BROOKS

Panasonic

Operation Manual
FT128
Rev 2.4
For Software V2.4.x

firetracker
FT128 FDCIE

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1 Introduction

1.1 Overview

FT128 Operation Manual is a document intended to be used by the end user and the fire brigade personnel, as well as the service / commissioning engineers, who should read this document in conjunction with the FT128 Technical / Programming manual, since most of the information in one of the documents is not found in the other document and vice versa.

The block wiring diagram of a standard FT128 system and general arrangement are shown in Chapter "Block Wiring Diagram" on page 143.

Due to continual development and improvement, different S/W versions might be found. This document is valid for software (firmware) **version 2.4.x.** On the date of printing this manual x=4.

The software version is the firmware (system software) downloaded in to the control unit via PC windows based software e.g. EBL128 V2.4.x. The latest system software is factory downloaded in FT128 before delivery. However, software may be upgraded to a newer revision on site.

The software version is dependent on the country where the control panel to be installed, that is due to the variations in the standard in each country. Two separate software versions are available, Australian (AU) and New Zealand (NZ).

The PC software is a windows based software **EBLWin** which has to be installed in your PC and must have a version number similar to the software (system software) version number i.e. version V2.4.x. The **EBLWin** is used to download the firmware and the Site Specific Data (SSD) into the FDCIE.

Only the first two digits **must be** identical in the system software and the **EBLWin** version number i.e. 2.4.x (x = minor modifications).

> Note: Regarding upgrade from S/W version 1.x.x to version 2.x.x see chapter "Software (S/W) download", page 79 .

1.2 Definitions / Explanations

Definitions / explanation and abbreviations are used frequently in this document and are shown in the following sections.

Table 1 Definitions and Explanations

Device or function	Description
Alarm points	Units, which can generate a fire alarm in FT128, i.e. analogue detectors (sensors), manual call points, conventional detectors, etc.
Smoke detector	Analogue or conventional photoelectric smoke detector
Sensor	Sensor = Analogue detector
Analogue detector	Contains an A/D-converter. The FT128 picks up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then taken by alarm algorithms in the FDCIE. 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. Analogue detectors are addressable, an address setting tool 4414 is used for the detector's COM loop address and mode settings. An analogue detector has to be plugged in an Analogue Sensor Base (ASB).
Analogue Sensor Base (ASB)	An analogue detector is plugged in an ASB, which is connected to the 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 (560 Ohm). Normally plugged in a conventional detector base CDB (see below), which is connected to a conventional zone line input. Some types are water proof types and cannot be plugged in the standard base, it is connected directly to a zone line. An end-of-line device has to be connected in the last unit on the conventional 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 FDCIE. (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	Input intended for one or more conventional alarm points. End-of-line device in the last alarm point on the zone must be fitted.
Output unit	Addressable unit with programmable control outputs. Connected to the COM loop (see below).
Output / Control output	Defined or programmable function. Relay output or voltage output (supervised or non-supervised), in the FDCIE or an output unit connected to the COM loop.
Short circuit isolator (ISO)	Addressable unit for automatic disconnection of a COM loop segment (see below) in case of short circuit on the loop. As per AS1670.1, one isolator is required every 40 alarm points on the COM loop or every zone.
Remote Display Unit (RDU)	Addressable unit (RS485 line) for fire alarm presentation (including user definable alarm text), alert annunciation, etc. Two types are normally used: External presentation unit 1728 (EPU) and alert annunciation unit 1736 (AAU). **Note:** An optional RS485 communication module (chip) must be fitted in order to interface up to 8 display units (1728 / 1736), end of line resistor must be set via a jumper link on the last unit. For more information, refer to the technical manual of 1728 and 1736
COM loop	Loop = twisted pair cable, to which all the addressable units can be connected. Starts in the FDCIE and returns back to the FDCIE.
Control Unit / C.U. / FDCIE	Control Unit = Fire Detection Control and Indicating Equipment (FDCIE) = Unit to which the alarm points are connected (via e.g. a COM loop). Indicates on the front fire alarm, fault conditions, etc.
Fire Brigade Panel (FBP)	The fire brigade panel is an integral part of FT128 intended for fire alarm, fault and disablement presentation, etc. The FBP compromises the top part of the front display. Intended for fire alarm presentation and for the fire brigade personnel.
Control panel (CP)	A part of the FT128 front display, intended for the building occupier / officer, service personnel, etc., to "communicate" with the Control Unit. It comprises the bottom part of the front display.
Nuisance alarms	False or unwanted alarms
LED	LED (Light Emitting Diode) = Yellow, green or red optical indicator ("lamp").
External Indicator / RIL	A unit with a red LED connected to a base (ASB / CDB) or a detector with an output for a remote indicator RIL. Lit when the built-in LED in the detector / base is lit.
Display / LCD	LCD (Liquid Crystal Display) = Display (in the FDCIE or Display unit) for presentation of fire alarms, fault messages, etc. Normally alphanumeric characters and backlight.
Door open (Door / Key switch)	In FT128 there is a door switch, which is activated when the FDCIE door is open. Door open feature can be used to disable

	fault, strobes or OWS. 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 FT1028 unit(s) with EBLWin.
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 be downloaded in FT128 on site using the PC program EBLWin.
EBLWin	PC program used to create and download the SSD in FT128 unit(s). Also used to download another / new software version. Can be used during commissioning / maintenance of the FT128 system (auto address, check loop, acknowledge faults, etc.)
Web-server	The Web-server is used to transfer FT128 information to other systems e.g. Nurse call systems, as well as remote control via a PC (browser) and an intranet / internet. The Web-server is configured via the PC tool EBLWin.

2 General Description

2.1 The FT128 FDCIE

FT128 is a microprocessor controlled intelligent fire alarm Control and Indicating Equipment (FDCIE) intended for Analogue addressable smoke and heat detectors as well as conventional detectors and manual call points. Programmable inputs, control outputs and I/O units are available. Up to 255 addresses can be connected to FT128 loaded with EBL128 system software ≥ V2.0.x. Figure 1 below presents an overview of the FT128 system.

FT128 is certified to the Australian Standard AS7240.2 and AS7240.4 and NZS4512: 2003. The Fire Brigade Panel controls and indicators are incorporated as part of the front fascia and conform to AS4438.3.
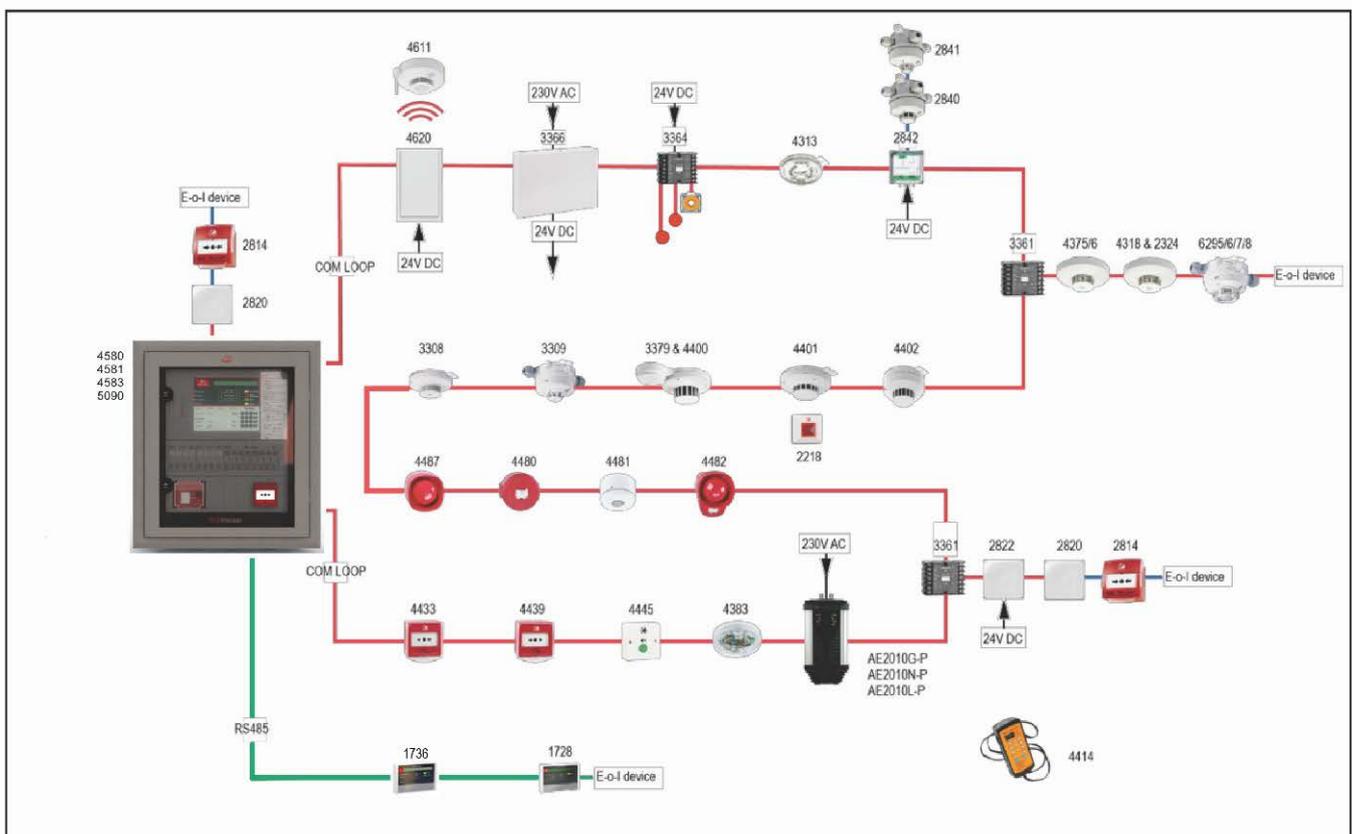
Figure 1 Connection diagram of FT128

2.2 Technical Address

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

2.3 Presentation Number

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

2.4 Com Loop Units

Addressable COM loop units are connected directly to a COM loop. Right click on the tree view as on Figure 2 to add new COM loop units.

2.5 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 4414, DIP switches, jumpers, or via the FDCIE display. For more information, please read the Technical Description for each unit respectively.

2.6 Software (S/W) Versions

Due to continual development and improvement, different S/W versions can be found. The control unit S/W can be updated on site.

2.6.1 EBLWin

The PC program **EBLWin** is used for programming and commissioning, i.e. to:

- Auto-generate, i.e. to identify the units connected on the COM loop and create default settings, which can be edited, saved and used as a Site Specific Data (SSD).
- Create / download / upload (backup) the site specific data (SSD)
- Download new S/W version (firmware), settings, conventions, configurations, FT128 data / etc.
- Create / download the user definable text messages (alarm text) shown in the display in FT128 / RDU's.
- Download software to the Web-server.
- Create and download the Web-server configuration.
- See alarms, faults, disablements, etc. and reset, acknowledge fault, re-enable.

EBLWin must have the same version no. as the system software EBL128 S/W version, e.g. 2.4.x. (x indicates only a small correction and is not required to be the same). Old SSD files can be opened in a newer (higher) version of EBLWin, then edited, saved and thereafter downloaded to FT128. If a backup is required, use the same EBLWin version as the EBL128 S/W version.

EBLWin key 5094 is a USB unit that has to be plugged in the PC to log on to the FDCIE.

2.6.2 Web-server Configuration

A tool used for configuration of the Web-server II (1598), it is part of the EBLWin PC program, see above.

2.7 Applications

The FT128 is intended for small and medium installations. The intelligent control unit offer the system designer and end user a technically sophisticated range of facilities and functions.

Programming with the PC program EBLWin and commissioning the system is very easy.

3 Fire Detection Control & Indicating Equipment (FDCIE)

3.1 FT128 Specifications

Table 2 FT128 specifications

Item		Specifications
Mains Voltage		$230V_{AC}$ (176-264), 1.6A
System Voltage		$24V_{DC}$ @ 1.6A
Current Consumption		Quiescent / alarm current is dependent on other equipment fitted in FT128, type and number of expansion boards, connected external equipment, etc.[1].
Ambient Temperature (ºC)		Operating 0 to + 40, Storage -40 to +70
Ambient humidity (%RH)		Maximum 90, non-condensing
Size (mm)	Standard	Small cabinet 630H x 450W x 210D (with door closed)
		Large cabinet 920H x 450W x 210D (with door closed)[2]
	19" Rack[3]	Small cabinet 678H x 600W x 250D
		Large cabinet 1078H x 600W x 250D
Enclosure Material		1.5 Zinc anneal steel
Enclosure Colour		Oyster, powder coated, ripple finish
Approvals		AS7240.2, AS7240.4, AS4428.3 and NZS4512
Standard Inputs / Outputs[4]		Single COM loop, can connect up to 255 devices
		Single programmable input I_0
		Two programmable Supervised voltage outputs, 0.75 Amp each
		One programmable relay outputs, contact rating 2 Amp[5]
		One programmable clean contact (N/O or N/C) inputs
		One non-programmable relay outputs for ASE (fault)
		Two x 24V outputs for Web server, ASE, remote display units, external applications, etc.
Expansion Boards [6]		Max. 4 of 4580, 4581 or 4583 or any combination [7]
I/O Matrix 4582 board		Max. 8 if no expansion boards fitted.

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[1] Refer to the technical manual and the current calculation spread sheet.

[2] A combination of large and medium enclosures can be used to fit more options.

[3] Will be available end of second quarter 2018

[4] Refer to FT128 block wiring diagram, drawing no. F665

[5] Voltage output V0 is used to provide 2 additional sets of relay contacts on the external termination board SUB835.

[6] Expansion boards are internally connected to the COM loop.

[7] It is allowed to have up to 4 boards of any type with warning for 4583 if more than 2 are added. Available only in V2.1.0 and higher.

3.2 FT128 Limitations

In addition to increasing the number of the COM loop units to 255 in software ≥ V2.0, other limitations have also been increased as well as adding new types. The following table lists some of the limitations in V2.4.x software.

Table 3 FT128 Limitations

Item	Maximum number
General fire alarm via programmable input	256
External fault via programmable input	50
Inputs	128
Outputs (All kinds of outputs)	200
Trigger conditions (in all the control expressions)	~1000
Technical warnings	50
Short circuit isolators	128
3379 (or future 4479)	50
Interlocking Combinations.	100
Presentation numbers / alarm points that can be presented in the display(s) in case of fire alarm (zone/zone address)	256
Presentation numbers that can be programmed (loop units)	255
Detectors and/or manual call points (alarm points)	512
Zones that can be programmed	99
Faults	200
Disabled alarm points (zone/address) + Disabled COM loops (Zone/address disabled via time channel not included.)	200
Disabled outputs (Control outputs disabled via menu H2/B3 and Alarm devices disabled via menu H2/B4 not included.)	100
Disabled interlocking outputs (Interlocking outputs disabled via menu H2/B3 not included.)	100
Sensors activating SERVICE signal	100
Max. number of expansion boards 4580, 4581 & 4583[8]	4
Max. number of LAA zones (AAM) (Max. 5 detectors/zones per LAA zone.)	50
Max. number of I/O Matrix boards with expansion boards.	4
Number without expansion boards.	8

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[8] Expansion boards are internally connected to COM loop 0, ensure total number of expansion boards and I/O matrix boards connected to the COM loop does not exceed 4. Software 2.1.1 allows to use 4 expansion boards.

3.3   FT128 FDCIE Layout

Figure 2 Standard FT128

The FT128 control and indicating equipment (FDCIE) is housed in a metal cabinet powder coated oyster colour. The cabinet has an inner and outer door. The outer door is fitted with a 003 key to provide access level 1 and is made of tinted high impact plastic and allows easy viewing of all indicators and controls.

Access to the inner door is gained by first opening the outer door which then provides access to the inner door fixing screws.

Opening the inner door allows access to the control unit hardware for the purpose of maintenance or servicing.

Figure 2 shows the standard FT128 in the medium size cabinet fitted with only one option (OWS). Other options e.g. AS1668 Fan Control, Zone Control, etc, can also be fitted depending on the space available on the front face plates.

Each FT128 has the following basic configuration:

- Metal cabinet powder coated oyster with smoky acrylic door as shown in Figure 2, larger cabinet sizes also available.
- Main board (4556). See Dwg. F665.

  - One COM loop (0) to which the loop units are connected. See Dwg. F665.
  - Two programmable supervised voltage outputs (S0-S1). See Dwg. F665.
  - One programmable relay output (R0). See Dwg. F665.
  - One non-programmable relay output for routing equipment (Fault condition output for Fault tx). See Dwg. F665.
  - One programmable inputs (I0). Supervised when required. See Dwg. F665.

➤ Two 24 V DC outputs (power supply outputs for routing equipment and external equipment). See Dwg. F665.

➤ A socket for an optional Communication module (RS485 transceiver component) 4552, which will provide an RS485 interface (serial line) for up to eight Display Units. See Dwg. F665.

➤ RS232 interface ("D" connector) for a PC with EBLWin. See Dwg. F665.

➤ RS232 interface for a Web-server 1598. See Dwg. F665.

➤ 24 V DC power supply output for a Web-server II 1598. See Dwg. F665.

• Built-in power supply and space for back-up batteries. See Dwg. F665.

• Space for optional expansion board holder. Up to four expansion boards can be mounted in the holder.

• Space and mounting bracket for different routing equipment (optional).

• DIN rail for Web-server II 1598 (optional.

3.4   Front Display
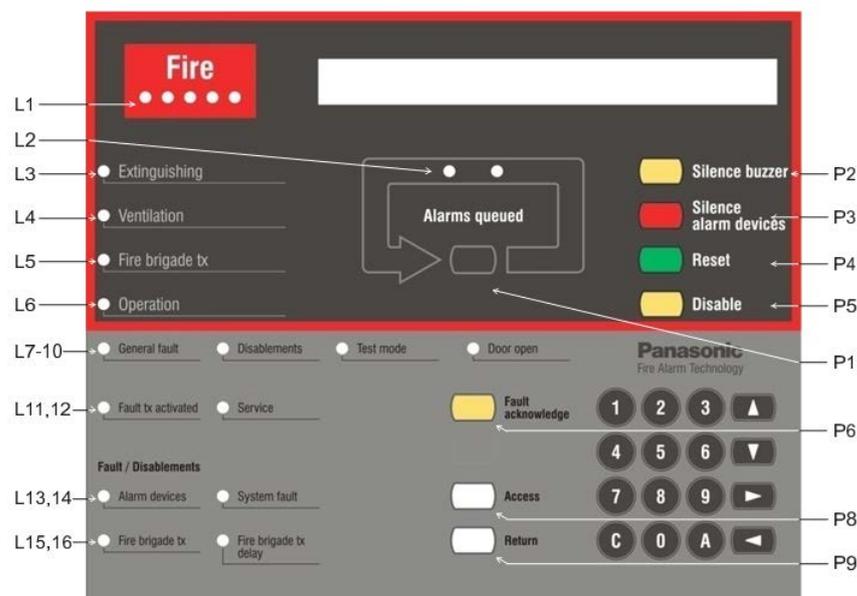
Figure 3 The FT128 Front, FBP (upper black part) and CP (lower grey part)

An alphanumeric display is provided to view which alarm point / zone has generated a fire alarm(s). In the alphanumeric display (LCD, 2x40 characters), the information displayed on the first row depends on how many alarm points / zones have generated fire alarm (and also convention). On the second row, a user definable text message is shown for an alarm point or a zone, if programmed. See chapter "Fire alarm", page 50.

Fire services personnel use the FBP in FT128 to take operational control of the system.

The CP is used to "communicate" with FT128, e.g. for commissioning, monthly tests, maintenance, etc. Access codes for different users and access levels are required. A keypad is used to get access to the menu tree, i.e. the main and sub menus for data input / output and manoeuvres, etc. The CP also holds several system status LEDs.

3.4.1 LED Indicators and Push Button

LED's and push buttons are contained on the front panel display and are described in the tables below. See also Figure 3 above, for the LEDs and push buttons.

3.4.1.1 Fire Brigade Panel Display and Control

Table 4 Fire Brigade Panel LED Indicators and Push Buttons

No.	Label	Colour	Indicating / Action
L1	Fire	5 x Red	Fire alarm, Quiet alarm, etc. See Alarm Types page 49[9]
L2	Alarms queued	2 x Red	More than one unit / zone has generated fire alarm. Use push button "Alarms queued" (P1) to scroll amongst the alarm points (zone-address).
L3	Extinguishing	Red	Output(s) for extinguishing equipment[10] activated (or a programmable input type "Extinguishing" is activated).
L4	Ventilation	Yellow	Output(s) for fire/smoke ventilation equipment [10] activated (or a programmable input type "Ventilation" is activated.)
L5	Fire Brigade TX	Red	Output for "Fire alarm" for Fire Brigade TX (routing equipment) activated. Or a programmable input(s) type "Activated routing equipment" is activated. Or test of routing equipment in progress (see menu H1).
L6	Operation	Green	Power on, i.e. the FT128 power supply (switch mode power supply and/or batteries) are connected and working properly.
P1	Alarms queued	BLACK	Used, when LEDs "Alarms queued" (L2) are lit, to scroll/browse through the queued alarms (zones).
P2	Silence buzzer	Yellow	Used to silence the buzzer in FT128
P3	Silence Alarm devices	Red	Used to silence devices configured as "Alarm devices" such as sounders or OWS (i.e. to "reset" outputs for alarm devices).[11]
P4	Reset	Green	Used to reset the fire alarm(s), has to be pressed for > 0.5 Secs
P5	Disable	Yellow	Used to disable active alarm(s), all outputs of the device or zone in alarm will be disabled.

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[9] In the New Zealand convention also "Acknowledged alarm" (ACK).

[10] L3, L4 and L5 can as an alternative be programmed to indicate when a programmable input is activated, i.e. input trigger condition "Extinguishing system released", "Activated fire ventilation" and "Activated routing equipment" respectively (e.g. L5 can be turned on when a programmable input is activated by an activated routing equipment output). L5 is turned on until all fire alarms are reset.

[11] Via EBLWin can be set if the alarm devices are to be continuously off / disabled or re-sound for a new alarm.

3.4.1.2 FT128 Display CP Indicators

Table 5 LED indicators on Control Panel (CP)

NO.	LED Indicator	Colour	Indicating
L7	General fault	Yellow	Fault(s), i.e. not acknowledged fault(s) and/or acknowledged but not corrected fault(s).
L8	Disablements	Yellow	Something is disabled / disconnected via a menu, via a disable switch or via a button in the zone control module if fitted.
L9	Test mode	Yellow	One or more zones are in "test mode" (see menu H7).
L10	Door open	Yellow	A door is open in FT128 control panel.
L11	Fault TX activated	Yellow	One or more non-acknowledged faults: • Output for fault TX (routing equipment) is activated. • Test of routing equipment in progress (see menu H1). • Sensitive fault detection mode is on. See menu Sensitive Fault Detection Mode (H5/A2).
L12	Service	Yellow	One or more sensors have reached the service level. See menu H4/U4.
L13	Fault / Disablements Alarm devices	Yellow	Steady light: output(s) type "Alarm device" is / are disabled. Flashing light: output(s) type "Alarm device" have generated fault(s)[12].
L14	System fault	Yellow	FT128 is not running due to S/W, CPU or memory fault)[13].
L15	Fault / Disablements Fire Brigade TX	Yellow	Steady light: Output(s) for "Routing equipment" disabled via menu H2 / B5 or via open door. Flashing light: Routing equipment power supply output or supervised outputs type "Routing equipment" have generated fault(s)[14].
L16	Fire Brigade TX delay	Yellow	The Alert Annunciation function is enabled, i.e. the time channel controlling this function is "on". [15]

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[12] This is also valid when FT128 has no "contact" with a unit with such an output, e.g. 4477, 3379, 3364, etc.

[13] The LED is turned on during restart and stays on for restart code other than 00, 03 or 25 until the fault is acknowledged.

[14] This is also valid when EBL128 has no "contact" with a unit with such an output, e.g. an I/O unit 3361, etc.

[15] The Alert Annunciation function is described in the FT128 Technical / Programming Manual, chapter "Alert annunciation". The LED "L16" will be "on" if the AA function is enabled for at least one alarm point / zone. Normally, only one time channel used for this function but two or more channels can be used. The AA function can, as an alternative, be continuously "on".

Table 6 Control Panel push buttons

Key/push button		Operation/function
P6	**Fault acknowledge** (yellow)	Used to acknowledge the faults shown in menu H6. Also used to acknowledge SERVICE signal, see menu H8/S4.[16]
P8	**Access** (white)	Used to log on, i.e. to get access to the menu tree (via an access code) to carry out disablements, etc. In conjunction with a fire alarm, some information is available and some actions are possible to perform via the "Fire alarm menu" (X1-X9) without log on, see chapter "Fire alarm", page 50 .
P9	**Return** (white)	Used to stop input of data, leave a menu ("one step up") and to log off.
	1 – 9 and 0	Numeric keys for the figures 0-9.
	C	Used to **clear** /delete just written data.
	A	Used to **accept** a menu and accept input of data.
	← → ↑ ↓	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.

3.4.2   The Display (LCD)

3.4.2.1   LCD Backlight

When the information above is shown in the LCD, the backlight is OFF.

As soon as any other information (see below) is shown in the LCD, the backlight is turned ON.

The LCD backlight will remain on even during loss of the main power source.

3.4.2.2   Information Priority Order

When the FT128 is in normal operation (quiescent state), i.e. no fire alarms, no faults, no disablements, no service signals, no zones in test mode, no activated interlocking in / outputs, and/or Alert Annunciation function not enabled, only the LED "Operation" should be lit and some system information is shown in the LCD.

The LCD information priority order is shown in Table 7 below.

Table 7 LCD priority order

Priority	Event
1	Fire alarms: • Fire alarm • Heavy smoke/heat alarm • Alert Annunciation (AA) alarm
2	Quiet alarm

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[16] In New Zealand convention, the "Fault acknowledge" button is used to acknowledge a Fire alarm, i.e. the alarm abbreviation "ALM" in the LCD is changed to "ACK".

3	Co-incidence alarm
4	Delayed alarm
5	Pre-warning
6	Test mode alarm
7	LAA (AAF) alarm[17]
8	New Zealand convention only: "Routing equipment left isolated"
9	Fault (not acknowledged)
10	Disablement
11	Zones in "Test mode"
12	Interlocking input / output active
13	System information

3.5   System Information in the LCD

The display (LCD) of FT128 in normal operation and in quiescent state will show the following information:

```
DD-MM-YYYY          * * * FT128 * *          hh:m          [ i ]
User programmable information text.
```

DD-MM-YYYY = (Date) Day-Month-Year

hh:mm = (Time) hours:minutes

[i] = Will only be shown in case of one or more Technical Warnings in the system.

3.5.1   Fire Alarm Presentation in the LCD
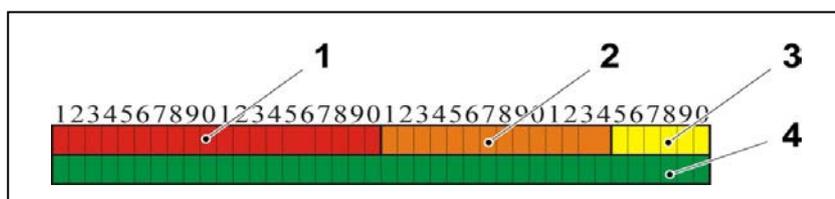
1. Field for the first alarm point or zone in alarm. By scrolling each alarm will be shown in this field.
2. Field for the most recent (last) zone in alarm.
3. Field for total number of zones in alarm.
4. Field for alarm text. (User definable.)

3.5.2   User Definable System Information

The information on the bottom row can be created via EBLWin, i.e. it is user definable. In total 40 characters.

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[17] The AAF function is used in conjunction with an AAM Control (3340) and the new Local Alarm Acknowledgement LAA module.

