BROOKS
Fire Products & Solutions

Panasonic

Operation Manual

FT1020G3

Rev 2.4

For Software V2.4.x

firetracker

FT1020G3 FDCIE

MA430 **April 2018**

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1 Introduction

1.1 Overview

FT1020G3 Operation Manual is a document intended to be used by the end user and the fire brigade personnel as well as service / commissioning engineers, who should read this document in conjunction with the FT1020G3 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 diagrams of a standard FT1020G3 system and general arrangement are shown in chapter 33 page 151.

Due to continual development and improvement, different S/W versions are to 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. EBL512 G3 V2.4.X. The latest system software is factory downloaded in FT1020G3 before delivery. However, new 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 (firmware) version number i.e. version 2.4.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 software and the **EBLWin** version number i.e. 2.4.x (x = minor modifications).

1.2 Definitions / Explanations

Definitions / explanation and abbreviations are used frequently in this document and shown in Table 1 below.

Table 1 Definitions and Explanations

Device or function	Description
Alarm points	Units, which can generate a fire alarm in FT1020G3, 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 FT1020G3 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 a COM loop (see below).

Conventional detector	A detector with only two statuses, i.e. normal or fire alarm. The detector has a "closing contact" and a series alarm resistor (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 a 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 a 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:** In standard FT1020G3 software ≥ V2.4.1, up to 30 display units (1728 / 1736) can be connected, 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 FT1020G3 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 FT1020G3 front display, intended for the building occupier / officer, service personnel, etc., to "communicate" with the Control Unit / system. It comprises the bottom part of the front display.
System / Installation	One or several control units connected via a TLON network (co-operating control units).
Network / TLON® / LonWorks® / Echelon / Node / TLON Conn. board / Channel / Backbone net / Router / Repeater	Brief explanations to the words/expressions to be found in the relevant documents. Refer to the TLON Technical Manual. TLON® = TeleLarm Local Operating Network = a LonWorks®-based network for communication between several control units / nodes.
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. In FT1020G3 it is a graphical monochrome LCD (320 x 240 dots) with backlight.
Door open (Door / Key switch)	In FT1020G3 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 FT1020G3 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 FT1020G3 on site using the PC program EBLWin.
EBLWin	PC program used to create and download the SSD in FT1020G3 unit(s). Also used to download another / new software version and to upgrade the maximum number of alarm points in FT1020G3. Can be used during commissioning / maintenance of the FT1020G3 system (auto address, check loop, acknowledge faults, etc.)
Web-server	The Web-server is used to transfer FT1020G3 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.
multi master system	Each control unit in a network has access to all information.

1.3 TLON Network

TLON is the name of the local network that connects a system of two or more FT1020G3 control units. Up to 30 control units can be connected in a TLON network.

The TLON protocol is LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a Control Unit to the network, a TLON connection board 5090 has to be plugged in the Control Unit. FT1020G3 also supports redundant TLON system communication. In this case two TLON connection boards have to be plugged in each Control Unit.

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

The PC program "TLON Manager" (V2 or V1.2) must be used to configure the TLON network and create the number of Control Units in a system.

Note: The TLON configuration must be performed prior creating the Site Specific Data (SSD).

2 General Description

2.1 The FT1020G3 FDCIE

FT1020G3 is a microprocessor controlled intelligent fire alarm system, intended for analogue addressable smoke or heat detectors, as well as conventional detectors and manual call points. Programmable control outputs and output units are also available. Up to 1020 addresses across 4 COM loops can be connected to each FT1020G3 loaded with EBL512G3 system software ≥ V2.0.x. Figure 1 below presents an overview of the FT1020G3 system.

FT1020G3 is available in several types, versions and configurations. It can be used as standalone FDCIE or connected to a TLON network, i.e. in a "system", with up to 30 Control Units. Each Control Unit has access to all information.

FT1020G3 is designed and assessed to the Australian Standard AS7240.2, AS7240.4 and NZS4512:2010. The Fire Brigade Panel controls are incorporated as part of the front fascia and conforms to AS4438.3 - 2010.

