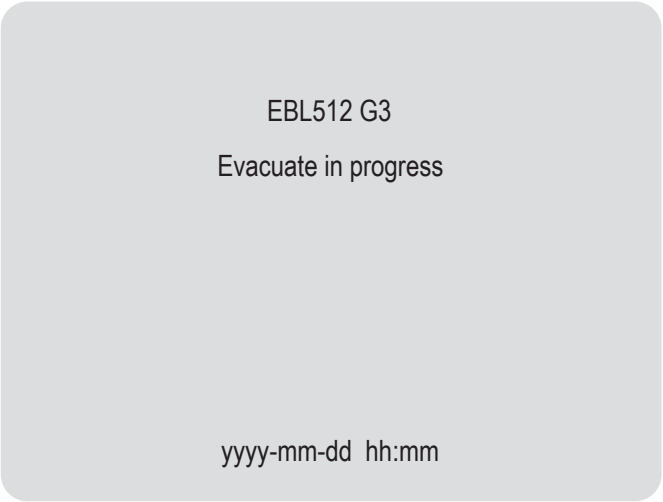
They will remain disabled until they are re-enabled again via menu H2/B3.

See also section 34.8. ACTIVATE / RESET OUTPUTS (H8/S8) on page 124. An output can be activated for an output test, even if it is disabled.

See also chapter 35.2. ACTIVATE / DEACTIVATE INTERLOCKING OUTPUT (H9/C2) on page 126. An interlocking output can be activated for an output test, even if it is disabled.

16. EVACUATE

When the soft key "Evacuate" is pressed, all outputs that are programmed for sounders (type "Alarm devices" and "Alarm devices for evacuation"), will be collectively turned ON (steady). This is indicated in the LCD:



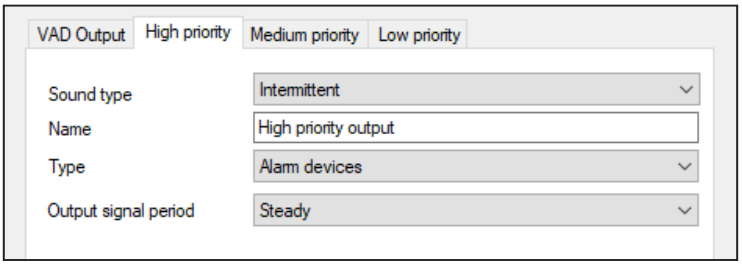
Alternatively, the same is the result when an input programmed as “Evacuate” is activated. One input per CIE.

Also sounders programmed with type "Alarm devices for evacuation" will be disabled by H2/B4.

The sounders will remain turned ON until they are turned OFF by pressing the soft key "Evacuate off" or alternatively when the programmable input is de-activated.

Outputs type “Alarm devices”: 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).

Addressable alarm devices: The alarm devices (sounders) will always be activated according to the setting in; High priority / Output signal period



17. OPEN DOOR

A special key is used to open the control unit door to get access to the front / system.

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

See also section 30.3. OPEN DOORS (H4/U3) on page 97.

There will not be an indication in the CIE display for the door in Display unit 5055.

17.1. DISABLE ROUTING EQUIPMENT WITH DOOR SWITCH

Via EBLWin the following can be programmed: Disable routing equipment by door switch

- None (selected by default): Open door in a CU will not disable the output(s) for routing equipment (Fire brigade tx and fault tx).
- Any control unit door: Open door in any CU will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all CU:s. This is a violation against EN54-2.
- Any door: Open door in any CU will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all CU:s. This is a violation against EN54-2.

These functions are not valid for the Display unit 5055.

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

17.2. SILENCE BUZZER WITH DOOR SWITCH

Via EBLWin can be set that the built-in CIE buzzer will be silenced when the CIE door is open.

See chapter 13. SILENCE BUZZER on page 31.

18. ALARM

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).

18.1. ALARM TYPES

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 can be used to activate outputs, based on smoke detected by a smoke detector, without activating a fire alarm in the system.
If the **Local Alarm Acknowledgement** function is used there will be an indication in the CIE display during the Acknowledgement Period and the Investigation Period respectively.
Regarding the different alarm types, etc., see the following chapters.

In the following chapters are all different alarm types described. The illustrations in this document show the essential information and might not look exactly as shown in the display.

18.1.1. PRE-WARNING

Activation of Pre-warning is an option that has to be enabled (via EBLWin) for the control unit respectively.

Pre-warnings activated in any control unit in the system will always be presented in all control units and all programmable outputs in the system (with trigger condition pre-warning) will be activated (if not disabled).

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

Any programmable input can also be used to activate a pre-warning, e.g. for a High Sensitivity Smoke Detector system. Aspirating smoke detector Aspect Lazeer (AE2010L-P) programmed for Detection type "And with pre-warning" will activate a pre-warning for "alarm" from one detection area only.
See EBL512 G3 Planning instructions for the system.

IN CASE OF A PRE-WARNING, THE FOLLOWING HAPPENS:

- The buzzer in the CIE sounds 0.8 sec. every five sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated.
- In the CIE display, a presentation number (zone/address) is shown (for the first pre-warning).
- In the CIE 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 (SMOKE, HEAT, MULTI or MCP).

If more than one pre-warning is activated, the LEDs "Alarms queued" are blinking and the pre-warnings will be automatically scrolled (every five seconds).
Pre-warnings are automatically reset, see chapter 19. ALARM RESET on page 50.

18.1.2. FIRE ALARM

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

Normally all fire alarms will be presented in all control units (default) but it is possible to have Selective alarm presentation, i.e. only fire alarms from selected control units will be presented in the control unit respectively. Set in EBLWin for each control unit.

See also section 5.4. INFORMATION PRIORITY ORDER on page 18.

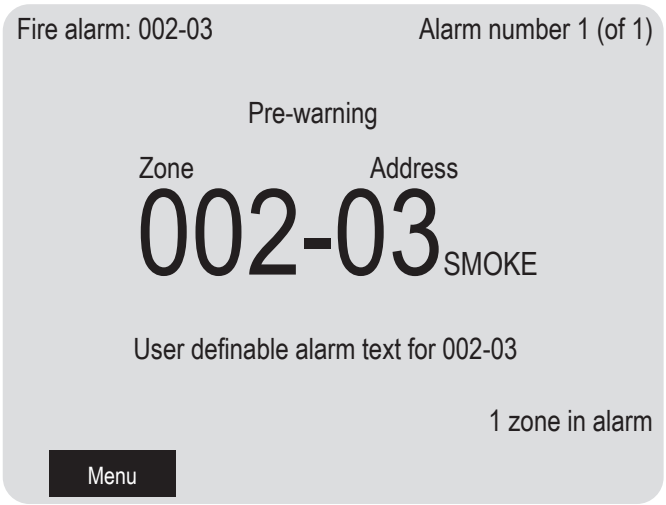
THE FOLLOWING HAPPENS IN CASE OF A FIRE ALARM:

(In accordance with the EN54-2 standard.)

- The buzzer in the CIE sounds 0.4 sec. every 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) is activated. In case of Selective alarm presentation only for the selected alarms.
- Outputs for fire alarm are activated. Outputs programmed for General fire alarm and outputs programmed for the activated fire alarm(s).
- In the CIE display, a presentation number (zone/address) is shown (for the first fire alarm).
- In the CIE display, a user definable text message (alarm text) is shown (if programmed).
- In the CIE display, is also some additional information presented.

ONE ALARM POINT ACTIVATING FIRE ALARM.

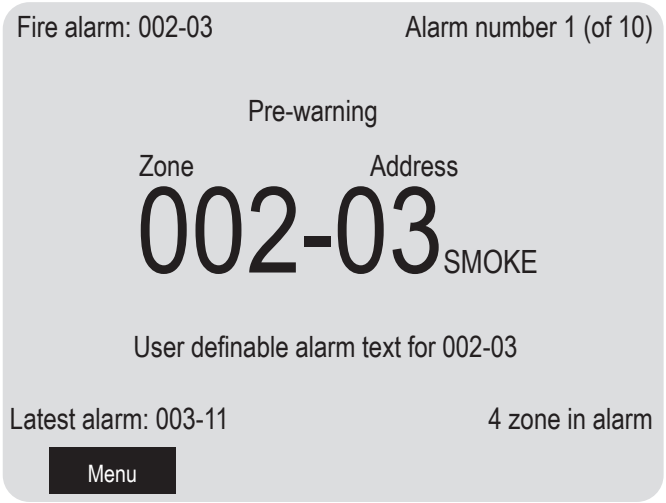
Example; fire alarm zone 002, address 03 (within zone 002):



After the presentation number is automatically added SMOKE, HEAT, MULTI or MCP depending on type of alarm source, for more information see section 18.2. ALARM SOURCE on page 49.

MORE THAN ONE ALARM POINT ACTIVATING FIRE ALARM.

Example; fire alarm in zone 002, address 03 (within zone 002) and nine other fire alarms (of which the latest alarm is 003-11) 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 and zone line input can an individual alarm text be shown (if programmed). Up to 40 characters can be used.

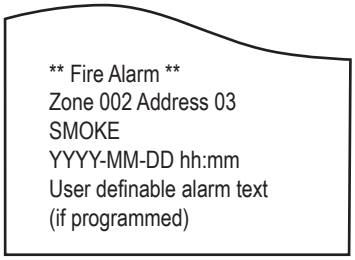
ADDITIONAL INFORMATION

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

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

Next zone. Use the soft key "Next zone" 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, for example.

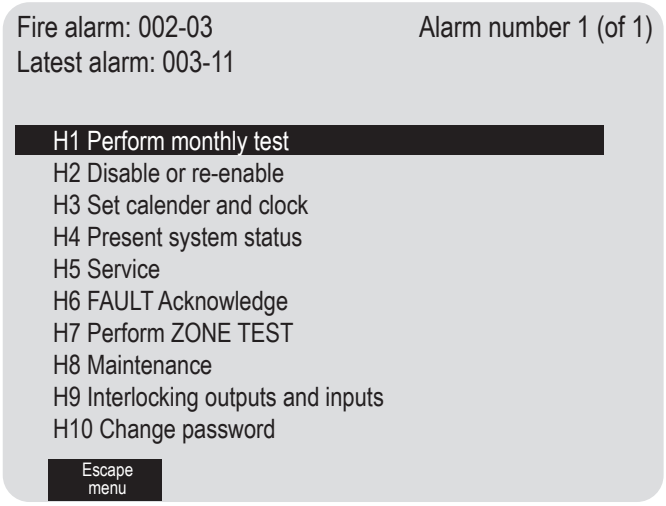


Reset of the fire alarms, see section 19. ALARM RESET on page 50.

ENTERING THE MENUS DURING FIRE ALARM

By pressing the soft key "Menu" during fire alarm, you will get access to the menu system
See chapter 7. ACCESS on page 22.

Access code is required. 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 5 minutes 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" or "ESC" is pressed or push button "Alarms queued".

TEST MODE ALARM

Regarding Test mode, see chapter 27. PERFORM MONTHLY TEST (H1) on page 87 and 33. PERFORM ZONE TEST (TEST MODE) (H7) on page 114.

When an alarm point in a zone set in test mode is tested, it is presented in the display as a fire alarm but with the information "Test mode" added. If a printer is available the test mode alarm will be printed with the information "(test mode)" added.

No outputs will be activated except the fire door outputs. The test mode alarm will be automatically reset after approximately 10 seconds.

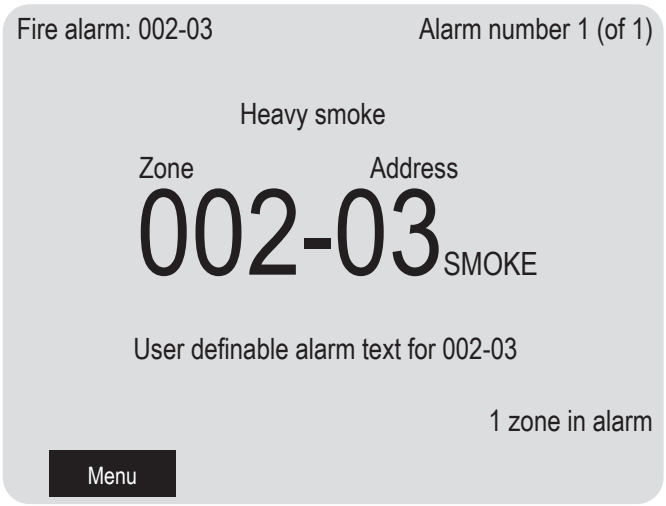
18.1.3. HEAVY SMOKE ALARM / HEAVY HEAT ALARM

An analog detector can activate a heavy smoke / heat alarm for a higher alarm level than the normal fire alarm level, i.e. a normal fire alarm is already activated by a detector activating a heavy smoke / heat alarm. See EBL512 G3 Planning Instructions for the system.

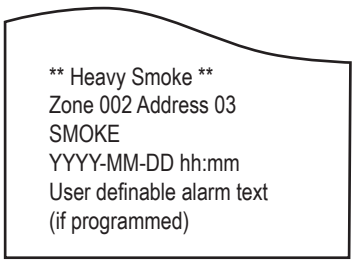
Heavy smoke / heat alarm is to confirm heavy or increasing smoke / heat and can be used for special actions, e.g. activation of smoke ventilation, and so on.

THE FOLLOWING HAPPENS IN CASE OF A HEAVY SMOKE / HEAT ALARM:

- Outputs programmed for heavy smoke / heat alarm are activated. General heavy smoke / heat alarm and individual alarm points / zones.
- Each heavy smoke / heat alarm is presented with a "title", which means "Heavy smoke" or "Heavy heat" will be added to the normal fire alarm information:



The printer (if available) will print each heavy smoke / heat alarm, and so on:

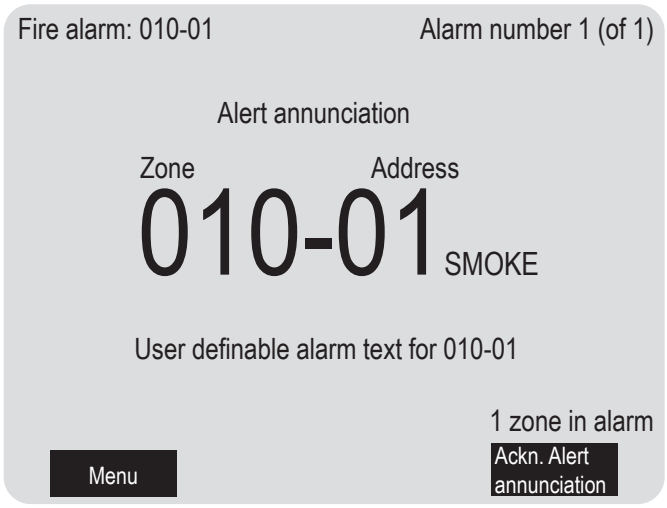


Heavy smoke / heat alarm will be reset when the fire alarm respectively is reset,
see section 19. ALARM RESET on page 50.

18.1.4. ALERT ANNUNCIATION ALARM (AA ALARM)

When the AA function is enabled, indicated by the LED Routing equipment "Fire brigade tx delay", the indications, print-outs, actions and so on are the same as for a normal fire alarm (see above) except for the CIE output for routing equipment (fire brigade tx), which will not be activated directly.

There will also be a "title". "Alert annunciation" or "Alert annunciation acknowledged" will be added to the normal fire alarm information. 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 5054.
See also section 19.5. ALERT ANNUNCIATION on page 52.



The "Ackn. alert annunciation" text is only visible if an AA alarm is activated and not if this key is used for the "Evacuate" function.

18.1.5. KEY CABINET ALARM

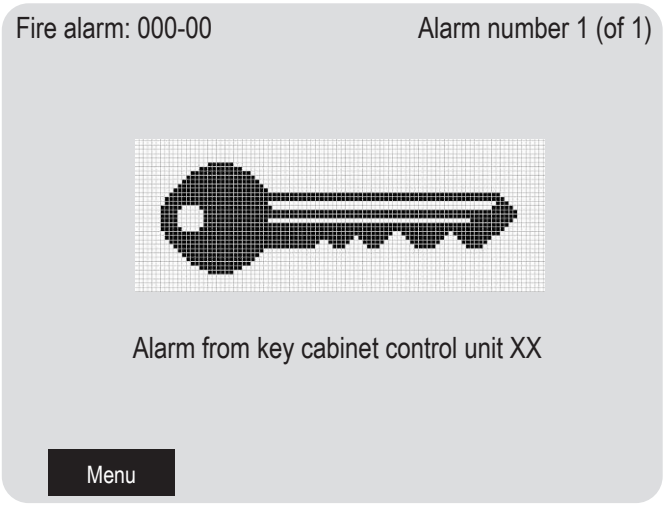
The fire brigade uses a key cabinet to store a key to the building.

One programmable input per CIE can be used to connect a key cabinet.

A key cabinet alarm is like a normal fire alarm, i.e. outputs with trigger condition "General fire alarm" will be activated as well as outputs with trigger condition "Activated key cabinet".

KEY CABINET OPENED BEFORE A FIRE ALARM

If the key cabinet is opened without a fire alarm, for example if somebody illegally breaks into the key cabinet, a key cabinet alarm will be activated. An example, XX = Control Unit number (00-29):



When printer is available the Key cabinet alarm will be printed like for a normal fire alarm (see above).
Key cabinet alarm is reset like a normal fire alarm, see section 19.2. FIRE ALARM RESET on page 50.

This alarm will also generate a fault message, see section 19.6. KEY CABINET ALARM RESET on page 53. It is indicated by LED "General fault" and the "Fault tx" output(s) will be activated.