4 Control Unit Options

4.1 I/O Matrix 4582[18]

The I/O matrix board is an interface between the FDCIE (COM loop) and various types of application boards e.g. AS1668 fan control board, Zone Disable and indication board, LED mimic board, etc.

Up to eight I/O matrix boards 4582 can be used in FT128 if no expansion boards type 4580, 4581 or 4583 are used. The limitation of the I/O matrix configuration as follow:

- Up to **two** I/O matrix boards can be programmed in FT128 as type "Zone control" and / or "Generic" e.g. NZ fire brigade panel, LED mimic, etc.

- Up to **eight** I/O matrix boards can be programmed as type "Fan control" if no other I/O matrix boards are used for generic or zone control i.e. up to 32 fans can be controlled and displayed in FT128.

- A combination of any of the two previous options can be used if the maximum number of each application is maintained.

In the generic application, each I/O matrix board can operate up to 48 LEDs (outputs) and 16 switches (inputs). All outputs and inputs can be configured individually via EBLWin.

The I/O matrix board can be used remotely, it requires 24V and COM loop in addition to an application board.

> Note: Jumper links JP1-JP3 are used to set the I/O matrix board number (0-3) and JP5-JP6 are used to set the application type (generic, fan control or zone control). For more details refer to the Technical / Programming manual and/or Technical Datasheet TDS040.

4.2 AS1668 Fan Control Module

The fan control module is designed to meet the requirements of the Australian standard AS1668.2, the front display is shown in Figure 4 below.
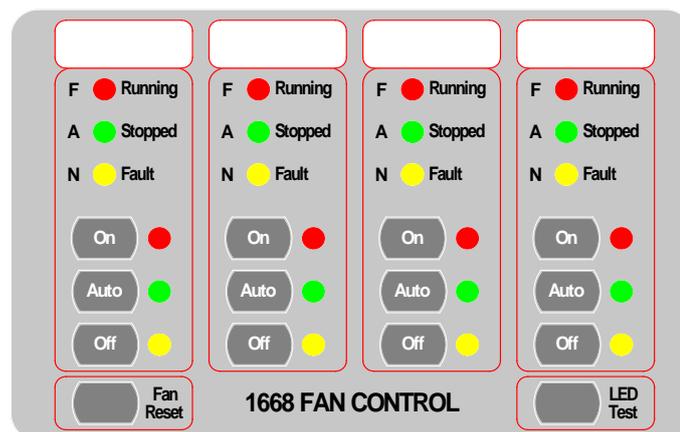
Figure 4: AS1668 Fire Fan Control Display

Each fan control module consists of an I/O matrix 4582 and display / control board SUB902. Each module can control and indicate the status of up to 4 different fans. Up to 8 x AS1668 fan modules can be used to provide 32 fan interfaces if no other Expansion Boards or 4582 are used in different applications.

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[18] In the new 19" rack format, the I/O matrix circuit is incorporated into the AS1668 fan control and display board as well as zone control board, new subassemblies are SUB1024 and SUB1023 respectively.

Note: the total number of fan modules must be reduced by one for every other option fitted, e.g. zone module, generic module, expansion board, etc.

A fan reset switch is provided to independently reset the fan module as required by AS1668.2 i.e. reset the alarm in the FDCIE will not restore the fans to the non-fire condition until the reset switch is pressed.

A remotely located (mechanical services) 3361 module is required for each fan and configured in the control panel using EBLWin. For standard fan configuration e.g. smoke exhaust fans, the simple standard mode can be used to program 3361 while for more configuration options e.g. supply air fans, the enhanced mode can be used.

The I/O matrix board 4582 is a COM loop unit which can be fitted with the front display board inside the control panel or remotely in a separate enclosure.

For more information refer to FT128 Technical / Programming manual and to drawing no. F665 shown in Figure 27 page 145

Table 8 Indicators and buttons in 1668 module

LED indicator & buttons		Indicating
Running	Fan running - Red	Illuminates to indicate fan running.
Stopped	Fan Stopped - Green	Illuminates when the fan is stopped.
Fault	Fan Fault - Yellow	Illuminates when the signal to change the fan status is restored, either via manual override switch or by the FDCIE in Auto mode <u>but</u> the feedback signal confirming the change of state has not been received by 3361 input in the field within 30 seconds. Or There is an open circuit in the 3361 supervised input (when set to be supervised) where the feedback from the pressure switch is connected. Or The pressure switch is faulty
On	LED – Red	Illuminates when the "On" button is pressed, fan starts up manually
	Button	Manual override control to start up the fan irrespective of any alarm condition in the FDCIE.
Auto	LED – Green	Indicates "Auto" position of the button, normal operation
	Button	Pressed to put the fan in "Auto" mode i.e. the fan may run or stop automatically depending on the alarm condition in the FDCIE
Off	LED - Yellow	Indicates "Off" position of the button, fan stops manually
	Button	Manual override control to stop the fan if it is running irrespective of any alarm condition in FDCIE.

4.3 Zone Control & Indication Module

The zone control module is used as a simple and easy method to disable (isolate) individual zones for service and maintenance purposes as well as providing alarm and fault indication for these zones. The front display layout is shown in Figure 5 .

Each zone control module consists of a universal I/O matrix 4582 and application board SUB900 specifically configured to provide up to 12 individual zone alarm and zone fault indicators as well as a disablement control with indicator to indicate switch activation. The module is normally mounted in the FDCIE. but it is also possible to connect the module externally via a COM loop.

The disable control allows a specific zone to be temporarily disabled without the need to access the FDCIE menu. This is typically used where building works or maintenance procedures are being carried out in a localised area of a building. For more information

refer to the Technical / Programming manual and to drawing no. F665 in Figure 27 page 145
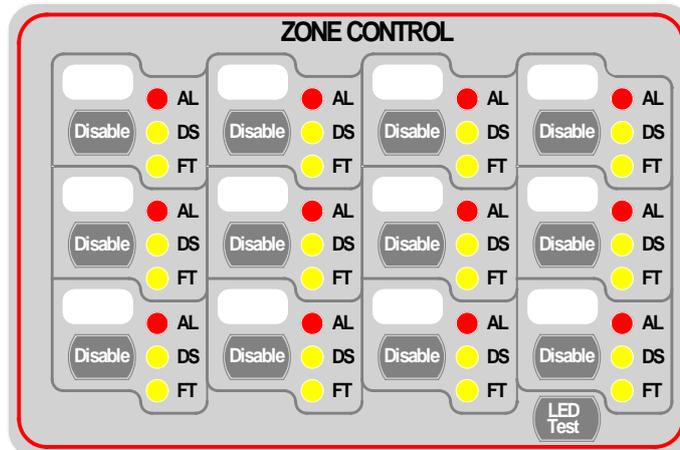
Figure 5 Zone Control & indication Display

Table 9 Zone control LEDs and Buttons

LED indicator & buttons		Indicating
AL	Alarm – Red 1-12	Illuminates when an alarm from a conventional zone or an addressable device or group of addressable devices designated as a zone enters an alarm state.
DS	Disable-Yellow 1-12	Illuminates when a zone is disabled either by the disable switch on the zone control card or where the zone is disabled via menu H2/B1
FT	Fault – Yellow 1-12	Illuminates when either a short circuit or open circuit fault on conventional zone or any fault that prevents an addressable alarm point in a designated zone to operate properly.
Disable	Button 1-12	Pressing the disable switch will disable the selected zone. Pressing the switch a second time will re-enable the zone. Functions same as menu H2/B1.
LED Test	Button	Is selectable to be activated either from the FDCIE or at the Zone Control Module itself, this feature can be utilised when the module is mounted externally via the COM loop.

4.4   NZ Fire Brigade (LED) Mimic Board

The generic feature in EBLWin software supports the mimic applications of the I/O matrix board 4582. This feature is used in the New Zealand fire brigade mimic panels or the standard index panels.

Each NZ mimic board provides 12 LED indicators and screw terminals for 4 inputs (switches). The first 3 LEDs used for Normal (green), Defect (yellow) and common alarm (red). The remainder 9 LEDs (red) used to indicate separate zone alarm indications or sprinkler flow switch indication. Two of the four inputs are used to interface the Bulgin keys to the FDCIE. Additional mimic boards provide 12 red LED indicators for each board.

Up to 4 mimic boards can be interfaced to each I/O matrix board 4582 to provide indications for up to 48 LED's, up to two I/O matrix boards can be used in the NZ mimic applications, if no zone control modules used. Total number of LED indicators that FT128 can provide is 96 indicators.

The new design of NZ mimic boards provides an option to allow for remote mounting of LED's via screw terminals. This can be used (if required) to mount individual LEDs on a building layout.

Figure 6 below shows an example of a mimic display used in conjunction with FT128 in New Zealand Steel.
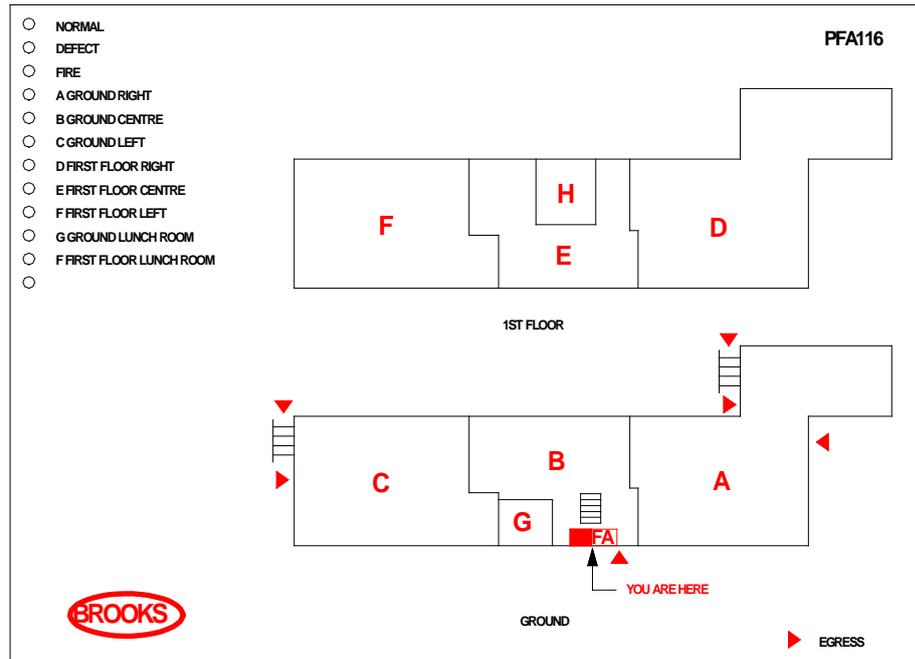
Figure 6 NZ Fire Brigade Mimic Sample Drawing

4.5   Occupant Warning System (OWS)

The standard BROOKS OWS display and control layout is shown in Figure 7 below. For more details, refer to the standalone OWS manual MA380 or OWS kit manual MA385.
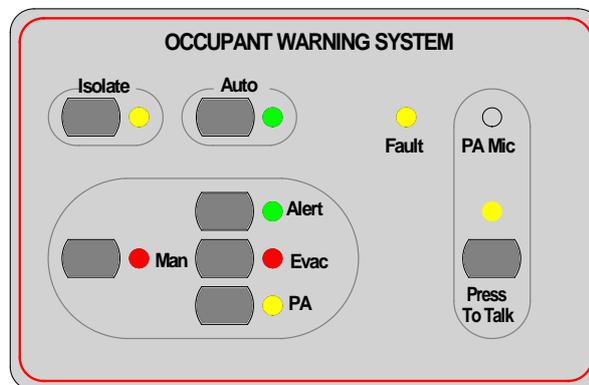
Figure 7 Occupant Warning System Display

Brooks Occupant Warning System is a single zone intelligent system designed to warn the occupant to evacuate the building in the event of fire or emergency. It can be incorporated in FT128 with some options depending on the available space in the standard cabinet, larger enclosures can be used to allow for more options.

The OWS comprises of an amplifier, control / indication front and speakers / strobes distributed within the building to provide audible and visual warning to the occupant as well as PA notifications. In addition to the T3 and AS2220 tones, the OWS provides in its standard configuration alert and evacuation messages as well as electret microphone for PA purposes.

Brooks OWS can be fitted in FT128 system inside the same cabinet, separate power supply to suit the amplifier size must be used. The OWS provides high quality audio output utilising high efficiency class D amplifier, sizes available: 60W, 120W and 250W.

The front display push buttons / indicators and its function are explained in Table 10 below.

Table 10 OWS controls and indications

LED indicators & Buttons		Indicating
Auto	LED - Green	Illuminates to indicate the "Auto" position of the button, normal position.
	Button	OWS controlled only by alarm condition
Isolate	LED - Yellow	Illuminates to indicate "Isolate" position of the button.
	Button	Disable all outputs to the speakers, FDCIE fault is generated if the isolate button remains active for more than 5 minutes
Manual	LED – Red	Illuminates to indicate the "Manual" position
	Button	Enables manual activation of Alert, Evac or PA. OWS fault is generated if the manual button remains active for more than 5 min.
Alert	LED – Green	Indicates that alert tone/message is active
	Button	Manual trigger of the alert tone/message
Evac	LED - Red	Indicates that evacuation tone/message is active
	Button	Manual trigger of the evacuation tone/message
PA	LED - Yellow	Indicates that PA is enabled
	Button	Enables PA mode
Press to Talk	LED - Yellow	Indicates PA is broadcasting
	Button	Press and hold to broadcast via the electret mic
Fault	Yellow	Indicates common fault in OWS i.e. speaker fault, trigger fault, strobe fault, etc.

Notes:

The OWS requires separate power supply as well as power supply supervision board. Standard FT128 is not capable to supply the required current to the amplifier.

A fault signal will be generated if the isolate or manual mode is kept active for more than 5 minutes (OWS software V1.5 and higher)

4.6 Gaseous Extinguishing Control Module

The gaseous extinguishing system control module is provided for use as an option in FT128. The gas module provides outputs to drive the following:

- A combination of BROOKS Warning Signs
- BROOKS Local Control Station (LCS)
- Voice / Tone Electronic sounder
- Dual Strobe Module

The gas control module combined with other Brooks system components has been designed to provide the monitoring and control functions of a complete gaseous extinguishing system that meets the requirements of the relevant clause 7.1 to 7.6 of the Australian Standard AS4214-2002 (including amendment 1). For more details, refer to FT2GAS Operation / technical manual MA400.

The gaseous extinguishing system status indicating LEDs and flash patterns are described in Table 11. The default state of the LED indicators is OFF, if it is not defined in the table.

Gas Extinguishing

- 1st Alarm
- 2nd Alarm - Timer Running
- Gas Initiated
- Gas Discharged
- Gas Externally Released
- Gas Discharge Inhibited
- Gas Fault
- Gas Disabled
- Service Master Abort
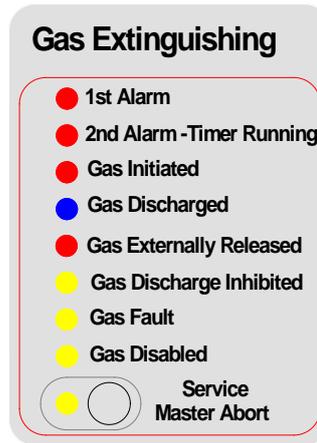
Figure 8 Gas Extinguishing Display Layout

Table 11 Gas Front Status LED Indication and flash Pattern

Type	LED Name	Module Conditions	LED Pattern
Alarm	1st Alarm - Red	One zone or zone address in alarm	Fast Flash
	2nd Alarm – Red, Timer Running	Both zones or zone addresses in alarm	
	Gas Initiated - Red	Gas release output activated	
	Gas Externally Released - Red	External gas release control activated	
	Gas Discharged - Blue	Gas discharged sensor input activated	
Fault	Gas Fault - Yellow	Fault in any of the supervised inputs or outputs	Steady ON
Disable	Gas Discharge Inhibited - Yellow	Gas discharge inhibited via LCS isolate switch	Steady ON
	Gas Discharge Disabled - Yellow	Gas discharge disabled by the service master abort switch or the gas lock-off valve controls	
	Service Switch Active- Yellow	Illuminates when the master abort switch is activated	
	Service, Master Abort	Gas service master abort switch	

4.7   FT128 External Termination

The FT128 Main Board 4556 is normally mounted on the rear of the front door. In order to avoid the field wiring termination on a swing door, an adapter board SUB836 [19] is connected to the main board. The new version of the adapter board is plugged in the screw terminals of the 4556 board and interfaced to another external termination board SUB835 mounted on the equipment plate. The adapter board SUB836 is connected to the termination board SUB835 via ribbon cable.

The FT128 has only one programmable relay. To increase the number of programmable relays in the standard FT128 system, another relay with two changeover contacts is added to the termination board to provide 2 sets of additional changeover relay contacts. The

---

[19] The adapter board shown in Figure 9 and external termination board shown in Figure 10 use a new PCB revision (PCB250 Rev 5). In all previous revisions, the adapter board is soldered in the terminals of FT128 main board (4556).

relay is controlled by the "Voltage output S0" [20] e.g. if S0 is programmed for general alarm, the following outputs will be available:

- Voltage output S0 on CON 7
- Change over alarm contacts R2-1 on CON 5
- Change over alarm contacts R2-2 on CON 6

The PCB layout of the adapter board SUB936 is shown in Figure 9 below.

The PCB layout of the external termination board SUB835 is shown in Figure 10 below.

Note: As shown in Figure 9 and Figure 10, one actual PCB is used for both boards with different components fitted in each one.
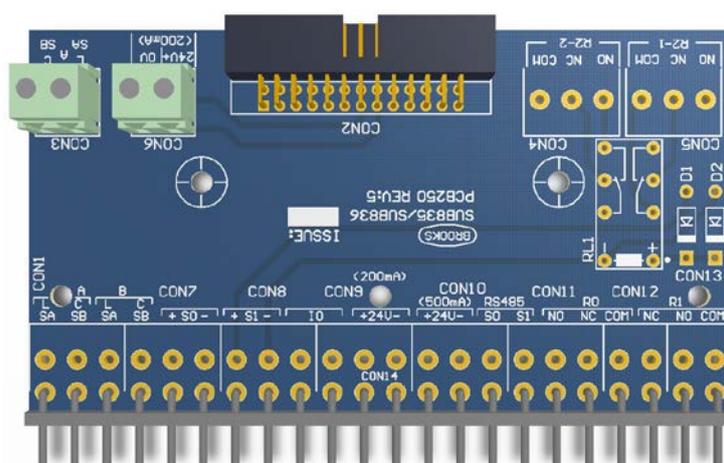
Figure 9 SUB836 Adaptor Board
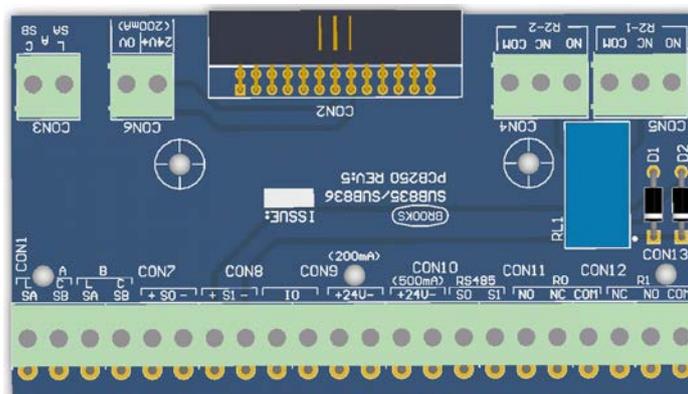
Figure 10 SUB835 external Terminal Board

The adapter board SUB836 provides additional terminals to support connections of COM loop (CON 3) and 24V (CON 6) to I/O matrix boards 4582 mounted on the front door.

The external termination board SUB835, as shown in Figure 10, provides the two additional alarm relay contacts R2-1 and R2-2 (CON4 & CON 5), current rating for the contacts is 2A @ $30V_{DC}$. The SUB835 provides additional terminals as well for the COM loop and $24V_{DC}$, these terminals can be utilised for modules mounted on the equipment plate and requiring COM loop connections or $24V_{DC}$.

---

[20] The voltage output V0 terminals are still available on the termination board SUB835 please note, the current limitation of V0 is less than 200mA.

5   New 19" Rack Cabinet & New Loop Modules

5.1   Cabinet Overview

The design of the new Brooks 19" rackmount FT128 cabinet is in accordance with the industry standard for 19" rackmount equipment. The 19" rackmount enclosures are available in the following cabinet size:

- Large enclosure 1078mm High x 600mm wide x 250mm Deep.

- Small enclosure 678mm High x 600mm wide x 250mm Deep Figure 11 below .

- Battery enclosure 290mm High x 600mm Wide x 250 mm Deep.

Any combination of the three sizes can be manufactured. The battery enclosure is normally fitted below either of the large or small enclosure to allow for larger batteries should the need arises. When the battery enclosure is to be used with the large enclosure, the whole cabinet should be mounted on a plinth on the floor such that the LCD display would be at the eye level.

The addressable FT128 19" rack panels are fully customisable to site requirements and its racks are modularised in design.

A possible layout for FT128 Mounted in small 19" Rack Cabinet is shown in Figure 11 below.

Figure 11 FT128 Mounted in Small 19" Rack Enclosure

5.2   Enclosure Components

Each small or large cabinet can be fitted with standard and optional face plates, equipment plates, ancillary racks, etc. The available plates as follows:

- **FT128 6U** face plate with OWS display module (CB678)

- FT1020G3 or FT128 equipment Plate for small 19 Inch Rack (CB677)

- Standard **Ancillary 3U Rack** for mounting display modules (CB681)

- Standard **3U Blank Rack** to fill up the unused racks (CB683)

- 10HP Blank Cover (CB684)

- Standard plates for mounting **MCP** 20HP Face Plate (CB682)

- **ASE** options: **Romteck** ASE Mounting Bracket (CB685), **Tyco** ASE Mounting Bracket (CB686)

- **Printer** Mounting Bracket (CB691)

- **Battery Shelf** for 19 Inch Rack Cabinet (CB687)

Large or small 19" rack cabinet is suitable for both FT1020G3 or FT128 including each ancillary rack equipment. Choosing either system to use large or small enclosure is dependent on the number of options added to each system. All ancillary racks are 3U which can be fitted with every possible optional module. 1U is left opened below both 19" Rack Cabinets for easy access and storage of site documentation. A 003 key is required to open the outer acrylic door to access the controls on the panel.

5.3 Addressable COM Loop Display Modules

The ancillary 3U rack is designed to be fitted with any combination of display modules as shown in Figure 12 below.

Figure 12 3U Ancillary Modules Face Plate (CB681)

Any combination of modules in Figure 13 to Figure 20 will fit onto the 3U Ancillary Modules Face Plate (CB681) as shown in Figure 12. These provide maximum flexibility for the control of inputs and outputs when used with any FT128 or FT1020G3 Addressable FDCIE loaded with software ≥ V2.4.x.

The modules are interconnected by a single ribbon cable part number CA380. A blank module 10HB is used to cover an unused module space. Also available is a Blank Module 4HP used to blank out the space reserved for the 1204 Power Monitor Module when 3U Ancillary Modules Face Plate (CB681) is used as a generic panel.

Figure 13: 1204 Power Monitor Module

Figure 14: 1205 Zone Control Module

Figure 15: 1206 Fan Control Module

Figure 16: 1211 Damper Control Module

Figure 17: 1207– 8 Key / 8 LED Control & Display Module

Figure 18: 1208 - 4 Key / 8 LED Control & Display Module

Figure 19: 1209 – 8 LED Display Module

Figure 20: 1210 – 6 LED Pump Status Module

Each display module is manufactured of 3 parts: PCB, plastic spacer and decal label. The following is a brief description for each display module:

- **1204** – Power Monitor module, designed as an interconnection point between a rack of new display modules and the FT128. One module per ancillary rack required and uses a reserved slot (first slot). The module supervises the rack power that feeds 24V and 5V to the display modules. Requires 4HP space at the beginning of the ancillary rack and one COM loop address.

- **1205** – 15 Zone Display and Control module, which is an upgrade over the old 4582/SUB900 Zone Display combination. In EBLWin, the 1205 still is programmed as an "I/O matrix board 4582" for "Zone Control". Require 2 x 10HB spaces on the ancillary rack. Internally connected to COM loop 0 similar to expansion boards 458x. Refer to the limitation of 4582 in Table 3 page 14.

- **1206** – Quad Fan Display and Control Module, which is an upgrade over the old 4582/SUB902 Fan Display combination. In EBLWin, the 1206 still is programmed as an "I/O Matrix board 4582" for "Fan / Damper Control". Requires 2 x 10HB spaces on the ancillary rack. 1206 can connect to any COM loop 0-3, refer to the limitation of 4582 in Table 3 page 14.

- **1211** – Quad Damper Display and Control module, is similar to the 1206 but with different label and functionality, it is intended to control fire dampers. The 1211 is programmed in EBLWin as an I/O Matrix board 4582 for "Fan / Damper Control". Require 2 x 10HB spaces on the ancillary rack. 1206 can connect to any COM loop 0-3, refer to the limitation of 4582 in Table 3 page 14.

- **1207**– Generic **8 switches** and **8 LEDs** display and control module, programmed as a normal type input (switch) and a normal type output (LED). The module requires **two** COM loop addresses and one 10HB space each on the ancillary rack. Can connect to any COM loop 0-3, the only limitation is the loop current consumption. DIP switch provided to change the LED's colour.

- **1208 -** Generic **4 switches** and **8 LEDs** display and control module, programmed as a normal type input (switch) and a normal type output (LED). The module requires **two** COM loop addresses and one 10HB space each on the ancillary rack. Can connect to any COM loop 0-3, the only limitation is the loop current consumption. DIP switch provided to change the LED's colour.

- **1209 -** Generic **8 LEDs** display module, programmed as a normal type input (switch) and a normal type output (LED). The module requires **one** COM loop addresses and one 10HB space each on the ancillary rack. Can connect to any COM loop 0-3, the only limitation is the loop current consumption. DIP switch provided to change the LED's colour.

- **1210** – **6 LEDs** Pump Status Monitor, specialised module to monitor the status of pumps, requires **one** COM loop address and one 10HB space on the ancillary rack. DIP switch settings can change the LED display colours.

Each display module can either be manually addressed with the address setting tool set to Advanced Mode or using the new auto-addressing feature in EBLWin V2.4.x. These Display Panel modules must also be configured with EBLWin V2.4.x for them to be recognised by the FDCIE.

> Notes:
>
> 1205, 1206 & 1211: Only addresses 0-5 can be assigned.
>
> 1207, 1208: Requires 2 consecutive addresses per module and will automatically take on the next address. Example: if address 15 was assigned to 1207, address 16 will be the second assigned address.

Please refer to The Technical Datasheet TDS059 for full details on DIP switch settings, programming, and installation.

5.4   I/O Field Modules

Four new I/O COM loop field modules are available in software ≥ V2.4.x. The following are some of the field modules features:

- Built-in short circuit isolator with yellow LED indicator.

- Flashing green polling LED on each module to indicate valid COM loop communications.

- Fully supervised input (N/O or N/C) via end of line resistor 10KΩ.

- Outputs can be supervised 24V circuits via end of line resistor 10KΩ (1201) or relay contacts N/O or N/C (1200, 1202 & 1203).

- On board LED indicators for relays activation.

- Pluggable terminals for easy field wiring terminations.

- Low COM loop current consumption.

1201 and 1203 I/O Units require an external 24Vdc power supply, whilst the1200 and 1202 are powered from the COM Loop. Refer to Technical Datasheet TDS053 for full details on programming and installation.

All units are programmed using the Addressing Tool 4414 or 4414E, the 1201 requires 24VDC to be applied for addressing the module. All modules are required to be addressed in "Advanced Mode" setting on the Addressing Tool. These units must also be configured with EBLWin ≥ V2.4.x for the FDCIE to recognise them.