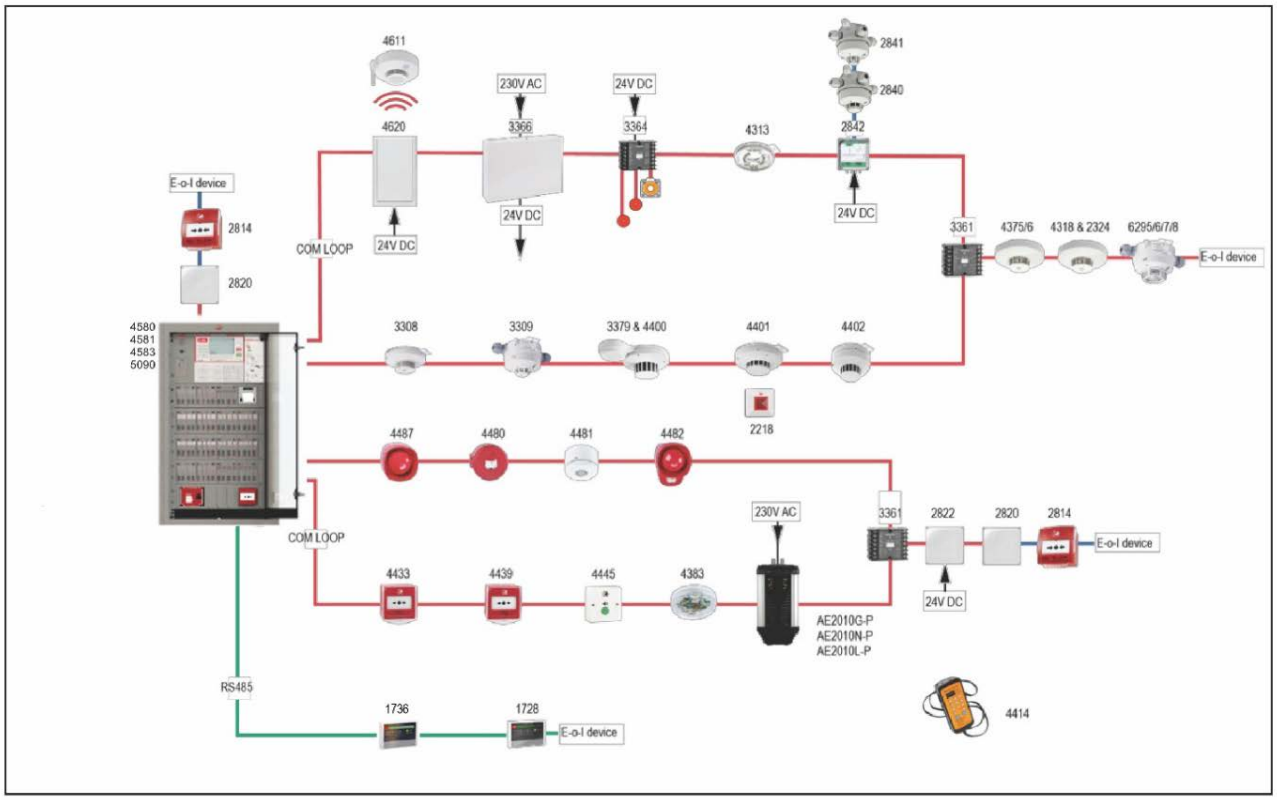


Figure 1 Connection diagram of FT1020G3

2.2 Technical Address

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

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.

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 may be found. When installing a new Control Unit in a system with "older S/W" Control Units, you must upgrade the S/W in the old Control Units with the current S/W or downgrade the new Control Unit software by downloading the same older S/W version in the new Control Unit. T**he same S/W version is required in all Control Units** in a TLON Network

2.6.1 EBLWin

The PC program **EBLWin** is used for programming and commissioning of one or more Control Units i.e. to:

- Auto-generate, i.e. to identify the units connected on a COM loop and create default settings, which can be edited, saved and used as a Site Specific Data (SSD).
- Create and download / backup (upload) of Site Specific Data (SSD)
- Download new software (firmware), settings, conventions, configurations, Control Unit & system properties, etc.
- Create / download the user definable text messages shown in the display in the C.U. and Display units.
- Download software to the Web-server.
- Create and download the Web-server configuration.
- See alarms, faults, disablements, etc. and reset, acknowledge fault, re-enable respectively.