KEY CABINET OPENED IN CONJUNCTION WITH A FIRE ALARM

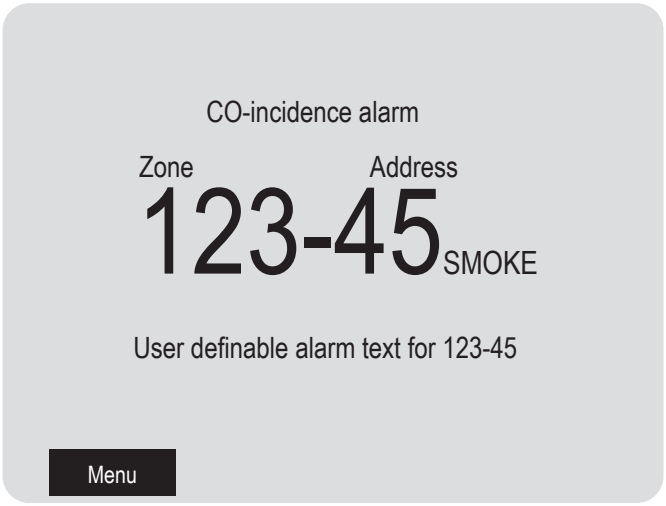
If a normal fire alarm already is activated in the CIE the fire brigade personnel can open the key cabinet without activating any key cabinet alarm or fault.

RESTORING THE KEY AFTER A FIRE ALARM

When **all** fire alarms in the system are reset, see chapter 19. ALARM RESET on page 50, the key has to be restored into the key cabinet **within 5 minutes**. If not, a fault will be generated, see section 19.6. KEY CABINET ALARM RESET on page 53.

18.1.6. CO-INCIDENCE ALARM (2-ADDRESS / -ZONE DEPENDENCE)

The co-incidence alarm function is programmed via EBLWin for the alarm points / zones in question. When only one zone or one zone / address (alarm point) is in alarm status, the CIE buzzer sounds (0.8 / 5 sec.) and there is a Coincidence alarm presentation in the display. Note that LEDs "Fire" are not indicating a co-incidence alarm.
The co-incidence alarm will be automatically reset after 5 minutes or via the "Reset" button. See chapter "Alarm reset", page 53. An example; Co-incidence alarm zone 123, address 45:



If more than one Co-incidence alarm not dependent on each other are activated, the LEDs "Alarms queued" are blinking and the Coincidence alarms will be automatically scrolled (every five seconds).

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.

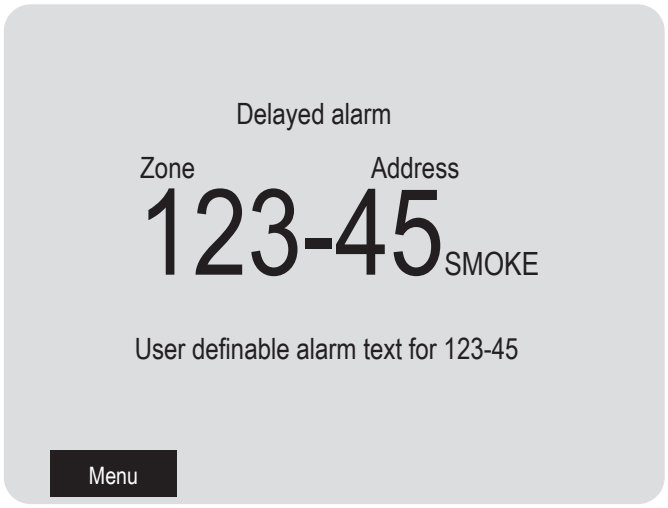
18.1.7. DELAYED ALARM

Delayed alarm is an option that has to be enabled (via EBLWin) for the alarm point respectively. The delay time (0-300 sec.) is, for the whole system, set via EBLWin (System Properties, page 1). The delay time will be added at the end of the alarm algorithm when a fire alarm normally would have been activated. For that reason this "extra" delay time should be as short as possible.

The Delayed alarm will be activated when the delay time countdown has started and will be activated until the delay time has run out and a normal fire alarm is activated. No outputs will be activated. In case of a Delayed alarm, the following happens:

- The buzzer in the CIE sounds 0.8 sec. every five sec. (0.8 sec. / 5 sec.).
- In the CIE display, a presentation number (zone/address) is shown (for the first delayed alarm). Also a user definable text message (= the alarm text for fire alarm) is shown (if programmed).
- Outputs programmed for delayed alarm will be activated.

Example; Delayed alarm zone 123, address 45 (within zone 123):



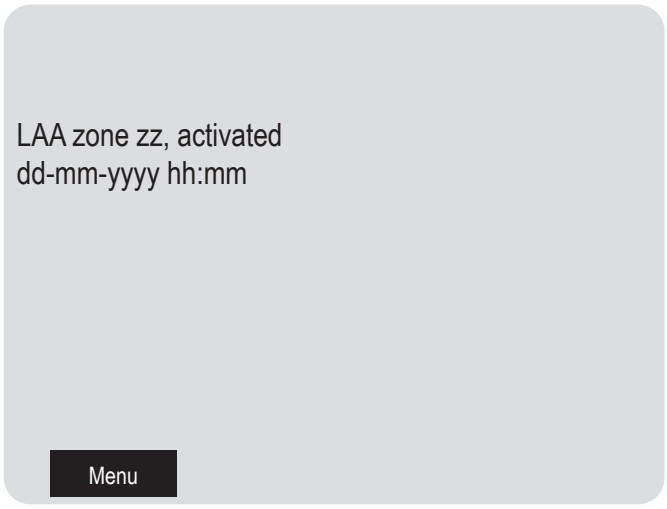
"SMOKE" after the presentation number is automatically added depending on the type of alarm point (for example SMOKE, HEAT, MULTI or MCP).

If more than one Delayed alarm is activated, the LEDs "Alarms queued" are blinking and the Delayed alarms will be automatically scrolled (every five seconds). Delayed alarms are automatically reset, see chapter 19. ALARM RESET on page 50.

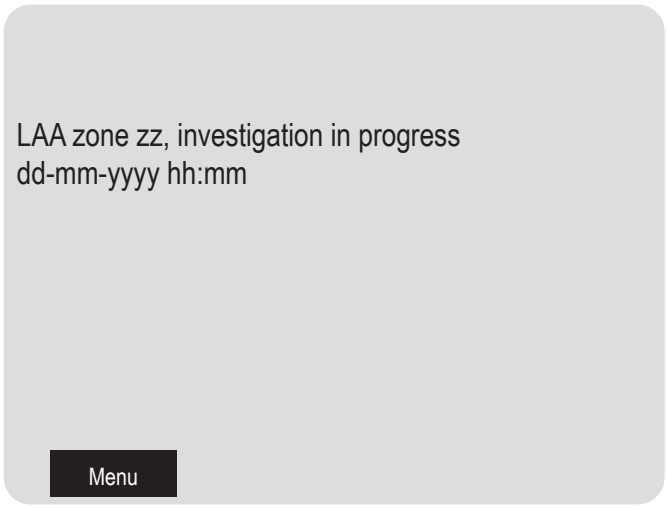
18.1.8. LOCAL ALARM ACKNOWLEDGEMENT (LAA)

One or more Local Alarm Acknowledgement Units are used in the system.
See Technical description MEW01838 for more information.

During the Acknowledgement Period (10-120 sec.), the following information (a list if many) is shown in the CIE display:



During the Investigation Period (1-9 min.), the following information (a list if many) is shown in the CIE display:



18.1.9. QUIET ALARM

One or more smoke detectors, via EBLWin programmed for Quiet alarm, have passed the fire alarm level. Quiet alarm is used for activating outputs based on smoke detected by a smoke detector without activating fire alarm in the system.

INDICATIONS AND ACTIONS:

Detector LEDs are turned on (i.e. also a connected ext. LED). The buzzer sounds (0.8 / 5 sec.) and there is a Quiet alarm presentation (including a title "Quiet alarm") in the display:

Programmable outputs for quiet alarm, i.e. any output with a control expression containing the trigger conditions "Quiet Alarm Zone" or "Quiet Alarm Zone Address".
Quiet Alarms are automatically reset; see section 19.10. QUIET ALARM RESET on page 53.

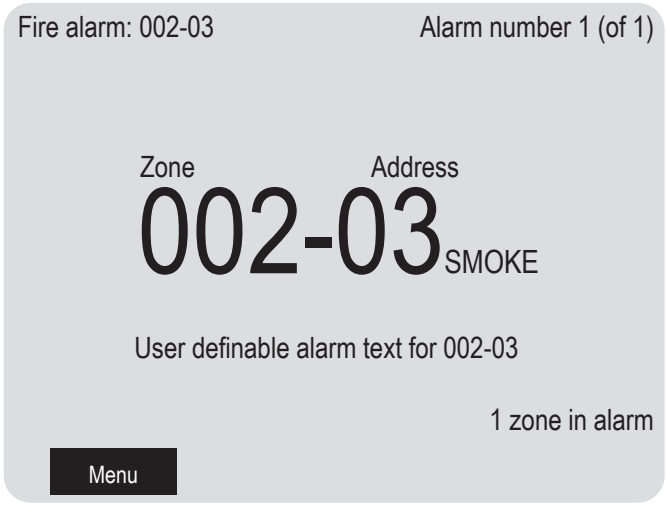
A detector programmed for Quiet alarm can never generate a real fire alarm.

18.2. ALARM SOURCE

An alarm point can activate a fire alarm based on detection of **smoke**, **heat**, or **multi**.

A **Manual call point** can be used to manually activate a fire alarm.

Each fire alarm is presented with a "title", which means that the alarm source "**Smoke**", "**Heat**", "**Multi**", or "**MCP**" will be added to the normal fire alarm information:



Alarm sources can be used to trigger control expressions, see trigger conditions Alarm 30-49 in Planning, chapter 12.19.7 TRIGGER CONDITIONS.

19. ALARM RESET

19.1. PRE-WARNING RESET

Pre-warning is automatically reset.

19.2. FIRE ALARM RESET

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 EBLWin. "All" is default.

19.2.1. ALL

All activated fire alarms (alarm points / zones) will be reset by pressing "Reset" once. (This is in accordance with the EN54-2 standard).

The push button has to be pressed for min. 0.5 sec.

When all fire alarms are reset, LEDs "Fire" and "Alarms queued" are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (for example. a fault message), for the priority order see section 5.4. INFORMATION PRIORITY ORDER on page 18.

All outputs (for fire alarm) are reset.

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 section 19.6. KEY CABINET ALARM RESET on page 53.

When "Single" or "Single with automatic disablement" is used, all alarms can be reset by pressing "Reset" and approx. 0.1 sec. later also press "Enter" and hold them pressed for > 0.5 sec.

19.2.2. SINGLE

Each fire alarm (alarm point / zone) has to be reset one by one.

This function is available only if it is set in EBLWin.

Press "Reset" to reset the fire alarm currently shown in the middle of the display with large digits.

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 (the LEDs "Alarms queued" 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" and "Alarms queued" 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 section 5.4. INFORMATION PRIORITY ORDER on page 18.

All outputs (for fire alarm) are reset.

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 section 19.6. KEY CABINET ALARM RESET on page 53.

19.2.3. 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 whilst still is in alarm status, it will activate a new fire alarm within 20 seconds. (This is 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, which means it will not activate a new fire alarm.

It has to be re-enabled via menu H2/B1 before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to the EN54-2 standard.)

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

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" 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.

19.3. TEST MODE ALARM

Test mode alarm is automatically reset after approximately 10 seconds.

19.4. 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.

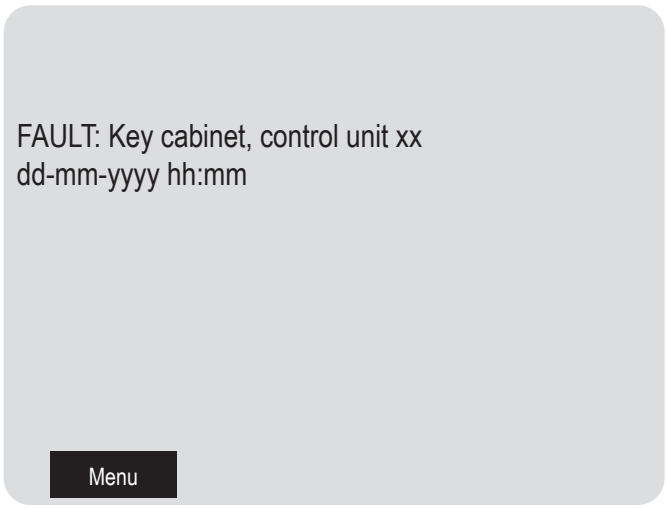
19.5. ALERT ANNUNCIATION

Regarding the function, see section 18.1.4. ALERT ANNUNCIATION ALARM (AA ALARM) on page 43 and EBL512 G3 Planning Instructions, chapter "Alert annunciation". Reset of the AA alarm(s) can be done via push button "Reset" on a display unit 5054 or in the CIE.

Reset via an AA unit is possible only during the investigation time and of AA alarm(s) only (not normal fire alarms). If more than one AA alarm is activated, they will be reset all at a time.

19.6. 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.



xx = control unit number (00-29).

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 22. FAULT ACKNOWLEDGE on page 76.
When the key cabinet fault is acknowledged, the LED Fault / Disablements "General fault" will be turned off (i.e. if the key cabinet is closed and if there are no other faults in the system).

19.7. CO-INCIDENCE ALARM

A Co-incidence alarm can be manually reset with the "Reset" button on the CIE front or automatically reset after 5 minutes (i.e. if the alarm point / zone is no longer in alarm state).
See also chapter 18.1.6. CO-INCIDENCE ALARM (2-ADDRESS / -ZONE DEPENDENCE) on page 45.

19.8. DELAYED ALARM

The Delayed alarm will be automatically reset if the alarm point during the delay time countdown no longer is in alarm state or when a normal fire alarm is activated (when the delay time has run out).

19.9. LOCAL ALARM ACKNOWLEDGEMENT (LAA) RESET

The indication in the control unit display, during the Acknowledgement Period (10-120 sec.) and the Investigation Period (1-9 min.) respectively, will automatically disappear when:

- the AA process ends because no detector in the LAA zone is over the fire alarm level.
- the AA process ends up in a fire alarm, which has higher priority. (Regarding Fire alarm reset, see above.)

19.10. 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.)

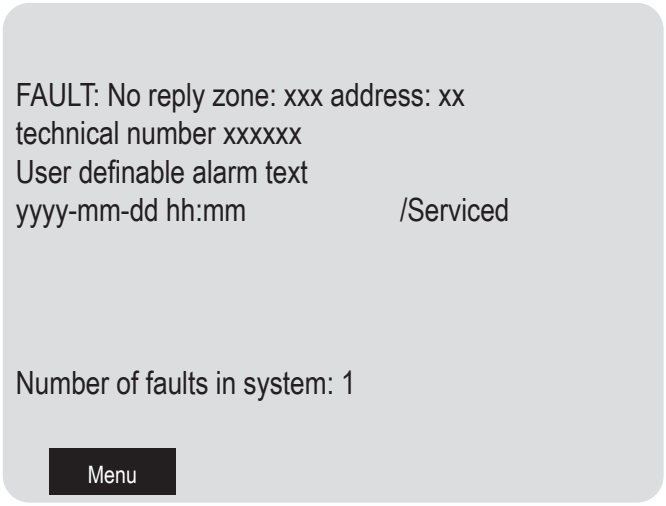
20. FAULT

All faults are delayed in order not to generate any unnecessarily faults, for example. for COM loop and zone line input faults the delay time is approx. 45 seconds. Some units may also have an internal delay time, which makes the delay time even longer, for example the Multipurpose I/O unit 4461 has an internal delay time of 30 seconds, which results in 45+30=75 seconds delay time in total.

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

- The buzzer in the CIE will sound continuously (steady). The buzzer in the control unit can be suppressed for faults generated in other control units. "Suppressed buzzer during fault" is set via EBLWin.
- 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" will be turned on (indicating that the fault condition output for routing equipment (Fault tx) is activated).
- LED **Fault / Disablements** "General fault" will be turned on.
- LEDs Fault / Disablements "Alarm devices", "System fault" and/or Fault / Disablements "Fire brigade tx" might be turned on as well.
- A fault message incl. date, time and status will be shown in the CIE display. If it is an alarm point or zone also the User definable alarm text will be shown.

Example; fault message:



- In the CIE display up to three fault messages can be shown simultaneously. In the display, down to the left, is displayed the number of faults.
- If a fault has been corrected (serviced) 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 section ENTERING THE MENUS DURING FIRE ALARM on page 40.

Faults have to be acknowledged, which is done via menu H6, see chapter 32. FAULT ACKNOWLEDGE (H6) on page 113. This menu is a list of all faults in the system:

- not corrected / serviced and not acknowledged fault
- not corrected / serviced but acknowledged fault (/Acknowledged)
- corrected / serviced but not acknowledged fault (/Serviced)

If a fault cannot be corrected, it is important to contact service personnel / engineer immediately.
The faults are normally latched, but can via EBLWin be set to be "not latched". This will make the fault disappear from the list when serviced but not acknowledged.

The fault list shown when the user is logged out of the menu, displays all faults, even acknowledged faults.

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

21. FAULT MESSAGES

Below follows a list of all fault messages, in alphabetical order. There is also an explanation to each 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: 24V for AAU xx, (Primary channel), CU xx
FAULT: 24V for FBP xx, (Primary channel), CU xx
FAULT: 24V for EPU xx, (Primary channel), CU xx
FAULT: 24V for GCP xx, (Primary channel), CU xx

The AAU/FBP/EPU/GCP unit xx, connected to control unit no. xx, has no power on its 24V primary input.
Check cables / connections / fuses etc.