1200 – SUB997: Single supervised input / single relay output. Used where a single device needs to be triggered (output) and a return signal is required to report the action has been carried out (input), e.g. a sprinkler flow switch. Requires **one address** on the COM loop.

1201 – SUB983: Four supervised inputs / four supervised voltage outputs. Inputs similar to 1200 input with supervised voltage outputs. Each voltage output is rated to 1 Amp, requires external 24V supply from the FDCIE or from external power supply. Requires **one address** on the COM loop.

1202 – SUB994: Four supervised inputs / four relay outputs. Due to the latching function of the used relays, the board doesn't need external 24V supply. Requires **one address** on the COM loop.

1203 – SUB991: Eight non-supervised inputs / Eight relay outputs. Requires external 24V supply and **two addresses** on the COM loop.
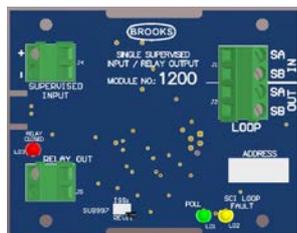
Figure 21 SUB997 Single Supervised Input / Single Relay Output

1200
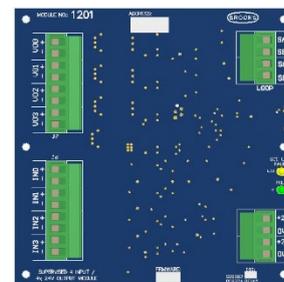
Figure 22 SUB983 4 Supervised Input / 4 Supervised 24V Output

1201
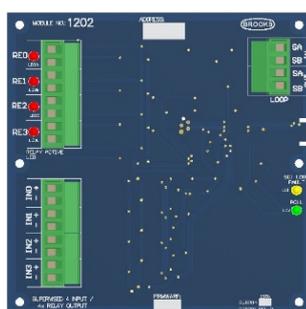
Figure 23 SUB994 Four Supervised inputs / four latching relay outputs

1202
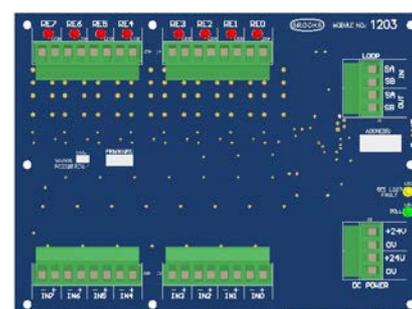
Figure 24 SUB991 8 Non-supervised Input / 8 Relay Output

1203

Any one of the Field Modules 1201, 1202 or 1203 can fit in an optional Small Field Module Enclosure BAFMES measuring 240mm x 160mm x 70mm. Any two of the Field Modules 1200, 3361/4461/4462 or 3364 can be fitted in BAFMES,

There is also a larger version available, BAFME - Field Module Enclosure measuring 330mm x 240mm x 70mm which can accommodate 2 x 1201, 2 x 1201 or 2 x 1203 or 4 x 1200, 4 x 3361/4461/4462 or 4 x 3364.

Figure 25 Field Module Enclosure BAFMES

6 User Data & Access Levels

6.1 User Data

FT128 software supports different levels for different users. To log on to FT128 (version ≥ 2.0) a **User name** and a **Password** are required. Ten different User names with individual Passwords can be used.

Ten different user names with individual passwords are available and can be defined via EBLWin (menu "System") in the "User data" dialog box. One of three different levels /Types can be selected for each user name. They can be used to log on to an FT128 (version ≥ 2.0) and/or Web-server access.

Three user names and passwords are set as default as shown in this "User data" dialog box:
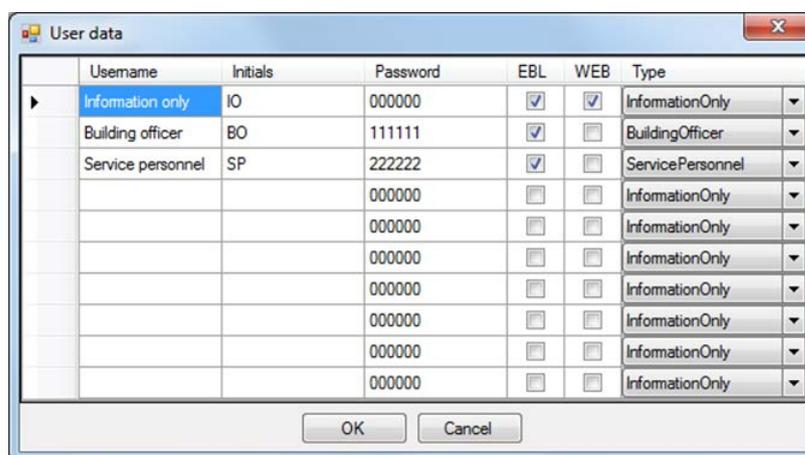
Note 1: It is highly recommended to change the default user names and passwords and to add a number of new user names and passwords. Also, the EBL and WEB columns have to be filled in, depending on how the user names and passwords should be used.

Note 2: In a new FDCIE. (i.e. before downloading any Site Specific Data), 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.

6.1.1 User Name

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

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

6.1.2 Password

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

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 29   page 139 change password (H10).

6.1.3   Password for Web-server 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 web-server if both are selected.

If a user should have access to the web-server 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.

Note: The letters are case sensitive

6.2   Access Levels

To use the keypad in FT128 and get access to the menus, it is necessary to log in with a user name and a password for level 2A, 2B or 3A.

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 will be valid.

6.2.1   How to Log On

a) Open the acrylic door with 003 key. 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. * * * * * *)[21]

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 incorrect. Try again.

> **Note:** After three attempts with wrong passwords, the log in function will be blocked for one hour for the user name respectively.

6.2.2   Navigation / General Procedures

- Scroll in lists or menus with ▼ ▲.

- Press ▼ ▲ to toggle between different choices.

- Press **A** 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 non-successful disablement is indicated by another beep and a "X".

- To leave a menu press Return.

- To leave the menu system, press Return.

- To logout, close the door.

Quick jump can be used within each menu, e.g. 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 "Menu" button. A new login is not required.

---

[21] Default password "000000" for information only, "111111" for building officer and "222222" for service personnel.

6.3 User Level

Each user name has access to a specific user level allowing access to specific menus according to Table 13 below.

Table 12 Levels of access

Information only	Building Officer	Service Personnel
H4 Present system status	H1 Perform monthly test	H1 Perform monthly test
H6 Display faults	H2 Disable or re-enable	H2 Disable or re-enable
H9 Interlocking outputs and inputs	H3 Set calendar and clock	H3 Set calendar and clock
H10 Change password	H4 Present system status	H4 Present system status
	H6 Fault acknowledge	H5 Service
	H7 Perform zone test	H6 FAULT Acknowledge
	H9 Interlocking outputs and inputs	H7 Perform zone test
	H10 Change password	H8 Maintenance
		H9 Interlocking outputs and inputs
		H10 Change password

6.3.1 User Level as specified in AS7240.2

The user names and type of access permitted are shown in Table 13 below.

Table 13 Access levels and users

User level	User level name / type	Required action / equipment	Access to
0	None	None (Door closed).	View indications and controls
1	Fire service personnel	Open door (003 key required).	Fire alarm response via fire brigade section, fan control, OWS controls and hot keys for zone disablement.
2A	Information only	003 key + logon as "Information only"	Same as 1 + keypad. Menu H4, H6[22], H9[23] & H10
2B	Building occupier.	003 key + logon as "Building officer"	Same as 2A + keypad. Menu H1-H4, H6, H7, H9 & H10
3A	Service personnel.	003 key + logon as "Service personnel"	Same as 2A + keypad. Menu H1-H10
3B		PC + EBLWin + H/W key	SSD & S/W download
4		PC + EBLWin + H/W key + special password	SSD & S/W download + reset of alarm counter

It is recommended to change the default passwords and to add a number of new user names and passwords. However, these access codes can be changed by typing over the previous password and reassigning the EBL and/or Web check boxes with the appropriate access level in the Type field.

---

[22] Information only, i.e. faults cannot be acknowledged.

[23] Menu H9/C1.

> Note: Initials are required in system FT128 since they will be used in the event log instead of the User names.
>
> In a new FDCIE (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.

6.3.2   User Level 0

With the door closed **no** access to controls. Indicators viewed through outer door.

6.3.3   User Level 1[24]

After the door has been opened using 003 key (LED "Door open" is lit), **the designated user / fire brigade personnel** will have access to the following push buttons:

Push button	Operation/function
P1	Scroll / browse through the active queued alarms
P2	Silence the buzzer in FT128
P3	Silence all alarm devices (OWS or sounders).
P4	Reset fire alarms (S) (see below)
P5	Disable active alarm (S)
OWS	OWS controls
AS1668 Fan / DamperControl	Manual override of AS1668 fans, if fitted
Zone Disablement	Quick access to zone disable / re-enable, if fitted

6.3.4   Access Level 2A

When the door has been opened using the 003 key, the door switch will activate (LED "Door open" is lit), you have access as per access level 1 and after log on as "Information only" (level 2A) the following menus are accessible:

H4 Present system status
U1 Disablement
U2 Disablement by time channel.
U3 Sensor values
U4 Sensors activating SERVICE signal
U5 Technical warning
U6 Event log
U7 Version and alarm counter
H6 Display FAULTS (Note: Information only)
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs/inputs
H10 Change password (In this case for "Information only")

[24] Access to new 19" rack display modules as shown in Figure 12 page 29 will also be possible.

6.3.5 User Level 2B

After the door has been opened using 003 key (LED "Door open" is lit), you have access to level 1 and after log on as "Building officer" (level 2B), the following menus will be accessible:

H1 Perform monthly test
H2 Disable or re-enable
B1 Disable zone
B2 Disable zone / address
B3 Disable output
B4 Disable all control, ventilation, extinguishing or interlocking outputs
B5 Re-enable zone
B6 Re-enable zone / address
B7 Re-enable output
B8 Re-enable all control, ventilation, extinguishing or interlocking outputs
B9 Disable / Re-enable alarm devices
B10 Disable / Re-enable outputs for routing equipment
B11 Disable / Re-enable alert annunciation function
H3 Set calendar and clock.
H4 Present system status
U1 Disablement
U2 Disablement by time channel.
U3 Sensor values.
U4 Sensors activating SERVICE signal
U5 Technical warning
U6 Event log
U7 Version and alarm counter
H6 Acknowledge FAULTS.
H7 Perform ZONE TEST (Test mode).
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs/inputs
C2 Activate interlocking output
C3 Reset interlocking output
C4 Disable interlocking output
C5 Re-enable interlocking output
H10 Change password (In this case for "Building officer")

6.3.6 User Level 3A

When the door has been opened using 003 key (LED "Door open" is lit), **the service / maintenance personnel** have access as per access level 1 and after log on as "Service personnel" (level 3A [25]), access to all levels in the menu, i.e. same as level 2B and also to the following menu:

Same menus as in access level 2B plus the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in unit
A5 Display current consumption on COM loop
A6 Display statistics for COM loop
A7 Activate address setting mode for DU
A8 Setup wireless detectors
A9 Setup wireless detectors
A10 Show information about site specific data
H8 Maintenance
S1 Disconnect / Re-connect COM-loop
S2 Disconnect / Re-connect Zone Line Input
S3 Disconnect / Re-connect addressable zone interface input
S4 Acknowledge SERVICE signal
S5 Restore weekly average to default
S6 Test of alarm devices
S7 Safe shut down of control unit
S8 Activate zone / address in alarm mode
S9 Activate output
S10 Reset activated output
H10 Change password (In this case for "Service personnel")

6.3.7 User Level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **EBLWin**) is to be connected to FT128 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.

6.3.8 User 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.

---

[25] If the code for access level 3A has already been used to logon to access level 2B, a new logon to access level 3A is not required.

6.4   Passwords / Change of Password

Normally, the user names and passwords are downloaded / changed via EBLWin (menu system I User data) i.e. SSD download.

A logged-on person (user name) can change his password via menu H10. If "Safe shutdown of control unit" (menu H8/S7) is done following the password change, this password will be valid also after power down else not.

A password changed via menu H10 (+ H8/S7) will be valid until it is changed via menu H10 again or it is erased via EBLWin (menu Tools I Reset user passwords).

6.4.1   Password for Web-server 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 Web-server if both are selected.

If a user should have access to the Web-server only, it is possible to choose a stronger password. It consists of 6 to 10 characters and digits as well as letters and alphanumeric characters. Note that the letters are case sensitive.

7 Technical Address / Presentation Number

7.1 Technical Address for COM Loop Units

The technical address "NNN" is used when programming any unit connected to the COM loop. The addressing tool 4414 / 4414E is used to write the address in a loop unit.

Technical address is also used to identify which unit has generated a fault.

- The addresses don't have to be in sequence.

- The connections on the COM loop don't have to be in sequence.

- The technical address can be set to 001 – 255.

- With the programming tool 4414E, the units can also be set to 000 (factory setting).

If the auto-addressing function should be used, the units on the loop must have technical address 000. See the Technical Manual for the system.

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 - 255) has to be set before the detector will work.

7.2 Presentation Number

For each fire alarm point / input / zone, a presentation number **NNN-NN** has to be programmed. The presentation number is shown in the FDCIE 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 a trigger conditions in the 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
01-99	**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.

8   Silence Alarm Devices

In FT128 front (FBP section), the push button "**Silence Alarm devices**" (P3) is available, used to silence the warning devices.

When the Alarm devices are activated and the push button "**Silence Alarm devices**" is pressed during a pre-warning, a fire alarm [26] or a Co-incidence alarm, the following will happen:

- LEDs "Fire" (L1) and "Alarms queued" (L2) [27] continue to be blinking (0.4 / 0.4).
- Activated outputs[28] programmed for sounders or OWS type "Alarm devices", will be silenced.

In case of a new alarm, or if the push button "Silence Alarm devices" is pressed again, the alarm devices will automatically re-sound.

In EBLWin, if option Button "Silence alarm devices" disables alarm devices was selected, the button "Silence alarm devices" (P3) will have the same function as in the menu H2/B9, see page 96. See also chapter "Disable / Re-enable alarm devices", page 44.

> Note 1: This option (Button Silence alarm devices disables alarm devices) must not be used in the Australian convention as this is a violation to AS4428.3: 2010.
>
> Note 2: In the NZ convention, the function is already implemented in the firmware i.e. there is no need to tick the check box.
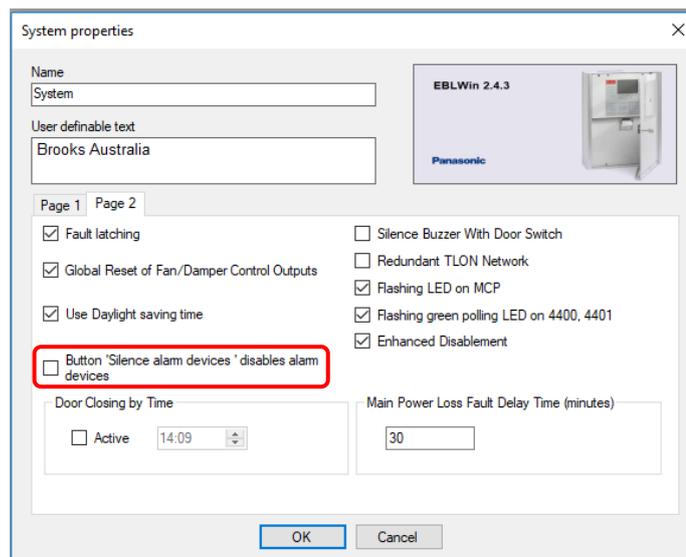
The "FIRE" LEDs will indicate steady instead of blinking when the alarm devices are disabled.

8.1   Silence Alarm Devices (Inside Switch)

> Note: The functions in this chapter are valid for the NZ convention only.

The button "Silence alarm devices" (P3) is called the "inside switch", it operates slightly different in the NZ convention as shown in the following section.

The switch toggles between two states:

- **Alarm devices disabled**
  When the button is pressed, all programmable outputs of type "Alarm devices"

---

[26] In the New Zealand convention "Acknowledged alarm" (ACK) as well.
[27] When more than one fire alarm is activated.
[28] Including Addressable sounder base 3379, Light indicator 4383, wireless smoke detector 4611 and all alarm devices 448x.

are isolated, i.e. sounders, OWS, strobes, etc. and prevents new alarms from activating the warning devices.

- **Alarm devices enabled**
  When the button is pressed again, all programmable outputs of type "Alarm devices" will be enabled.

If the "Silence alarm devices" button (inside switch) is left in its isolated state when the FDCIE door is being closed, the buzzer will beep continuously and the message "**Silence switch left active**" will be shown in the LCD. This feature is required in NZS4512 standard to ensure that the door cannot be closed while the alarm devices are isolated. For priority order see chapter "Information Priority Order" page 19.

> Note: The "Silence alarm devices" button on the front display (inside switch) has no function if the "Silence alarms" Bulgin key in the FT128 cabinet or in the remote fire brigade panel (see below) is turned to the silence alarms position.

8.2   NZ FB "Silence Alarms" Bulgin key (outside switch)

The **New Zealand FB "Silence Alarms" Bulgin key switch** is connected to NZ mimic application board via a programmable input in the I/O matrix board 4582 with the trigger condition "NZ Silence switch".

The fire brigade Bulgin key switch can be in one of two states:

1. The Bulgin key switch is turned **ON** (from non-activated to activated state).

    - All programmable outputs of type "Alarm devices" are disabled. The "Silence Alarm Devices" switch in FT128 front display (see above) has no function.

    - LEDs "Fire" (on FT128 front display) changes from blinking to steady (continuous). [29]

    - The FDCIE built-in buzzer is silenced.

    - A fault is generated[30] : **"FAULT: FB Silence switch active"**

2. The Bulgin key switch is turned **OFF** (from activated to non-activated state).

    - The fault **"FAULT: FB Silence switch active"** will be **Serviced**[31].

    - Any "Alarm" or "Acknowledged alarm" will be automatically disabled / isolated, i.e. it must be re-enabled via menu H2/B5-B6) and will be indicated by LED "General disablement" on the FDCIE front.

    - Any "Alarm" or "Acknowledged alarm" will automatically change state to "Isolated alarm" and in the fire alarm list (presented in the LCD) will "**ALM**" be changed to "**ISO**".

An example:

```
ISO ZONE-ADDR 12-46 LAST ZONE 12  No. 01
This is a user defined alarm text.
```

The FDCIE built-in buzzer is re-enabled.

---

[29] This is valid also if the fire alarm is activated after the Bulgin key switch (outside switch) is turned ON (Silence Alarms position).

[30] Always latched, regardless of if faults are programmed to be not latched.

[31] Since this fault is always latched, it has to be acknowledged via menu H6.

9 Disable / Re-Enable Alarm Devices

Outputs programmed for sounders or OWS type (Alarm devices) can be collectively disabled during fire alarm or alert annunciation alarm via menu H2/B9. This is indicated by LED "Disablements" (L8) and LED Fault / Disablements "Alarm devices" (L13) which would be 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/B9.

Note 1: Outputs of type "Alarm devices" and "Alarm devices for evacuation" cannot be individually disabled, not even via menu H2/B3 "Disable Output". See also chapter "Test of Alarm Devices (H8/S6)" page 128. All outputs of type "Alarm device" for the control unit can be activated for an alarm device test.

Note 2: Also, OWS or sounders programmed with type "Alarm devices for evacuation" will be disabled by H2/B4.

10   Silence Buzzer

The FT128 built-in **buzzer** 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 / 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 FDCIE is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.
- Delayed alarm

Press **"Silence buzzer"** (P2) to silence the buzzer.

In case of a new alarm or if the push button "Silence buzzer" is pressed again, the buzzer will automatically re-sound[32]

NOTE: This is also valid for pre-warning, co-incidence alarm, etc.

10.1   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 FT128 door is open.

10.2   Silence buzzer by the "FB Bulgin Key"

Note: Valid only for the New Zealand convention.

When the **New Zealand FB "Silence Alarms" Bulgin key switch** (outside switch) is turned ON (i.e. "Silence Alarms" position) the buzzer is silenced until the Bulgin key is turned to the "Normal" position.

10.3   Buzzer

If there is a fault or disablement whilst the door to FT128 is closed, the FT128 built-in **buzzer** will sound continuously directly after the door is closed. One fault message or disablement will be shown in the LCD but more faults and/or disablements will be indicated by the word "**more**".

Note: In the New Zealand convention, if any of the outputs for routing equipment ("Fire Brigade TX" and "Fault TX") or outputs for alarm devices is disabled when the door of FT128 is being closed, the FT128 built-in buzzer will sound continuously immediately after the door is closed. **"Alarm routing equipment left isolated"**, **"Fault routing equipment left isolated"** and **"Silence switch left active"** will be shown in the LCD. This information has higher priority than the normal fault messages and disablements.

---

[32] Not valid if the buzzer is silenced by the open door.

11   Disable / Re-enable Control Outputs

All control outputs programmed as type:

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

….can be collectively disabled via menu H2/B4 type by type. This is indicated by the LED "Disablements" (L8).

They will remain disabled until they re-enabled again via menu H2/B8.

An interlocking output can be activated for an output test, even if it is disabled.

12   "Disable" Button

When the push button "**Disable**" (P5) is pressed whilst there is an active alarm, all outputs configured for either the device(s) or zone(s) in alarm, will be disabled. This is indicated by the disablement LED L8.

The "**Disable**" push button (P5) is provided in the fire brigade section on the front display to enable the fire brigade personnel to disable (isolate) an active alarm such as a zone of addressable sensors, conventional zone or individual addressable device.

A single operation of the "**Disable**" button (P5) whilst there is an active alarm will initiate the following:

- Disablement of all zones in alarm and/or addressable devices in alarm.

- Illuminate the "General Disablement" LED L10.

- Disablement of all the outputs configured for zone(s) or device(s) in alarm.

The output indicators activated as a result of an alarm will not clear automatically after disablement. A subsequent reset operation is required to restore the FDCIE to the normal condition.

> Note: The "Disable" button will not function unless the "Silence Alarm Devices" button has been activated first as required by AS4428.3:2010[33].

---

[33] This function is not required in NZ convention.

13 Door Open

A standard 003 key is used to open the FT128 door and get access to the front membrane and other optional modules e.g. OWS, zone disable, AS1668 fan control, etc., see also chapter "User ", page 34.

Door open may be programmed via EBLWin to disable any external strobe or sounder/strobe combination located at the designated building entry point.

Door open in FT128 is indicated by LED "Door open" (L10) in FT128.

13.1 Disable Routing Equipment with Door Switch

> Note: Do not use the door open function to disable (isolate) the routing equipment. This option cannot be selected in Both Australia and New Zealand, it is a violation to AS4428.3.

In EBLWin the following options are available to program:
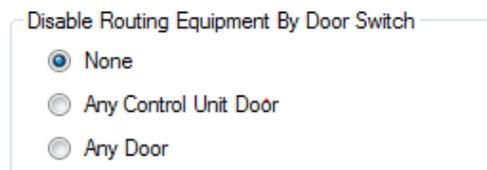
Disable Routing Equipment By Door Switch
- ⦿ None
- ◯ Any Control Unit Door
- ◯ Any Door

None: The output(s) for routing equipment (Fire Brigade and Fault TX) will not be disabled by any open door (default).

Any Control Unit Door: Door open in FT128 will disable the output(s) for routing equipment (Fire Brigade and Fault TX).

Any Door: Door open in FT128 and/or Ext. Fire Brigade Panel will disable the output(s) for routing equipment (Fire Brigade and Fault TX).

Disabled routing equipment outputs are indicated by the LED "Disablements" (L8) and "**Fault / Disablements** Fire Brigade TX" (L15) and listed in menu H4/U1.

The following is shown in the display:

> All outputs to fire alarm routing equipment
> disabled by door switch

13.2 Silence Buzzer by Door Switch

In EBLWin the following can be programmed:

☑ Silence Buzzer With Door Switch

The buzzer will be turned off as long as the FT128 door is open.

14   Alarm Types

In case of a fire, Analogue detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can generate **fire alarm** [34].

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

The Analogue detectors can also generate other types of "alarm", i.e. **Pre-warning**, **Heavy smoke alarm** / **Heavy heat alarm** and a two-unit / zone dependent alarm point / zone generating a **Co-incidence alarm**. [35]

Quiet alarm is an alarm type that can be used for AS1668 fan control and other applications that require a non-latching / non-brigade call alarm.

LAAF alarm [36] (Local Alarm Acknowledgement Facility) is similar to the alert annunciation function and normally used to control the brigade call alarms. If the LAAF function is used, during the acknowledgment and the investigation periods, there will be an indication in the FDCIE display and the Fire Brigade TX will be delayed. The LAAF function requires a Local Alarm Acknowledgement Unit (LAAU 4445), a smoke detector (sensor) 4300/4400 or 4301/4401 and sounder base 3379. During the Acknowledgement Period and the Investigation Period respectively, there will be an indication in the FDCIE display.

FT128 can handle and present up to 256 fire alarms (alarm points and/or zones). Zone numbers 01-99 can be used and in each zone the alarm point (address) numbers 01-99 can be used. The fire alarms will be shown in FT128 display, Alert Annunciation unit 1736 and External Presentation unit 1728.

Acknowledged and **Isolated alarm** are fire alarm functions used only in New Zealand convention.

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

14.1   Pre-Warning

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

An Analogue detector generates a pre-warning at a lower alarm level than the fire alarm level[37] Pre-warning can be used when an early alarm and/or an early action is required (e.g. a "soft" computer shut down). Normal alarm devices (output type "Alarm devices"), routing equipment, etc. will not be activated.

In case of a pre-warning, the following will occur:

- The buzzer in FT128 sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated[38]
- On the first row in the FT128 display, the presentation number (zone-address) is shown (for the first pre-warning).
- On the second row, an alarm text (= the fire alarm message) will be shown (if programmed).

Example; pre-warning zone 12, address 45 (within zone 12):

---

[34] In the New Zealand convention only, a Fire alarm (ALM) can be "changed" to an Acknowledged alarm (ACK) or an Isolated alarm (ISO).

[35] This function is normally used for smoke detectors only.

[36] LAAF is the Local Alarm Facility as per the previous model AAF (Alarm Acknowledgement Facility). Local Alarm Acknowledgement Unit (new unit) is similar to the discontinued Alarm Acknowledgement Module AAM.

[37] See FT128 Technical / programming manual. Any programmable input can also be used to activate a pre-warning.

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

```
Pre-warning detector 12-45
(user definable text message)
```

Example; pre-warning zone 12:

```
Pre-warning zone 12
(user definable text message)
```

LEDs "Alarms queued" (L2) blinking are indicating more than one pre-warning and they will be automatically scrolled (each 5th second). Pre-warning is automatically reset see chapter "Alarm reset", page 58.

14.2 Fire Alarm

256 alarms (points or zones) can be presented in the FT128 display.

The following occurs in case of a fire alarm:

- The buzzer sounds 0.4 sec. each 0.8th sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire Brigade TX) and outputs type "Routing equipment" are activated. See also **Note** below.
- Programmable outputs for fire alarm are activated[39]
- In the FT128 display, a presentation number (zone/address) with a user definable text message (alarm text) is shown (if programmed).

Note: Normally the FDCIE relay output "R0" is used as the output for Routing equipment (Fire Brigade TX). The output will then be activated for fire alarm from any alarm point or Zone Line Input.

If the fire alarm routing equipment has provision for transmission of several fire alarm signals and the alarm receiver has provision for reception of several fire alarm signals, the alarm receiver can take different actions depending on if it is a fire alarm type A or B.

If a **fire alarm type B** is received, it will indicate that only **one** Analogue addressable smoke, heat or multi detector is activated, which could be a nuisance alarm.

If a **fire alarm type A** is received, it is probably a real fire since fire alarm is then activated from:

- **Two or more** Analogue addressable smoke, heat or multi detectors.
- **Any** Manual Call Point
- **Any** Zone Line Input
- **Any** programmable input with the trigger condition "General Fire"

For more information on alarm type A and B, see Technical / Programming manual.