EBLWin must have the same version number as the system software **EBL512G3** version number e.g. **2.4**.x and **2.4**.x respectively (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 FT1020G3 Control Units with the corresponding version. If a backup is required, use the same EBLWin version as the EBL512G3 S/W version.

EBLWin Key 5094 is a USB dongle that has to be plugged in the PC in order to log on to the FDCIE.

2.6.2 TLON Manager

TLON Manager is an installation and maintenance tool used for the TLON Network programming and setup, it is windows based PC software. Both TLON Manager V1.2 and TLON Manager ≥ V2.0 can be used.

2.6.3 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 FT1020G3 system is intended for small, medium and large installations. The intelligent Control Units offer the system designer and end user a technically sophisticated range of facilities and functions.

Programming with the PC programs EBLWin and TLON Manager and commissioning of the Control Unit / system is an easy process. Start with one Control Unit and then, when required, add more units. The TLON network allows the installer to install the Control Units in one building or in different buildings.

3 Fire Detection Control & Indicating Equipment (FDCIE)

3.1 FT1020G3 Specifications

Table 2 Control unit specifications

Item		Specifications
Mains Voltage		230V_{AC} (176-264), 1.6A
System Voltage		24V_{DC} @ 6.5A
Current Consumption		Quiescent / alarm current is dependent on other equipment fitted in FT1020G3, 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	Large cabinet 920H x 450W x 210D (with metal 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 annealed steel
Enclosure Colour		Oyster, ripple finish
Approvals		AS7240.2, AS7240.4, AS4428.3:2010 and NZS4512:2010
Standard Inputs / Outputs[4]		Four COM loops (0-3), each loop can connect up to 255 devices
		Four non-supervised programmable inputs (N/O or N/C) I0-I3[5]
		Four Programmable Supervised Voltage Outputs, 0.75 Amp each
		Two Programmable Relay Outputs, contact rating 2 Amp
		Two non-programmable relay outputs for ASE (fire & fault)
		Six x 24V_{DC} outputs for Web server, ASE, Remote Display Units, external applications 2-4 Amp.
Expansion Boards		Max. 6 of 4580, 4581 or 4583 or any combination [6].
I/O Matrix 4582 board		Max. 24, 6 per COM loop if no Expansion Boards on Loop 0[7] fitted. Up to 6 modules can be used as zone or generic + 18 Fan Control Modules (4 fans per module)[8]

[1] Refer to the Technical / Programming Manual and the current calculation spread sheet.

[2] Medium size enclosure 630H x 450W x 210D can be used in systems with limited options. A combination of large and medium size enclosures can be used to fit more options.

[3] Will be available end of second quarter 2018

[4] Refer to G3 block wiring diagram, Figure 26 FT1020G3 Standard Block Wiring Diagram" page 155

[5] First input I0 cannot be used in NZ convention, only 3 programmable inputs are available.

[6] Expansion boards are internally connected to COM loop 0, ensure total number of Expansion Boards and I/O matrix boards connected to COM loop 0 does not exceed 6. Software ≥ V2.1.1 allows to use 6 x 4583.

[7] Reduce the number of 4582 connected to COM loop 0 by one for every Expansion Board used.