FAULT: 24V for AAU xx, (Secondary channel), CU xx
FAULT: 24V for FBP xx, (Secondary channel), CU xx
FAULT: 24V for EPU xx, (Secondary channel), CU xx
FAULT: 24V for GCP xx, (Secondary channel), CU xx

The AAU/FBP/EPU/GCP unit xx, connected to control unit no. xx, has no power on its 24V secondary input.
Check cables / connections / fuses etc.

FAULT: 24V for Display Unit (Fxx), CU xx

xx = Fuse number(18 or 19), xx = 00-29.
Check fuse F18 or F19 on the main board in control unit no. xx.
Fuse: T1.6AH 250V.

These 24V outputs, together with the 24V output for routing equipment, are also protected by an auto-reset-table fuse PTC2 (max 3.15A). If this fault message occurs and the fuse is not blown, check the 24V outputs for combined overload.

FAULT: 24V for expansion board (auto-resettable), CU xx

xx = 00-29.
The auto-resettable fuses PTC4 and PTC12 (total max 1A) has been activated. Check for overload on the expansion board's outputs.
To reset the PTC, remove the load and wait 5 min to let the PTC cool down before re-connecting the load.

FAULT: 24V for external equipment output 1 (F9), CU xx

xx = 00-29.
Check fuse F9 on the main board in control unit no. xx.
Fuse: T1.6AH 250V.

This 24V output, together with the other 24V outputs for external equipment (2-4), are also protected by an auto-resettable fuse PTC1 (max 3.15A). If this fault message occurs and the fuse is not blown, check all the 24V outputs for combined overload.

FAULT: 24V for external equipment output 2,3,4 (F10), CU xx

xx = 00-29.
Check fuse F10 on the main board in control unit no. xx.
Fuse: F3.15AH 250V.

These 24V outputs, together with the other 24V output for external equipment (1), are also protected by an auto-resettable fuse PTC1 (max 3.15A). If this fault message occurs and the fuse is not blown, check all the 24V outputs for combined overload.

FAULT: 24V for MMI (auto-resettable), CU xx

xx = 00-29.
The auto-resettable fuses PTC9 and PTC10 (total max 1A) has been activated. Check for overload or damage on the MMI board.
To reset the PTC, disconnect the MMI board and wait 5 min to let the PTC cool down before re-connecting the MMI board.

FAULT: 24V for routing equipment (F8), CU xx

xx = 00-29.
Check fuse F8 on the main board in control unit no. xx.
Fuse: T500mAH 250V.

This 24V output, together with the 24V outputs for display units, is also protected by an auto-resettable fuse PTC2 (max 3.15A). If this fault message occurs and the fuse is not blown, check all the 24V outputs for combined overload.

FAULT: 24V for Gateway (auto-resettable), CU xx

xx = 00-29.
The auto-resettable fuse PTC11 (max 500mA) has been activated. Check for overload or damage on the Gateway.
To reset the PTC, disconnect the Gateway and wait 5 min to let the PTC cool down before re-connecting the Gateway.

FAULT: 24V out, output unit xxxxxx

This is valid for the external power supply 3366 or 4466 on the COM loop.
The output might be turned off or the current output limit is exceeded.

FAULT: Alert annunciation unit xx,
Channel x, CU xx

5054 (Alert Annunciation Unit - AAU.)
The AAU unit xx, connected to channel x, control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Alert annunciation unit xx,
control unit xx

5054 (Alert Annunciation Unit - AAU.)
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: Aspect not calibrated zone xxx
address xx

The Aspiration smoke detector Aspect Lazeer is not working as it should be, i.e. the unit has not been calibrated in conjunction with commissioning.

FAULT: Aspect not calibrated zone xxx
address xx and zone xxx address xx

The Aspiration smoke detector Aspect Nitro / Grizzle is not working as it should be, i.e. the unit has not been calibrated in conjunction with commissioning.

FAULT: Aspect zone xxx address xx

Check the specified Aspiration smoke detector Aspect Lazeer. (One detection area, one or two pipelines per detection area.)

FAULT: Aspect zone xxx address xx and
zone yyy address yy

Check the specified Aspiration smoke detector Aspect Nitro / Grizzle. (Two detection areas, one or two pipelines per detection area.)

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 is blown.
- Other / external battery fuse is blown.

This check is done every 14th minute but when the fault is generated the check is done every 30th sec.
Fuse: F6.3AH 250V (5x20 mm ceramic).

FAULT: Battery, technical number xxxxxx

The charging function in the external power supply 3366 or 4466 connected on the COM loop is not OK.

- Batteries (2 x 12 V) are missing or not connected correctly.
- The PCB is faulty and has to be replaced.

FAULT: Battery zone xxx address xx,
technical number xxxxxx

Valid for the wireless units 4611 and 4614. The battery voltage is < 2.8 V. The batteries have to be replaced.

FAULT: Charger, control unit xx

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

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, output unit xxxxxx

The fault is to be found in the external power supply unit 3366 or 4466.
Charging is stopped due to too high output current.

FAULT: Checksum MMI program,
control unit xx

A fault in the control unit xx MMI board software. LED "System fault" is turned on. 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 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel / engineer immediately.

FAULT: CU xx has no contact with control
unit xx, network x

Network x = network 0 or network 1
Network 0: In a redundant network, the communication is normally on Network 0 only.
Network 1: In a redundant network is Network 1 normally in a supervised quiescent state until there is a fault (cut-off or short circuit) on Network 0.

- Check the TLON network cables / connections.
  (Also for mixed Network 0 and Network 1 cables.)
- Faulty TLON connection board 5090.
- The control unit has no power.
- Can be shown in conjunction with new S/W download.

FAULT: Cut-off tech addr nnn <-> nnn [sup-loop x], loop x, CU xx

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.
Tech addr nnn <-> nnn describes between which Short Circuit Isolators the cut-off is located.
n = Technical address of the unit with short circuit isolator. A & B is the built-in isolator in the EBL512 G3 A-direction and B-direction respectively.

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: Multiple faults …".

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: Detector removed zone xxx address xx

A wireless smoke detector 4611 has been removed from its base or the door on a wireless manual call point 4614 has been opened.

FAULT: Display units mixed on channels (Primary/Secondary), CU xx

The primary and secondary channels to the display units connected in control unit xx have been mixed. Check cables and connections.

FAULT: Earth fault (minus),
control unit xx

FAULT: Earth fault (plus),
control unit xx

Earth fault is detected in control unit no. xx.

+24 V to earth is normally 11.5 V. 0 V to earth is normally 12.5 V.

- Voltage to earth < 3.0 V = Earth fault (minus)
- Voltage to earth > 21.9 V = Earth fault (plus)

When the earth fault is located on a COM-loop it can be difficult to measure with a multi meter due to the fact that SA and SB changes polarity during COM loop communication. However, the CIE makes measurements at specific timings when the polarity of SA and SB is known. In case of an earth fault on a COM-loop it will be displayed as follows:

- ***Earth fault on the SA line will be displayed as Earth fault (minus)***
- ***Earth fault on the SB line will be displayed as Earth fault (plus)***

Disconnect the loops one by one to find out where the earth fault is.

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: Expansion board x, control unit xx

This is valid for the exp. boards 4580, 4581 & 4583, i.e. no. x, mounted in the control unit no. xx.
There is some internal fault on the board, which has to be replaced.

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: External presentation unit xx,
control unit xx

5054 (Ext. Presentation Unit - EPU.)
The EPU xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

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.
There will also be an additional information text in the display: Extinguishing fault.

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, technical number xxxxxx

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 4461 input has not been activated within the programmed time. 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).

FAULT: Fire brigade panel xx,
control unit xx

5054 (Ext. Fire Brigade Panel - FBP)
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: Fire brigade panel xx, channel x, CU xx

5054 (Ext. Fire Brigade Panel - FBP)
The ext. FBP xx, connected to channel x, control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Fuse output x,
technical number xxxxxx

Blown fuse 0, 1 or 2 on the 4464 board or in power supply 4466.
Replace the fuse.

FAULT: Fuse, supervised output x (auto-resettable), CU xx

x = 0-3, xx = 00-29.
The auto-resettable fuse PTC7 (for output 0), PTC8 (for output 1), PTC5 (for output 2) or PTC6 (for output 3) (max 500mA) has been activated. Check for overload on the equipment connected to the output.
To reset the PTC, disconnect the connected equipment and wait 5 min to let the PTC cool down before re-connecting the equipment.

FAULT: General control panel xx, CU xx

5054 (General control panel - GCP)
The GCP xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: High current [sub-loop x] loop x, CU xx

When starting up the control unit or when the COM-loop is reconnected, the loop current in normal condition is measured and stored.

Main board 5012 and a SUB-loop connected to 4585:
This fault will be generated for a measured current higher than the stored value plus 50mA. (One example: 75 mA (stored) + 50mA = 125 mA = fault limit.)

This fault is not checked in alarm condition.
The reason could be not "full" short circuit on the COM loop but very close to short circuit, e.g. due to moisture / corrosion / bad contact. Check connections etc.

FAULT: High current consumption, control unit xx

The control unit current consumption is > 2.8 A (> 6.3 A in alarm state) and because of this, the battery charging is turned off and will be so until the current consumption has decreased to < 2.8 A (< 6.3 A) again.

FAULT: High resistance [sub-loop x] loop x, CU xx

The loop resistance measured by the control unit / 4585 board is too high for the current consumptions. Check cables / connections etc.
The measured value can be seen in menu H5/A6

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, loop x, CU 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: Cables mixed [sub-loop x], loop x, CU 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: Loop unit,
technical number xxxxxx

The unit (e.g. a customized unit) is not all right, i.e. the unit is out of order / faulty. The unit has to be replaced.

FAULT: Loop unit zone: xxx address: xx
technical number xxxxxx

The unit is not all right, i.e. the unit is out of order / faulty. The unit has to be replaced.
An Aspirating smoke detector Aspect Lazeer: The PCB for addressing is broken and has to be replaced.

FAULT: Loop unit zone: xxx address: xx and
zone: yyy address: yy
technical number xxxxxx

The unit (not a detector) is not all right, i.e. the unit is out of order / faulty. The unit has to be replaced.
An Aspirating smoke detector Aspect Nitro / Grizzle: The PCB for addressing is broken and has to be replaced.

FAULT: Low battery capacity,
control unit xx

Battery (in control unit no. xx) internal resistance > 0.5 Ω.
The "Resistance in battery circuit." value shown in menu H5/A4 is > 500 m 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).

The battery should normally be replaced.

The battery check is performed every 15 minutes, i.e. it can take up to 15 minutes until the fault status will be "corrected".

FAULT: Low battery capacity, technical
number xxxxxx

Battery in external power supply 4466 unit no. xxxxxx, internal resistance > 0.7 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).

The battery should normally be replaced.

The battery check is performed every 5th minutes, i.e. it can take up to 5 minutes until the fault status will be "corrected".

FAULT: Low performance on primary network, CU xx

Control unit xx has detected several bit faults and/or low signal strength on the incoming primary network.
Check cables, connections, etc.

FAULT: Low performance on secondary network, CU xx

Control unit xx has detected several bit faults and/or low signal strength on the incoming secondary network.
Check cables, connections, etc.

FAULT: Low voltage, control unit xx

System voltage < 21.0 V DC, in control unit no. xx. Check the power supply, rectifier LS 150-24 (5047) output voltage, which shall be 24 V DC. Replace LS 150-24 if required.

A control unit powered by the back-up battery only, will shut down at a battery voltage of 20.6 V, in order not to damage the battery. When this fault is detected, the log is saved to flash automatically, in order to keep the log intact after a power failure.

FAULT: Low voltage, technical number xxxxxx

System voltage < 21 V DC in the external power supply unit 3366 or 4466.
Check the power supply, rectifier output voltage, which shall be 24 V DC. Replace if required.

FAULT: Mains, control unit xx

The fault is activated 1-300 minutes after:

- Loss of mains, i.e. no 230 V AC
- Blown mains fuse.
- Blown fuse F1 on main board. Fuse F6.3A H 250V (5x20 mm ceramic).

When this fault is detected, the log is saved to flash automatically, in order to keep the log intact after a power failure.

FAULT: Mains, external power supply, control unit xx

This is valid for 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 after the input is activated.

- Loss of mains, i.e. no 230 V AC to the ext. power supply equipment.
- Blown mains fuse.
- Check the programmable input connections.

FAULT: Mains, technical number xxxxxx

3366 / 3364

This is valid for the external power supply unit 3366 and the addressable 2 voltage outputs unit 3364, connected on the COM loop. The fault is activated after 1-300 minutes after:

- Loss of mains, i.e. no 230 V AC to the 3366 unit.
- Blown mains fuse.
- Fuse F1 blown on the 3366 unit's charger board Fuse T5A L (H) (5x20 mm).
- 3364 unit:
  - (/Mains OK) not connected to the 3366 unit (J7:4) or 0 V
  - "no mains signal" from the 3366 unit.

The time delay of this fault activation is programmable via EBLWin. Maximum 30 minutes is allowed according to the EN54-2 standard. Default value is depending on convention.

4466

This is valid for the external power supply unit 4466 connected on the COM loop. The fault is activated after 1-300 minutes after:

- Loss of mains, i.e. no 230 V AC to the 4466 unit.
- Blown mains fuse.
- Fuse F1 blown on the 4466 unit's charger board (Fuse T5AH 250 V, 5x20 mm).

The time delay of this fault activation is programmable via EBLWin. Maximum 30 minutes is allowed according to the EN54-2 standard. Default value is depending on convention.

FAULT: Multiple faults, [sub-loop x], loop x, CU xx

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

FAULT: Network board (Network 0),
control unit xx

FAULT: Network board (Network 1),
control unit xx

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

Check the network board type. The type should be the same as programmed via EBLWin.

FAULT: Network cables mixed, control unit xx

In a redundant network the Network 0 cables and Network 1 cables are mixed. Check the network installation / connections.

FAULT: No connection with MMI board,
control unit xx

This fault message cannot be shown in the control unit's display, only via EBLWin, via Gateway and in other control units in the system. Fault in the MMI board 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, AAU xx,
(Primary channel) CU xx

FAULT: No reply, EPU xx,
(Primary channel) CU xx

FAULT: No reply, FBP xx,
(Primary channel) CU xx

FAULT: No reply, GCP xx,
(Primary channel) CU xx

Alert Annunciation Unit
External Presentation Unit
External Fire Brigade Panel
General Control Panel

- The contact with the unit is interrupted. Check the cable, all connections, etc on the primary channel. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings.

FAULT: No reply, AAU xx,
(Secondary channel) CU xx

FAULT: No reply, EPU xx,
(Secondary channel) CU xx

FAULT: No reply, FBP xx,
(Secondary channel) CU xx

FAULT: No reply, GCP xx,
(Secondary channel) CU xx

Alert Annunciation Unit
External Presentation Unit
External Fire Brigade Panel
General Control Panel

- The contact with the unit is interrupted. Check the cable, all connections, etc on the secondary channel. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings.

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: 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, alert annunciation unit xx,
channel x, control unit xx

FAULT: No reply, external presentation unit xx
Channel x, control unit xx

FAULT: No reply, fire brigade panel xx,
channel x, control unit xx

FAULT: No reply, General Control Panel xx,
channel x, CU xx

Alert Annunciation Unit
External Presentation Unit
External Fire Brigade Panel
General Control Panel

- The contact with the unit is interrupted. Check the cable, all connections, etc. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings.

FAULT: No reply Loop unit xxxxxx

The unit (e.g. a customized unit), cannot be found by the control unit.

- Check the unit's COM loop address (with the programming tool 3314 / 4414).
- Check the downloaded site specific data (SSD).
- The unit might be faulty.
- The unit might be removed from the COM loop.
- There might be a double break or short-circuit on the COM loop.

FAULT: No reply zone: xxx address: xx
technical number xxxxxx

The unit cannot be found by the control unit.

- Check the unit's COM loop address (with the programming tool 3314 / 4414).
- 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 or short-circuit on the COM loop.
- Valid for a wireless smoke detector 4611or wireless manual call point 4614:
  Battery voltage < 2.3 V or the Base station (4620) does not receive any detector data.

FAULT: No reply zone: xxx address: xx and
zone: yyy address: yy
technical number xxxxxx

The unit (Aspirating smoke detector Aspect Nitro / Grizzle), cannot be found by the control unit.

- Check the unit's COM loop address (with the programming tool 3314 / 4414).
- Check the downloaded site specific data (SSD).
- The unit might be faulty.
- There might be a double break or short-circuit on the COM loop.

FAULT: Primary network, CU xx <-> CU xx,
Detected by CU xx

Control unit xx has detected a network fault on the primary network between the two control units listed.
Check cables, connections, etc. This could also mean a faulty 5040 board in either of the two control units listed.
If the secondary network is ok, the messages will be sent on the secondary network.

FAULT: Printer, control unit xx

This is valid for an EBL512 G3, type 5000 with printer. Control unit no. xx.

- Faulty printer
- Printer not correctly connected.
- No paper.
- Printer selected in EBLWin but no printer mounted in the CIE and vice versa.

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 CU 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 149), this fault might be generated when the CU 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

A restart has occurred in control unit no. nn. SSD and S/W download will automatically be followed by a restart. Also, you can manually do a restart. Regarding the restart codes 00, 03, 13, 14, 25, 50 & 53, see chapter 25. RESTART on page 82.
The following restart codes are because of some external disturbance and are not normal, i.e. call for service personnel / engineer:

- xx=01: Watchdog Reset.
- xx=02: Accidental jump to reset vector.
- xx=04-12: Unexpected interrupt.
- xx=13: S/W monitoring fault
- yy…y = memory address (before restart). Write down the address and inform the service personnel/engineer.