Some Fire alarm examples:

One alarm point activating fire alarm (e.g. detector 12-45)

```
001 ZONE-ADDR 12-45      LAST ZONE 12        No. 01
"Alarm text for 12-45"
```

One zone activating fire alarm (e.g. zone **14**; a conventional Zone Line Input)

```
001 ZONE 14          LAST ZONE 14              No. 01
"Alarm text for zone 14"
```

More than one alarm point activating fire alarm (e.g. detectors 12-45 & -46)

---

[39] Programmable outputs for "General fire alarm" and for the activated fire alarm(s).

```
001 ZONE-ADDR 12-45      LAST ZONE 12        No. 01
"Alarm text for 12-45"
```

The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" (P1) to see the other alarm:

```
002 ZONE-ADDR 12-46      LAST ZONE 12        No. 01
"Alarm text for 12-46"
```

Two alarm points in two different zones activating fire alarm (e.g. detectors 12-45 & 13-02)

```
001 ZONE-ADDR 12-45      LAST ZONE 13        No. 02
"Alarm text for 12-45"
```

The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" (P1) to see the other alarm:

```
002 ZONE-ADDR 13-02      LAST ZONE 13        No. 02
"Alarm text for 13-02"
```

Alarms Queued

LEDs "**Alarms queued**" (L2) are blinking (0.4 / 0.4 sec.), indicating that more than one fire alarm[40] is activated. To scroll through the alarms, use the push button "Alarms queued".

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

When the "Scroll" button has been used the first alarm will be automatically displayed again after 20 seconds.

14.2.1   Entering Fire Alarm Menu during fire alarm (X1-X9)

During the fire alarm presentation, a special fire alarm menu can be used.

☑ Use special menu during fire alarm

Fire alarms can be displayed via this menu but it can also be used to display faults and disablements in the system.

Alarm points, zones, control outputs and alarm devices can also be disabled / re-enabled via this menu.

No User name and Password are required.

a) During the fire alarm presentation press button "Access[41] and **the alarm text will be replaced with the following:**

```
001 ZONE-ADDR 12-45           LAST ZONE 12          No. 01

Display alarms                        ACCEPT?   X1
```

---

[40] Up to 256 alarms can be presented in the display. Alarm = ZONE and/or ZONE-ADDRESS.

[41] Access code is not required.

b) Press "**A**"

001 ZONE-ADDR 12-45	LAST ZONE 12	No. 01
ZONE-ADDR: 12-45		001 of 003

c) Navigate similar to the normal menu

"A", "↓", "↑", "→", "←" and "Return" can be used same as per the normal menu tree, see chapter "Access Levels", page 35 . The original presentation (the alarm text) will be automatically displayed again approx. 20 seconds after the push buttons "A", "↓", "↑", "→", "←" or "Return" are no longer used.

Available Fire Alarm Menus

- **Display alarms (X1)**

  One alarm is an alarm point (ZZ-AA) or a zone (ZZ).

- **Display faults (X2**)

  Only the fault message for the fault respectively, will be displayed here, not date, time and "status" information.

- **Display disablements (X3)**

  Notes Also zones in "Test mode" will be displayed via this menu.

  After all disablements, the zones in "Test mode" will be displayed.

- **Disable zone (X4)**

  Write a zone number (01 – 99) and press A. If more zones are to be disabled, repeat the procedure.

- **Disable zone / address (X5)**

  This function is useful e.g. for a manual call point not to continue to generate alarms because of a broken glass. Write a zone-address and press A. If more zone-addresses are to be disabled, repeat the procedure.

- **Re-enable zone (X6)**

  This is a list of disabled zones. Scroll to or write the wanted zone number and press A. If more zones are to be re-enabled, repeat the procedure.

- **Re-enable zone / address (X7)**

  This is a list of disabled zone-addresses. Scroll to or write the wanted zone-address and press "A". If more zone-addresses are to be re-enabled, repeat the procedure.

- **Disable / Re-enable control (X8)**

  To disable, press 0 and A. (To re-enable, press 1 and A.).

  For more information, see section 21.4 "Disable All Control, Ventilation, Extinguishing or Interlocking Outputs (H2/B4)" page 91

- **Disable / Re-enable alarm devices (X9)**

  To disable, press 0 and A. (To re-enable, press 1 and A.).

  For more information, see section 21.9 "Disable / Re-Enable Alarm Devices (H2/B9)" page 96.

14.2.2   Test Mode Alarm

Regarding Test mode, see chapter 20   "Perform Monthly Test (H1)" page 85 and chapter 26   "Perform ZONE TEST (Test Mode) (H7)'' page 121.

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.

No outputs (sounders) will be activated except the fire door outputs. The test mode alarm will be automatically reset after approx. 10 seconds.

14.3   Heavy Smoke Alarm / Heavy Heat Alarm

An analogue detector (sensor) 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 FT128 Technical Manual 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.

In Case of a Heavy Smoke / Heat Alarm, outputs programmed for heavy smoke / heat alarm will be activated. General heavy smoke / heat alarm and individual alarm points / zones.

001 ZONE-ADDR 12-45	LAST ZONE 12	No. 01
ZONE-ADDR: 12-45		001 of 003

Heavy smoke / heat alarm will be reset when the fire alarm is reset, see section 15   "Alarm Reset" page 58

14.4   Alert Annunciation Alarm (AA Alarm)

When the AA function is enabled, indicated by the LED "Fire brigade tx delay", the indications, actions etc. are similar to a normal fire alarm (see above) except that FT128 output for routing equipment (Fire Brigade TX) will not be activated directly. An AA alarm is indicated by the LED "Fire Brigade TX delay" (L16).

The AA alarm has to be acknowledged within an acknowledgement time and reset within an investigation time, otherwise the output(s) for routing equipment (Fire Brigade TX) will be activated. See FT128 Technical / Programming manual for more information regarding the AA function. Acknowledgement and reset of the AA alarm can be performed on an AA unit 1736.

14.5   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 [42] or when only one two-zone dependent zone is in alarm status[43], the FT128 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". Examples for Co-incidence alarm zone / address and zone shown below:

Co-incidence alarm detector ZZ/AA
(user definable test message)

or

---

[42] If two or more two-unit dependent alarm points (zone - addresses) in the same zone are in alarm status at the same time, normal fire alarms will be activated in FT128. See also FT128 Technical / Programming Manual.

[43] If two or more two-zone dependent zones in the same group are in alarm status at the same time, normal fire alarms will be activated in FT128. See also FT128 Technical / Programming Manual.

> Co-incidence alarm zone ZZ
> (user definable test message)

If there are Co-incidence alarms generated in other zones, the LEDs "Alarms queued" (L2) are blinking and the Co-incidence alarms will be automatically scrolled (each 5th second).

If two or more zones or alarm points (zone / addresses) dependent on each other are in alarm status at the same time, normal fire alarm (see above) will be activated in the system. The co-incidence alarm function can be turned on / off via a time channel.

14.6 Delayed Alarm

Delayed alarm is an option that can be enabled via EBLWin for a specific alarm point. Two applications for delayed alarm are shown below.

14.6.1 General Time Delay Applications

In some premises delayed fire alarm activation from analogue smoke detectors can be used to avoid nuisance alarms. The delay time will be added at the end [44] when a fire alarm normally would have been activated in the FDCIE.

Each analogue detector in the system can be programmed (in EBLWin) to delayed fire alarm activation, "Delayed alarm" check box in the detector properties must be ticked. (Heat detectors and manual call points must not have delayed fire alarm activation). The delay time interval can be set (in EBLWin, System Properties) to 0-255 seconds. In this application, the time delay must be as short as possible (less than 30 seconds. In fact, if the FT128 is connected to the brigade, it is not recommended to use this function.

The Delayed alarm will be activated when the delay time countdown has started and a normal fire alarm will not be activated until the delay time has run out. No outputs will be activated.

Function

An alarm point has to be in "fire alarm state" for the duration of the delay time, in order to activate a fire alarm in the FDCIE. If an alarm point restores back to "normal state" during the delay time, the delay time will reset and start again when the alarm point activates a "fire alarm" again.

In case of a Delayed alarm, the following occurs:

- The buzzer in FT128 sounds 0.8 se. each 5th sec. (0.8 / 5 sec.).
- Output programmed for delayed alarm are activated [45].
- On the first row in the FT128 display, the presentation number (zone-address) is shown (for the first delayed alarm)
- On the second row, an alarm text is shown (if programmed).

Example:

> Delayed alarm detector ZZ/AA

Or

> Delayed alarm ZZ

If more than one Delayed alarm is activated, the LEDs "Alarms queued" (L2) will be blinking and the delayed alarms will be automatically scrolled (every 5th second).

---

[44] This function is added in EBLWin software version V2.1.2

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

Delayed alarm is automatically reset, see chapter "Alarm Reset", page 58.

> Note: The delayed alarm function for a conventional Zone Line Input e.g. 3361 Input 0 (Z), zone expansion board 4580 inputs is different. The "Delayed alarm" check box in the Zone Line Input properties is called "AVF", the general delayed alarm function will not be used and is replaced by the alarm verification function.

14.6.2 Alarm Delay Facility (ADF)

The ADF is a new optional function added in the AS1670.1:2015. The function is similar to the Alarm Acknowledgement Facility (AAF) without manual acknowledgement button (LAA or AAM). Instead of the manual control, the function will be automatically control by a time delay that can be set in the system properties.

In this specific application, the alarm activation type for an output unit (3379) must be set (in EBLWin) to "DelayedAlarmZoneAddress" (or zone). In this case, when the alarm point (only analogue smoke or multi detectors) activates an alarm, the output unit 3379 will sound for the predetermined time delay period without signalling alarm to the FDCIE. If the alarm point remains in alarm after the time delay elapsed, a general fire alarm in the FDCIE will be generated. If the smoke cleared form the smoke detector before the end of the time delay period, the alarm will automatically reset and the system remains in the normal condition. The delay for this application can be selected in EBLWin system properties for up to 255 seconds.

Application Example:

A typical application for the ADF would be a residential accommodation where false alarms may cause a brigade call. A sounder base(s) 3379 is used as a local warning, it is mounted inside the apartment and will activate upon receiving an alarm from a smoke detector inside the unit and continues to operate for the time delay configured in the system properties (0-255 sec). If the smoke has not been cleared from the smoke detector during the time delay, the control panel will generate a general fire alarm. If the smoke clears up within the delay time, the alarm will automatically reset, 3379 will be silenced and the system restores to the normal condition.

Several control expressions are available to cover any possible configuration:

- DelayedAlarmZoneAddress (Zone, Address), true when a certain zone / address is in delayed alarm state.

- DelayedAlarmZone (Zone), true when a certain zone or any detector in a certain zone is in delayed alarm state.

- GeneralDelayedAlarm, true when any zone or zone/address is in delayed alarm state.

14.7 Alarm Acknowledgement Facility (AAF)

One or more Local Alarm Acknowledgement Unit (LAAU or discontinued AAM) can be used in the system.

The LAAF is a function requires wall mounted Local Alarm Acknowledgement Unit (LAAU) 4445 or the Brooks discontinued Alarm Acknowledgement Module (AAM) 3340. The LAAU is used in residential applications to provide the occupant with a local control facility to control nuisance alarms within the occupancy e.g. cooking fumes, smoking, aerosol spray, steams, etc. and prevent this nuisance alarm from generating general fire alarm within the building. It provides the occupant inside the sole occupancy unit with a pre-determined time to acknowledge a nuisance alarm and investigation time to clear the smoke from the smoke chamber in the active unit.

A complete AAF requires an LAAU (AAM), one or more sounder base 3379 and up to 5 analogue smoke detectors (sensors). Each AAF unit configured as an AAF zone.

See FT128 Technical Manual chapter "Alarm Acknowledgement Facility (AAF)" for more information.

During the Acknowledgement Period (10-120 sec.), the following information (a list if many) is shown in the FDCIE display[46]:

> LAA zone zz, activated
> dd-mm-yyyy hh:mm

During the Investigation Period (normally 0-9 min.), the following information is shown on the FT128 display:

> LAA zone zz, investigation in progress
> dd-mm-yyyy hh:mm

See FT128 Technical / Programming Manual chapter "Local Alarm Acknowledgement (LAA) for more information.

Note: The Local Alarm Acknowledgement Unit (4445) is the newer version of the discontinued Alarm Acknowledgement Module (3340). In V2.2.0, the Australian AAFC function has been moved to the obsoleted units and replaced by the LAA. The function of AAFC and LAA are identical, only the wall control unit is different.

14.8   Quiet Alarm

Quiet alarm is an alarm type that can be programmed via EBLWin for an analogue smoke detector. The quiet alarm is self-resetting alarm (non-latching), it is only displayed on the LCD and does not activate any general alarm functions.

This feature is used in AS1668 supply air / stair pressurization fan control applications or in residential units as a non-latching smoke alarm.

In AS1668 supply air fan applications, the type "Quiet alarm" is used to set the duct detector to be non-latching and resets automatically after the post timing [47] is completed, this can be configured in EBLWin.

A smoke detector (in duct probe) set in EBLWin to "Quiet alarm" is normally used in conjunction AS1668 fan control module, it requires an I/O unit 3361 selected in EBLWin as "3361 for fan".

In residential applications, an analogue smoke detector set to type "Quiet alarm" is used in conjunction with the sounder base 3379 and LAAU 4445 (or ADF) as a local warning inside the sole occupancy unit.

Quit alarm Indications and actions:

- Detector LEDs are turned on (also a connected RIL).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- The buzzer sounds (0.8 / 5 sec.),
- A Quiet alarm presentation (incl. a title "Quiet alarm") in the display.

> Quiet alarm detector ZZ/AA
> (User definable text message)

---

[46] When the discontinued Brooks AAM (3340) is used, the display shows "AAF zone, activated".

[47] When the smoke clears from the smoke chamber, the detector resets after predetermined time (normally 60 sec.)

Programmable outputs for quiet alarm is required e.g. 3361 outputs controlling fan operation 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, non-brigade call alarm and do not activate any common alarm output.

14.9   Acknowledged and Isolated Alarm (for only NZ)

Note: Acknowledged or Isolated alarm is a fire alarm function used only in New Zealand convention.

14.9.1   Acknowledged Alarm

A fire alarm presented in the LCD can be acknowledged by pressing the yellow button "Fault acknowledge" (P6).

Acknowledged alarms are indicated in the fire alarm list on the LCD by "ACK" in front of the alarm. This indication is the only difference between a fire alarm and acknowledged alarm.

Acknowledged alarms "ACK" have to be reset same as normal fire alarms "ALM".

14.9.2   Isolated Alarm (for only NZ)

A normal fire alarm "ALM" or an acknowledged alarm "ACK" presented on the LCD can be isolated as follow:

When the "New Zealand FB Silence Switch" (outside switch) is restored i.e. from the activated to non-activated position, any fire alarm and acknowledged alarm will be isolated (disabled).

Isolated alarms are indicated in the fire alarm list on the LCD by "ISO" in front of the alarm.

Isolated alarms do not activate any control outputs, output for routing equipment (Fire Brigade TX), FT128 buzzer and the LEDs "Fire" in the FDCIE.

Isolated alarm "ISO" have to be reset same as normal fire alarms "ALM".

Isolated alarms have to be re-enabled via menu H2/B5-B6 before they can activate a new fire alarm.

15   Alarm Reset

> Note: The alarm "RESET" button will not function unless the programmed alarm devices have been silenced i.e. "Silence alarm devices" button is activated.

15.1   Pre-Warning Reset

Pre-warning is non-latching i.e. resets automatically when the alarm point / zone is no longer above pre-warning level. Outputs activated by pre-warning will be de-activated.

15.2   Fire Alarm Reset

In the New Zealand convention, **fire alarms** are shown in the LCD as normal fire alarms with "**ALM**", acknowledged alarms shown with "**ACK**" and isolated alarms shown with "**ISO**".

> Note: The detectors having activated fire alarms after reset, must be inspected, tested and replaced when required.

Onlye of the following alarm reset alternatives is valid. This is selected via EBLWin. "All" is default.
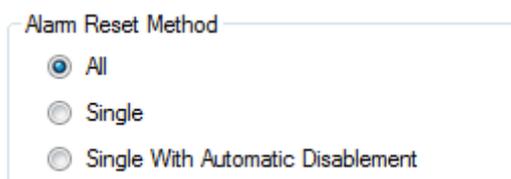
Alarm Reset Method
- ● All
- ○ Single
- ○ Single With Automatic Disablement

15.2.1   All (default)

All activated fire alarms (alarm points / zones) will be reset by pressing "RESET" (P4) once but must be preceded by "Silence alarm devices" button (P3) activation (this is in accordance with the fire brigade standard AS4428.3:2010).

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

When all fire alarms are reset, LEDs "FIRE" (L1) and "Alarm Queued" (L2) are turned off. If there are other conditions exist e.g. fault condition, the corresponding information will be shown (fault message), for the priority order see section 3.4.2.2 "Information Priority Order" page 19.

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

> Note: When "Single" or "Single with automatic disablement" is used, all alarms can be reset by pressing "RESET" (P3) and approx. 0.1 sec. later also press "Enter" and hold them pressed for > 0.5 sec. **Both alternatives must not be used in the Australian or NZ conventions**.

15.2.2   Single

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

Press "Reset" (P4) to reset the fire alarm currently shown to the left in the display.

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

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

If more than one fire alarm is activated (i.e. LEDs "Alarms queued" (L2) are lit) the next fire alarm in the queue will be shown in the display. It has to be reset same as the first one.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L2) 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 priority order see section 3.4.2.2 Information Priority Order page 19.

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

15.2.3   Single Reset with Automatic Disablement

Similar to "Single reset" but includes the 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.

When "Single with automatic disablement" reset is performed, an alarm point or zone, still in alarm status, will not only be reset but also disabled, i.e. it will not activate a new fire alarm within 20 seconds. It has to be re-enabled via menu H2/B6 (see page 93) before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to AS7240-2 standard).

LED "Disablements" (L8) 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" (P4) and approx. 0.1 sec. later also press "Alarms queued" (P1) and hold them pressed for > 0.5 sec. The alarm point or the whole zone (conventional) currently shown in the display will be reset and disabled.

15.3   Test Mode Alarm Reset

Test mode alarm is automatically reset after approx. 10 seconds.

15.4   Acknowledged and Isolated Alarm (for only NZ) Reset

Acknowledged alarms "ACK" or isolated alarm "ISO" have to be reset same as normal fire alarms "ALM".

15.5   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.

15.6   Alert Annunciation Alarm Reset

Regarding the function, see chapter "Alert Annunciation Alarm (AA Alarm) page 54 and FT128 Technical / Programming manual, chapter "Alert Annunciation".

Reset of the AA alarm can be performed via push button "Reset" on an AA unit 1736 or in FT128. AA alarms will be reset all at a time.

Note: Reset via an AA unit (1736) is only possible during the investigation time and only if the alarm is an AA alarm (not normal fire alarms). If more than one AA alarm is activated, they will be reset all at the same time.

15.7   Co-Incidence Alarm Reset

Co-incidence alarm is automatically resets 5 minutes after the alarm point / zone is no longer in alarm status or by the Reset button (P4).

15.8   Delayed Alarm

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

15.9   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 clear 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.

15.10   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).

16   Fault

All faults are delayed in order not to generate any unnecessarily faults, e.g. the delay time 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 3361/4461 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 FT128:

- The buzzer in FT128 sounds steady (continuous).
- The fault relay output for routing equipment (Fault TX) is de-activated (fault relay is normally activated).
- Programmable output for general fault is activated and output(s) for general charger fault may be activated.
- LED "Fault TX activated" (L11) is illuminating.
- LED "General fault" (L7) is illuminating.
- LEDs "**Fault / Disablements** Alarm devices" (L13), "System fault" (L14) and/or "**Fault / Disablements** Fire Brigade TX" (L15) may also illuminate (depending on the type of fault).
- A fault message including date, time and status is shown in the FT128 display. If the fault is generated by an alarm point or zone, the user definable alarm text will be shown.

For an alarm point / zone also the "alarm text" will be shown.

Example of a fault message:

FAULT: No reply	zz-aa	→
Date: DD-MM	Time: HH:MM	

Press "→" to see the technical address:

FAULT: No reply	techn. address xxx	←
User definable alarm text for zz-aa		

Press "←" to see the zone-address:

- If more than one fault is activated, the text: "**More faults**" is added after the time.

- If a fault has been corrected before it has been acknowledged, the "status" text: "**Serviced**" is added after the time [48].

- Fire alarm presentation has higher priority than the fault messages. During fire alarm presentation, the faults can be shown via the special fire alarm menu X2 see section " Entering Fire Alarm Menu during fire alarm (X1-X9)" page 51.

Faults are normally latched[49] and have to be acknowledged via menu H6 (see page 120).

In this menu (H6), up to 100 faults can be listed:

- Not serviced / corrected and not acknowledged faults
- Not serviced / corrected but acknowledged faults (acknowledged)
- Serviced / corrected but not acknowledged faults (serviced)

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

---

[48] In EBLWin, Fault can be selected to be either latching (default in AU convention) or non-latching. Latched faults = each fault must be acknowledged. Non-latching faults = corrected faults will automatically be removed from the fault list (menu H6).

[49] In New Zealand convention, faults must be set to non-latching.

Note: As a warning, faults (and disablements) are also indicated by a 2-sec. beep when an open FDCIE door is being closed.

16.1   Fault Messages

Below follows a list of all fault messages, in alphabetical order:

FAULT: 24 V for external equipment

Fuse "F9" on the main board 4556 is blown.

FAULT: 24 V for routing equipment

Fuse "F7" on the main board 4556 is blown.
Also indicated by LED "L15" blinking.

FAULT: 24 V output, techn address xxx

Valid for an external power supply 3366 connected on the COM loop.

The output might be turned off or current output limit is exceeded.

FAULT: AAU x

AAU=1736 (Alert Annunciation Unit)

The unit is programmed as another unit type different to the type configured in the SSD or fault in the unit.

FAULT: Battery

The battery check is performed every 14th minute (every 30th second in the New Zealand convention or when the fault is generated).

- Battery voltage is below 18.9 V (24.4 V in New Zealand convention).
- Batteries (2 x 12 V) are missing or not correctly connected.
- Fuse F2 on the main board 4456 is blown.
- In line fuse between the two batteries is blown.

FAULT: Battery charging

The battery charging function is not working properly. The main board 4556 may have to be replaced.

FAULT: Battery, tech. address xxx   ←

The charging function in the external power supply 3366 or 4466 connected on the COM loop is not functioning.
- Batteries (2 x 12 V) are missing or not correctly connected.
- Battery fuse is blown
- PCB might be faulty

FAULT: Battery, loop unit zz-aa

Press ▶ to see the technical address.

FAULT: Battery, techn address xxx

zz-aa = Zone-Address. **xxx** = COM loop address.
This is valid for a Wireless smoke detector 4611.

Battery voltage is too low (< 2.8 V)
The batteries (2 x 3 V Lithium) must be replaced.

FAULT: Cables mixed COM-loop

The two wires L (SA) and C (SB) have been mixed (swapped). Check that the wire connections are correct (according to drawing F666).

FAULT: Charging external power supply

A fault exists in external power supply equipment. A fault output from the external equipment is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: Charging, techn addr xxx

Valid for an external power supply 3366 connected on the COM loop.
The battery charging function is not working properly. The charger board may need to be replaced.

FAULT: Checksum system program

A fault in FT128 S/W. This is very serious. Requires system software download. Call for service personnel / engineer immediately.

FAULT: Cut-off SCI **nn** <-> SCI **nn**

This fault is indicating a cut-off (break) on the loop or that the COM loop voltage is too low at the end of the loop (i.e. < 12 V_{DC}).

SCI n <->SCI n describes between which **S**hort **C**ircuit **I**solators (SCI:s) the cut-off is located.
n = A, B, 0, 1, 2, 3, 4, 5, 6 or up to 127. A & B are the built-in isolators in the FT128 A-direction and B-direction respectively, i.e. if no SCI is used the information will always be: **SCI A <-> SCI B**.
If only one SCI e.g. 4313 no. 0 is used, the information will be:
SCI A <-> SCI 0 or **SCI 0 <-> SCI B**
...and so on.

If the break is a single break (cut-off) on the loop, no other fault messages will be reported.

If the loop has several breaks, the message reports the last isolator before the break in the A-direction (including the following isolator). There will also be a "FAULT: No reply ….." message for each unit that FT128 cannot find and "FAULT: Several faults …".

NOTE: Each 10th minute a new attempt is made to communicate in the A-direction only.
When all breaks are repaired (corrected), the communication automatically returns to communicate in the A-direction only. [50]

FAULT: Detector removed zz-aa

Press ▶ to see the technical address.

---

[50] The fault has to be acknowledged and it can last up to 10 minutes before the communication returns to communicate in the A-direction only.

FAULT: Detector removed, techn address xxx

zz-aa = Zone Address. xxx = Com loop address
A wireless smoke detector 4611 has been removed from its base.

FAULT: Earth fault (minus)

FAULT: Earth fault (plus)

Earth fault is detected in FT128. The system voltage is normally 24 V_{DC}.
+24 V to earth is normally 12.5 V. 0 V to earth is normally 11.5 V. Voltage to earth < 3.4 V = Earth fault (minus).
Voltage to earth > 18.3 V = Earth fault (plus).
Check all cables (for damage, etc.). The function of the FT128 cannot be guaranteed. Call for service personnel/engineer.

FAULT: Earth fault, techn address xxx

Valid for an external power supply 3366 (4466) connected on the COM loop. Check all cables connected to the unit.

FAULT: EPU x

EPU=1728. (External Presentation Unit)

The unit is programmed as another type to the type configured in the SSD or a faulty unit.

FAULT: Expansion board x

Valid for Expansion Boards 4580, 4581 and 4583 i.e. no. x, mounted in FT128. Also valid for the I/O Matrix board 4582 connected on the COM loop.

Internal fault on the board and it may needs to be replaced.

FAULT: External fuses

The fault is to be found in the external power supply equipment (blown fuses, etc.). A fault output is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: External power supply

The fault is to be found in the external power supply equipment. A fault output is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: Extinguishing system

The fault is to be found in the extinguishing system, which has a fault output connected to a programmable supervised input in the FT128 system, i.e. to an expansion board 4583. Also check the input connections.

FAULT: Factory settings

The battery charging factory settings have been "changed", e.g. because of some external disturbance. The main board has to be replaced since the battery charging function cannot be guaranteed.

FAULT: Fan on loop unit addr xxx

The LED "Fault" is lit on a fan control module connected to a COM loop, fan no. xx which controlled by I/O unit 3361 with the technical address xxx. The fault indicates that the fan has changed the status (run to stop or stop to run) but the corresponding I/O unit 3361 input has not been activated within 30 seconds. Check the fan pressure switch and the cables / connections.

FAULT: Fault warning routing equipment

The fault is to be found in the Fault warning routing equipment. A fault output is connected to a programmable input in the FT128 system. Check the input as well.

FAULT: FB Silence switch active

Only valid for the New Zealand convention.
New Zealand FB Silence switch ("outside switch") is turned ON, i.e. from not activated to activated state.

FAULT: FBP x,

FBP=1826 (Ext. Fire Brigade Panel)

The ext. FBP is programmed as another type in the SSD or a fault in the unit

FAULT: Fuse on COM-loop

Fuse F4 on the main board is blown. The fuse is not replaceable.

Note: The fuse should not be replaced. The main board 4556 has to be replaced, since more components are broken as well.

FAULT: High current consumption in CU

FT128 current consumption > 1.8 A, this will cause the battery charging turn off. The battery charging is turned off as long as the current consumption exceeds 0.75 A. Normally this fault only appears when starting up / expanding an FT128.