FAULT: Second network, CU xx <-> CU xx,
detected by CU xx

Control unit xx has detected a network fault on the secondary network between the two control units listed.
Check cables, connections, etc. This could also mean a faulty 5040 board in either of the two control units listed.
If the primary network is ok, the messages will be sent on the primary network.

FAULT: Sensor zone: xxx address: xx
technical number xxxxxx

The analog smoke, heat or multi detector is faulty. The detector's built-in self-verification function has reported a fault. The detector has to be replaced.

FAULT: Short circ. tech addr nnn <-> nnn, [sub-loop x], loop x, CU xx

Tech addr nnn <-> nnn describes between which Short Circuit Isolators the short-circuit is located.
nnn = Technical address for short circuit isolator. A & B is the built-in isolator in the EBL512 G3 CIE.
A-direction and B-direction respectively.

Each 10th minute a check is performed if all short-circuits are corrected (repaired). If so, the communication automatically returns to communicate in one direction only.
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 one direction only.

This fault might be incorrectly shown if the SA-SB cables are mixed. If no short circuit can be found, run "check loop" from EBLWin to get correct information.

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 EBLWin) is required.

FAULT: Site specific data, Alert annunciation unit xx,
CU xx

FAULT: Site specific data, External presentation unit xx,
CU xx

FAULT: Site specific data, Fire brigade panel xx,
control unit xx

FAULT: Site specific data, General control panel xx,
control unit xx

Alert Annunciation Unit
External Presentation Unit
External Fire Brigade Panel
General Control Panel

There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: SSD, alert annunciation unit xx
Channel x, CU xx

FAULT: SSD, external presentation unit xx
Channel x, CU xx

FAULT: SSD, fire brigade panel xx
Channel x, CU xx

FAULT: SSD, General Control Panel xx
Channel x, CU xx

Alert Annunciation Unit
External Presentation Unit
External Fire Brigade Panel
General Control Panel

There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: SSD mismatch, General Control Panel xx
CU xx

The SSD (Site Specific Data) downloaded in the General control panel doesn't match the SSD downloaded in the control unit.
A new SSD download (via EBLWin) must be performed in both General control panel and the control unit.

FAULT: SSD mismatch, General Control Panel xx
Channel x, CU xx

The SSD (Site Specific Data) downloaded in the General control panel doesn't match the SSD downloaded in the control unit..
A new SSD download (via EBLWin) must be performed in both General control panel and the control unit.

FAULT: Supervised 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: Supervised input x
technical number xxxxxx

A fault on the supervised input x in 4461/4462
A fault on the supervised input x on the board 4464. (Mounted in power supply 4466)
Check the cables / connections (cut-off or short-circuit).

FAULT: Supervised input x,
control unit xx

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

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" blinking.
If the output is programmed for fire brigade tx (type "Routing equipment"), it is also indicated by LED Fault / Disablements "Fire brigade tx" blinking.
If the output is programmed for an extinguishing system (type "Extinguishing"), there will be an additional information text close to the soft key area in the display: Extinguishing wire fault.

Supervised (1-50 kΩ):
x=0 (S0): Short circuit/break on the connected cable/ equipment
x=1 (S1): Short circuit/break on the connected cable/ equipment
x=2 (S2): Short circuit/break on the connected cable/ equipment
x=3 (S3): Short circuit/break on the connected cable/ equipment
Fuse **T500mA** L 250V

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

The calibrated value has to be in the range 1 kΩ - 50 kΩ.

Supervised (EN54-13):
x=0 (S0): Short circuit/break on the connected cable/ equipment
x=1 (S1): Short circuit/break on the connected cable/ equipment
x=2 (S2): Short circuit/break on the connected cable/ equipment
x=3 (S3): Short circuit/break on the connected cable/ equipment
Fuse T**500mA** L 250V

- Connected equipment might be "stolen".
- End-of-line device 4472 missing

FAULT: Supervised 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" blinking.
If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED Fault / Disablements "Fire brigade tx" 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 T200mA L 250V (TR5).
- Connected equipment might be "missing".
- End-of-line resistor(s) missing or not correct value, (1-5 resistors 33kΩ).

The calibrated value has to be in the range 4.7 kΩ - 40 kΩ.

FAULT: Supervised output x,
technical number xxxxxx

This fault message is valid for a COM loop output unit 3364 output or 4464 board output.
If the output is programmed for sounders (type Alarm devices), it is also indicated by LED Fault / Disablements "Alarm devices" blinking.
If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED Fault / Disablements "Fire brigade tx" blinking.

- Calibration not performed via menu H5/A1.(Valid for 3364 only)
- 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). (Valid for 3364 only)
- End-of-line device 4472, or end-of-line resistor, is missing (Valid for 4464 only)

The calibrated value has to be in the range 470 nF – 5 x 470 nF (2350 nF). (Valid for 3364 only)

FAULT: Temperature sensor, control unit xx

The sensor is not correctly connected, is faulty, or is missing.

FAULT: Wrong connections, primary network, detected by CU xx

The order of the control units in the primary network ring doesn't match the order specified in the SSD data.

Check cables and the SSD data programming.
The connection order must be correct, to get the correct fault messages, but this fault has no impact on the system function.

FAULT: Wrong connections, secondary network, detected by CU xx

The order of the control units in the secondary network ring doesn't match the order specified in the SSD data.

Check cables and the SSD data programming.
Note that the secondary ring must run in the opposite order of the primary ring.
The connection order must be correct, to get the correct fault messages, but this fault has no impact on the system function.

FAULT: Wrong information, control unit xx

Can be shown in conjunction with new software download and/or when commissioning a system. This fault can be generated due to a bad 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, synchronization will start automatically, otherwise synchronization has to be started via menu H8/S8 (or via EBLWin).

It is important that all control units that are supposed to exist (SSD downloaded via EBLWin) are running and are connected to the network. The network programming has to be done. It will take 90-120 seconds until this fault is corrected.

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 EBLWin.

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 EBLWin.

FAULT: Wrong type of unit xxxxxx

Check the type of unit, which should be the same as programmed via EBLWin.

FAULT: Wrong type of unit zone: xxx
address: xx
technical number xxxxxx

Check the type of unit, which should be the same as programmed via EBLWin.

FAULT: Wrong type of unit zone: xxx
address: xx and zone: yyy address: yy
technical number xxxxxx

Check the type of unit (Aspirating smoke detector Aspect Nitro / Grizzle), which should be the same as programmed via EBLWin.

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

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, zone: xxx address:
xx technical number xxxxxx

Valid for the Multipurpose I/O unit 3361/4461 monitored zone line input Z. Break on the zone line or wrong / no end-of-line capacitor (10 µF) or short-circuit (if not programmed for fire alarm at short-circuit).

No contact with main board

Shown only in the affected control unit.

- Check that "MMI board" is selected in the SSD (EBLWin, Control unit properties).
- Fault in the Main board software or hardware. Check the cable between the Main board and MMI board. This is a very serious fault. Call for service personnel/engineer immediately
- In conjunction with SSD download: Erase the SSD in the control unit and download the SSD again.

External fault; User programmable text

Programmable input is connected to any external equipment's fault output. User definable fault message (< 40 characters) has to be programmed via EBLWin.

The prefix "FAULT:" will not be automatically added.

FAULT: Corrupt program area 2,
Control unit xx

A fault in the control unit xx MMI board. There is some internal fault on the board.

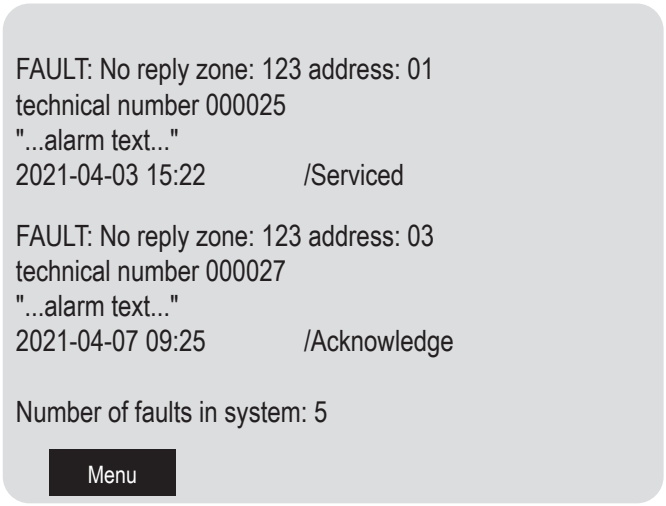
- Try to download S/W again
- Replace the MMI board

22. FAULT ACKNOWLEDGE

The LEDs **Routing equipment** "Fault tx activated" and **Fault / Disablements** "General fault" are turned on. This is indicating that output for routing equipment (Fault tx) is activated. (LEDs Fault / Disablements "Alarm devices", "System fault" and/or Fault / Disablements "Fire brigade tx" 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 EBLWin, after the time might be shown "/Serviced" = the fault is already serviced / corrected.
Any already Acknowledged fault in the list is indicated by **"/Acknowledged"**.

Example: Fault messages shown in the control unit display:



See also chapter 32. FAULT ACKNOWLEDGE (H6) on page 113.
Menu H6 is a list showing a maximum of 300 faults. This includes not acknowledged faults and/or acknowledged but not serviced / corrected faults.

- All faults must be individually acknowledged one by one.
- If a fault has been corrected before it has been acknowledged, the text "serviced" is added after the time. It still must be acknowledged.
- When a fault is corrected / serviced and acknowledged, it will disappear from the list (H6).
- 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" 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" 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).

23. COMMISSIONING

Before you connect the power supply to a control unit, all other cable connections shall be made. Check once more that they are correct.
A tip! Measure the resistance of each loop wire (L & C respectively) before turning on the power. Check that the L-wire (SA) that goes out on terminal J5:1 comes back at terminal J5:3 and so on. If the loop has short circuit isolators, only the C-wire (SB) can be measured.
Also measure the resistance between the loop wires and 24V, 0V and Earth (J2:1, 2 and 3). The resistance should be very high (mega ohm).

23.1. SINGLE CONTROL UNIT

a) Take away the rectifier fuse (F1) and the battery fuse (F2) on the main board.

In a single / standalone control unit there shall be no network board plugged on the main board.

b) Connect the batteries to the main board, terminal block "J2".

There shall be an in-line-fuse (F) on the cable between the batteries, see Technical description for the CIE.

RISK OF EXPLOSION IF BATTERY IS REPLACED BY INCORRECT TYPE. DISPOSE USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

c) Connect the rectifier to the mains (230 V AC). A cable tie shall be mounted to keep the mains wires well separated from the 24 V DC wires.

It shall be connected to a household removable fuse for the fire alarm CIE only, via a two-way circuit breaker. National regulations always must be followed. 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 rectifier screw terminals shall after the installation be correctly applied.

d) First put back the battery fuse (F2) and then the rectifier fuse (F1) on the main board.
e) LED "Operation" indicate that the 24 V DC power supply is okay (rectifier and/or battery).
f) The CIE will do a restart, see chapter 25. RESTART on page 82.
g) The site specific data (SSD) – created in EBLWin – can now be downloaded, see Planning Instructions for the system.
h) See also section 31.1. CALIBRATION OF SUPERVISED OUTPUTS (H5/A1) on page 104.

23.2. CONTROL UNITS IN A NETWORK

The EBL512 G3 system can be build up as a single TLON Network or as a redundant network, which means two networks.
In the single TLON Network, one TLON connection board (5090) has to be plugged in each control unit.
This network will be Network no. 0.
In the redundant network, two network boards (5040/5090) have to be plugged in each control unit. The redundant network supports full functionality also in case of a network fault, for example open circuit or short circuit in one of the networks. In this case there will be a Primary network (Network no. 0) and a Secondary network (Network no. 1).

23.2.1. 5040 NETWORK

a) Mount two network boards 5040 on the main board.
b) Connect the network cables to the networks board.
c) For each control unit, repeat procedure 23.1. SINGLE CONTROL UNIT on page 77, step a) to f).
d) When all control units are powered, do the programming in EBLWin.
e) For each control unit, set the control unit ID according to 17.3.8 SET CONTROL UNIT ID in Planning Instructions for this system. After the control unit ID has been set, each control unit will automatically restart and start using the new ID.
f) Download the SSD.

23.2.2. TLON NETWORK

a) Mount the TLON connection board on the main board.
b) Connect the network cables on the main board, terminal block "J4".
c) For each control unit, repeat procedure 23.1. SINGLE CONTROL UNIT on page 77, step a) to f).
d) When all control units are powered, do the TLON Network programming in TLON Manager. Include only the control units that shall be connected now, see Planning Instructions for this system.
e) Install the TLON Network.
f) Download the SSD.

If you know that one or more of the control units are to be started-up later, do as follows:

- ***In EBLWin or TLON Manager, do the TLON Network programming only for the control units that shall be connected now.***
- ***Create an SSD only for the control units that shall be connected.***
- ***Always wait to download the SSD until the TLON Network installation is ready.***

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

- ***Open the project in TLON Manager, add the new control unit(s) and install (download) according to the separate Technical description TLON Manager Kit MEW01983.***
- ***Open the SSD in EBLWin and add the new control unit(s) and download the SSD to all control units.***

TLON NETWORK INSTALLATION (SINGLE)

a) Create a project in the PC program TLON Manager.
b) Connect a PC to the modular connector "J10" (Network no. 0) in a control unit. Open the project in TLON Manager and install (download) the project.

For more information see separate Technical description TLON Manager Kit MEW01983.

TLON NETWORK INSTALLATION (REDUNDANT)

In a redundant network two Projects have to be created and installed. The Projects have to be identical but with different Project names.
One project has to be installed for Network no. 0 and one has to be installed for Network no. 1.
If a redundant TLON Network shall be used, a PC is connected to the modular connector "J11" (Network no. 1) and the same procedure as for Network no. 0 is done for Network no. 1.

After the TLON Network installation (download) it is highly recommended to restart the control units.

23.3. ADD A CONTROL UNIT INTO A NETWORK

When adding a new control unit to a "running" installation you must 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. That means the control units in the "running" installation must be upgraded. As an alternative, it is possible to download an earlier S/W version in the new control unit.

When the control unit is equipped with a network board 5040, the lowest S/W version is 3.0.0.

Both alternatives are described in Planning Instructions for this system.

5040 NETWORK:

Open the SSD for the current system via EBLWin. Add one control unit (and the units connected to it) and set the control unit ID according to 17.3.8 SET CONTROL UNIT ID in Planning Instructions.
Download the new SSD according to Planning Instructions for this system.

Do not forget to add the new control unit in the network ring, see section 16.3.7 SYSTEM PROPERTIES, PAGE 4 in Planning Instructions for this system.

TLON NETWORK:

a) Open the current project in TLON Manager
b) Add one control unit and install (download) it according to Technical description MEW01983.
Also see section TLON NETWORK INSTALLATION (SINGLE) on page 79.
c) Open the SSD for the current system via EBLWin. Add one control unit (and the units connected to it) and download the new SSD according to Planning Instructions for this system.

23.4. MAKE TWO NETWORKS ONE

a) Make sure the system properties is the same in the two systems.
b) Make sure that no presentation numbers in the systems are the same as another.
c) Choose one of the systems as starting point, for example the largest system, and add the control units and all other units from the other system.

It is very important that two or more presentation numbers (Zone or Zone-Address) in the systems are not the same.

It is not possible to merge two networks into one or copy one system and paste into another system.

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.

23.5. DELETE A CONTROL UNIT IN A NETWORK

a) Physically disconnect the control unit. This action will generate faults in the other control units.
b) Acknowledge the faults.
c) Open the SSD for the current system via EBLWin. Delete the control unit (and the units connected to it) and download the new SSD.

TLON NETWORK:

d) Open the current project in TLON Manager, delete the control unit according to the separate Technical description MEW01983.

24. UPGRADE NUMBER OF ALARM POINTS

All EBL512 G3 settings are normally factory downloaded before delivery. It is however, on site possible to upgrade the maximum number of alarm points (128 → 256 → 512).

Do not forget to add the new control unit in the network ring, see section 16.3.7 SYSTEM PROPERTIES, PAGE 4 in Planning Instructions for this system.

If you wish to upgrade the number of alarm points, a PC and EBLWin are used. The PC must be connected to the USB connector in the control unit and you must log on.

For more information, see Planning Instructions for this system.

24.1. CONTROL UNITS IN A NETWORK

All control units connected to a network are not required to have the same maximum number of alarm points set.

25. RESTART

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

FF = Fire alarms and Faults
D = Disablements
FFD = Fire alarms, Faults and Disablements
SSW = Sensor min. / max. values & performance factor, passwords, supervised output calibration values and event logs
WASV = Week Average Sensor Values
SSD = Site Specific Data, i.e. all the installation programming created and downloaded via EBLWin
S/W = Software, the EBL512 G3 system program

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 CIE has been powered off (de-energized).

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.

25.1. SAFE SHUT DOWN

Safe shut down of control unit via menu H8/S6 will save the SSW data in a Flash memory. in EBL512 G3. Before the first "Safe shut down" this memory is empty. After each "Safe shut down" the latest SSW data is saved. (Safe shut down will not save the week average sensor values)

a) Activate safe shut down via menu H8/S5.
b) Power off (de-energize)

When EBL512 G3 is powered up, the RAM will, after the restart, read the SSW data saved in the Flash memory.

25.2. RESTART TABLE

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

ACTION	DATA deleted	DATA not deleted	RESTART CODE
Power down and then power up again. (Both mains and battery disconnected)	SSW FFD, WASV	SSD, S/W SSW*	00 (+50)
Via menu H8/S5 Safe shut down of control unit.	FFD, WASV	SSD, S/W, SSW	00 (+50) 03 (+53)
Via RESET button on Main board. If this reset is done in the middle of a process, also the SSW might be deleted.	FFD, WASV	SSD, S/W, SSW	00
Via RESET button on MMI board.		SSD S/W, SSW FFD, WASV	50
Reset command via EBLWin or TLON Manager.	FFD, WASV	SSD, S/W, SSW	03 (+53)
Automatically after download of site specific data (SSD) via EBLWin.	FFD, WASV	SSD, S/W, SSW	25
Automatically after download of S/W via EBLWin. (The old S/W will be deleted.)	FFD, WASV	SSD, S/W, SSW	03 (+53)
Automatically (by the S/W itself) S/W watchdog	FFD, WASV	SSD, S/W, SSW	13
Automatically due to trying to use auto boot mode with a MMI board that doesn't support auto boot mode	FFD, WASV	SSD, S/W, SSW	15
Automatically due to some external disturbance. If this happens, call for service personnel / engineer. Depending on the restart reason, also the SSW might be deleted.	FFD, WASV	SSD, S/W, SSW	01, 02 alt. 04-12

During the restart, the fault output (relay) for the 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.

**** SSW previously saved with safe shut down is not deleted.***

25.2.1. EXPLANATION OF RESTART CODES

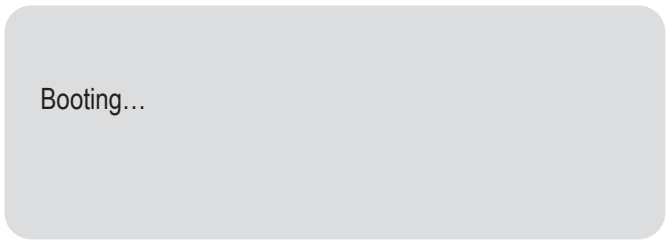
Code 00 appears after manual power on/off or S/W download.
Code 03 will appear after a normal restart.
Code 13 is always followed by an address, to be noted.
Code 25 appears after download of SSD and automatic restart.
Code 50 will appear only if the CIE has an MMI board.
Code 53 will appear only if the CIE has an MMI board.

Code 00 – 49 = Main board restart. Some data might be lost, see above.
Code 50 – 99 = MMI board restart. No data is lost.

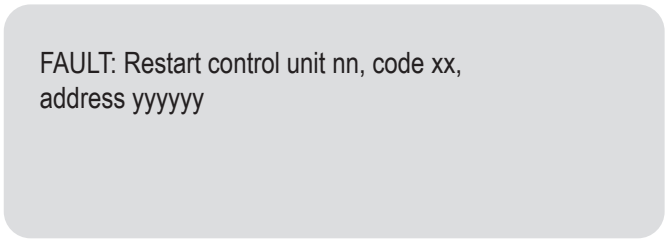
25.3. DURING RESTART

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

And after a few seconds (if not, see section 25.3.1. MEMORY FAULT on page 85):



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



Regarding code xx and address yyyyyy, see section 25.2. RESTART TABLE on page 83. This fault is also indicated by LEDs Routing equipment "Fault tx activated" and Fault / Disablements "General fault".
After the fault is acknowledged (via menu H6), the LEDs will be turned OFF if there are no other faults.

After any restart, required individual disablements have to be done.

25.3.1. MEMORY FAULT

In case of a fault in the main board S/W (system program) or the MMI board 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

(MMI board software)

FAULT: No connection with MMI board, control unit xx

(Not shown in the display, only via EBLWin, Gateway, or via another unit in the system.)

No contact with Main board

This is also indicated by LED "System fault" and the buzzer sounds steady (continuous). The Fault tx output is "activated".

A new download of the S/W is required and/or the Main board and/or the MMI board must be replaced.

After SSD download the following messages might be shown:

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), control unit xx

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

26. MENUS

The following ten (10) chapters describe the menus in the CIE and the procedures to use them.
There are different access levels for different menus. See chapter 8. USER LEVELS on page 23.
For general information on navigation in the menu system, see section 7.2. NAVIGATION / GENERAL PROCEDURES on page 22.

27. 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 and no outputs (sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4.)
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, which means fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, and so on.
See also section 5.4. INFORMATION PRIORITY ORDER on page 18.

If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) might be disabled (if set so in EBLWin).
See also chapter 33. PERFORM ZONE TEST (TEST MODE) (H7) on page 114.

a) Log on to the CIE.
b) Menu H1 is selected. Press ↵ .
c) Press ↵ . The CIE buzzer sounds, all the dots in the display are shown and all LEDs on the front are turned on. If the CIE has a printer it has made a print out: **ABC.....Z abc.....z**.
d) Press ↵ . Up to four zones can be set in test mode. Use the keypad to type the zone numbers.
e) Press ↵ .
f) Perform the test.
g) To end the test, press ↵ .

Some national regulations also require a routine test of the routing equipment.
If the routing equipment **shall not be tested**, the monthly test is completed. Press ↵ .

If the routing equipment **shall be tested**, press ▼ to highlight YES and press ↵ .
Started test is indicated by LED "Fault tx activated" and after 30 seconds also LED "Fire brigade tx".
After 60 seconds in total, the routing equipment test is ended and the LEDs are turned off. Press ↵ .

During a routing equipment test, the following will happen in the system:
The CIE "Fault tx" output will be de-activated, indicated by the LED "Fault tx activated".

The "Fault tx" is activated in normal state. 60 seconds count-down starts.

- After 30 seconds, also the CIE "Fire brigade tx" output (and corresponding programmable outputs type "routing equipment") will be activated, indicated by the LED "Fire brigade tx".
- After another 30 seconds, the test will be ended and the outputs and LEDs will return to "normal".

The zone(s) will stay in test mode until the test mode is ended. The test mode is ended in this menu or automatically one hour after the latest test alarm. This is valid for each zone respectively.

You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will stay in test mode until the test mode is ended.

Perform the test as quickly as possible, since the outputs for routing equipment are disabled during the test mode. 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 approximately 10 seconds and then the alarm point will be automatically reset. There will be a test mode alarm indication in the CIE display. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM). A detector in test mode is not able to generate a fault.

During the test, information on which zones are in test mode will be shown in all other CIE displays.

If an alarm point, for example a manual call point, is in alarm state when the test mode is ended, there will be a fire alarm activated.

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

28. DISABLE OR RE-ENABLE (H2)

a) Log on to the CIE.
b) Navigate to menu H2.
c) Press ↵ . A sub menu list (B1 – B6) will be displayed.

A whole zone, one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B2. This function can be used for temporary disablement (e.g. craftsmen working in the premises, etc.).
If the function Enhanced disablement is enabled (default), disabled alarm points cannot activate Pre warning, fire alarm and fault.
If this function is not enabled (via EBLWin), disabled alarm points cannot activate Pre-warning and fire alarm but fault can be generated. (This is a violation to the EN54-2 standard).
An Addressable manual call point can be disabled (but shall normally not be disabled). When a whole zone is disabled, the addressable manual call points will also be disabled. (This function complies with EN54-2 but can be changed in EBLWin).

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/B1. (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/B2.
Disabled output will stay in (or return to) the normal condition for the output respectively. (Collectively disabled outputs via menus H2/B3 – B4 are not limited and must not be counted!)
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/B1-B2), or use automatic re-enablement for zones and alarm points.
Disablements are listed in menus H4/U1 & U2 from which it is also possible to get a print-out.
LED Fault / Disablements "General disablements" is indicating one or more disablements in the system.
Disablements are also shown in the display.
An example:

```
Zone 001 disabled
yyyy-mm-dd hh:mm
Zone 002 address 01 disabled
yyyy-mm-dd hh:mm
....
          Number of disablements in system: 2
```

See chapter "The information area priority order", page 24, regarding priority order.
Disablements (and faults) are indicated by a 2-sec. beep when you close the control unit door.

28.1. ZONE OR ZONE/ADDRESS (H2/B1)

When a whole zone is disabled, all alarm points within the zone will be disabled. Up to 512 zones can disable at the same time. The zones don´t have to be in consecutive order, you can disable any zones between 1-999999.

Alarm points can be individually disabled.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B1
c) Press the soft key Change type of disablement to toggle between:
   - **Zone** 000
   - **Zone** 000 **address** 000
   - **Zone** 000 **address** 000 `Smoke only`
   - **From zone** 000 **to zone** 000
d) If "Automatically re-enablement" shall be used, time press ▼ and ▶. Insert time (hh:mm). Default is current time + 3 hours.
e) Press ↵ to disable.

RE-ENABLE:

f) Use the ⟶| to toggle between:
   - **Disable**
   - **Re-enable list**
g) Select “Re-enable list”.
h) Press ▼ to select the Zone or Zone / Address to be re-enabled.
i) Press ↵ to re-enable. Re-enabled zone or zone / address will disappear from the list, indicated with a beep.

The sensor values for disabled analog smoke detectors in NORMAL mode will not be used for calculation of the week average sensor value, i.e. only the values saved before and after the disablement will be used for this calculation.

28.2. OUTPUT (H2/B2)

All programmable outputs in the CIE and outputs in units connected to the COM loops (except outputs of type "Alarm device" or "Alarm device for evacuation") can be individually disabled.
If you try to disable an output of type "Alarm device" or "Alarm device for evacuation" it will be treated as if it does not exist.

Disabled output: Even if its control expression / control group (trigger condition) is fulfilled (true), the output will not be activated.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B2.
c) Press the soft key Change type of disablement to toggle between:
   - Loop unit 000000 output 0
   - Control unit 00 S0
   - Control unit 00 R0
   - Control unit 00 expansion board output 0.
d) Type the technical number and output number address.
e) Press ↵ to disable.

RE-ENABLE:

f) Use the ⟶| to toggle between:
   - **Disable**
   - **Re-enable list**
g) Select “Re-enable list”.
h) Press ▼ to select the output that shall be re-enabled.
i) Press ↵ to re-enable.

28.3. OUTPUT TYPE (H2/B3)

Via menu B3 outputs of the same type can be collectively disabled in a selected control unit, or in all control units.

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.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B3.
c) Press the soft key Change type of disablement to toggle between:
   - Control outputs
   - Ventilation outputs
   - Extinguishing outputs
   - Interlocking outputs
d) Type the number of the control unit
e) Press ↵ to disable.

RE-ENABLE:

f) Use the ⟶| to toggle between:
   - Disable
   - Re-enable list
g) Select “Re-enable list”.
h) Press ▼ to select the output type that shall be re-enabled.
i) Press ↵ to re-enable.

28.4. ALARM DEVICES (H2/B4)

All outputs of type "Alarm device" and "Alarm device for evacuation" can be collectively 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.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B4.
c) By default “All alarm devices” is selected.
d) Press ↵ to disable.

RE-ENABLE:

e) Use the →| to toggle between:
   - Disable
   - Re-enable list.
f) Select “Re-enable list”.
g) Press ↵ to re-enable.

28.5. ROUTING EQUIPMENT (H2/B5)

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 and 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 for routing equipment is indicated by LEDs Fault / Disablements "General disablements" and "Fire brigade tx".
Disabled output will stay disabled until re-enabled again via this menu.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B5.
c) Press ◀ ▶ to toggle between:
   - Fire (by default Fire is selected)
   - Fault
d) Press ↵ to disable.

RE-ENABLE:

e) Use the →| to toggle between:
   - Disable
   - Re-enable list
f) Select “Re-enable list”.
g) Press ▼ to select the type that shall be re-enabled.
h) Press ↵ to re-enable.

28.6. ALERT ANNUNCIATION (H2/B6)

For alarm points / zones programmed for Alert Annunciation (via EBLWin) is normally the AA function enabled via a time channel, for example enabled daytime (during working hours) and disabled night time.
As an alternative, the AA function can be continuously enabled (always on).

Via this menu (H2/B6) it is possible to disable the AA function, i.e. the AA function will be turned off for the alarm points / zones programmed for Alert Annunciation in spite of the time channel is "on" or if they are programmed to be continuously enabled. The AA function will be turned off until re-enabled via this menu.

DISABLE:

a) Log on to the CIE.
b) Navigate to menu B6.
c) By default “Alert annunciation” is selected.
d) Press ↵ to disable.

RE-ENABLE:

e) Use the →| to toggle between:
   - Disable
   - Re-enable list.
f) Select “Re-enable list”.
g) Press ↵ to re-enable.

29. 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. 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 CIE for the whole system. Every day (at midnight) the calendar and clock will be synchronised.

a) Log on to the CIE.
b) Navigate to menu H3.
c) Press ↵ . Depending on if it is the date, time and/or the day that shall be set, press ▶ and ▼ to highlight it.
d) Use the keypad to enter new values. Press ↵ .

To exit the menu without making any changes, press ESC.

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.

30. PRESENT SYSTEM STATUS (H4)

If a printer is mounted (an option for control unit 5000), it is possible to get a print-out from some of the menus. In this case, the soft key "Print" shall be used.

During printing "Print" will be replaced with "Abort printing". When "Abort printing" is pressed the soft key text immediately changes back to "Print" but the items already stored in the print buffer will be printed (up to five items).

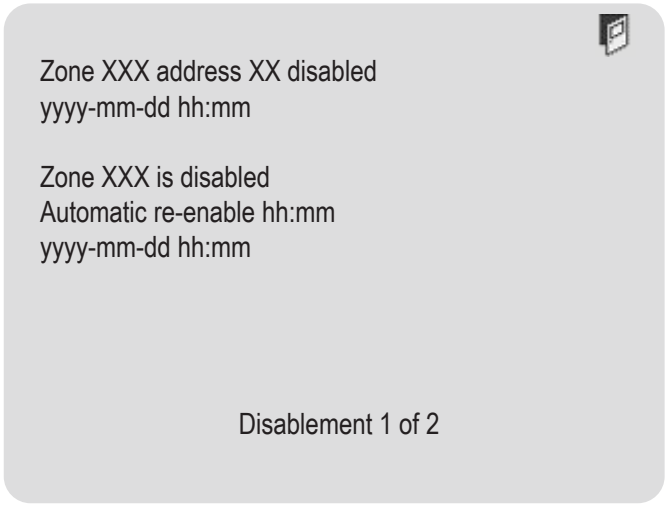
a) Log on to the CIE.
b) Navigate to menu H4.
c) Press ↵. A sub menu list (U1 – U8) will be displayed.

30.1. DISABLEMENT (H4/U1)

This is a dynamic list of all disablements in the system. Also alarm point(s) and/or zones disabled via 19.2.3. SINGLE WITH AUTOMATIC DISABLEMENT on page 52 are shown in the list.

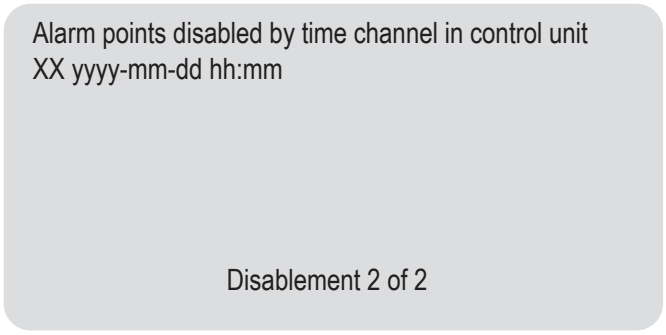
If there are no disablements --List is empty-- will be shown.

a) Log on to the CIE.
b) Navigate to menu U1.
c) Scroll in the list with ▼ ▲.



d) To exit the menu press ESC.

Disablements by time channels are listed in this menu, but not with detailed information about zone and zone address, see example below. For more information, see menu H4/U2.



30.2. DISABLEMENT BY TIME CHANNEL (H4/U2)

This is a static list of all disablements by time channels in the system. The list has up to four items per page. Indicated by LED "General disablements".

a) Log on to the CIE.
b) Navigate to menu U2.
c) Scroll in the list with ▼ ▲.

Zone XXX address XX disabled by time Channel

Zone XXX address YY disabled by time channel.

Number of disablement by time channel: 2

d) To exit the menu press ESC.

All other disablements are listed in menu H4/U1.

30.3. OPEN DOORS (H4/U3)

If any door in the system is open the following symbol is shown in the display: 
See also chapter 17. OPEN DOOR on page 35.
This menu is a dynamic list of all open doors in the system.

a) Log on to the CIE.
b) Navigate to menu U3.
c) Scroll in the list with ▼ ▲.

Door open control unit 00
yyyy-mm-dd hh:mm

Door open control unit 01
fire brigade panel 00
yyyy-mm-dd hh:mm

Open door 1 of 2

d) To exit the menu press ESC.

30.4. SENSOR VALUES (H4/U4)

Information on heat, smoke or multi detector sensor values.

a) Log on to the CIE.
b) Navigate to menu U4.
c) Write the technical number for a specific sensor or press ↵ to start as from sensor 000001.
   If there are no sensors (analog detectors) when ↵ is pressed, the list view will not open.
d) Scroll in the list with ▼ ▲.
e) To exit the menu press ESC.