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

FAULT: High current on COM-loop

If the stored value is below 100 mA, this fault will later be generated for a measured current higher than the stored value plus 20mA. (One example: 75 mA (stored) + 20mA = 95 mA = fault limit.)

If the stored value is over 100 mA, this fault will later be generated for a measured current higher than the stored value plus 20%.

(One example: 150 mA (stored) + 20% = 180 mA = fault limit.)

Note: 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: Input

A fault on the supervised input I_0 in FT128.

Check the cables / connections (open or short circuit).

FAULT: Input x exp board x

A fault on the supervised input x on the expansion board (4583) with address x. Check the cables / connections (open or short circuit).

FAULT: Interlocking input AA/PP

AA/PP = Area – Point

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 AA / point PP.

FAULT: Loop unit zz - aa   →

Press "→" to see the technical address.

FAULT: Loop unit techn. address xxx   ←

zz-aa Zone address, xxx = COM loop address
The communication with the unit is not established, i.e. the unit is probably faulty.

FAULT: Low battery capacity

Battery internal resistance > 1.4 Ω will generate a fault.

The "Low capacity voltage diff." value shown in menu H5/A4 is > 700 mV.

The battery might be too old.

- Check / adjust the power supply voltage (must be 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.

NOTE! The battery check is performed every 4th hour, i.e. it can take up to 4 hours until the fault status be "corrected".

In the New Zealand convention: The battery charging is turned off 60 minutes every 24th hour. A battery voltage < 24.4 V during these 60 minutes will generate a fault.

If a fault is generated it will automatically be **Serviced** after the 60 minutes.

FAULT: Low voltage

System voltage < 21.6 V_{DC}, in the FT128. Check the power supply, output voltage, which must be 24 V DC. Replace the rectifier if required.

Note: A FT128 powered by the back-up battery only, will shut down at a battery voltage of 21.4 V, in order to avoid damaging the batteries. 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, techn address xxx

System voltage < 21 V DC in the external power supply unit 3366 or 4466.

Check the power supply, charger output voltage must be 24 V_{DC}. Replace power supply if required.

FAULT: Mains

Fault is activated 1-300 minutes after:
- Loss of mains, i.e. no 230 V_{AC} [51]
- Blown mains fuse
- Blown fuse "F1" on the main board 4556

FAULT: Mains, external power supply

This is valid for external power supply equipment, which has a fault output connected to a programmable input in FT128 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, techn address xxx

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 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.
- 3364 unit:

    o (/Mains OK) not connected to the 3366 unit (J7:4) or 0 V.
    o "no mains signal" from the 3366 unit.

The time delay of this fault activation is programmable via EBLWin. Default value is 30 minutes.

FAULT: No reply zz-aa   →

Press ▶ to see the technical address.

FAULT: No reply techn. address xxx   ←

zz-aa = Zone address, **xxx** = COM loop address
The unit the unit cannot be found by the control unit.

- Check the unit's COM loop address (with programming tool 3314/4414).
- Check the downloaded site specific data (SSD).
- The unit might be faulty.
- Detector might be removed (un-plugged) from its base.
- Double break or short-circuit on the COM loop.

*(**Note:** There will also be a fault message "FAULT: Cut-off loop…." or "FAULT: Short-circuit loop….".).*

FAULT: No reply AAU x
FAULT: No reply EPU x

Alert Annunciation Unit 1736

External Presentation Unit 1728

FT128 cannot communicate with the unit. Check the cable, all connections,

[51] The time is programmable in EBLWin. Default value depending on convention.

FT128 cannot communicate with the unit. Check the cable, all connections, etc. Is correct / complete SSD downloaded (via EBLWin). Check the address and the S/W mode in the unit (or edit the SSD).

FAULT: No reply, expansion board x

Valid for the 8-Zone Expansion Board 4580, 8 relays exp. board 4581 and the I/O exp. board 4583 mounted in FT128. Also valid for the I/O Matrix board 4582 connected on the COM loop, i.e. mounted outside the FDCIE

FT128 cannot communicate with the board. Check / edit the address. Check the cables / connections.

FAULT: Output Sx

This is valid for the FT128 supervised voltage outputs S0 and S1.

If the output is programmed for sounders or OWS (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking. If the output is programmed for a Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit on the connected cable / equipment.
- Blown fuse "F8" (S0) or "F6" (S1) on the main board 4556.
- Connected equipment might be "missing".
- End-of-line resistor(s) missing or not correct (1-5 resistors 33K)

NOTE: *The calibrated value has to be in the range 4K7 – 50K*

FAULT: Output x expansion board x

A fault on supervised output x on the expansion board (4583) with address x.

If the output is programmed for sounders (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking.

If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit on the connected cable / equipment.
- Blown fuse "F1" (Output 0) or "F2" (Output 1) on the 4583 board.
- Connected equipment might be missing.
- End-of-line resistor(s) missing or not correct value (1-5 x 33K).

Note: *The calibrated value has to be in the range 4K7-50K.*

FAULT: Output x, techn addr xxx

Valid for outputs of COM loop output unit 3364.

If the output is programmed for sounders or OWS (type Alarm devices), it is also indicated by LED "**Fault / Disablements** Alarm devices" (L13) blinking.

If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED "**Fault / Disablements** Fire Brigade TX" (L15) blinking.

- Calibration not performed via menu H5/A1.
- Short / open circuit break on the connected cable / equipment.
- Connected equipment might be missing.
- End-of-line capacitor(s) or resistor(s) missing or not correct value, 1-5 capacitors (470 nF). (Valid for 3364 only)

Note: *The calibrated value has to be in the range 470nF – 5 x 470nF (2350nF).*

FAULT: Read/write site data (SSW)

SSW = the data that has changed during operation, i.e. week average sensor values, passwords, calibration values and event logs.

- If FT128 was powered down i.e. both mains and battery disconnected without first doing a Safe shut down of control unit via menu H8/S7 (see page 129), this fault might be generated when the FT128 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, code xx addr yyyyyyyyyy

A restart has occurred in FT128 SSD and S/W download will automatically be followed by a restart. Also, you can manually do a restart. See also Table 15 page 82

Regarding the restart codes **00, 03**, **25**, see chapter "Restart" page 82.

xx=00, 03 and 25 are normal. Only acknowledge the "fault".

The following restart codes are due 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=04-19: Unexpected interrupt.

xx=20:   S/W monitoring fault

yy…y = memory address (before restart). Write down the address and inform the service personnel / engineer.

FAULT: Sensor zone: xxx address: xx

FAULT: Sensor zone zz-aa, zz-aa   →

Press ▶ to see the technical address.

FAULT: Sensor zone techn. address xxx   ←

zz-aa = Zone address, **xxx** = COM loop address

The analogue smoke, heat or multi detector is faulty.
Valid for detector types 33xx / 43xx / 44xx. The detector's built-in self-verification function has reported a fault. The detector has to be replaced.

FAULT: Several faults on COM-loop

Open (cut-offs) **/** short circuits in more than one segment on the COM loop. Normally this fault is generated in conjunction with some open / short circuit faults. In that case, first correct one fault and the next fault will be presented.

FAULT: Short-circuit, internal COM-loop

Short-circuit on the connection (ribbon cable) to or between the expansion boards (458x) in the FT128.

FAULT: Short-circuit SCI **nn** <-> SCI **nn**

SCI **n** <-> SCI **n** describes between which **S**hort **C**ircuit **I**solators the short-circuit is located.

nn = A, B, 0, 1, 2, 3, 4, 5, 6 or up to 128. A & B are the built-in isolators in the FT128 A-direction and B-direction respectively.

If no SCI is used the information will always be: SCI **A** <-> SCI **B**.
If one SCI (no. 0) is used, the information will be: SCI **A** <-> SCI **0**

or

SCI **0** <-> SCI **B** ...and so on.

There will also be a "FAULT: No reply ….." message for each unit that FT128 cannot find.

If several short circuits exist on the loop the message shows the last isolator before the break in the A-direction (including the following isolator). There will also be shown "FAULT: Several faults …".

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

NOTE: 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)

The Site Specific Data (SSD) is not downloaded correctly (a checksum fault, etc.). A new SSD download (via EBLWin) is required. If the fault cannot be corrected it is very serious. Call for service personnel / engineer immediately.

FAULT: Site specific data (SSD), AAU x

Alert Annunciation Unit 1736
There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Site specific data (SSD), EPU x

External Presentation Unit 1728
There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Supervised input x   addr xxx

A fault on the supervised input x on 4461/4462.
Check the cables / connections (cut-off or short-circuit).

FAULT: Wrong type, expansion board x

This is valid for the I/O Matrix board 4582 no. x connected on the COM loop inside or outside the FT128.
The board is not the same type as programmed in the SSD. Change the programming (via EBLWin) or the board.

FAULT: Wrong type of unit zz-aa   →
Press ▶ to to see the technical address.

FAULT: Wrong type of unit t.addr xxx   ←
zz-aa = Zone address, **xxx** = COM loop address The unit is not the same type as programmed in the SSD. Change the programming (via EBLWin) **or** the unit.

FAULT: Zone line input zz-aa
Press ▶ to see the technical address <u>or</u> the expansion board (4580) number and input number.

FAULT: Zone line input t.addr xxx
zz-aa = Zone address, **xxx** = COM loop address Valid for the Multipurpose I/O unit 3361/4461, connected on the COM loop, monitored Zone Line Input Z: Open circuit in the zone line or wrong / no End-Of-Line capacitor / short-circuit (if not programmed for fire alarm at short-circuit).

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

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

16.2   Fault Acknowledge

When a fault is generated in FT128, the following may occur:

- The LEDs "Fault TX activated" (L11) and "General fault" (L7) are turned ON.
- LEDs Fault / Disablements "Alarm devices" (L13), "System fault" (L14) and/or "Fire Brigade TX" (L15) might be turned ON as well.
- Output for routing equipment (Fault TX) is activated.
- Output for general fault is activated.
- Output for general charge fault might be activated.
- A fault message, date and time, is shown in the FT128 display.

Next to the time might be shown "**More faults**" = more than one fault is generated.

Next to the **time** might be shown "**Serviced**" = the fault is already serviced / corrected.

"**Serviced**" will not be shown if the faults are set to be "Not latched".

Any already Acknowledged fault in the list is indicated by "**/Acknowledged**".

To acknowledge faults in FT128 conduct the following:

- Login, according to chapter "Access Levels", page 35 .
- Use **menu H6** (access code for Building officer or Service personnel is required) for fault acknowledge, see chapter "FAULT Acknowledge (H6) ", page 120.

Menu H6 is a list showing a maximum of 200 faults (<u>not acknowledged</u> faults and/or <u>acknowledged but not corrected</u> faults). The first fault in the list is the most recent fault. When a fault is <u>acknowledged and corrected,</u> it will be removed from the list (and a

new fault can be shown, if there are more than 200). Corrected faults are shown in the event log (menu H4/U6).

Notes:

- All faults have to be individually acknowledged one by one with push button "Fault acknowledge" (P6). Use ↑ or ↓ keys to scroll.
- If a fault has been serviced / corrected before it has been acknowledged, the text "**Serviced**" is added next to the time[52]. It still has to be acknowledged.
- When a fault is <u>corrected and acknowledged</u>, it will disappear from the list (H6).
- When all faults have been <u>acknowledged</u>, 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 (<u>not acknowledged</u> faults and/or acknowledged <u>but not corrected</u> faults) the LED "General fault" (L7) 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).

---

[52] Via EBLWin the faults can be set to be not latched. Corrected faults will in this case automatically disappear from the list without being acknowledged before.

17   Commissioning an FT128

No connection, other than the mains power supply should be made, prior to checking the operation of the FDCIE

Mains power should be turned on and charger voltage levels checked / set. If these levels are correct, batteries can then be connected. Follow the procedures shown below in 1-9.

Basic operation of the FT128 should be confirmed as supplied without any external connections, ensure no earth fault shown on the LCD.

> Note: To avoid generating earth fault when connecting a PC to FT128, it is strongly recommended that Brooks USB isolator BA-PCISO be used. If no isolator is used and if there are several earth faults in the system when a PC is connected, damages may result on both PCBs and the PC.

The only "fault" seen by the system, which cannot be fixed at this point of time, should be "Cut-off COM-loop". This is due to some loop units e.g. panel MCP, I/O matrix boards, Panel display modules, etc. in FT128 being wired to the COM loop as Class "B" wiring (no loop return wiring used). In NZ control panels the MCP mounted on the outer door may be replaced by the fire brigade Bulgin keys if required.

Before connecting any field wiring, the battery supply and mains power must be turned off.

Cable resistance readings and field connections must then be checked to ensure they are correct prior to their connection to the FDCIE

> 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 CON 1, terminal 1 comes back at CON 1, terminal 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. The resistance should be very high (mega ohm).

Power up Procedures:

Once the cabinet is mounted and secured in place, the following power up procedures must be followed:

1. Connect the incoming mains power feed to the GPO, ensure the mains isolator switch is "OFF".
2. Turn "ON" the incoming mains power from the circuit breaker in the switch board.

> Note: It should be connected to a household removable fuse for the fire alarm FDCIE only, via a two-way circuit breaker.
> The mains cable should be securely clamped and the wires be as short as possible, use cable ties to keep mains wires well separated from 24V$_{DC}$ wires. The mains safety earth (ground) should, however, be longer than the other wires, to ensure that it is the last to be disconnected if the mains cable clamp should fail.
> After the installation, the lid protecting the power supply screw terminals should be correctly applied.

3. Remove the battery fuse F2 on the main board 4556 (or the in-line fuse between batteries).
4. Connect the batteries to the battery leads.

5. Turn "ON" the mains isolate switch (230 V$_{AC}$)[53]

Note: The Control Unit will be supplied pre-wired, the installer has to connect the incoming mains to the GPO only.

6. Re-place the battery fuse (F2) on the main board.

7. LED "Operation" (L6) indicates that the 24 VDC supply (power supply and/or battery) is okay.

8. An automatic restart will now take place, see chapter "Restart", page 82.

9. Once the basic operation of the panel is confirmed, power down the panel then terminate the COM loop and field wiring into the expansion board (SUB835).

10. The site specific data (SSD) created in EBLWin can now to be downloaded, see chapter "Software Download", Page 75.

See also chapter "Calibration of Supervised Outputs (H5/A1)", page 110.

Note: A "Safe shutdown" must be performed once FT128 is cleared of all faults and the system becomes in normal operational mode.

---

[53] The Control Unit is supplied with a GPO which has the mains isolate switch and a power point outlet used during programming to connect the power cable to your PC.

18 Software Download

18.1 EBLWin Software Installation

To install EBLWin software in your PC, the instructions in this chapter must be followed, the instructions apply only to software versions ≥ V2.0. This does not cover the optional installation of EBLWeb for the WebServer or TLON installation. For EBLWeb installation, please refer to the Web Server II manual MA440 for FT1020G3 / FT128.

Required files:

The following files must be copied in your PC:

1. PEW .Net Framework V2.0 or higher (if Windows did not install it as part of its updates)

2. 2.10.00 WHQL (Win7_Win8_Win8.1)

3. Drivers for USB to Serial Converter

4. Sentinel_LDK_Run-time_setup

5. EBLWin V2.4.4 file named EBLWin.msi and setup.exe

6. Australian_EBL512G3_244.BIN or NewZealand_EBL512G3_244.BIN[54]

Hardware required:

1. EBLWin key 5094

2. Null modem serial cable

3. USB to Serial Converter to USB adapter

4. Laptop with Win7 - Win10

18.1.1 Installation procedure:

The order of prerequisite software and drivers installed before EBLWin can be installed is important. Please follow this order closely:

1. If running on Win7, install PEW .Net Framework V2.0 or higher first. Go to Microsoft https://www.microsoft.com/en-us/download/details.aspx?id=55167 and download the latest Microsoft .NET Framework (Offline Installer) for your machine.

   If running on Win10, it is probably already installed as part of its system. To ensure that .NET is turned on, ask Cortina with this keyword "Windows Features" and ensure that .NET Framework are turned on as shown below:

---
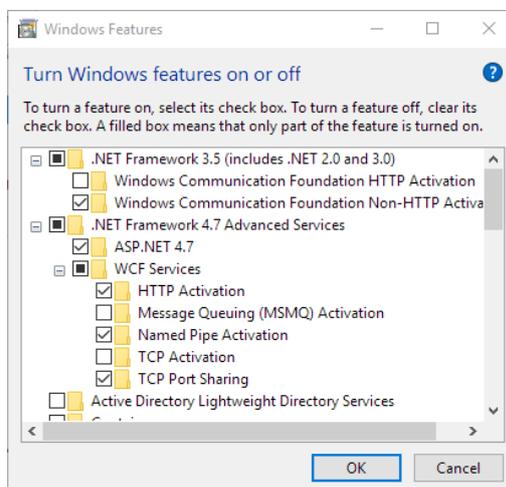
[54] The BIN files are not part of the EBLWin installation, it is used only to upgrade existing firmware or replace corrupted firmware in 4556.

2. Install Sentinel_LDK_Run-time_setup:
   Win7: Right click on HASPUserSetup.exe and choose "Run as Administrator"
   Win10: Right click on HASPUserSetup.exe and choose properties then go into the Compatibility tab. Set as shown in **Error! Reference source not found.** :
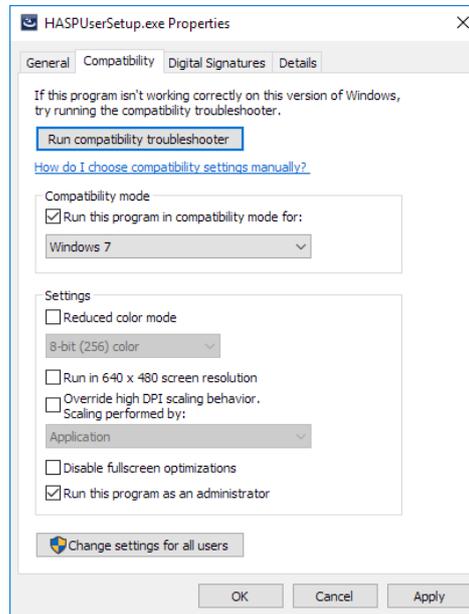
o
o   Figure 24 Installing HASPUserSetup in compatibility mode
o

3. Install drivers for USB to Serial Converter (e.g. Brooks CA375). Choose spare USB port in your PC and plug in your USB to Serial Converter. Plug-in the null modem serial cable between the panel and the serial connector of the converter, you should see an exclamation mark or something like "Serial to USB" on device in the "Device Manager". Select properties and click on Update Drivers, you should see the following:
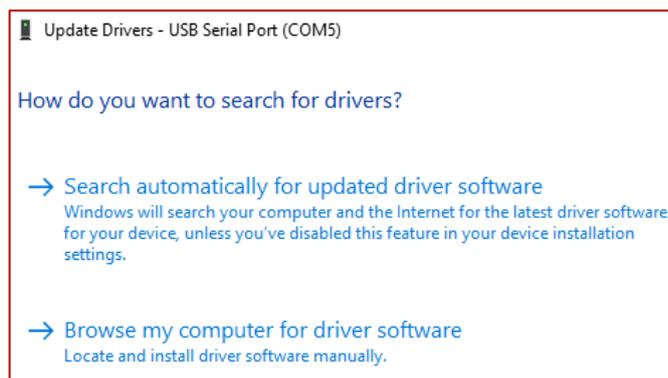
choose "Browse my computer for driver software" if you have the driver software in your hard drive otherwise select "Search automatically for updated driver software" to search the internet. Leave cables in place.

When the installation is completed, you should see the following in the "Device Manager":
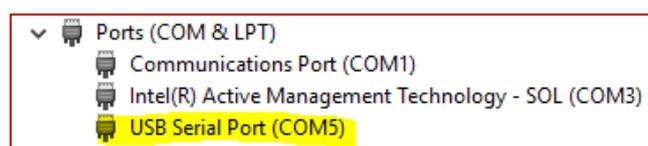
4. Next install the USB drivers 2.10.00 WHQL (Win7_Win8_Win8.1). Look for a device   or something with and exclamation mark named

USB. Right click on it and choose properties. Then click on the Driver Tab. Click on Update Drivers and choose "Browse my computer for driver software" and locate the folder for 2.10.00 WHQL (Win7_Win8_Win8.1).

5. Install from folder EBLWin V2.4.4 file named EBLWin.msi.
Win7: Right click on setup.exe and choose "Run as Administrator"
Win10: Right click on EBLWin.msi and choose properties then go into the Compatibility tab. Set as shown in **Error! Reference source not found.** below.

6. Plug in EBLWin key 5094 into another available USB port.

7. Go to Device Manager again and check that your computer has detected EBL* as a device and assigned it a COM port. Note this COM port number.

8. Launch EBLWin, go to Tools > Log on control unit, the COM port number in step 7 should be displayed.

18.2   Download SSD

Note: An EBLWin USB key (5094) must be used to communicate with the control panel and download the SSD using EBLWin ≥ V2.x.x.

The PC program **EBLWin** is used for creating the Site Specific Data (SSD) and to download it into the FT128 Control Unit, Web-server and/or display units 1728, 1736 units.

The SSD will be saved in a file named **xxxxx.EBLWin** (xxxxx is the project name).

The EBLWin key (5094) is a USB device required to log on to the Control Unit, it has a unique number. The EBLWin key identification number will be registered in the control panel event log with the date and time stamp for every SSD download performed in the control panel.

When the installation is ready, i.e. all units connected and the power is turned on, the SSD download can take place.

Version Control for SSD Download

In EBLWin, when the Download SSD window is opened, the EBLWin checks that the SSD file originates from the SSD in the control unit. The check will start automatically when the download SSD window is opened. It is not possible to start SSD download until the check is completed (or timeout occurs).

If the check shows that the SSD doesn't match the SSD in the control unit, there will be a dialog window, asking if the download shall proceed anyway.

Note: No password / access code is required to log on to the Control Unit, instead an EBLWin 5094 key is required.

SSD Download Procedures:

1. Connect the PC to the RS232 port "J3" in the FT128.

2. Start EBLWin and open the required project.

3. Log on to the control unit via the PC (EBLWin).

4. In EBLWin, go to **Tools** menu / **Download SSD**… Select the control unit as well as the Display Units (if fitted) or the web server (if fitted), to which the SSD is to be downloaded.

5. Click **Start** to start the download. The progress bar will indicate the download progress as shown below.

6. "Control unit download count" / "Document download count" numbers should match. This is a check to ensure that no an old configuration is downloaded.

7. Click OK.
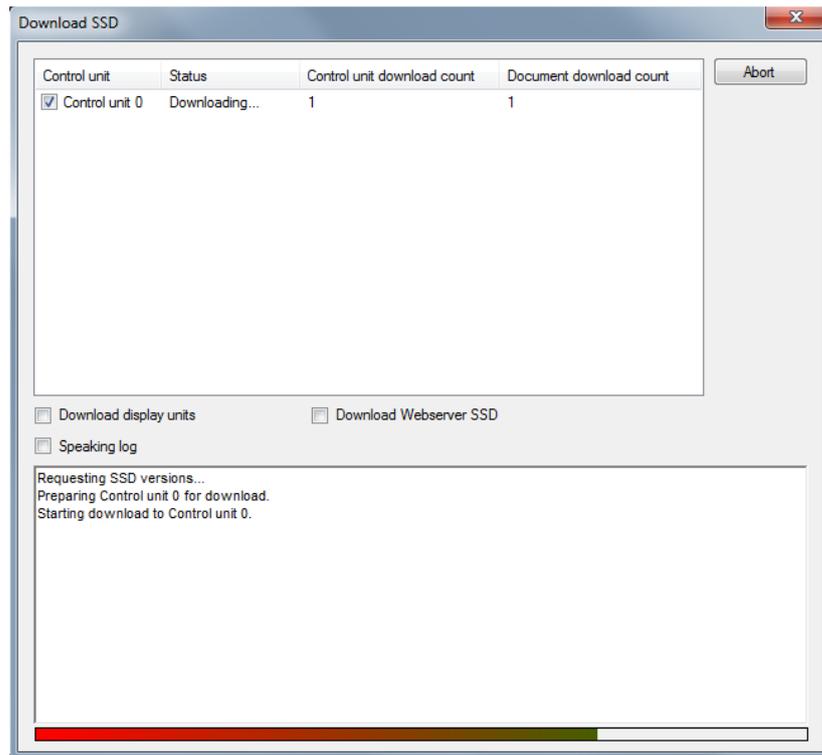
The download is not completed until the following box is shown:
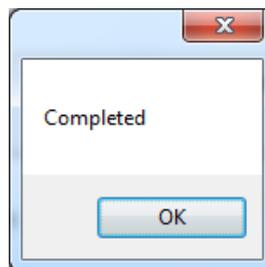
After the SSD download, the FT128 will restart. A number of faults may then be generated due to the loop units being not connected yet.

Disconnected at start up

In the COM loop properties dialog box, it is possible to select the option "**Disconnected at start up**". The COM loop will then be disabled directly after the download restarts and therefore no faults will be generated.
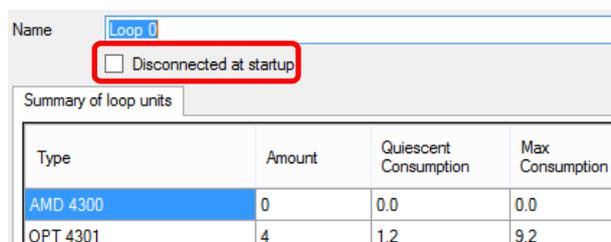
Note: A COM loop "Disconnected at start-up" can be re-connected via menu H8/S1 but it will then be disconnected again following a new restart. Finally, the SSD for the control unit has to be downloaded again with the option "Disconnected at start-up" not selected.

18.2.1   SSD Download to the Control Unit

Start the SSD download from EBLWin according to section 18.2.1 "SSD Download to the Control Unit". A text message will be shown in the FT128 display:

```
Downloading in progress….
███ "progress bar"
```

When the download is completed and the control unit restarts, a fault message will be shown in the display:

```
Download completed successfully
Control unit will now restart
```

```
FAULT: Restart code 25
DD-MM-YYYY        HH:MM
```

Code 25 indicates a normal restart after the SSD download.

Acknowledge the restart fault. If the download was unsuccessful, another fault will be generated:

```
FAULT: Site specific data (SSD)
Date:-DD-MM Time: HH:MM
```

This text message means that the SSD has not been downloaded successfully i.e. a new download must be performed.

18.2.2   User Definable Text Messages Download

Each alarm point, zone and zone line input should have a unique user definable alarm text programmed via **EBLWin**. When a fire alarm is activated e.g. an addressable alarm point, the presentation number (Zone – Address) will be shown on the first row in the FT128 display and in all the external display units 1728 and 1736 with its alarm text.

All alarm texts, up to 40 alphanumeric characters each, are created and downloaded via **EBLWin** (SSD Download). See Technical / Programming manual, chapter "Alarm texts".

A fault message for an alarm point, zone, zone line input will also show the text message (software ≥ V2.0.0).

18.3   Download Software (System Firmware)

> Note: When existing system requires software upgrade, first, logon to the Control Unit using a compatible EBLWin (or Win128) software version with the existing firmware version in FT128 then conduct SSD backup to save the existing Site Specific Data file. This must be performed prior to any software download.

The latest software version of EBL128 system software [55] is factory downloaded before delivery. Due to continual development and improvement, different S/W versions may be found.

FT128 can be upgraded with a new S/W version, downloaded on site via EBLWin as well as remote display units 1728 and 1736. The valid (current) S/W version of the main board 4556 is shown in menu H4/U7 or via EBLWin (Control unit pop-up menu; Software version…).

- If the FDCIE time differs more than 60 minutes to the time shown in the PC, a dialog box will display when logon is performed. Via this dialog box, the PC time can be used to update the FDCIE time.

- A user that is defined to have access to Web-server (not the FDCIE) can have a password containing between 6 and 10 characters (not only digits).

Before commencing a firmware download, ensure you have a copy of the current SSD and be save in the latest EBLWin software version.

---

[55] The software (firmware) is the system software and always uses "EBL" abbreviation.

To download a new EBL software (system firmware) version, a PC and **EBLWin** are used. The BIN file required to be downloaded contains both the software and a text file i.e. there is one BIN file for each convention (AU or NZ).

> **Note:** Brooks strongly recommends using the USB isolator device when you connect your PC to the Control Unit.

System Software Download Procedures:

1. Plug in the **USB key** (5094) into a spare USB port on your PC.

2. Connect the PC to the RS232 port "J3" in FT128. and start EBLWin.

3. Start EBLWin, **do not Log on to FT128**. In the "Tools" menu select "Download Software…" to open the dialog box and set as required.
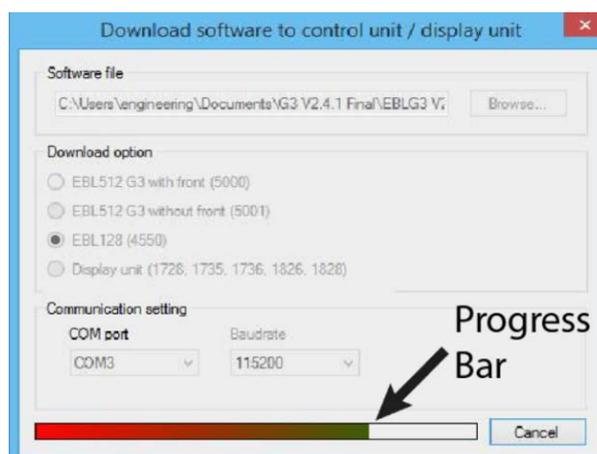
4. Select the path and the S/W file to be downloaded, e.g. **Australian_EBL128_244.BIN** (244 = version 2.4.4).

5. Select the control unit, i.e. EBL128 (4550)

6. Select the "COM port" to be used on your PC. **Do not** click "Start" yet.

7. Set the main board in "boot mode" i.e. up to the left, put the jumper onto the two pins marked "BOOT" (JP2) and then momentarily short the solder pads marked "RESET" (JP1). The buzzer sounds continuously, the main board is now in "boot mode".

8. Click "**Start**" to start the download, the buzzer stops sounding. The download status is indicated by the progress bar.

9. When the progress bar goes from red to green, the download is completed and the following dialog box opens:
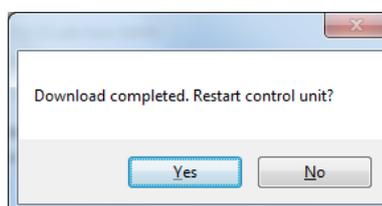
10. Remove the jumper from the two pins marked "BOOT" (JP2).

11. Click "Yes" and the control unit will restart.

> FAULT: Restart code 00
> Date:-DD-MM   Time: HH:MM

Code 00 indicates a normal restart of FT128 after the software download, acknowledge the fault.

12. LED "Operation" (L6) on FT128 display will now be lit, all other LEDs will be extinguished.

13. New Site Specific Data (SSD) [56] can now be downloaded.

> **Note:** After a new software download, the logon password reverts back to the default setting i.e. "000000". The user names and passwords will be changed when the SSD is downloaded.

18.4 Software Versions

Due to continual development and improvement, different S/W versions can be found.

The S/W versions listed below in Table 14 were the valid S/W when this document was written (the date of this document or date of revision).

Table 14 Latest Software Versions for FT128

S/W for:	Latest version	Required version
4556; EBL128 PCB 9285-6A Rev 6 or higher	2.4.4	2.4.4
4580; 8 zones expansion board, PCB no. 9287-2B	1.0.5	1.0.2
4580; 8 zones expansion board, PCB no. 9287-3A	2.0.4	2.0.4
4581; 8 relays expansion board	1.0.2	1.0.2
4582; I/O Matrix board	1.0.4	1.0.2
4583; Inputs and Outputs expansion board	1.0.2	1.0
1728; Ext. Presentation unit (EPU)	1.5.1	1.4.1
1735 / 1736; Alert Annunciation unit (AAU)	1.5.1	1.4.1
EBLWin	2.4.3	2.4.3
1588 Web-server	Cannot be used.	Cannot be used.
1598 Web-server II	2.4.3	2.4.3

> Note: The EBLWin version and the EBL system software and web-server software version must be the same, at least the first two digits; 2.4.x -- 2.4.x.

---

[56] Old SSD can be opened in EBLWin, saved and then downloaded as new SSD.

19   Restart

A restart may delete some data in FT128. Below follows an explanation of the different data, abbreviations and a table describing the different restart alternatives and how the data respectively is affected (**cold** or **warm restart**).

FF   = **F**ire alarms and **F**aults.

D   = **D**isablements

FFD   = **F**ire alarms, **F**aults and **D**isablements.

SSW   = Sensor min. / max. values and performance factor, password, supervised output calibration values and event log.

WASV   = **W**eek **A**verage **S**ensor **V**alues

SSD   = **S**ite **S**pecific **D**ata, i.e. all the installation programming created and downloaded via EBLWin.

S/W   = Software, i.e. the EBL128 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 FT128 powered down.

> Note: After any restart, a new week average sensor value will be calculated within 2 minutes, for all the Analogue smoke detectors[57]. Thereafter a new average sensor value will be calculated each week.

19.1   Safe Shut Down

Safe shut down of control unit via menu **H8/S7** will save the **SSW** data in a Flash ROM in FT128. Before the first "Safe shut down" of the control unit, 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)

When FT128 is powered up, a restart takes place and the RAM (working memory) will read the **SSW** data saved in the Flash ROM.

19.2   Restart Table

Table 15 below describes the different reset alternatives and how the data is affected.

Table 15 Data affected by restart

Action	Data - Deleted	Data - not Deleted	Restart code
Power down [58] and then **power up** again. ("Cold restart")	SSW FFD, WASV	SSD, S/W	00
Via menu H8/S4 Safe shut down of control unit. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	00 alt. 03
Automatically after download of site specific data (SSD) via a PC & EBLWin. ("**Warm restart**")	FF, WASV, D	SSD, S/W, SSW	25
Automatically after download of S/W via a PC & EBLWin. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	03
Automatically due to external disturbance. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	01, 02 alt. 04-20

---

[57] During these 2 minutes, all fire alarms from analogue smoke detectors will be suppressed.

[58]   Both the power supply (mains) and the batteries are disconnected.

Note: <u>During</u> the <u>restart</u>, the fault output "R1" for Fault TX will be "activated" for few seconds, the supervised 24 V_{DC} outputs S0-S1 will not be supervised and S0-S1 programmed as normally high will be low for a few seconds.

19.2.1   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 25 appears after download of SSD and automatic restart.

NOTE! Code 00 – 49 = Main board restart. Some data might be lost, see above.

19.3   During Restart

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

```
        *** FT128 ***
Checking program memory......
```

And for a second (if everything is okay, else see Memory <u>fault</u> below):

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

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

```
FAULT: Restart code xx addr yyyy
Date: DD-MM   Time: HH:MM
```

Regarding code **xx** and **yyyy**, see page 69. This fault is also indicated by LEDs "Fault TX activated" (L11) and "General fault" (L7).

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

After any restart, if any unit was disabled before restart, an individual disablement for these unit should be done.

<u>Memory fault</u>

In case of a fault in the main board 4556 S/W (system program) the following text message will be shown in the display:

```
Memory fault in program area: xxx
```

This is also indicated by LED "System fault" (L14) and the buzzer sounds steady (continuous). The Fault TX output is "activated".

A new download of the S/W (system program) is required.

After SSD download (see chapter "SSD programming & download ", page 75), the following messages <u>might</u> be shown:

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

```
FAULT: Restart code 25 addr yyyy
Date: DD-MM   Time: HH:MM   Serviced
```

```
FAULT: Site specific data (SSD)
Date: DD-MM   Time: HH:MM
```

The last message means that the SSD has **not** been successfully downloaded. A new SSD download has to be performed.

19.4   Boot Menu

The Boot menu should be used by **authorised personnel only**!

Note: Vital data can be erased via this menu.

The Boot menu is opened as follows:

a) Perform a "cold restart", i.e. power down / power up FT128, the following text messages will be shown in the FT128 display:

```
       *** FT128 ***
Checking program memory......
```

b) And after that, for a second:

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

c) When the text "Booting……" appears, press **"Access"** and 0.1 sec. later also press **"1"** and the **Boot menu** will be shown:

```
1:Restart, 2:Erase memory
```

Press **"1"** to perform a restart (you will also leave the Boot menu).
Press **"2"** to open the Erase memory menu, see below.

The Erase memory menu:

```
1 = SSD, 2 = SSW, 3 = Texts
```

Press **"1"** to erase the SSD memory.
Press **"2"** to erase the SSW memory.
Press **"3"** to erase the texts memory.

Text "Erasing SSD", "Erasing SSW" and "Erasing texts" respectively will be shown and then the Erase memory menu will be shown again.

Press **"Return"** to return to the Boot menu.

Note:

After erasing the SSW, perform a "Power down / power up" restart directly.

All other alternatives are strictly forbidden to use. These are used for troubleshooting only and is controlled by Brooks engineers.

20   Perform Monthly Test (H1)

The FT128 and the building must be tested on a regular basis, please refer to the Australian maintenance standard AS1851 for details regarding monthly, quarterly and annual test.

In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S6).

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

> Note: If FT128 door is left open, the output(s) for external strobe or alarm bell might be disabled (if set in EBLWin).

There will be an automatic termination of the test mode one hour after the latest tested alarm point / zone.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
	Perform monthly test ACCEPT? H1	
"A"	Check that all LEDs light up! ACCEPT	
"A"	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	The buzzer (in FT128) sounds and all dots in the display are shown. All LEDs light up, including LEDs in units connected via I/O Matrix board 4582.
"A"	Zones to be set in TEST MODE: ? ? ?? ?? ?? Start test: ACCEPT	
Write zone numbers e.g. 01, 02, 03, 04)	Zones in test mode: 01 02 03 04 Start test: ACCEPT	Press "A" to start the test mode.
"A"	Zones in test mode: 01 02 03 04 End test: ACCEPT	LED "Test mode" (L9) will light up. Perform the tests.
The zone(s) will stay in test mode until the test mode is terminated. The test mode is terminated in this menu or automatically one hour after the latest test alarm. This is valid for each zone respectively. Perform the test as quickly as possible, since the output(s) for routing equipment (Fire Brigade TX) 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 normal. In the tested alarm point, the LED will light up for approximately 10 seconds, then the alarm point will be automatically reset. There will be a test mode alarm indication in the FT128 display. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM). A detector in test mode will <u>not</u> be able to activate fault.	
	Zones 01 in test mode More…	You are no longer in menu H1 but still in test mode.

After 60 minutes **or** "Return" "Return"	**NOTE:** See chapter "The Display (LCD)", page 19 regarding priority order.	
(When required: "Access", "password") "A"	Zone in test mode: 01 02 03 04 End test: ACCEPT	Press "A" to end the test mode.
"A"	Test of routing equipment? <u>0</u> (1 = Yes, 0 = No) ACCEPT	The LED "Test mode" is turned OFF.
Testing of routing equipment is not permitted in the Australian and NZ convention.		
"1", "A"	Test of routing equipment in progress. nn seconds left.	"nn" starts at 60 and will count down to 00.
	Monthly test is completed! ACCEPT	
"A"	Perform monthly test ACCEPT? H1	Scroll or press "Return" to log off.

Notes:

If an alarm point e.g. an MCP is in alarm state when the test mode is terminated, a fire alarm will be activated.

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

21   Disable or Re-enable (H2)[59]

A whole zone[60], 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 when a temporary disablement is required (e.g. maintenance or renovation work 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.

> Note: When a zone is disabled, the addressable manual call points in that zone will be disabled.

- Up to 99 whole zones can be disabled via menu H2/B1.
- Up to 100 alarm points (zone / address) can be individually disabled via menu H2/B2 (Alarm points disabled via time channels are not limited and must not be counted).
- Up to 100 outputs can be individually disabled via menu H2/B3. Disabled output will remain in (or return to) the normal condition for the output.
- All outputs of a specified type can be collectively disabled via menu H2/B4 (the outputs are not limited and must not be counted).
- All outputs of type alarm devices can be collectively disabled via menu H2/B9.
- Outputs for routing equipment can be disabled via menu H2/B10 (not permitted).

> Notes:
>
> Up to 100 Interlocking outputs can be individually disabled via menu H9/C4.
>
> The COM loop can be disabled via menu H8/S1.
>
> A Zone Line Input can be disabled via menu H8/S2 or S3.