For an Analog multi detector 4300 / 4400 in NORMAL mode:

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

For an Analog heat detector 3308 / 3309 / 4408 / 4409 in NORMAL mode:

Sensor: 001-03 (technical address 000002)	
Momentary: XX°C	Min: XX°C
Algorithm: XX	Max: XX°C

For an Analog multi detector 4400 in Advanced mode:

Sensor: 001-01 (technical address 000001)	
Momentary: XX.X%/m	Weekly: XX.X%/m
Perf factor: X.XX%/m	Min: XX.X%/m
Algorithm: Xxxxxx	Max: XX.X%/m
Momentary: XX°C	Min: XX°C
	Max: XX°C

For an Analog multi detector with CO 4402 in NORMAL mode:

Sensor: 001-01 (technical address 000001)	
Momentary: XX.X%/m	Weekly: XX.X%/m
Perf factor: X.XX%/m	Min: XX.X%/m
No. of months left: XX	Max: XX.X%/m
Momentary: XX°C	Min/Max: XX/XX°C
Momentary: XXppm	Weekly: XXppm

For an Analog multi detector with isolator 4400I in Advanced mode:

Sensor: 001-01 (technical address 000001)	
Momentary: XX.X%/m	Weekly: XX.X%/m
Perf factor: X.XX%/m	Min: XX.X%/m
Algorithm: Normal	Max: XX.X%/m
Momentary: XX°C	Min: XX°C
Install date: XXXX-XX-XX	Max: XX°C

30.4.1. EXPLANATION TO THE SENSOR VALUES

Momentary: Momentary value in this menu will be updated after every detector polling, approx. every 6th second.
Weekly in NORMAL mode: The very first week average sensor value for the 430x and 440x detectors in NORMAL mode is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes can no fire alarm be activated and "Weekly: 00.0%/m" will be shown. The "Weekly" value will thereafter be updated every week.
Weekly in Advanced mode: For the 440x detectors in Advanced mode the "Weekly" value is 00.0%/m by delivery. It will be updated the very first time after 13 minutes. It will thereafter be calculated every 13th minute but will then only be changed downwards if required. After 18 hours it can be changed downwards or upwards and after additional 18 hours (36 hours in all) it can be changed downwards or upwards and it is also saved in the detector's EEPROM, i.e. that value will be used after the detector has been powerless. The "Weekly" value for the 440x detectors in Advanced mode is also called the "Contamination Compensation Value (CCV).
Performance factor: The "Performance factor" and "Min. / Max." values are updated at midnight (00:00), which means the values shown are from the previous day. For more information on performance factor, see the Planning instructions for the system.
Algorithm: Shows the algorithm that is currently in use.
Install date: The date is set in the detector when it's powered up by the loop for the first time.

Algorithm - NORMAL mode	Abbreviations
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
Normal sensitivity (3%/m) & Slow detection (35 s)	N-35
High sensitivity (2.4%/m) & Slow detection (35 s)	H-35
Low sensitivity (3.6%/m) & Slow detection (35 s)	L-35
Heat algorithm, Class A1	A1
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec

Algorithm - Advanced mode	Abbreviations
Normal area	Normal
Clean area	Clean
Smoke - Steam area	Smoke
Cooking - Welding area	Welding
Heater area	Heater

30.5. SENSORS ACTIVATING SERVICE SIGNAL (H4/U5)

Menu H4/U5 is a list of the sensor(s) having activated service signal.
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, section "Service signal".
Regarding Lifetime limit service signal, see Planning Instructions.

Service signal is only information that the sensor has to be replaced with a new/clean sensor soon.
Service signal from an Analog multi detector with CO (4402) can also indicate that the CO sensor's life time (5 years) is reached and the detector has to be replaced.
Service signal from an Aspirating smoke detector Aspect Grizzle or Lazeer: Contact service personnel.

After replacement of a detector, the service signal must be acknowledged for that detector, see section
34.2. ACKNOWLEDGE SERVICE SIGNAL (H8/S2) on page 117.

a) Log on to the CIE.
b) Navigate to menu U5.
c) Scroll in the list with ▼ ▲.
d) To exit the menu press ESC.

If there are no sensors activating service signal -- List is empty-- will be shown.

30.6. TECHNICAL WARNING (H4/U6)

A technical warning is an event that is neither a fire alarm nor a fault.
It is information that something has or has not happened and is generated via a programmable input. The text message, shown in the CIE display, is user programmable (up to 40 characters).
If one or more technical warnings are activated in the system, the technical warning symbol is shown .

a) Scroll in the list with ▼ ▲.

b) To exit the menu press ESC.

If there are no technical warnings --List is empty-- will be shown.

The technical warnings are normally not latched, but can via EBLWin be set to be "latched". If an programmable input is activated with a latched technical warning, the technical warning must be reset via this menu.

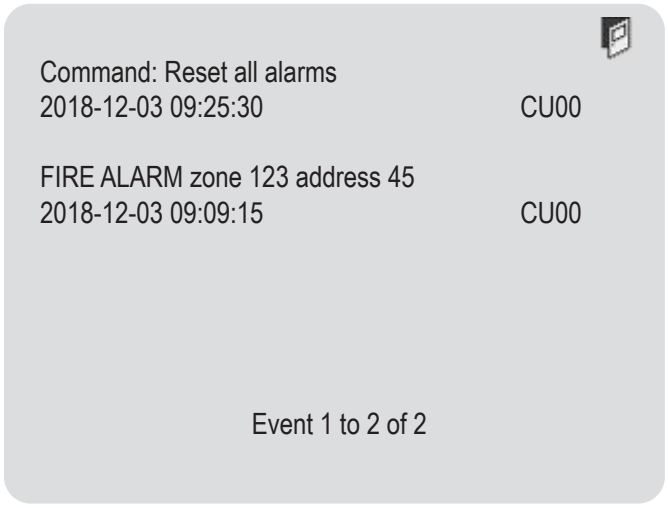
30.7. EVENT LOG (H4/U7)

Three event logs (3 x 999 events) are available:

- Alarm log (alarm events, for example fire alarm, fire alarm reset, and so on)
- Interlocking log (interlocking events only)
- General event log (all other type of events)

The origin of the event, for example CU00 (see below), can instead be EBLWin, EBLWeb or Ext# (External system no. # connected via Gateway).

a) Log on to the CIE.
b) Navigate to menu U7.
c) Press ▼ or ▲ to scroll between:
   - Alarm log
   - Interlocking log
   - General event log
d) Press ↵ to select an event log.
e) Scroll in the list with ▼ ▲.



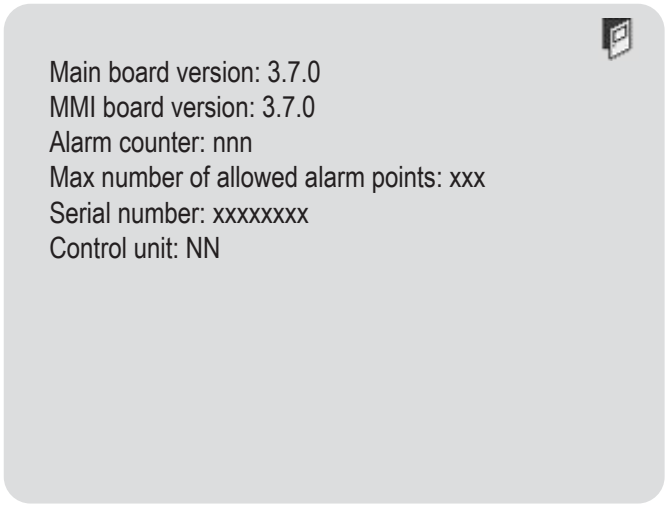
f) To exit the menu press ESC.

The most recent event is on top of the list. If there are no events ---List is empty--- will be shown.

30.8. INFORMATION (H4/U8)

This menu can be used to show the following information for the specific control unit you currently use:
Main board version: The S/W (software / firmware / system program) version downloaded to the Main board.
MMI board version: The S/W (software / firmware / system program) version downloaded to the MMI board.
Alarm counter: The alarm counter is increased with "1" every time the CIE enters a real "fire alarm condition" (i.e. fire alarm indication in the display, LEDs "Fire" are lit and the CIE buzzer is sounding). Alarms from zones in test mode will not be counted. It starts on 000 and goes to 999. It can be reset to 000 via EBLWin (Control unit menu "Reset alarm counter…"). The value will be retained also after the CIE has been completely powerless. During synchronization, the alarm counter will also be synchronized, so that the highest value is stored in each control unit in the system.
Max. number of allowed alarm points: that can be used in this control unit, i.e. 128, 256 or 512. (Configured number of alarm points.)
Serial number: The manufacturer's serial number (year YY, week WW, plant P, number of the main board NNN). Used e.g. when upgrading max. no. of allowed alarm points. Control unit number: 00-29.

a) Log on to the CIE.
b) Navigate to menu U8.



c) To exit the menu press ESC.

31. SERVICE (H5)

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

Only authorized personnel have access to menu H5 and a password for level 3A (Service technician) is required.

a) Log on to the CIE.
b) Navigate to menu H5.
c) Press ↵ . A sub menu list (A1 – A9) will be displayed.

Some tasks for Service technicians are done via EBLWin. Via PC and EBLWin 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 and Display units.

To be able to log on to an EBL512 G3 CIE via a PC and EBLWin, the PC has to be provided with an EBLWin key (5094). This USB device has a number (a key) required for the log on.

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

31.1. 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.
The voltage outputs (0-2) on the I/O exp. boards 4583.
When all alarm devices have been connected, including required end-of-line devices and when the SSD is downloaded, a calibration has to be done.

FUNCTION

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.

a) Log on to the CIE.
b) Navigate to menu A1.
c) Press ↵ to start calibration of supervised outputs.
d) Press ↵ again when the calibration is ready.
e) To exit the menu press ESC.

After the calibration it is recommended to do a "Safe shutdown of the control unit", see menu H8/S5. This will save the SSW data (e.g. the calibration values) in a Flash memory.

31.1.1. END-OF-LINE DEVICES

Control unit outputs S0-S3, programmed as Supervised (1-50kΩ): One end-of-line resistor (33kΩ) in the last unit or one resistor (33kΩ) in up to five units.

Control unit outputs S0-S3, programmed as Supervised (EN54-13): One end-of-line device 4472 in the last unit on the line

4583 outputs 0-1: Calibration value range 4.7 kΩ - 40 kΩ.

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.

31.2. SENSITIVE FAULT DETECTION MODE (H5/A2)

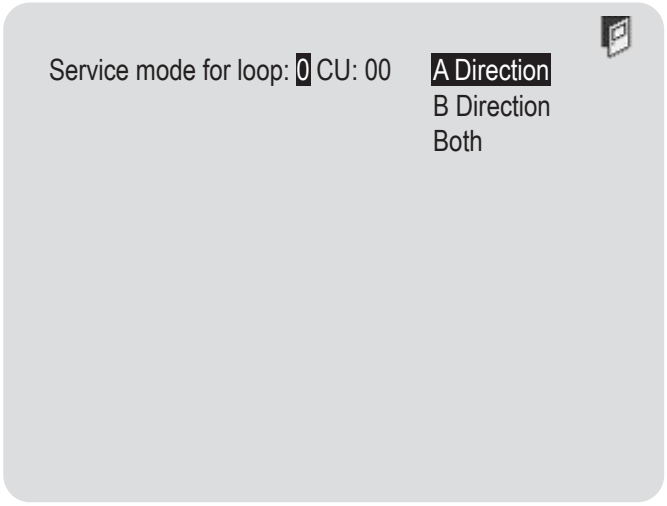
To increase the possibilities to detect faults during the commissioning, it is possible to use the "Sensitive fault detection mode". The time delay for each fault will then be reduced, i.e. you might find some faults now instead of later. The "Sensitive fault detection mode" turned on is indicated by the LED Routing equipment "Fault tx activated" and the "Fault" output for routing equipment is "activated" and in the display's symbol area.

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

a) Log on to the CIE.
b) Navigate to menu A2.
c) If sensitive fault detection mode is not active: Press ↵ to activate.
d) If sensitive fault detection mode is activated: Press ↵ to deactivate.
e) To exit the menu press ESC.

31.3. 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. (Since there is voltage on the loop, short circuit isolators will work normally.) It is recommended to do this check also when EBL512 G3 is power supplied via the backup battery only, since the battery voltage can be different (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" and the symbol is flashing.

If the user stays in this menu window, without doing any actions, there will be a timeout after 1 hour, and the user is logged off. If the user logs off this menu, the "Service mode for COM-loop" will be terminated automatically.

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 Tech addr A <-> B,
loop x, control unit xx

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

a) Log on to the CIE.
b) Navigate to menu A3.
c) Write loop number and control unit number.
d) Press ▼ or ▼ to scroll between:
   - A Direction
   - B Direction
   - Both
e) To exit the menu press ↵ or ESC.

When you leave this menu by pressing ESC or ↵ the service mode will be turned off, and the communication will be turned on in the normal way.

31.4. DISPLAY CURRENT CONSUMPTION IN UNIT (H5/A4)

POWER SUPPLY (CONTROL UNIT)
Voltage: The 24V measured by the CPU on the main board. Corresponds to the output voltage at the power supply outputs on connector J3.
Earth voltage: Measured from 0V (connector J4:2) to earth.
Current from power supply: The total current consumption (including the charging current at 24V) for the selected control unit (CIE) when it is connected to the mains (230 V AC), i.e. this function is not working by battery backup.

BATTERY
Voltage: The battery voltage at connector J4:4-5.
Charging current: The battery charging current for the selected control unit (CIE).
Temperature: The temperature detected by the battery temperature sensor.
Resistance in battery circuit: During the battery capacity check the resistance in the battery circuit is measured. A resistance > 500 mΩ will result in a "Low battery capacity" fault. Checked every 15 minutes.

a) Log on to the CIE.
b) Navigate to menu A4.
c) Write control unit number and press ↵ .
d) Please wait.

Power supply (control unit xx)
Voltage: xx.xx V
Earth voltage: xx.xx V
Current from power supply: xxx mA

Battery
Voltage: xx.xx V
Charging current: x mA
Temperature xx°C
Resistance in battery circuit: xxxxx mΩ

e) To exit the menu press ↵ or ESC.

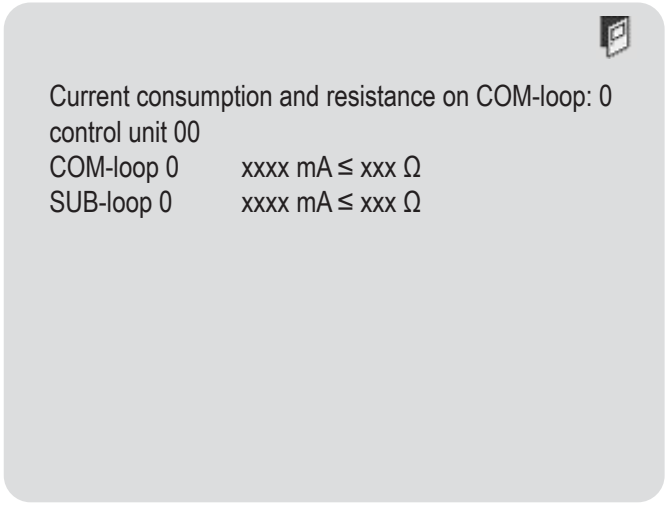
The information is automatically updated every 5th second.

If you get "No reply from control unit....." the control unit don't exist or don't answer.

31.5. DISPLAY CURRENT CONSUMPTION ON COM-LOOP (H5/A5)

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

a) Log on to the CIE.
b) Navigate to menu A5.
c) Write loop number and control unit number and press ↵ .
d) Please wait.



e) To exit the menu press ↵ or ESC.

The information is automatically updated every 5th second.

No or very small current consumption (< 10 mA) cannot be presented correctly / precisely since the accuracy is ±5 mA.

If you get "No reply from control unit....." the control unit don't exist or don't answer.

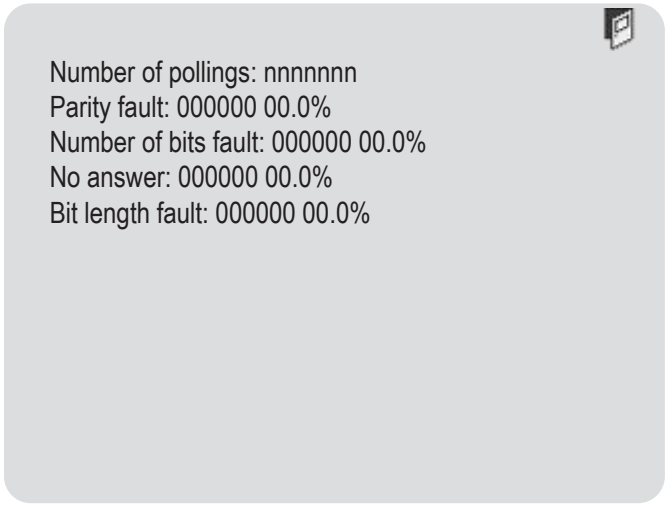
31.6. DISPLAY STATISTICS FOR COMMUNICATION (H5/A6)

The statistics can be used during commissioning, service, and so on.
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/S1).

a) Log on to the CIE.
b) Navigate to menu A6.
c) Use the soft key Change type of loop to toggle between:
   - COM loop
   - SUB-loop
d) Write loop number and control unit number and press ↵.
e) Please wait.



f) To exit the menu press ↵ or ESC.

The information is automatically updated every 5th second.

If you get "No reply from control unit....." the control unit don't exist or don't answer.

31.7. 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 CIE:
This can also be done via jumper "J4" inside the DU respectively.

- Ext. Presentation unit
- Alert Annunciation units
- Fire Brigade Panels
- General Control Panel

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

The units have to be in operation and in quiescent condition, which means the units have to have an address already.

a) Log on to the CIE.
b) Navigate to menu A7.
c) Write control unit number and the display unit address and press ↵.

OR

d) Press ▶ to select All and press ↵ . (All display units in the selected control unit.)

Address setting mode for display unit 00,
control unit 00 activated

e) Edit the address in each display unit respectively.
f) To exit the menu press ↵ or ESC.

31.8. SETUP WIRELESS DETECTORS (H5/A8)

This function can be used by commissioning / service engineer to set a Base station for wireless units (4620) to one of the following modes:

Register - in order to register one or more wireless units 4611 / 4614 / 4645 to the Base station.

Unregister - in order to unregister one or more wireless units 4611 / 4614 / 4645 from the Base station.

Install - in order to change the communication from normally every 2nd minute to every 5th second, to be used during commissioning, and so on.

To set the Base station to any of the modes above the Base station must be in a "Normal state", i.e. not set to any of the modes. For example, a Base station set to e.g. "Register" mode must be set back to "Normal state" before it can be set to any other mode.

For more information, see Technical description MEW01764.

a) Log on to the CIE.
b) Navigate to menu A8.
c) Write the technical number for the base station.
d) Press ▼ or ▲ to scroll between:
   - Register
   - Unregister
   - Install
e) Press ↵ to select a state.

SET TO NORMAL STATE

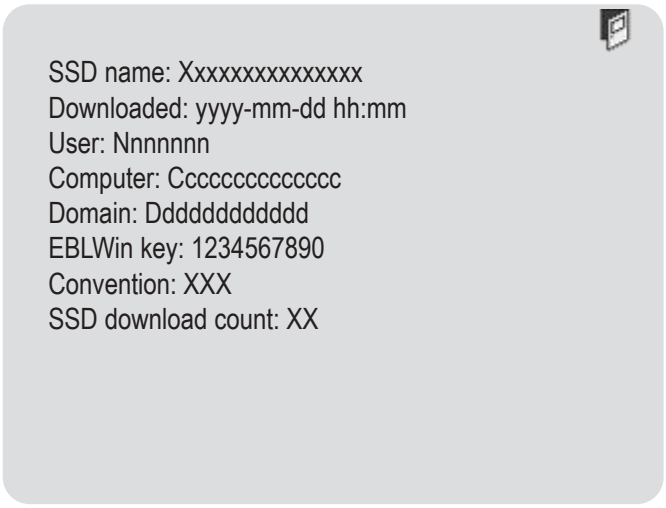
f) Use the soft key →| to toggle between:
   - Set base station mode
   - Base station mode
g) Select the base station with the correct technical number in the list and press ↵ . The base station is now back in Normal state. The Base station will disappear from the list, indicated with a beep.
h) To exit the menu press ESC.

The Base station must be set back to the "Normal state" for the wireless detectors to function normally.

31.9. SSD INFORMATION (H5/A9)

SSD name: As written in the EBLWin dialog box "System Properties" (Name).
Downloaded: Date and time when the SSD was downloaded. User name for the person who performed the SSD download.
Computer: Computer name (if programmed) for the PC that was used for the SSD download.
Domain: Domain (if programmed) for the PC that was used for the SSD download.
EBLWin key: The unique number for EBLWin key.
Convention: Country specific functions, default EBLWin settings, and so on, is set in conjunction with the installation of EBLWin.
SSD download count: Number of times the SSD has been downloaded.

a) Log on to the CIE.
b) Navigate to menu A9.



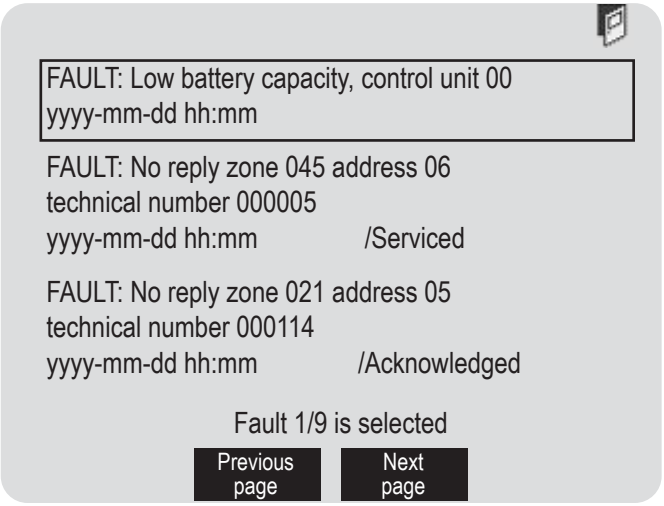
c) To exit the menu press ESC.

32. FAULT ACKNOWLEDGE (H6)

Regarding fault indication, and so on., see chapter 20. FAULT and 21. FAULT MESSAGES where all faults messages are listed.
See also chapter 22. FAULT ACKNOWLEDGE.
All faults and the status / action are stored in the event log and can be listed, see section 30.7. EVENT LOG (H4/U7).
In menu H6 can be listed up to 300 faults:

- Not corrected (not serviced) and not acknowledged faults (no status information)
- Not corrected (not serviced) but acknowledged faults (/Acknowledged)
- Corrected (serviced) but not acknowledged faults (/Serviced)

a) Log on to the CIE.
b) Navigate to menu H6.
c) Press ▼ or ▲ to scroll in the list:
d) To acknowledge a fault, select it and press ↵ .



e) To exit the menu press ESC.

If there are no events --List is empty-- will be shown.

The most recent fault is on top of the list. A serviced fault that is acknowledged will disappear from this list.

33. PERFORM ZONE TEST (TEST MODE) (H7)

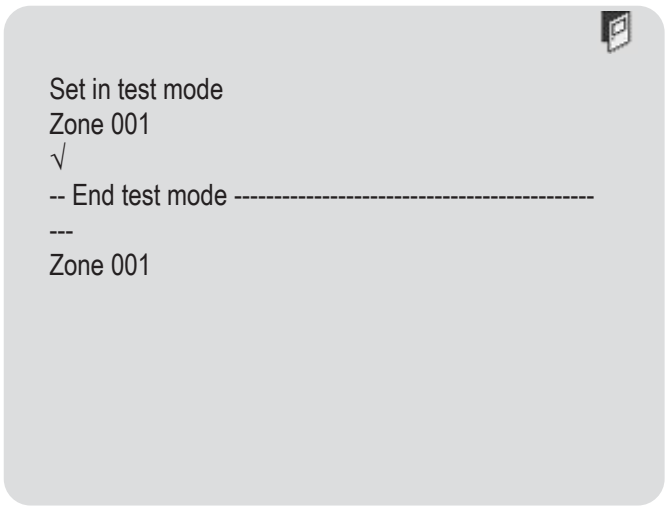
Normally, zones are tested during the monthly test via menu H1. Via this menu (H7) it is also possible to perform the zone test. Up to 100 zones can be set in test mode at the same time. The zones don´t have to be in consecutive order, you can add any zones between 1-999999.
In test mode, only the alarm points are tested.
No outputs (sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4 and any output via menu H8/S8 or via EBLWin when you are logged on.)

If a real fire alarm is activated by an alarm point not in test mode, the normal fire alarm functions will be activated, which means fire alarm presentation, outputs activated, routing equipment activated, and so on. See also section 5.4. INFORMATION PRIORITY ORDER on page 18.

If the control unit door is left open, the output(s) for routing equipment might be disabled (if set so in EBLWin).

One or more zones in test mode are indicated by the LED "Test mode". The green polling LED in the 440x detectors will be turned off in test mode.
The zones are set one by one in test mode and the test mode has to be ended for each zone one by one.

a) Log on to the CIE.
b) Navigate to menu H7.
c) Press the soft key Single/Multiple to toggle between:
   - **Zone** 000
   - **From zone** 000 **to zone** 000
d) Write the zone number (for example 001) and press ↵ .
e) Press ↵ to start the test. Indicated by "√" and a beep.



END TEST MODE

f) Use the soft key →| to toggle between:
   - Set in test mode
   - End test mode list
g) After the testing, select a zone in the "End test mode" list and press ↵ .
   The test mode must be ended for all zones.

33.1. DURING THE TEST

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 approx. 10 seconds and then the alarm point will be automatically reset. There will be a test mode alarm indication in the CIE display. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).
A detector in test mode is not able to generate a fault.

During the test, the following information will be shown in all other CIE displays:
Zone 001 in test mode
Zone 002 in test mode
…and so on.

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

33.2. AFTER THE TEST

The zone(s) will stay in test mode until the test mode is ended. The test mode is ended in menu H7 or automatically one hour after the latest test alarm. This is valid for each zone respectively.
For example, if you set 4 zones in test mode, it should be possible to finish the test within 1 hour. But if you have 50 zones in test mode, and start testing from zone 1, it will probably take more than 1 hour to test all zones.
After one hour, the first zones will begin to end test mode, one by one.

You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will stay in test mode until the test mode is ended, see above.

If an alarm point (for example a manual call point) is in alarm state when the test mode is ended, there will be a fire alarm activated.

34. MAINTENANCE (H8)

Only authorised personnel have access to menu H8 and a password for level 3A (Service technician) is required.

a) Log on to the CIE.
b) Navigate to menu H8.
c) Press ↵ . A sub menu list (S1 – S8) will be displayed.

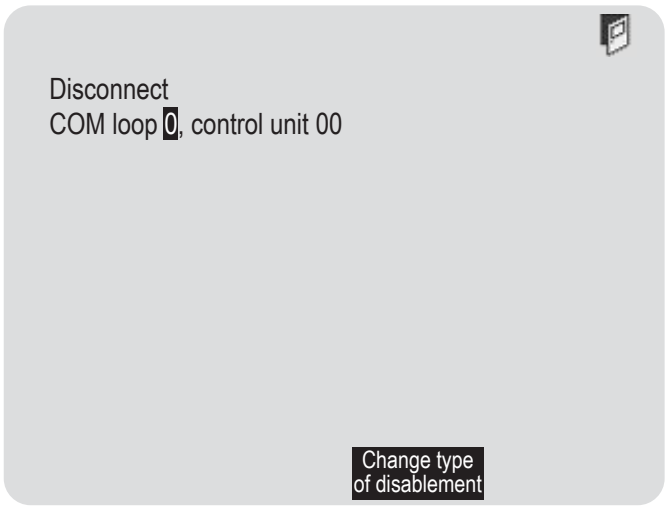
34.1. DIS- / RE-CONNECT LOOP / ZONE LINE INPUT (H8/S1)

Before physical connection / disconnection of loop units, etc. the loop (or zone line) shall be disconnected (voltage free) in order to avoid damage on the units and the CIE. Zone line input requires an 8 zones expansion board 4580 in the control unit or an Addressable multipurpose I/O unit 4461 connected on a COM loop.

One or more disconnected "loops" are indicated by LED Fault / Disablements "General disablements", the symbol is flashing, and disconnected loops are listed in menu H4/U1.

When you re-connect a COM loop all the statistics shown in menu H5/A6 will be erased and set to "0".

a) Log on to the CIE.
b) Navigate to menu S1.
c) Use the soft key Change type of disablement to toggle between:
   - COM loop
   - SUB-loop
   - Zone line input (exp. board)
   - Zone interface input (loop unit)



d) Write, for example loop number and control unit number, and press ↵ .
e) Press ↵ to disconnect. Indicated by "√" and a beep. The loop will directly be shown in the Re-connect list.

RE-CONNECT

f) Use the soft key →| to toggle between:
   - **Disconnect**
   - **Re-connect list**
g) Select an item in the re-connect list and press ↵ . Re- connected loop will disappear from the list, indicated with a beep.
h) To exit the menu press ESC.

34.2. ACKNOWLEDGE SERVICE SIGNAL (H8/S2)

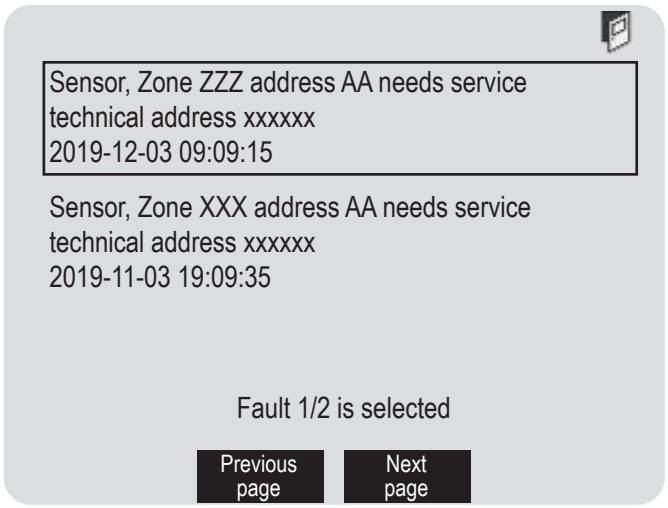
When SERVICE signal is generated in the system, following symbol is shown in the display's symbol area:
See also section 30.5. SENSORS ACTIVATING SERVICE SIGNAL (H4/U5) on page 100.
Sensor = analog smoke detector.

Only 430x, 4400 and 4401 sensors in NORMAL mode have to be acknowledged: When service signal from such a sensor is acknowledged, the sensor is given a default week average sensor value (same as for a new / clean sensor = 0.1 %/m). 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.

Sensors 4400, 4401 set in advanced mode and 4402 (always set in normal mode) do not have to be acknowledged if they are replaced after generating service signal. They will be automatically reset.

If a sensor 430x, 4400 and 4401 in NORMAL mode is replaced without having generated service signal, it has to be reset to the default week average sensor value via menu CLEAR WEEKLY AVERAGE (H8/S3).

a) Log on to the CIE.
b) Navigate to menu S2.
c) Press ▼ or ▲ to scroll in the list:
d) To acknowledge a sensor, select it and press ↵ . The acknowledged sensor disappears from the list.



e) To exit the menu press ESC.

If there are no sensors ---List is empty--- will be shown.

The most recent service signal is on top of the list. A serviced fault that is acknowledged will disappear from this list.
The "Service symbol" will be turned off when all sensors have been acknowledged.

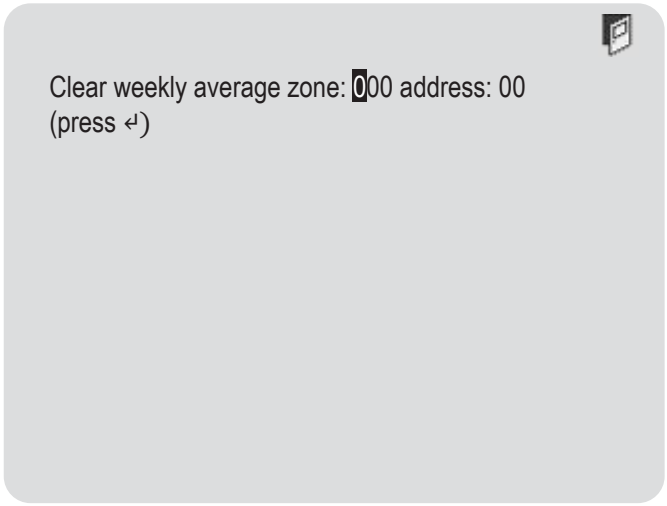
34.3. CLEAR WEEKLY AVERAGE (H8/S3)

Valid only for 430x, 4400 and 4401 sensors in NORMAL mode: 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 (i.e. "1" = 0.1 %/m), 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.

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.

a) Log on to the CIE.
b) Navigate to menu S3.
c) Write the wanted zone and address and press ↵ .



d) To exit the menu press ESC.

34.4. TEST OF ALARM DEVICES (H8/S4)

The programmable outputs of type "Alarm device" or "Alarm device for evacuation" can be collectively activated via this menu (H8/S4), which makes it possible to test the alarm devices. This procedure includes Addressable siren 4477 and Addressable sounder base 4479 / 3379, wireless detector 4611, and all alarm devices 4480, 4481, 4482, 4487.
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.
For the alarm devices 4477, 4479, 3379, 4611, 4480, 4481, 4482, and 4487, the tone with the highest priority level (and type "alarm device") will be automatically selected.

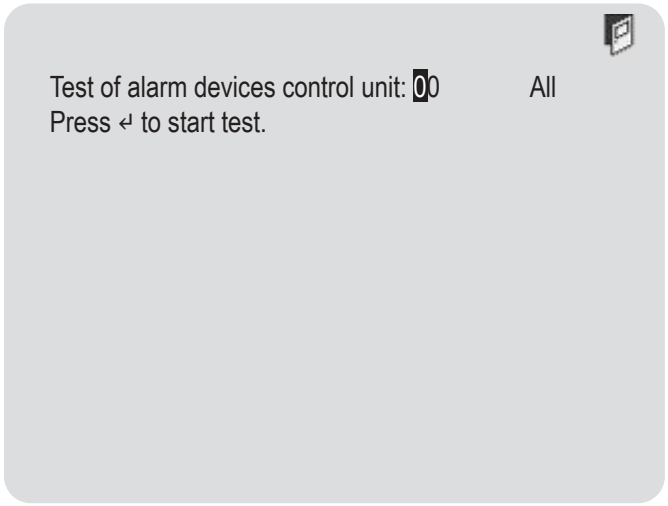
Disabled (and silenced) alarm devices will also be tested, and will also sound during the test.

The test will continue for one hour if not stopped via this menu (H8/S4) or if a fire alarm is activated in the system. After one hour, when the test mode is ended, a message is shown in the General event log (menu H4/U7).

a) Log on to the CIE.
b) Navigate to menu S4.
c) Write control unit number and press ↵ to start the test. (All alarm devices in one control unit)

OR

d) Press ▶ to select **All** and press ↵ (All alarm devices in all control units.).



END THE TEST

e) Press ↵ to end the test.
f) To exit the menu press ESC.

34.5. SAFE SHUT DOWN OF CONTROL UNIT (H8/S5)

It's recommended to do a safe shut down of control unit before you power off a control unit, which means disconnecting it from 230 V AC and battery. Safe shut down will save the SSW in a Flash memory and put the CPUs at rest.
If safe shut down is not done, it might also generate a fault when you power up the control unit again:
FAULT: Read/write site data (SSW), control unit xx").

See also chapter 25. RESTART on page 82.

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

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

a) Log on to the CIE.
b) Navigate to menu S5.
c) Write control unit number and press ▼ to select “Yes“.

Shut down control unit 00? No
Yes

d) Press ↵ to start the safe shut down. The SSW is now saved and the Main board and MMI board CPUs are at rest.

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. During the countdown the buzzer will start sounding since the communication between the Main and MMI boards has stopped. (Can be silenced via push button "Silence buzzer".)