The limits must not be exceeded, a warning might be shown

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

Don't forget to re-enable via the menus 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 01 is disabled
                          More...
```

More… is indicating two or more disablements.

See chapter "Information Priority Order" page 19.

Disablements (and faults) are indicated by a 2-sec. beep when an open FT128 door is being closed (if used).

---

[59] The word "Disable" or "Re-enable" is used in the Australian convention while "Isolate" and "De-Isolate" are used in the New Zealand convention.

[60] When the zone disable module is used, a whole zone can be disabled without entering the menu.

21.1 Disable Zone (H2/B1)

When a whole zone is disabled, <u>all</u> alarm points within the zone are disabled.

Alarm points can be individually disabled.

Disabled zones can be automatically re-enabled or re-enabled via menu H2/B5.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
"A"	Disable zone: <u>0</u> 0 ACCEPT?	
Write zone number e.g. 01	Disable zone: 01 ACCEPT?	Press "A" to accept.
"A"	Automatic re-enabling: <u>0</u> (0=No, 1=Yes) Time: HH:MM ACCEPT? (Default is current time + 3 hours)	Press "1" for auto re-enabling and accept or change the time (max. 24 hours). Press "A" to accept. LED "Disablements" (L8) will light up.
"A"	Zone 01 is disabled	
"A"	Disable zone: <u>0</u> 0 ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B1.
"Return"	Disable zone ACCEPT? B1	Scroll or press "Return" to menu H2
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"

21.2 Disable Zone / Address (H2/B2)

Up to 100 addressable alarm points (also addressable manual call points), connected to the COM loop, can be individually disabled.

Disabled alarm points (zone – address) are listed in menu H4/U1.

Disabled alarm points (zone – address) can be automatically re-enabled or via menu H2/B6.

> Note: The sensor values for disabled analogue 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.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B2.	Disable zone / address ACCEPT? B2	
"A"	Disable zone: 0 0 Address: 00 ACCEPT?	
Write zone number and address e.g. 01 - 01	Disable zone: 01 Address: 01 ACCEPT?	Press "A" to accept.
"A"	Automatic re-enabling: 0 (0=No,1=Yes) Time: HH:MM ACCEPT? (Default is current time + 3 hours)	Press "1" for auto re-enabling and accept or change the time (max. 24 hours). Press "A" to accept. LED "Disablements" (L8) will light up.
"A"	Zone 01 address 01 is disabled	
"A"	Disable zone: 0 0 Address: 00 ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B2.
"Return"	Disable zone-address ACCEPT? B2	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"

21.3   Disable Output (H2/B3)

Up to 100 programmable outputs in the FT128 and outputs in units connected to the COM loops (except outputs of type "Alarm device") can be individually disabled.

If you try to disable an output of type "Alarm device" it will be treated as if it does not exist.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B3.	Disable output ACCEPT? B3	
"A"	Disable output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	Press: "0"=3361 or 4477 or 3379 or 3364 or 4380 "1"=FT128 output S0-S1 "2"=FT128 output R0 "3"=FT128 exp. board output. Press "A" to accept.

"0", "1", "2" or "3"
"A"
Depending on the chosen type the following will be shown:
	Disable output 0 technical address 000
	                              ACCEPT?
	Disable S0
	                              ACCEPT?
	Disable R0
	                              ACCEPT?
	Disable output 0 expansion board 0
	                              ACCEPT?
		Regarding the 4477 & 3379 units' output no.:
		0=high priority
		1=medium priority
		2=low priority
		Write the data.
		Press "A" to accept.
		LED "Disablements" (L8) will light up.

(Type 2 chosen.) "A"	Output R0 disabled	
"A"	Disable R0 ACCEPT?	
"Return"	Disable output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	If more disablements required, continue as above. If not, press "Return" to menu B3.
"Return"	Disable output ACCEPT? B3	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.4 Disable All Control, Ventilation, Extinguishing or Interlocking Outputs (H2/B4)

Outputs programmed as type <u>Control</u> (general), type <u>Fire ventilation</u>, type <u>Extinguishing system</u> and type <u>Interlocking</u> can be collectively disabled for the type respectively (all at the same time).

Disabled output means that even if the control expression (trigger condition) for the output is true, the output will not be activated. Disabled outputs are shown in menu H4/U1.

The outputs will be disabled until re-enabled again (via H2/B8).

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B4.	Disable all control, extinguishing, ventilation or interlocking outputs ACCEPT? B4	
"A"	Disable type:0 0=Control 1=Ventilation 2=Exting 3=Interlocking ACCEPT?	Press: "**0**"=control outputs "**1**"= ventilation outputs "**2**"= extinguishing output "**3**"=interlocking outputs. Press "A" to accept. LED (L8) "Disablement" will illuminate
"0", "1", "2" or "3" "A" Depending on selected type, the following will be shown:	All xxxxxx outputs disabled	XXXXX=control, ventilation, extinguishing or interlocking.
"A"	Disable type: <u>0</u> 0=control 1=ventilation 2=exting 3=Interlocking ACCEPT?	If more disablements required, continue as above otherwise, press "Return" to menu B4.
"Return"	Disable all control, ventilation, exting. or interlocking outputs ACCEPT? B4	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"

21.5   Re-Enable Zone (H2/B5)

Disabled zones are listed in menu H4/U1.

Re-enabling via this menu (H2/B5) has higher priority than automatic re-enabling.

Zones disabled via the "New Zealand FB Bulgin key Silence Alarms" (outside switch), have to be re-enabled via menu B5 or B6 before they can activate a new alarm.

When all zones have been re-enabled, the LED "Disablements" (L8) will be turned OFF, if there are no other disablements 61.

Note: Alarm points that have been individually disabled via menu H2/B2 cannot be collectively re-enabled via this menu. They have to be individually re-enabled.

If there is nothing to re-enable, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B5	Re-enable zone ACCEPT? B5	
"A"	Re-enable zone: 01 ACCEPT? L	**L**=A list in which you can scroll. Press "A" to accept. You will stay in this list until all zones are re-enabled or press "Return" to menu B5.
"A" (to re-enable) or "Return"	Re-enable zone ACCEPT? B5	If more re-enabling shall be done, continue like above. If not, scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return"

---

61 If zone control card is used, also the disabled zone LED will extinguish.

21.6   Re-Enable Zone / Address (H2/B6)

Disabled alarm points (zone – address) are listed in menu H4/U1.

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

A zone will be presented as ZZ - 00 (ZZ=01-99).

Alarm points within a Zone disabled via the "New Zealand FB Silence Alarms Bulgin key" (outside switch), have to be re-enabled via menu B5 or B6 before they can activate a new alarm.

When all alarm points have been re-enabled, the LED "Disablements" (L8) will be extinguished, if there are no other disablements.

If there is nothing to re-enable, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2:	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B6.	Re-enable zone-address ACCEPT? B6	
"A"	Re-enable zone: 01 Address: 01 ACCEPT? L	**L**=A list in which you can scroll. Press "A" to accept. You will stay in this list until all zone-addresses are re-enabled or press "Return" to menu B6.
"A" (to re-enable) or "Return"	Re-enable zone-address ACCEPT? B6	If more re-enabling shall be done, continue like above. If not, scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.7   Re-Enable Output (H2/B7)

Disabled outputs are listed in menu H4/U1.

When all outputs have been re-enabled, the LED "Disablements" (L8) will be extinguished, if there are no other disablements.

If there is nothing to re-enable, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B7.	Re-enable output ACCEPT? B7	
"A"	Re-enable output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT? Or, e.g. if only type 2 is disabled: Re-enable output type: 0 2=R0 ACCEPT?	Only disabled type(s) will be shown. Press: "**0**"=3361 or 4477 or 3379 or 3364 or 4380 "**1**"=FT128 output S0-S1 "**2**"=FT128 output R0 "**3**"=FT128 exp. board output (4581). Press "A" to accept.
"0", "1", **2** or "3" "A" Depending on the chosen type the following will be shown:	Re-enable output 0 technical address 000 ACCEPT? L Re-enable output S0 ACCEPT? L Re-enable output R0 ACCEPT? L Re-enable output 0 expansion board 0 ACCEPT? L	**L**=A list in which you can scroll. Regarding the 4477 & 3379 units' output no.: 0=high priority 1=medium priority 2=low priority Press "A" to accept.
"A"	--- List is empty ---	All types are re-enabled.
"Return"	Re-enable output ACCEPT? B7	If more re-enabling required continue as above. If not, scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.8 Re-Enable All Control, Ventilation, Extinguishing, Or Interlocking Outputs (H2/B8)

Disabled outputs are listed in menu H4/U1.

When all outputs have been re-enabled, the LED "Disablements" (L8) will be extinguished, if there are no other disablements.

If there is nothing to re-enable, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B8.	Re-enable all control, ventil, exting or interlocking outputs ACCEPT? B8	
"A"	Re-enable type:0 0=Control 1=Ventilation 2=Exting 3=Interlocking ACCEPT?	Only disabled type(s) will be shown. Press: "**0**"=control output "**1**"=extinguishing output "**2**"=ventilation output "**3**"=interlocking output. Press "A" to accept.
	Or, e.g. if only type 1 is disabled:	
	Re-enable type:0 1=Ventilation ACCEPT?	
Press 1 "A"	--- List is empty ---	All types are re-enabled.
"Return"	Re-enable all control, ventil, exting or interlocking outputs ACCEPT? B8	Scroll or press "Return" to menu H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.9 Disable / Re-Enable Alarm Devices (H2/B9)

Disabled alarm devices are listed in menu H4/U1.

Outputs for alarm devices can be collectively disabled and re-enabled via this menu. Disabled output will stay disabled, until re-enabled again via this menu.

When all outputs type Alarm devices have been disabled, the LEDs "Disablements" (L8) and "**Fault / Disablements** Alarm devices" (L13) will be illuminated.

When all outputs type Alarm devices have been re-enabled, the LED "**Fault / Disablements** Alarm devices" (L13) will be extinguished.

Note: This function for alarm devices is not the same as for push button "Silence alarm devices" (P3) – unless the option Button "Silence alarm devices" disables alarm devices, is selected in EBLwin System properties, see chapter "Silence Alarm devices", page 42. This menu has higher priority than the push button "Silence alarm devices".

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B9	Disable / re-enable alarm devices ACCEPT? B9	
"A"	Alarm devices in normal condition Press ACCEPT to disable	Depending on the actual status one of the texts will be shown.
"A"	Alarm devices disabled Press ACCEPT to re-enable	
"Return"	Disable or re-enable outputs for routing equipment ACCEPT? B9	Scroll or press "Return" to return to H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.10 Disable / Re-Enable Outputs for Routing Equipment (H2/B10)

Disabled outputs are listed in menu H4/U1.

Outputs for routing equipment (Fire Brigade TX / fault TX) can be disabled and re-enabled via this menu. Disabled output will stay disabled, until re-enabled again via this menu.

The function can be used during commissioning and testing of an installation, when only local alarms are required but it can't be used during normal operation. **This menu must not be used to disable routing equipment.**

Disabled output is indicated by LEDs "Disablements" (L8) and "**Fault / Disablements** Fire Brigade TX" (L15).

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B10	Disable / re-enable outputs for routing equipment ACCEPT? B10	
"A"	Routing equipment for FIRE: <u>1</u>, FAULT:1 (1=enabled, 0=disabled) ACCEPT?	To move the cursor, press "→". Edit and/or press "A" to accept.
e.g. "0" "A"	All outputs to routing equipment for: FIRE is disabled / FAULT is enabled	
"A"	Routing equipment for FIRE:0, FAULT:1 (1=enabled, 0=disabled) ACCEPT?	
"Return"	Disable / re-enable outputs for routing equipment ACCEPT? B10	Scroll or press "Return" to return to H2.
"Return"	Disable or re-enable ACCEPT? H2	Scroll or press "Return".

21.11 Disable / Re-Enable Alert Annunciation Function (H2/B11)

Normal function:

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

Turned Off

Via this menu (H2/B11), it is possible to disable the AA function, i.e. the AA function will be disabled for the alarm points / zones programmed for Alert Annunciation <u>in spite of the time channel being "on" or the programming being set as continuously enabled</u>.

The AA function will stay disabled until re-enabled again via this menu.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H2.	Disable or re-enable ACCEPT? H2	
"A"	Disable zone ACCEPT? B1	
Scroll to menu B11.	Disable / re-enable alert annunciation function ACCEPT?B11	
"A"	Alert annunciation function is in normal operation. Press ACCEPT to turn off	Depending on the actual status, one of the texts will be shown.
"A"	Alert annunciation function turned off. Press ACCEPT to set to normal	
"Return"	Disable / re-enable alert annunciation function ACCEPT? B11	Scroll or press "Return" to menu H2
"Return"	De-activate alert annunciation function ACCEPT? H2	Scroll or press "Return".

Note: Disabled Alert Annunciation function is not indicated by LED "Disablements" (L8).

The LED "Fault / Disablements Fire Brigade TX delay" (L16) turned off, is indicating that the Alert Annunciation function is turned off by a time channel or is disabled via this menu.

22   Set Calendar and Clock (H3)

The RTC component has no backup power supply. Normally, date, day of the week and time only have to be set when the power is turned on the FT128 for the first time. Also, if FT128 is restarted, the clock must be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct.

Note: To exit the menu without making any changes, press Return.

After any restart of the control unit, it is recommended to check / set the date and time in menu H3.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H3.	Set calendar and clock ACCEPT? H3	
"A"	Date: DD-MM-20YY Time: hh:mm:ss Weekday:1 (1=Monday, 7=Sunday) DD=Date MM=Month YY=Year hh=hour mm=minute ss=second	The time shown is the time when "A" was pressed (in menu H3). When required, edit the date, time and/or weekday. Press "A". The "clock" starts again from the date, time, etc. shown in the display. **NOTE: Press "Return"** (instead of "A") **to return to menu H3 if no changes are required.**
Settings done "A"	Date and time was set. Date: DD-MM-20YY Time: hh:mm:ss Day D	Depending on if "A" or "Return" is pressed.
"Return"	Set calendar and clock ACCEPT? H3	Scroll or press "Return".

22.1   Daylight Saving Time

The daylight saving is set via EBLWin in the system properties. When set, the time will be automatically changed according to AU or NZ convention. The daylight saving time is set in the firmware as shown below:

Australian convention: Forward 1 hour the first Sunday in October, 02:00 → 03:00. Backward 1 hour the first Sunday in April, 03:00 → 02:00.

New Zealand convention: Forward 1 hour the last Sunday in September, 02:00 → 03:00. Backward 1 hour the first Sunday in April, 03:00 → 02:00.

23 Present System Status (H4)

23.1 Disablement (H4/U1)

A list of all disablements (done via menu H2/Bx).

> NOTE: Disablements by time channel(s) are listed in menu H4/U2.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	Press "A" for presentation in the display.
"A"	When "A" is pressed, the disablements will be shown in the display. Some examples: Zone XX address XX disabled L or Zone XX is disabled L	L = a list in which you can scroll. If there are no disablements --- List is empty --- will be shown.
"Return"	Disablement ACCEPT? U1	Scroll or press "Return" to menu H4.
"Return"	Disablement ACCEPT? H4	Scroll or press "Return".

23.2   Disablement by Time Channel (H4/U2)

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

Note: Other disablements are listed in menu H4/U1.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT?U1	
Scroll to menu U2.	Disablement by time channel ACCEPT?U2	Press "A" for presentation in the display.
"A"	When "A" is pressed, the disablements will be shown in the display, e.g.: Zone XX address XX disabled (by time channel) L	L = a list in which you can scroll. If there are no disablements, --- List is empty --- will be shown.
"Return"	Disablement by time channel ACCEPT?U2	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT?H4	Scroll or press "Return"

When scrolling in the list, the message "No more zone/addresses disabled by time channel found in the system" can be shown.

23.3 Sensor Values (H4/U3)

Information on heat, smoke or multi detector sensor values. XX.X%/m = XX.X % obscuration per meter".

Perf. Factor: see below this table. nnnnnn = algorithm short name.

No. of months left: the number of months until the detector activates service signal. See section 23.3.1 "Explanation of the Sensor Values" below.

		Text in display	Comments
"Access"			Log on to FT128 as shown in page 35.
Scroll to menu H4.		Present system status ACCEPT? H4	
"A"		Disablement ACCEPT? U1	
Scroll to menu U3.		Sensor values ACCEPT? U3	Press "A" to accept.
"A"		Start Sensor : 0̲0̲-00	Write the presentation number and/or press "A" to accept.
Depending on the type, the following will be shown (examples):	"A"	*Type Analogue multi 4300/4400 in Normal mode:* Sensor: 01-01 (technical address AAA) Momentary: XX.X%/m Weekly: XX.X%/m	This is a list in which you can scroll or use "→" to see the next information window for the selected sensor.
	"→"	Sensor: 01-01 Min: XX.X%/m Perf factor: X.XX%/m Max: XX.X%/m	Press "Return" back to "Start Sensor...".
	"→"	Sensor: 01-01 Current Algorithm: nnnnnn	Scroll or write a new presentation number or press "Return" to menu U3.
	"A"	*Type Analogue heat 3308/3309 in Normal mode:* Sensor: 01-02 (technical address AAA) Momentary: XX°C Min: XX°C Max: XX°C	Note: XX.X%/m = XX.X % obscuration per meter".
	"→"	Sensor: 01-02 Current Algorithm: nnnnnn	Perf. Factor: see below this table.
	"A"	*Type Analogue Multi 4400 in Advanced Mode:* Sensor: 01-01 (technical address AAA) Momentary: XX.X%/m Weekly: XX.X%/m	nnnnnn = algorithm short name, see separate table, page 103.
	"→"	Sensor: 01-01 Min: XX.X%/m Perf Factor: X.XX%/m Max: XX.X%/m	
	"→"	Sensor: 01-01 Current Algorithm: nnnnnn	
	"→"	Sensor: 01-02 (technical address AAA) Momentary: XX°C Min: XX°C Max: XX°C	
	"→"	Sensor: 01-02 Current Algorithm: nnnnnn	

"Return"	Start Sensor : <u>0</u>0-00	Write the presentation number and/or press "A" to accept or press "Return" to menu U3.
"Return"	Sensor values ACCEPT? U3	Scroll or press "Return" to menu H4. Scroll or press "Return".
"Return"	Present system status ACCEPT? H4	Scroll or press "Return".

When scrolling the message "Please Wait….." might be shown

23.3.1 Explanation of the Sensor Values

Momentary: Momentary value in this menu will be updated following every detector polling, i.e. approx. every 6 second.

Weekly in NORMAL mode: The very first week average sensor value for a new installed detector type 430x and 440x in NORMAL mode is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes, no fire alarm can 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 on delivery. It will be updated during the first 13 minutes when the detector has been installed. 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 loses power. 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 each night (00:00), i.e. the values shown are from the previous day. For more information on performance factor, see the Planning instructions for the system.

The Performance factor can be 0.00 – 2.55. How the Performance factor (PF) is calculated is shown to the left.

In an "unstable" environment the Performance factor will be higher than 0.00. This could for example be the case in a factory (e.g. "dirty" activities during working hours – no or clean activities during the night) and is not a problem as long as there are no nuisance (false) alarms or other problems.

Algorithm: displays the algorithm that is currently in use.

23.3.2 Algorithms

The following table showing the algorithms and the abbreviations respectively:

Algorithm – Normal mode Detectors 3308/3309, 430x and 440x, all in Normal mode.	Abbreviation
Normal sensitivity (3%) & Normal detection (15 s)	**N-15**
High sensitivity (2.4%) & Normal detection (15 s)	H-15
Low sensitivity (3.6%) & Normal detection (15 s)	L-15
Normal sensitivity (3%) & Slow detection (35 s)	N-35
High sensitivity (2.4%) & Slow detection (35 s)	H-35

Low sensitivity (3.6%) & 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 [62]

Default is **N-15** and **A1** respectively.

Algorithm Detector 4400 in <u>Advanced mode</u>.	Abbreviation
Normal area	**Normal**
Clean area	Clean
Cooking-Welding area	Welding
Heater area	Heater
Smoke-Steam area	Smoke

Default is Normal.

Algorithm Detector 4401 in <u>Advanced mode</u>.	Abbreviation
Normal area	**Normal**
Clean area	Clean
Smoke-Steam area	Smoke

Default is Normal.

---

[62] Analogue multi detector 4300 only.

23.4 Sensors Activating SERVICE Signal (H4/U4)

Service signal is indicated by LED "Service" (L12). The <u>week average sensor value</u> is over the service level respectively for one or more sensors. (Regarding the service signal levels, see Technical / Programming manual, chapter "Service signal".

Menu H4/U4 is a list of the sensor(s) activating service signal.

Note: Service signal is only information to prompt that a sensor has to be cleaned / replaced soon. The service signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S4)", page 126 .

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status on display ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U4.	Sensors activating SERVICE signal ACCEPT? U4	Press "A" to accept.
"A"	Sensor: ZZ-AA (technical address aaa) needs service L	L = a list in which you can scroll. If there are no sensors activating service signal, --- List is empty --- will be shown.
"Return"	Sensors activating SERVICE signal ACCEPT? U4	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return"

23.5 Technical Warning (H4/U5)

A technical warning is an event that is neither a fire alarm nor a fault. It indicates that something has or has not happened and is generated via a programmable input.

The text message, shown in the FT128 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 **[i]**.

Menu H4/U5 is a list of the Technical warnings in the system.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U5.	Technical warning ACCEPT? U5	Press "A" to accept.
"A"	Technical warning number NNNN xxxxxxxxxxx xxxxxxxxxxxxx	A list in which you can scroll. If there are no Technical warnings, --- List is empty --- will be shown.
"Return"	Technical warning ACCEPT? U5	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return".

23.6   Event Log (H4/U6)

Three event logs (3 x 500 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 most recent event is shown in the top of the list. If there are no events --- List is empty --- will be shown.

The initials of the person logged on to the system will also be shown for each event when applicable (i.e. commands). Commands done via EBLWin and the Web-server will also be shown.

> Note: The event logging is disabled as long as menu H4/U6 is open.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U6.	Event log ACCEPT? U6	Press "A" to accept.
"A"	Select event log: 0 0=Alarm 1=Interlocking 2=General	Select type of event log.
"0", "1" or "2" "A"	*When "A" is pressed, an event will be shown in the display, e.g.:* FIRE ALARM zone 12 address 45 DD-MM HH:MM XX or FIRE ALARM zone 32 DD -MM HH:MM XX or FAULT: Output S1 Acknowledge DD -MM HH:MM XX	The most recent event will be shown, i.e. use "↓" to scroll downwards in the list. **xxx:** "Blank" = FT128 Win = By EBLWin Web = By Web-server SP = By Service Personnel
"Return"	Select event log: 0 0=Alarm 1=Interlocking 2=General	Select type or press "Return" to menu U6.
"Return"	Event log ACCEPT? U6	Scroll or press "Return" to menu H4
"Return"	Present system status ACCEPT?H4	Scroll or press "Return"

23.7   Version and Alarm Counter (H4/U7)

This menu can be used to show the following information:

Version: FT128 software / firmware version downloaded to the main board 4556.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H4.	Present system status ACCEPT? H4	
"A"	Disablement ACCEPT? U1	
Scroll to menu U7.	Version and alarm counter ACCEPT? U7	Press "A" to accept.
"A"	Version: X.X.X Alarm counter: YYY	Press "Return" to menu U7.
"Return"	Version and alarm counter ACCEPT? U7	Scroll or press "Return" to menu H4.
"Return"	Present system status ACCEPT? H4	Scroll or press "Return"

24   Service (H5)

When commissioning a new system or maintaining an existing system, menu H5 can be used to perform certain actions and get information and help.

Only authorised personnel have access to menu H5. User name and Password for level 3A (Service Personnel) are required.

Via a PC [63] and EBLWin (+ EBLWin key in the PC) you can:

- Download / upload (backup) Site Specific Data (SSD)
- Download system software, setting, configuration, control unit and system properties.
- Create and download the user definable text messages (alarm texts) shown in the display in FT128 / AAU / EPU.

Note: To log on to an FT128 FDCIE via a PC and EBLWin, a PC has to be provided with an EBLWin key (5094). This USB device has a number (key) required for the log on.

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[63] Connected to the "D" connector J3 (RS232) on the main board.

24.1 Calibration of Supervised Outputs (H5/A1)

Supervised (monitored) outputs [64] :

- The voltage outputs (S0-S1) in the control unit
- The voltage outputs (VO0-VO1) in the COM loop output unit 3364.
- The voltage outputs (Output 0-Output 1) on the I/O expansion board 4583

When all alarm devices (OWS, sounders, etc.) are connected, including required End-Of-Line devices [65] and when the SSD download is ready, a calibration has to be done.

Function: If the actual value differs from the calibrated value ± a small tolerance or if the calibrated value is outside the calibration range [66], a fault will be generated.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
"A"	To calibrate supervised outputs press ACCEPT	
"A"	Calibration in progress Please wait......	
"A"	Calibration is completed ACCEPT?	
"A"	Calibration of supervised outputs ACCEPT? A1	Scroll or press "Return" to H5.
	Service ACCEPT? H5	Scroll or press "Return"

Note: During the calibration, all outputs will automatically be low, i.e. a normally high output will be low during the calibration for a few seconds.

Note: After the calibration it is recommended to do a "Safe shutdown of control unit" (see menu H8/S4). This will save the SSW data (e.g. the calibration values) in a Flash ROM (see page 82).

---

[64] Supervised (monitored) outputs can be set to be not supervised via EBLWin.

[65] FT128 outputs (S0-S1) requires one EOL resistor (33K) in the last unit or one resistor (33K) in up to five units, 3364 outputs (VO0-VO1) requires one EOL capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

[66] 4K7 – 50K and 470 – 5x470 nF respectively.

24.2   Sensitive Fault Detection Mode (H5/A2)

To increase the possibilities to detect faults during 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 activated "Sensitive fault detection mode" is indicated by the LED Routing equipment "Fault tx activated" and the "Fault" output for routing equipment is "activated".

Note: The "Fault" output for routing equipment is also "activated".

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A2	Sensitive fault detection mode ACCEPT? A2	
"A"	Sensitive fault detection mode is not active Press ACCEPT to activate	The text shown depends on the actual status.
	Sensitive fault detection mode is active Press ACCEPT to deactivate	Press "A" to accept or press "Return" to menu A2.
"Return"	Sensitive fault detection mode ACCEPT? A2	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

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

24.3   Service Mode for COM-Loop (H5/A3)

This mode can be used when commissioning an installation and by maintenance personnel. The COM loop communication (polling) will be turned off but there will still be 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 FT128 is powered via the backup battery only, since the voltage can be up to 3 V lower (compared with the switch mode power supply) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED "Disablements" is lit and LED "Service" 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.

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

FAULT: SHORT CIRCUIT SCI A <-> SCI B

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A3	Service mode for COM-loop ACCEPT? A3	Press "A" to accept.
"A"	Service mode for COM-loop: <u>0</u> 0=Off 1=A-dir 2=B-dir 3=Both ACCEPT?	Press: **0**=Service mode is off. **1**=Voltage in A-direction. **2**=Voltage in B-direction. **3**=Voltage in both directions. 1, 2 or 3 selected is indicated by LED "Disablements" (L8)
e.g. "1" "A"	COM-loop in service mode. Powered in A-direction.	The communication is now turned off on the COM loop but 24V still exist in the A-direction. This state will last until you press "A" or "Return" to menu A3.
"A" or "Return"	Service mode for COM-loop ACCEPT? A3	Scroll or press "Return" to H3.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

24.4 Display Current Consumption in Unit (H5/A4)

Power Supply (Control Unit)

Voltage - xx.xx V: The 24V measured by the CPU on the main board. Corresponds to the output voltage at the power supply outputs on connector J1.

Earth voltage - xx.xx V: Measured from 0V (connector J1:14) to earth.

Current from power supply: xxx mA: The total current consumption (including the charging current at 24V) for the control unit when it is connected to the mains (230 V AC), i.e. this function is not working by battery backup.

BATTERY

Voltage: xx.xx V: The battery voltage at connector J2:4-5.

Charging current: x mA: The battery charging current for the control unit (FDCIE).

Resistance in battery circuit: xxxxx mΩ: During the battery resistance check the voltage is measured with and without a resistor. A resistance > 500 mΩ will result in a "Low battery capacity" fault. Checked every 4th hour.

Charging: The battery charging current.

Low capacity voltage difference: During the battery capacity check the voltage is measured with and without a resistor. A difference between these two voltages > 2100 mV will result in a "Low battery capacity" fault. This is checked every 4th hour.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A4	Display current consumption in unit ACCEPT? A4	
"A"	Current consumption unit: XXXX mA Charging: XXXX mA →	Press "→" for the second information window.
"→"	Low capacity [67] voltage diff: XXXXX mV ←	Press "←" for the first information window.
"Return"	Display current consumption in unit ACCEPT? A4	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return".

Notes: Each window is updated continuously.

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[67] This window will not be visible until 4 hours after the CIE. is powered and the batteries have to be connected.

24.5 Display Current Consumption on COM-Loop (H5/A5)

An average current consumption value can be displayed for the COM loop.

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

Action	Text in display		Comments
"Access"			Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service	ACCEPT? H5	
"A"	Calibration of supervised outputs	ACCEPT? A1	
Scroll to menu A5	Display current consumption on COM loop	ACCEPT? A5	
"A"	Current consumption on COM-loop is XXX mA	ACCEPT?	
"A" or "Return"	Display current consumption on COM loop	ACCEPT? A5	Scroll or press "Return" to H5.
"Return"	Service	ACCEPT? H5	Scroll or press "Return".

Note: Each window is updated continuously.

24.6   Display Statistics for COM Loop (H5/A6)

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

Number of Polling is the number of polling ("questions") sent out by FT128 to the units connected on the COM loop.

Parity fault is the received number of parity faults and % parity faults in relation to the polling.

Number of Bit faults is the received number of bit faults and % bit faults in relation to polling.

No answer is the received number of answer faults / no answers and % faults in relation to polling.

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

The number of Parity faults, no. of Bit faults and No answer and Bit length faults must 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. Check that the COM loop cable is not placed too close to mains voltage cables, etc. that might cause communication disturbance / problems.

Note: All values are set to "0" after a restart and/or when you re-connect the COM loop (via menu H8/S1).

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A6	Display statistics for COM loop ACCEPT? A6	
"A" 68	Polling 1234567 Parity 000000 00.0% No reply 000000 00.0% →	Press "→" for the second information window.
"→"	Bit length 000000 00.0% ← No. of bits 000000 00.0%	Press "←" for the first information window.
"Return"	Display statistics for COM loop ACCEPT? A6	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return" to H5.

---

[68] The values are updated continuously.

24.7   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 **D**isplay **U**nits connected to the RS485 interface in FT128:

- External Presentation unit (EPU) 1728
- Alert Annunciation unit (AAU) 1736

A specific unit or all units can be activated for address setting.

Note: The units have to be in operation and in quiescent condition, i.e. the units have already been addressed.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A7	Activate address setting mode for DU ACCEPT? A7	
"A"	Activate address setting mode for DU 0 (9 = All) ACCEPT?	Write the unit's address (0-7). 9 = All units. Press "A" to accept.
e.g. "9" "A"	Operation failed!	If the address setting mode was not activated.
e.g. "9" "A"	All DU set in address setting mode	The address has now to be set / changed in the DU respectively.
"Return"	Activate address setting mode for DU ACCEPT? A7	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

24.8   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 detectors 4611 to the Base station

Unregister: in order to unregister one or more wireless detectors 4611 from the Base station

Install: in order to change the normal communication time from every 2nd minute to every 5th second, to be used during commissioning, etc.

Note: To set the Base station to any of the modes above, the Base station has to 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 has to be set back to "Normal state" before it can be set to any other mode.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A8	Setup wireless detectors ACCEPT? A8	
"A"	Set base station mode 000 to mode 0 (0=Register, 1=Unregister, 2=Install)	
Write technical address for the base station, e.g. "001" and mode, e.g. "0"	Set base station mode 001 to mode 0 (0=Register, 1=Unregister, 2=Install)	Press "A" to accept.
"A"	Base station 001 set in register mode	
"A"	Set base station mode 001 to mode 0 (0=Register, 1=Unregister, 2=Install)	If more base stations shall be set, continue like above. If not, press "Return" to menu A8.
"Return"	Setup wireless detectors ACCEPT? A8	Scroll or press "Return" to menu H2.

For more information, refer to the manual for Wireless Units for Addressable FDCIEs.

Note: The procedure to set a Base station to the "Unregister" and "Install" mode respectively (and back to the "Normal state") is the same as for the "Register" mode.

24.9   End Setup Wireless Detectors (H5/A9)

This menu is used to set wireless base station in register / unregister / install mode back to normal mode.

If there are no base stations in register / unregister / install mode, --- List is empty --- will be shown. For more information, see Technical description of wireless detectors.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A9.	End setup wireless detectors ACCEPT? A9	
"A"	Set base station 001 to normal mode ACCEPT? L	**L**=A list in which you can scroll. Press "A" to accept. You will stay in this list until all base stations are in normal mode or press "Return" to menu A9.
"A" (to re-enable) or "Return"	End setup wireless detectors ACCEPT? A9	
"Return"	Service ACCEPT? H5	Scroll or press "Return"

24.10   Show Information about Site Specific Data (H5/A10)

Information about the latest downloaded Site Specific Data (SSD) via a PC and the program EBLWin.

- **SSD name:** As written in the EBLWin dialog box "System Properties" (Name).

- **Downloaded:** Date and time when the SSD was downloaded.

- **User:** 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, etc. is set in conjunction with the installation of EBLWin [69]

- **Language:** The Control unit language.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H5.	Service ACCEPT? H5	
"A"	Calibration of supervised outputs ACCEPT? A1	
Scroll to menu A8	Show information about site specific data ACCEPT? A10	
"A"	SSD name: xxxxxxxxxxxxx Downloaded: DD-MM-YYYY hh:mm →	