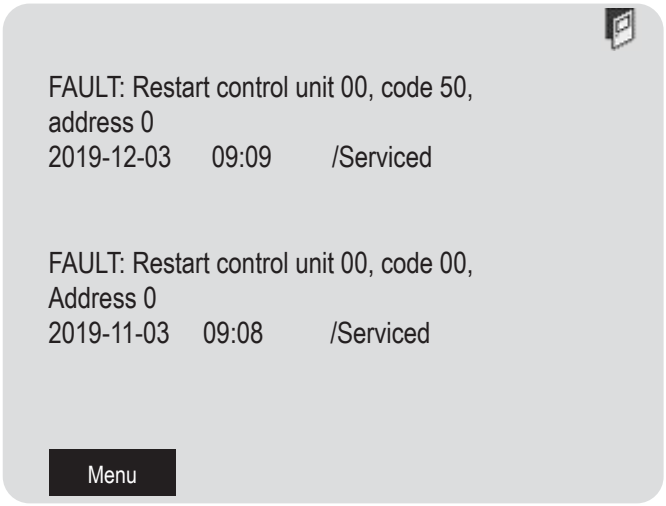
e) Break the power of the control unit.

OR

f) If not, the control unit will restart automatically after 300 seconds (5 minutes).

34.5.1. AFTER RESTART

After a restart, see chapter 25. RESTART on page 82, there will always be two restart faults. The code will be 00 / 50 after Power off / Power on restart and 03 / 53 after a countdown restart. Address 0. This fault must be acknowledged, see chapter 32. FAULT ACKNOWLEDGE (H6) on page 113.



Code 50 and 53 respectively will only appear if the control unit has an MMI board.

Before the very first safe shut down the Flash memory is empty. Then every time safe shut down is performed the valid data will be saved in the Flash memory, i.e. any old data will be overwritten. When the CIE is powered up, the data stored in the Flash ROM will be used.

If safe shut down is not performed just before you power off a control unit, then by power on, the Flash memory might be empty which means the default settings will be used. Or the stored data might be old and not valid.

34.6. ACTIVATE ADDRESS IN ALARM MODE (H8/S6)

One alarm point (zone-address), not a whole zone, can be set in alarm. It will be presented as a fire alarm, the built-in LED in the alarm point (for example a detector) will be turned on and all outputs, standard and programmable, which would have been activated by a normal fire alarm from the same alarm point will be activated.
In all other control units in the system the alarm will be presented as a Test mode alarm.

If a real fire alarm occurs, the "Test mode alarm" will be automatically reset by the actual fire alarm.

A detector programmed for "Quiet alarm" will activate a Quiet test alarm instead of a fire alarm.

a) Log on to the CIE.
b) Navigate to menu S6.
c) Write the wanted zone and address.

```
Select zone: 123 address: 45
(press ↵)
```

d) Press ↵ to start the alarm mode of this zone address.

```
First alarm: 123-45                    1 zone in alarm
Latest alarm: 123-45
--------------------------------------------------------------------

Select zone: 123 address: 45
(press ↵)
```

RESET

e) Press "Reset" to reset the fire alarm.
f) Press ESC to leave this menu.

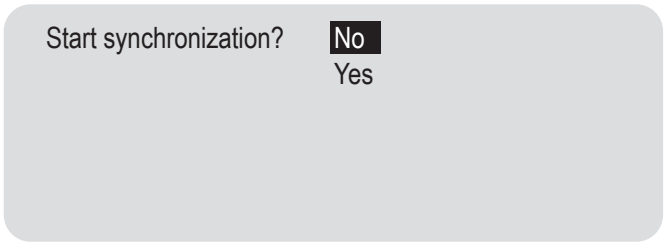
This manually activated fire alarm will be presented as "Test mode alarm" in all control unit displays and all display units and indicated by the LEDs "Fire" and "Fire brigade tx".

34.7. SYNCHRONIZE THE CONTROL UNITS (H8/S7)

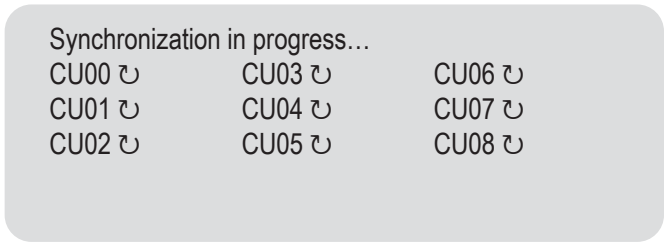
After any control unit restart, synchronization will start automatically. Synchronization can also be started via EBLWin and via this menu (H8/S7). The control units must be synchronized when the following fault message is shown:
FAULT: Control unit xx has wrong information.

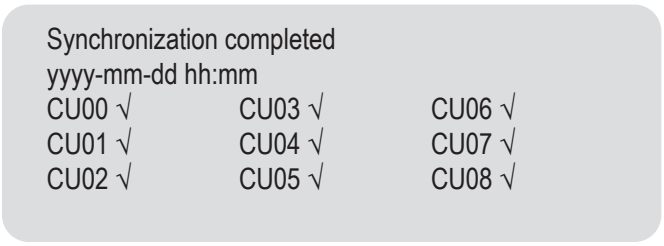
During the synchronization there will be information displayed for all control units in the system.
↻ = Synchronization in progress for the control unit (CU) respectively.
√ = Synchronization completed successfully for the control unit (CU) respectively.
<Blank> = Synchronization failed for the control unit (CU) respectively.

a) Log on to the CIE.
b) Navigate to menu S7.
c) Write control unit number and press ▼ to select “Yes.

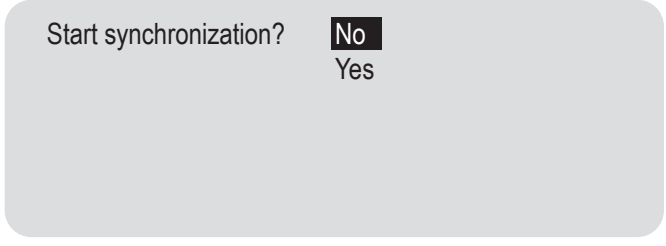


d) Press ↵ to start the synchronization. During the synchronization the progress symbol for each control unit is shown. In the example





Date and time for the latest completed synchronization will show. The symbol "√" means that the synchronization succeeded. If the symbol "√" is missing the synchronization has failed



e) Press ESC to leave this dialog.
f) Press ESC to leave this menu.

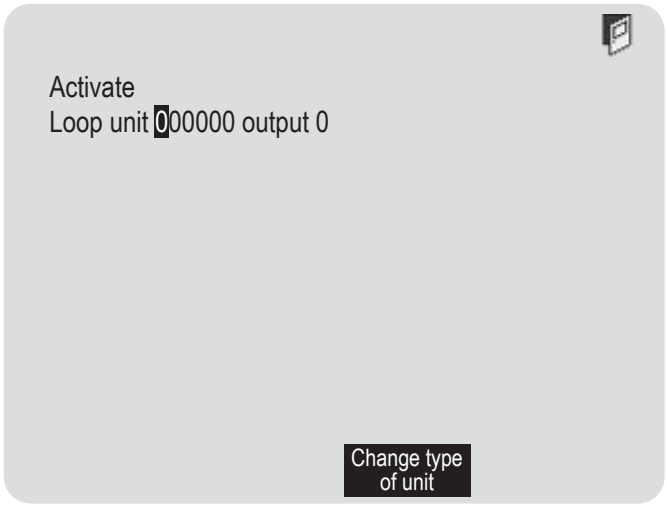
34.8. ACTIVATE / RESET OUTPUTS (H8/S8)

Via this menu, a loop unit output, control unit output and expansion board output can be activated and reset.

Any output can be activated, which means the function can be tested. (Can also be done via EBLWin.)
This is including Addressable siren 4477, Addressable sounder base 3379 / 4479, wireless detector 4611, light indicator 4383, and all alarm devices 4480, 4481, 4482, 4487.

The selected output will be activated no matter if the control expression / control group is true or not. The selected output will be reset only if the control expression / control group is false. If the control expression is true when you reset the output via menu H8/S8, the output will remain activated until the control expression / control group is false again.

a) Log on to the CIE.
b) Navigate to menu S8.
c) Use the soft key "Change type of output" to toggle between:
   - Loop unit output
   - Control unit output (S0-S3 and R0-R1)
   - Exp. board output
d) Write the technical number of the loop unit and press ↵ to activate. Indicated by "√" and a beep.



RESET

e) Use the soft key →| to toggle between:
   - Activate
   - Reset list.
f) Select an item in the reset list and press ↵ . The reset output will disappear from the list, indicated with a beep.
g) To exit the menu press ESC.
h) Press ESC to leave this menu.

35. INTERLOCKING OUTPUTS AND INPUTS (H9)

a) Log on to the CIE.
b) Navigate to menu H9.
c) Press ↵ . A sub menu list (C1 – C3) will be displayed.

35.1. ACTIVATED INTERLOCKING OUTPUTS / INPUTS (H9/C1)

This menu is read only and/or print available .

a) Log on to the CIE.
b) Navigate to menu C1.
c) Press ▼ or ▲ to scroll in the list:

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

d) Press ESC to leave this menu.

35.2. ACTIVATE / DEACTIVATE INTERLOCKING OUTPUT (H9/C2)

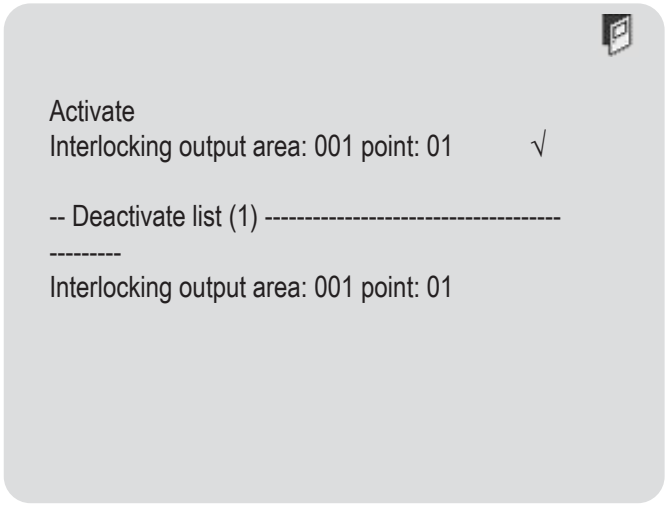
The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression / control group.

The output in each interlocking combination (area / point) can be manually deactivated via this menu.

The output will be deactivated also if its control expression / control group still is true and cannot be activated again until after its control expression / control group has been false again.

Also a latched output will be deactivated. If an interlocking output is activated via its control expression / control group and with latching output selected (in EBLWin), the output must be deactivated via this menu.

a) Log on to the CIE.
b) Navigate to menu C2.
c) Write the area number and address and press ↵ to activate. Indicated by "√" and a beep. The output will directly be shown in the Deactivate list.
d) Press ↵ to start the alarm mode of this zone address.



DEACTIVATE

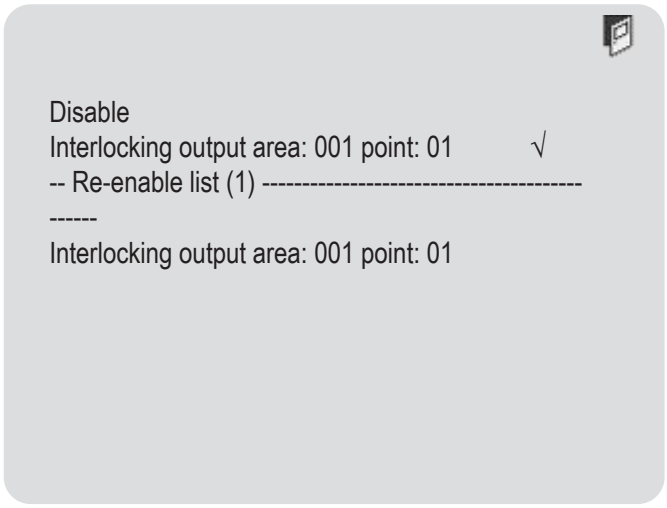
e) Use the soft key →| to toggle between
- Activate
- Deactivate list.

f) Select an item in the re-connect list and press ↵ . The deactivated output will disappear from the list, indicated with a beep.
g) To exit the menu press ESC.

35.3. DISABLE / RE-ENABLE INTERLOCKING OUTPUT (H9/C3)

Interlocking outputs (Type = Interlocking) can be individually disabled via this menu (and collectively via menu H2/B3). The "Interlocking Combination" (Area / Point) is to be entered to disable the output. Up to 200 interlocking outputs can be disabled in the whole system. 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" is also indicating one or more disabled interlocking outputs.

a) Log on to the CIE.
b) Navigate to menu C3.
c) Write the area number and address and press ↵ .
d) Press ↵ to disable the output. Indicated by "√" and a beep. The loop will directly be shown in the Re-connect list.



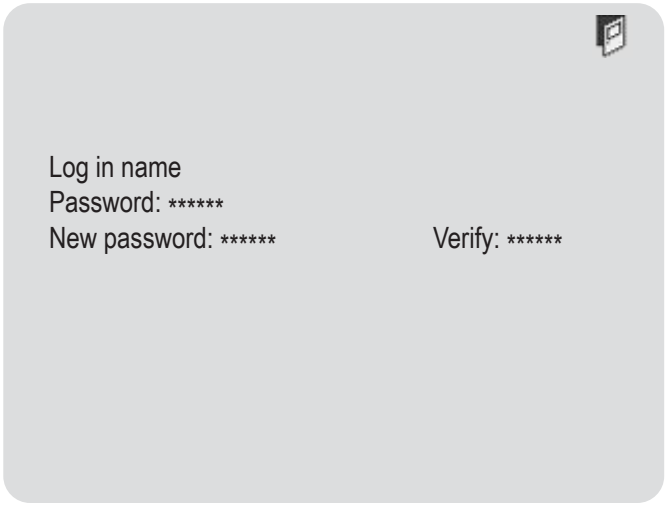
RE-ENABLE

e) Use the soft key →| to toggle between
   - Disable
   - Re-enable list
f) Select an item in the re-enable list and press ↵ . Re- enabled output will disappear from the list, indicated with a beep.
g) To exit the menu press ESC.

36. CHANGE PASSWORD (H10)

A password changed via menu H10 (+ H8/S5) will be valid until it is changed via menu H10 again or it is erased via EBLWin (menu Tools / Reset user passwords.

a) Log on to the CIE.
b) Navigate to menu H10.
c) Enter the old password, the new password and the new password again. The password is now changed to the new one.



d) To exit the menu press ESC.

Make a "Safe shutdown of control unit" if you want this password to be valid also after power off. This will save the SSW data in a Flash memory. See menu H8/S5.

37. PRINTER

If a printer is available the soft key "Print" is shown and can be used to start a print-out.
During printing the same soft key might change to "Abort printing".

After pressing the soft key "Abort printing" it will change back to "Print" but the printing might continue for a few seconds.

37.1. 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:

a) Open the control unit door.
b) Open the printer cover, i.e. press the green illuminated release button (in the middle) on top of the printer front.
c) Remove the remains of the old paper roll.
d) Place the new paper roll in the printer. Make sure that it unrolls in the correct direction – like the old one.
e) Pull out 50 mm paper and close the cover.
f) 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.
g) Close the control unit door.

38. REPLACING TLON BOARD AND MAIN BOARD

By the TLON network programming, some unique data will be stored in a memory on the 5090 TLON connection board and some will be stored in a memory on the main board.

The main board 5012 is not compatible with the old TLON connection board 1590.

REPLACING ONLY A TLON CONNECTION BOARD 5090

After replacing the board:

- In TLON Manager version 1.2 do "Replace", "Update" and "Save".
- In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is automatically done).

REPLACING BOTH A TLON CONNECTION BOARD 5090 AND ALSO THE MAIN BOARD

After replacing the boards:

- In TLON Manager version 1.2 do "Replace", "Update" and "Save".
- In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is automatically done).

REPLACING ONLY THE MAIN BOARD

After replacing the main board, put back the TLON connection board(s) in the same position as on the replaced main board:

- In TLON Manager version 1.2 do "Update" and "Save".
- In TLON Manager version 2.0 do "Update" ("Save" is automatically done).

39. BATTERY MAINTENANCE

The batteries - 2 x 12 V, 28 Ah (for example Panasonic LC-P1228AP) – are placed inside the control unit. Larger batteries (≤ 65 Ah) must be placed outside the control unit, in a separate battery cabinet.

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

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 (approximately 20-22°C). For highest safety, the batteries used in a fire alarm installation should not be more than four years old.

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

40. HOW TO AVOID 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) cannot sense the difference between "smoke" and "smoke". They cannot 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 kinds 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.

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, for example. from an oven, dry-blower, heater, and so on.

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 inappropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.

ACTIONS VIA EBLWIN
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 EBLWin, 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). 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.

41. RADIOACTIVE RADIATION SOURCE

Today, Panasonic have no ionization smoke point detectors but old detectors connected to the EBL512 G3 installation might be smoke sensors / detectors of the ionization type. They contain a small radioactive radiation source, normally Americium 241.

When these sensors / detectors 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.

The Aspirating smoke detectors Aspect Nitro and Lazeer contain a small radioactive radiation source, Americium 241. These detectors must only be handled by authorized personnel. Dismounted detector must be sent to Panasonic Fire & Security Europe AB.

PLEASE NOTE!
Damaged sensors / detectors shall be packed in a sealed packet whose surface must not be contaminated, that is, not be soiled with loose radioactive dust.

National regulations must be followed.

DOCUMENT NAME: OPERATING INSTRUCTIONS V. 3.8.0
DOCUMENT NUMBER: MEW03040
DATE OF ISSUE: 2025-02-28
REV: -
DATE OF REVISION: -

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