" → "	User: nnnnnnnnnn Computer: cccccccccc →	Press "→" to see the next window.
" → "	Domain: ddddddddd EBLWin key: 1234567890 →	Press "→" to see the next window.
" → "	Convention: CCCCCCCCCC Language: LLLLLLLLLL	Press "→" to see the first window.
"Return"	Show information about site specific data ACCEPT? A10	Scroll or press "Return" to H5.
"Return"	Service ACCEPT? H5	Scroll or press "Return"

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[69] To change the convention via EBLWin, "Level 2" in the tools menu must be selected, which require a special password. Alternatively EBLWin can be re-installed.

25 Acknowledge FAULTS (H6)

Regarding fault indication, etc., see chapter "Fault", page 61 .

See also chapter "Fault Acknowledge", page 62 .

All fault events are stored in the event log and can be listed. See also chapter "Event Log (H4/U6)", page 107

In this menu (H6) are up to 200 faults listed:

- Not corrected (not serviced) and not acknowledged faults (no status info.)
- Not corrected (not serviced) but acknowledged faults (status: Acknowledged)
- Corrected (serviced) but not acknowledged faults (status: Serviced)

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H6.	FAULT Acknowledge ACCEPT? H6	
"A"	FAULT: Xxxxxxxx → Date: DD-MM Time: HH:MM Status info. FAULT: Xxxxxxxx ← User defined Alarm text, when applicable 	This is a list in which you can scroll. <u>The first fault in the list is the most recent fault.</u> Status info., see above. When applicable, press "→" for more info. To acknowledge the fault shown in the display, press "Fault acknowledge" (P6).
"Fault acknowledge"	FAULT: Xxxxxxxx → Date: DD-MM Time: HH:MM Acknowledged	The status info. is now **Acknowledged**. When this fault is **corrected** it will be removed from the list. Scroll in the list e.g. to acknowledge more faults or press "Return" to menu H6.
"Return"	FAULT Acknowledge ACCEPT? H6	Scroll or press "Return" to log off.

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

26   Perform ZONE TEST (Test Mode) (H7)

Normally, zones are tested during the monthly test via menu H1, see page 85. Via this menu (H7) it is possible to perform the zone test.

Up to 99 zones can be in set in test mode.

In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S6 and any output via menu H8/S9 or via EBLWin when you are logged on).

If a real fire alarm is activated by an alarm point <u>not</u> in test mode, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (OWS or sounders) activated, routing equipment (Fire Brigade TX) activated, etc.

There will be an automatic termination of the test mode one hour after the latest tested alarm point / zone.

Note: If the door in FT128 is left open, the output(s) for external strobe or alarm bell might be disabled (if set in EBLWin).

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H7.	Perform ZONE TEST ACCEPT? H7	
"A"	Set zone in test mode ACCEPT? D1	**D1** = Sub menu to set a zone in test mode.
"A"	Set zone: 00 in test mode Start test: ACCEPT	Write the zone number and press "A".
e.g. "01" "A"	Zone 01 in test mode	LED "Test mode" (L9) will light up.
"A"	Set zone: 00 in test mode Start test: ACCEPT	If more zones to be set in test mode, do as above, else press "Return".
"Return"	Set zone in test mode ACCEPT? D1	
The zone(s) will stay in test mode until the test mode is terminated. The test mode will also be automatically terminated 60 minutes after the last testing in the zone. 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 normal. In the tested alarm point, the LED will light up and the alarm point will be automatically reset after about ten seconds. The alarm will also momentarily be shown in the FT128 display. A sensor in test mode will not be able to activate fault.	
	Set zone in test mode ACCEPT? D1	To terminate the test mode, the menu D1 has to be open. Press "↓" or "2" to open menu D2.
"↓" or	Set zone in test mode ACCEPT? D2	Press "↑" to end the test mode.

Action	Text in display	Comments
"2"		
"A"	End test mode zone: 01 ACCEPT? L --- List is empty ---	This is a list in which you can scroll between all the zones in test mode. Select or type the zone number and press "A". When no more zones are in test mode --- List is empty --- will be shown and the LED "Test mode" (L9) is turned OFF. Press "Return" to D2.
"Return"	End zone in test mode ACCEPT? D2	Press return to H7
"Return"	Perform zone test ACCEPT? H7	

Notes:

If an alarm point (e.g. 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(s) will be closed when the zone involved is set in test mode.

27 Maintenance (H8)

Only authorised personnel have access to (H8), user name and password for level 3A (Service technician) are required.

Disconnected (disabled) loop, etc. is indicated by LED "Disablements" (L8) and is listed in menu H4/U1.

27.1 Disconnect / Re-connect COM loop (H8/S1)

To avoid damage on the units and FT128 during physical connection / disconnection of loop units, it is highly recommended to have the loop disconnected (disabled), i.e. the loop is voltage free (dead). Zone line input requires an 8 zones expansion board 4580 in the control unit or an Addressable multipurpose I/O unit 3361/4461 connected on a COM loop.

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

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
"A" or "Return"	COM-loop is connected. Press ACCEPT to disconnect	Depending on if the COM loop shall be disconnected or re-connected, press "A" or "Return"
"A" or "Return"	COM-loop is disconnected. Press ACCEPT to re-connect	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	Scroll or press "Return" to H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

27.2 Disconnect / Re-connect Zone Line Input (H8/S2)

To avoid damage on the units and FT128 during physical connection / disconnection of units, it is highly recommended to have the zone line disconnected (disabled), i.e. voltage free (dead).

Disconnected zone line input is indicated by LED "Disablements" and is listed in menu H4/U1.

Action	Text in display		Comments
"Access"			Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance	ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop	ACCEPT? S1	
Scroll to menu S2	Disconnect / Re-connect Zone Line Input	ACCEPT? S2	
"A"	Disconnect (=0) or Re-connect (=1) zone line input? <u>1</u>	ACCEPT?	Press "0" or "1" and press "A" to accept.
Depending on if "0" or "1" is chosen, one of the following will be shown:	Disconnect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	Write the 4580 board no. (0-3) and the Zone Line Input no. (0-7). Press "A" to accept.
	Re-connect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	
E.g. "0" "0" "A"	Zone line input 0 expansion board 0 disconnected		
"A"	Disconnect Zone Line Input <u>0</u> expansion board 0	ACCEPT?	Do more disconnections or press "Return".
"Return"	Disconnect (=0) or Re-connect (=1) zone line input? <u>1</u>	ACCEPT?	Write "0" or "1" and press "A" to accept or press "Return" menu S2.
"Return"	Disconnect / Re-connect Zone Line Input	ACCEPT? S2	Scroll or press "Return" to H8.
"Return"	Maintenance	ACCEPT? H8	Scroll or press "Return".

27.3 Disconnect / Re-connect addressable zone interface input (H8/S3)

To avoid damage on the units and FT128 during physical connection / disconnection of units, it is highly recommended to have the zone interface input disconnected (disabled), i.e. voltage free (dead).

Disconnected addressable zone interface input is indicated by LED "Disablements" and is listed in menu H4/U1.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
Scroll to menu S3	Disconnect / Re-connect addressable zone interface input ACCEPT? S3	
"A"	Disconnect (=0) or Re-connect (=1) addr. zone interface input? 1 ACCEPT?	Press "0" or "1" and press "A" to accept.
Depending on if "0" or "1" is chosen, one of the following will be shown:	Disconnect addressable zone interface input, technical address: 000 ACCEPT? Re-connect addressable zone interface input, technical address: 000 ACCEPT?	Write the COM loop address (001-255). Press "A" to accept.
E.g. "0" "001" "A"	Input technical address 001 disconnected	
"A"	Disconnect addressable zone interface input, technical address: 000 ACCEPT?	Do more disconnections or press "Return".
"Return"	Disconnect (=0) or Re-connect (=1) addr. zone interface input? 1 ACCEPT?	Write "0" or "1" and press "A" to accept or press "Return" menu S3.
"Return"	Disconnect / Re-connect addressable zone interface input ACCEPT? S3	Scroll or press "Return" to H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

27.4 Acknowledge SERVICE Signal (H8/S4)

When SERVICE signal is generated in the system, it is indicated by LED "Service" (L12), which will be turned off when all sensors have been acknowledged.

See chapter "Sensors activating SERVICE signal (H4/U4)", page 105.

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, and 4401 set in advanced mode do not have to be acknowledged if they are replaced after generating service signal. They will be automatically reset.

> Note: 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 RESTORE WEEKLY AVERAGE TO DEFAULT (H8/S5).

The very first week average sensor value after the SERVICE signal is acknowledged will be calculated within one hour. Thereafter a new week average sensor value will be calculated every week.

If there are no sensors having activated SERVICE signal, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
Scroll to menu S4.	Acknowledge SERVICE signal ACCEPT? S4	
"A"	Sensor : xx-xx (technical address xxx) needs service L	L = a list in which you can scroll. Press "Fault acknowledge" to acknowledge the service signal **or** press "Return" to S4.
"Fault acknowledge"	*The service signal for that sensor is now acknowledged and the next sensor will be shown in the display.* Sensor : yy-yy (technical address yyy) needs service L	If more service signal acknowledgements shall be done, continue like above. If not, press "Return" to menu S4.
"Return"	Acknowledge SERVICE signal ACCEPT? S4	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

27.5   Restore Weekly Average to Default (H8/S5)

Valid only for 430x, 4400 and 4401 sensors in NORMAL mode.

If a sensor (analogue 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.

The week average sensor value has to be restored for each replaced sensor individually. First replace the sensor then restore the week average sensor value as soon as possible.

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

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Disconnect / Re-connect COM loop ACCEPT? S1	
Scroll to menu S5.	Restore weekly average to default ACCEPT? S5	
"A"	Enter zone-address to restore: 00-00 ACCEPT?	Write the zone-address and press "A" to accept.
E.g. "01-01" "A"	Sensor 01-01 (tech addr 001) is restored to default average	
"A"	Enter zone-address to restore: 00-00 ACCEPT?	If more sensors shall be restored, continue like above. If not, press "Return" to menu S5.
"Return"	Restore weekly average to default ACCEPT? S5	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

27.6 Test of Alarm Devices (H8/S6)

The programmable outputs [70] of type "Alarm device" can be collectively activated via this sub menu (S6), which enables the service technician to test the alarm devices without too much disturbance on site.

The test cannot be started if fire alarm is already activated in FT128

When the test starts, the alarm devices will sound for approx. 1 seconds, be silent for approx. 29 seconds, sound for approx. 1 seconds and so on. [71]

Note: Disabled (and silenced) alarm devices will also be tested. The test will continue for one hour if not stopped via this menu (H8/S6) or if a fire alarm is activated in the system.

Action	Text in display		Comments
"*Access*"			Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance	ACCEPT? H8	
"A"	Acknowledge SERVICE signal	ACCEPT? S1	
Scroll to menu S6.	Test of alarm devices	ACCEPT? S6	
"A"	Test of alarm devices?	ACCEPT?	Press "A" to start the test.
"A"	Test of alarm devices in progress. End test?	ACCEPT?	The test will now continue until stopped via this menu (S6) or automatically after one hour or if a fire alarm is activated. Press "A" to stop the test.
"A"	Test of alarm devices?	ACCEPT?	
"Return"	Test of alarm devices	ACCEPT? S6	Scroll or press "Return" to return to menu H8.
"Return"	Maintenance	ACCEPT? H8	Scroll or press "Return"

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[70] Including Addressable siren 3377 / 4477, Addressable sounder base 3379, wireless detector 4611, and all visual alarm devices 4480, 4481, 4482, 4487.

[71] The output activation will be steady (continuous). For the alarm devices 3377 / 4477 and 3379, 4611, 4480, 4481, 4482 and 4487, the tone with the highest priority level (and type "alarm device") will be automatically selected.

27.7 Safe Shut Down of Control Unit (H8/S7)

It's not recommended to do a safe shutdown of FT128 before power down the FDCIE which means disconnecting it from 230 V AC and battery. Safe shut down will save the SSW in a Flash memory and also put the CPU at rest. See also chapter" Restart ", page 82.

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

Note: By restart and power down, the Fault TX relay, which is energised in quiescent / normal state, will de-energise, i.e. the relay contacts will alternate.

Action	Text in display	Comments
"*Access*"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S7.	Safe shut down of control unit ACCEPT? S7	
"A"	For safe shut down of control unit press ACCEPT	
"A"	Control unit ready for power down. To restart without power down press ACCEPT. **NOTE!** If you change your mind regarding power down, press "A" to restart the CU (<u>or</u> wait **5 min.** for an aut. restart).	The SSW is now saved, the CPU is at rest and the CU is ready to be de-energized.
Power down – up <u>or</u> "A" <u>or</u> after 5 min.	Normal restart indication, see page 82 FAULT: Restart code 0x addr 0 Date: mm-dd Time: hh:mm Serviced	After the restart, there will be 2 restart faults, which has to be acknowledged, see chapter "Acknowledge FAULTS (H6)", page 120.

The code for the two restart faults will be 00 after Power off / Power on restart and 03 after a countdown restart.

Note: Before the very first safe shutdown, the Flash ROM is empty. Then every time safe shut down is performed, the valid data will be saved in the flash ROM, i.e. any old data will be overwritten. When the FT128 is powered up, the data stored in the Flash ROM will be used.

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

27.8   Activate Zone-Address in Alarm Mode (H8/S8)

One alarm point (zone-address), not a whole zone, can be manually set in alarm mode. 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.

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

Action	Text in display	Comments
"*Access*"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S8.	Activate zone/address in alarm mode ACCEPT? S8	
"A"	Select zone: 00 address: 00 ACCEPT?	
Write the zone and address e.g. "12-45"	Select zone: 12 address: 45 ACCEPT?	Press "A" to accept / activate the fire alarm.
"A"	001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45"	Normal fire alarm presentation in the FT128. If more alarm points have to be set in alarm status, press "Return" to select another zone - address and continue as above.
"Return"	Select zone: 00 address: 00 ACCEPT?	
Write another zone and address, e.g. "12-34".	Select zone: 12 address: 34 ACCEPT?	Press "A" to accept / start the fire alarm.
"A" "Alarms queued"	001 ZONE-ADDR 12-45 LAST ZONE 12 No. 01 "Alarm text for 12-45" 002 ZONE-ADDR 12-34 LAST ZONE 12 No. 01 "Alarm text for 12-34"	The LEDs "Alarms queued" (L2) are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" (P1) to see the other alarm. Press "Reset" to reset the alarm(s).

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

The LEDs "Alarms queued" are indicating that more than one alarm point is in alarm. Press the button "Alarms queued" to see the other alarm. Press "Reset" to reset the alarm(s).

What happens when you press "Reset" is dependent on:

1. if you still are in menu H8/S8 and single encapsulated reset is used

2. if you still are in menu H8/S8 and multiple reset is used **or** if you have left the menu system (by pressing "Return" two times **or** automatically after 10 minutes).

Alternative a) "Reset"	Activate zone/address in alarm mode ACCEPT? S8	Scroll or press "Return" to menu H8.
	Maintenance ACCEPT? H8	Scroll or press "Return".

Alternative b) "Reset"	(Blank)	

Note: Multiple reset is default. [72]

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[72] Alarm reset is selected via EBLWin, "Control Unit Properties", tab "Advanced".

27.9   Activate Output (H8/S9)

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

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, 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 is true or not. The selected output will be reset only if the control expression is false. If the control expression is true when you reset the output via menu H8/S10, the output will remain activated until the control expression is false again.

Action	Text in display	Comments
"*Access*"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S9.	Activate output ACCEPT? S9	
"A"	Activate output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	Loop unit=3361 or 3364 S=S0-S1, R0=R0 EXPB= 4581 or 4583
Depending on if 0, 1, 2 or 3 is selected one of the alternatives will be shown.	Activate output: 0, technical address 000 ACCEPT? Activate S0 ACCEPT? Activate R0 ACCEPT? Activate output: 0, expansion board 0 ACCEPT?	Fill in the requested data respectively and press "A".
"A" Depending on if 0, 1, 2 or 3 is selected one of the alternatives will be shown.	Output 0 technical address 002 forced active Output S0 forced active Output R0 forced active Output 0 expansion board 0 forced active	
"A" "Return"	Activate output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	If more outputs shall be activated do as above, else press "Return" to menu S9.
"Return"	Activate output ACCEPT? S9	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

27.10   Reset activated output (H8/S10)

Output(s) activated via menu H8/S9 have to be reset via this menu (H8/S10).

Note: Only output types that are activated will be shown and possible to select.

Action	Text in display	Comments
"*Access*"		Log on to FT128 as shown in page 35.
Scroll to menu H8.	Maintenance ACCEPT? H8	
"A"	Acknowledge SERVICE signal ACCEPT? S1	
Scroll to menu S10	Reset activated output ACCEPT? S10	
"A"	Reset output type: 0 0=Loopunit 1=S 2=R0 3=EXPB ACCEPT?	Only output types that are activated will be shown. Loop unit=3361 or 3364 S=S0-S1 R0=R0 EXPB= 4581 or 4583
Depending on if 0, 1, 2 or 3 is selected one of the alternatives will be shown.	Reset output: 0, technical address 000 ACCEPT? L Reset S0 ACCEPT? L Reset R0 ACCEPT? L Reset output: 0, expansion board 0 ACCEPT? L	L=A list in which you can scroll. Select the output to reset and press "A".
"A"	Reset output type: 0 0=Loop unit 1=S 2=R0 3=EXPB ACCEPT?	Only output types that are activated will be shown. When all outputs are reset, --- List is empty --- will be shown.
"Return"	Reset activated output ACCEPT? S10	Scroll or press "Return" to menu H8.
"Return"	Maintenance ACCEPT? H8	Scroll or press "Return".

28 Interlocking Outputs and Inputs (H9)

28.1 Activated Interlocking Outputs/Inputs (H9/C1)

If there are no output / input activated, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
"A" Depending on activated output and/or input, the following will be shown:	Output AA/PP activated at HH:MM Alarm text (if progr.) Output AA/PP act HH:MM, input act HH:MM Alarm text (if progr.) Input AA/PP activated at HH:MM Alarm text (if progr.)	This is a list in which you can scroll. AA = interlocking combination Area PP = interlocking combination Point (within the area). Press "Return" to menu C1.
"Return"	Activated interlocking outputs/inputs ACCEPT? C1	Scroll or press "Return" to menu H9.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"

28.2 Activate Interlocking Output (H9/C2)

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

Reset has to be performed via menu H9/C3.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
Scroll to menu C2.	Activate interlocking output ACCEPT? C2	
"A"	Activate interlocking output area 00 point 00 ACCEPT?	
e.g.: "01", "01" "A"	Interlocking output 01-01 activated	
"A"	Activate interlocking output area 01 point 01 ACCEPT?	If more outputs shall be activated do as above, else press "Return" to menu C2.
"Return"	Activate interlocking output ACCEPT? C2	Scroll or press "Return" to menu H9.
"Return"	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"

28.3   Reset Interlocking Output (H9/C3)

All activated interlocking outputs are listed in this menu.

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

Interlocking output activated via its control expression and with latching output selected (in EBLWin): The output has to be reset via this menu (C3).

Interlocking output activated via menu H9/C2: The output has to be reset via this menu (C3).

Interlocking output activated via its control expression and with latching output **not** selected: The output can be reset via this menu (C3).

If there are no outputs to reset, --- List is empty --- will be shown.

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

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
Scroll to menu C3.	Reset interlocking output ACCEPT? C3	
"A"	Reset interlocking output area 00 point 00 ACCEPT?	This is a list in which you can scroll. Press "A" (for reset) or "Return" (no reset) to menu C3.
"A" or "Return"	Reset interlocking output ACCEPT? C3	Scroll or press "Return" to menu H9.
"Return"	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"

28.4 Disable Interlocking Output (H9/C4)

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 100 interlocking outputs can be disabled in the system.

Disabled interlocking outputs are listed in menu H4/U1.

The LED "Disablements" is also indicating one or more disabled interlocking outputs.

Re-enable is performed via menu H9/C5.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
Scroll to menu C4.	Disable interlocking output ACCEPT? C4	
"A"	Disable interlocking output area 00 point 00 ACCEPT?	
e.g.: "01", "01" "A"	Disable interlocking output area 01 point 01 ACCEPT?	Press "A" to accept and/or "Return" to menu C4.
"A"	interlocking output 01 – 01 disabled	
"A"	Disable interlocking output ACCEPT? C4	Scroll or press "Return" to menu H9.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"

28.5 Re-Enable Interlocking Output (H9/C5)

Disabled interlocking outputs are listed in menu H4/U1.

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

All interlocking outputs, disabled via menu H2/B4, will be re-enabled via menu H2/B8

If there are no outputs to re-enable, --- List is empty --- will be shown.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H9.	Interlocking outputs and inputs ACCEPT? H9	
"A"	Activated interlocking outputs/inputs ACCEPT? C1	
Scroll to menu C5.	Re-enable interlocking output ACCEPT? C5	
"A"	Re-enable interlocking output area 00 point 00 ACCEPT?	This is a list in which you can scroll. Press "A" (for re-enable) or "Return" (not re-enable) to menu C5.
"A" or "Return"	Re-enable interlocking output ACCEPT? C5	Scroll or press "Return" to menu H9.
"Return"	Interlocking outputs and inputs ACCEPT? H9	Scroll or press "Return"

29   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).

If the valid password is unknown, EBLWin must be used to change the password.

Action	Text in display	Comments
"Access"		Log on to FT128 as shown in page 35.
Scroll to menu H10.	Change access code for daily duties ACCEPT? H10	
"A"	Password: _ New Password: Verify:	
Enter the old and new passwords and the new password again.	Password: ****** New Password: **** Verify: ******	The digits are replaced (******) in the display.
	Incorrect Password, NO change	Wrong password was entered. Try again.
	Password is changed	Correct password was entered.
	Change Password ACCEPT? H10	Scroll or press "Return" to log off.

Note: As long as you don't close the door you can enter the menu system again without a password.

Note: After change of password, it is recommended to do a "Safe shutdown of the control unit" (see menu H8/S7). This will save the SSW data (e.g. the new password) in a Flash ROM (see page 82).

Use EBLWin to change the password(s) if they are forgotten.

30 FDCIE Maintenance

The FDCIE shall be maintained and tested in accordance with the Australian standard AS1851.

To avoid the Fault TX output(s) to be activated, they can be disabled via menu H2/B10 (or via an open door, see chapter "Door Open" page 48. However, in Australia and NZ it is not permitted to disable routing equipment via cabinet door, it must be isolated via the ASE.

Regarding the fault condition, see chapters "Fault", page 61 and "Fault messages", page 62.

Note: Most of the faults have approximately 60 seconds delay.

Each Control Unit should be tested as follows:

- Perform monthly / quarterly / yearly test (menu H1).
- Remove one battery fuse (e.g. F2 on the Main board 4556). The following fault message is to be shown:

FAULT: Battery not connected

- Re-place the fuse and acknowledge the fault (menu H6).

30.1 Battery Maintenance

The batteries (2 x 12 V) are normally placed inside FT128 cabinet (Larger batteries are placed in a separate battery box attached to FT128 cabinet).

FT128 charges the batteries and continuously monitors its condition, a fault will be generated when the batteries are disconnected or outside the specified limits.

The batteries are rechargeable Sealed Lead-Acid batteries, it must be approved batteries. The batteries are normally maintenance-free but the manufacturer's instructions should always be followed.

The ambient temperature affects the battery capacity, self-discharge and life span. If possible, it should not be higher than normal room temperature

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

CAUTION: Risk of explosion may occur if batteries are replaced by incorrect type. Dispose used batteries according to the producer's instructions and national regulations.

31   How to Avoid Nuisance Fire Alarms

We all realise, when life, buildings, production facilities, etc. need to be saved, it is of utmost importance that an initial fire is detected as soon as possible. That's why more reliable 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 nuisance fire alarms.

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

Tobacco smoke

The detectors (sensors) cannot differentiate between different types of smoke. They cannot separate tobacco smoke from smouldering smoke. Intensive tobacco smoking in conjunction with poor ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling, these types of activities may generate smoke.

Carpet welding

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

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc.

Warning! Be careful when there are smoke detectors (sensors) near such activity.

Special environments

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

Steam / hot air

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

Exhausts

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

Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an Analogue system (like FT128) a Service signal is given when it is time to clean or exchange the smoke detectors (sensors). The alternative is to exchange detectors at even intervals, 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 altering. Due to some of the special environments shown above, an in-appropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.

Actions via EBLWin

Choosing another type of detector, e.g. a multi detector (with both heat and smoke detection), can solve certain problems. Note that the coverage area can be different for different types of detectors.

It is however not always the best action is 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 Facility (ADF) for analogue smoke sensor / detector and sounder bases combination can be used.

- Alarm verification Facility (AVF) can be used for convention zone inputs.

- Co-incidence (two units) fire alarm activation can be used.

- In an installation with addressable detectors / sensors (e.g. FT128), the affected detectors can be individually disabled (or whole zones) when the work is in progress. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors/zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2/B1-B3). Automatic re-enabling can be used. disable card can also be used to manually disable a zone of smoke detectors.

- If there are some alarm investigation procedures for the personnel on site, the alert annunciation function can be used.

- Pre-warning can be used as an initial warning before a fire alarm is activated.

32   Block Wiring Diagram

All drawings and connection diagrams quoted in this manual are shown on Table 16. These drawings are subject to change without notice, as are other technical features and data, resulting from continual development and improvement.

Table 16 Other Drawing Lists

Item	Drawing No.	Issue	Description
1	F625	1	FT128 & FT512 General Arrangement
2	F665	8	FT128 Standard Block Wiring Diagram (BWD)
3	F667	1	FT128 Main & Expansion Boards Layout
4	F702A	5	NZ FT128 BWD with Mimic & Bulgin Keys
5	F702B	5	NZ FT128 BWD without Mimic & Bulgin Keys
7	F728	2	4580 - 8 Zone Expansion Board
8	F729	2	4581 - 8 Relay Expansion Board
9	F730	2	4582 - I/O Matrix board
10	F731	2	4583 - 5 Inputs 3 Outputs Expansion Board
11	F733	2	COM Loop Units Connection Diagram
12	F734	2	Web-Server II Connection Diagram
13	F735	2	3361 Addressable Multi-purpose Module
14	F737	2	3364 / 3366AU Connection Diagram
15	F779	1	WA ASE Connection Diagram
16	F780	3	FT128 Gas Module Connection
17	F784-01	0	COM Loop Cable Length & Specifications Sheet 1
18	F784-02	0	COM Loop Cable Length & Specifications Sheet 2

The above drawings are available in a separate document, only three drawings are shown in this manual:

1. Drawing F264 General Arrangement for FT128
2. Drawing F625 Standard FT128 Block Wiring Diagram
3. Drawing F702A Standard FT128 Block Wiring Diagram for NZ
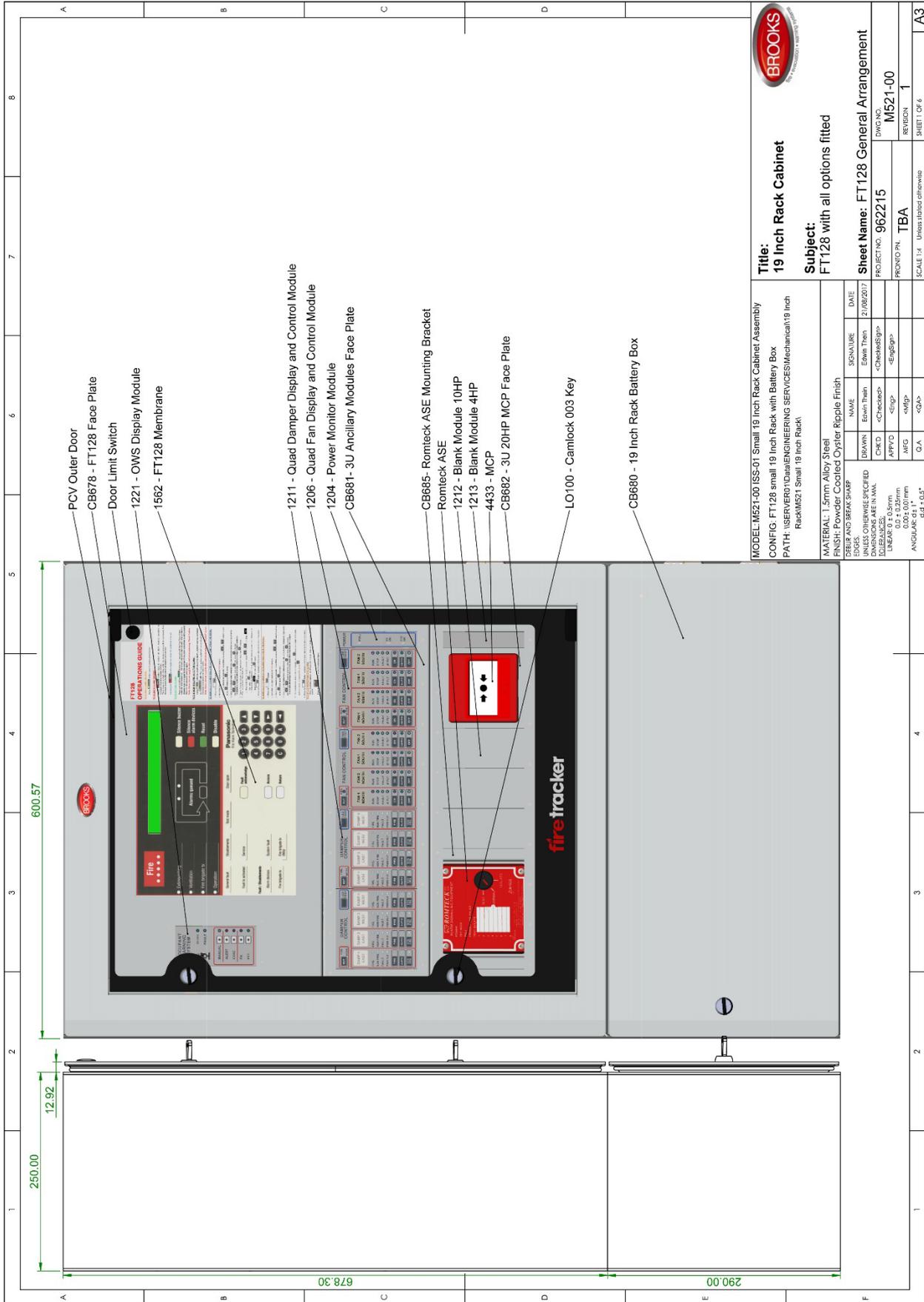
Figure 26 FT128 General Arrangement for 19" Rack System

Figure 27 FT128 Standard Block Wiring Diagram

Figure 28 NZFT128 Block Wiring Diagram for NZ

33 Revision History

33.1 Operation Manual Revisions Table

Issue	Date	Description	Written By	Checked By
Rev 0	16/04/07	Update the original MEW00509 Rev 2 document for the Australian convention. 16/04/07	A.S.	C.O.
Rev 1	15/01/09	Update the original MEW01091 Rev 1 document for the Australian convention.	A.S.	C. Orr
Rev1.1	24/03/09	Add general arrangement drawing and update wiring diagrams	A.S.	A.S.
Rev1.2	02/02/11	Add OWS details & update	G.P.	A.S.
Rev 2.0	27/11/13	Update to V2.0 software and add gas module option	AS / ET	AS
Rev 2.1	06/06/14	Update to include the features in V2.1 software,	A.S.	
Rev 2.1.1	26/8/14	Change limitations in Table 3, page 14	A.S.	
Rev 2.1.2	12/1/15	Minor update to add EBLWin V2.1.2 feature, transfer drawings to separate document & keep only 2 drawings.	A.S.	
Rev 2.2	12/08/15	Minor update, include V2.2.x software, added Local Alarm Acknowledgement.	E.T.	A.S.
Rev 2.4	20/04/18	Update for S/W V2.4.X, add new 19" rack cabinet, new Brooks 19"rack display and field modules.	A.S. / E.T.	A.S.

33.2 Software Revision 2.4.4

33.2.1 New Brooks Display and Field Modules

Support a new series of BROOKS display modules for the new 19" rack systems. For more details, refer to Chapter 5 "New 19" Rack Cabinet & New Loop Modules" page 28.

33.2.2 New and Enhanced Features

- Support some new products not released yet, will advise when become available e.g. 4461, 4462, 4611, 4620, etc.

- Support new visual Alarm Devices 4480, 4481, 4482 and remote indicator 4418.

- Increase number of remote display units (1728 & 1736) to 30 units in FT1020G3 (still 8 in FT128).

- Increase number of zone Groups from 30 to 64.

- Increase number of short circuit isolators to 128.

- Disconnect / re-connect COM loop by just right-clicking on the loop in EBLWin.

- Toggle LED

- Automatic address setting

  This is a new feature which enables the commissioning / maintenance technician to automatically set addresses on a COM loop with units containing short circuit isolators i.e. addresses 1-128 are allocated for the units with isolators. It also sets the sequence number on all short circuit isolators.

  For more details, refer to FT128 Technical / Programming Manual.

- New check loop function

The control unit will find all units that are connected on the selected COM loop. The search is always performed in the A-direction and stops at the first fault found. A fault; a break (cut-off) or short circuit on the loop, will be shown graphically. Repair the fault and press start to resume. Units containing isolators are numbered (sequence number). These units will always come in the correct order. Units without short circuit isolators are visualized in their correct segment. Segments are divided by units containing short circuit isolator. Segments are indicated by red or blue colour. For more details, refer to FT128 Technical / Programming manual.

- Loop Units serial numbers

During check loop or auto-addressing the loop unit's serial number is read and displayed in EBLWin as well as saved in SSD. The loop units currently supporting this function are 4400I, 4418, 4433*, 4439*, 4461, 4462, 4479, 4480*, 4481*, 4482* and 4487* (* feature will be introduced in production during 2018). All future units will also support the function.

- Local Alarm Acknowledgement

Up to 5 alarm points can be defined per Addressable local alarm acknowledge unit 4445. In the new version an alarm point can be either a zone/address or a whole zone containing several smoke detectors. Also, the wireless smoke detector 4611 and the multi detectors 4400 in advanced mode and 4400I can be used for alarm acknowledgement.

- Version control for SSD download

When the Download SSD window is opened in EBLWin, the EBLWin checks that the SSD file originates from the SSD in the control units and opens a dialog if otherwise (to prevent from unintentionally download an older version of the SSD).

- Improved disablement of smoke detection in 4400/4400I

The smoke detection of a multi detector 4400 or 4400I can now be disabled by the menu system (H2/B1).

When the smoke detection of a multi detector 4400 or 4400I is disabled it's indicated as a disablement.

- New output type: 'Alarm device for evacuation'

The new output type 'Alarm devices for evacuation' works the same as the current type 'Alarm devices' except that the outputs are not affected by the push button 'Silence alarm devices'. This is a violation of AS4428.3.

- Interlocking

The interlocking function is changed so that an output belonging to an interlocking combination can be of any type.

- Enhanced service signal

A service signal will be given when a 4400I detector is to be changed because of long time use. The time limits vary with country regulations.

- Service mode

When the system is in some kind of 'Service mode', the spanner symbol used for indicating 'Service signal' will flash. The system is in 'Service mode' when at least one of the following is valid:

  o A COM loop is disconnected
  o A COM loop is in service mode
  o When Check loop, Auto address loop etc. is in progress
  o SSD download is in progress

The timeout for automatic reset of a COM-loop in service mode has been changed from 15 min to one hour.

- Fault presentation

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

- Improved fire door closing function

  The control expression 'Fire door closing' has been changed so that it also reacts on quiet alarms. If the check box "Used for fire door closing" is checked in the properties dialog for 4401, a disabled detector will generate a quiet alarm if it goes into alarm state. This quiet alarm will active the door closing function.

- Menu H5/A4 'Control unit current consumption'

  The menu H5/A4 'Control unit current consumption' has got an improved layout also including System voltage, Battery voltage and Earth voltage.

  The 'Low capacity voltage diff ... mV' field has been changed to 'Resistance in battery circuit ... m Ohm'.

33.2.3   Corrected bugs in FT128

- The 'High current on COM-loop' fault can sometimes be generated without reason under the following circumstances:

  - An output of type 'Alarm device' is activated when the control unit is not in alarm state.

  - A zone line input of a 3361 unit is activated without setting the system in alarm condition.

- Sometimes analogue heat detectors 3308 / 3309 generate temporary "Fault, no reply…" when other (non-heat) units generate fire alarms. This issue is due to loop polling during fire alarm which was introduced in software versions ≥ V2.1.x. In V2.4.4 the loop polling has changed to be in one direction only which has been confirmed that this issue has now disappeared.

- In some FT128 systems, there have been problems as spontaneous restart, system fault and memory fault. These problems are related to a timing problem of the flash memory branded AMIC. Issue corrected in EBL128 V2.2.2 and now in V2.4.4.

- Under certain circumstances only one alarm is displayed in the LCD when two co-incidence alarms generated fire alarm.

- When a 4400 in advanced mode is programmed to a specific area algorithm other than Normal, H4/U3 shows the wrong area algorithm.

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