[8] If no Expansion Boards fitted, up to 24 fan control modules can be used i.e. 96 individual fans

3.2 FT1020G3 Limitations

In addition to increasing the number of each 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 Control Unit limitations

Item	FDCIE	Network System
General fire alarm via programmable input	100	30 x 100
External fault via programmable input	50	30 x 50
Programmable inputs	512	30 x 512
Programmable outputs (= control expressions)[9]	512	30 x 512
Technical warnings	100	30 x 100
Addressable 2 voltage outputs unit 3364	40	30 x 40
External Display Units	30	30 x 16
Interlocking Combinations	400	4000[10]
Presentation numbers / alarm points[11] that can be presented in the display(s) in case of fire alarm	512	512
Presentation numbers[8] that can be programmed	512	30 x 512 = 15 360
Zones that can be programmed	512[12]	999
Faults		300
Disabled Zones		512
Disabled Alarm Points (zone/address) + Disabled COM loops		200[13]
Disabled Outputs		200[14]
Disabled Interlocking Outputs		200[15]
Sensors activating SERVICE signal		200
LAA zones (Max. 5 detectors per AAF zone.)[16]	100	30 x 100
Total number of Expansion Boards 4580, 4581 and 4583[17]	6	30 x 6
Number of I/O Matrix Boards 4582[18]	24	30 x 24
Total number of 4582 for Zone Control & Generic applications	6	30 x 6
Number of user definable text message programmed per 1728 and 1736	617	

[9] Approx. 4000 trigger conditions can be used in these control expressions, more outputs can be used without control expression (V2.1.1 and higher).

[10] Max. 100 user definable texts can be displayed "at the same time".

[11] Presentation number is a ZONE only or ZONE – ADDRESS.

[12] Any zone number between 001 and 999 can be used for the 512 zones.

[13] Zone/address disabled via time channel not included.

[14] Control outputs disabled via menu H2/B3 and Alarm devices disabled via menu H2/B4 are not included.

[15] Interlocking outputs disabled via menu H2/B3 are not included.

[16] Used in conjunction with the Local Alarm Acknowledgement Module (LAA).

[17] Expansion boards 4580, 4581 and 4583 are physical connected to COM loop 0

[18] Reduce no. of 4582 boards by one for every Expansion Board used (4580, 4581 or 4583).

3.3 FT1020G3 FDCIE Layout

The FT1020G3 available in many configurations depending on the number of options fitted in the FDCIE.

Figure 2 FT1020G3 Control Unit with printer and options

Figure 2 above shows the standard FT1020G3 in large cabinet fitted with some options e.g. printer, Occupant Warning System, Zone Control Module and AS1668 fan control module.

The appearance and functions of FT1020G3 may vary depending on the convention e.g. AU or NZ and the number of fitted options

Note: Special hardware is required to add the options.

The FT1020G3 Control and Indicating Equipment (FDCIE) shown in Figure 2 is housed in an oyster coloured powder coated metal cabinet. 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. The look of the Control Unit might vary based on the number of fitted options, cabinet size, etc.

Access to the inner door is gained by 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.

Each FT1020G3 has the following basic configuration:

- Metal cabinet powder coated oyster with smoky acrylic door as shown in.
- MMI board 5011, see drawing no. F727.
- Main board 5010, see drawing no. F726.
  - 4 x COM loops (0-3) to which the loop units are connected, see drawing no. F765.
  - 4 x programmable supervised voltage outputs (S0-S3), see drawing no. F732-02.
  - 2 x programmable relay outputs (R0-R1), see drawing no. F732-02.

- 4 x programmable non-supervised inputs (I0-I3), see drawing no. F732-02.
- 6 x 24 V DC outputs (power supply outputs for Web-server II (1598), routing equipment and external equipment), see drawing no. F732-01.
- 2 x non-programmable relay outputs for routing equipment (Fire alarm output for Fire brigade tx and Fault output for Fault tx), see drawing no. F732-02.
- Space & connectors for two TLON connection boards (5090), see drawing no. F732-03.
- RS485 and 24 V DC outputs for Display Units (1728, 1736, 1826), see drawing no. F732-03.
- Connector for expansion boards (4580, 4581 & 4583), see drawing no. F765.
- Connectors for Web-server (1598), see drawing no. F765.
- Connectors for power supply and batteries, see drawing no. F732-01

- Power supply, see drawing no. F765
  - Switch mode power supply, 230 VAC / 24 VDC.
  - Space and connection cables for two Sealed Lead-Acid backup batteries (12 V, up to 40 Ah). Battery box available for larger batteries
  - Battery temperature sensor.
- Space for up to six expansion boards 458x.

3.4 Front Display

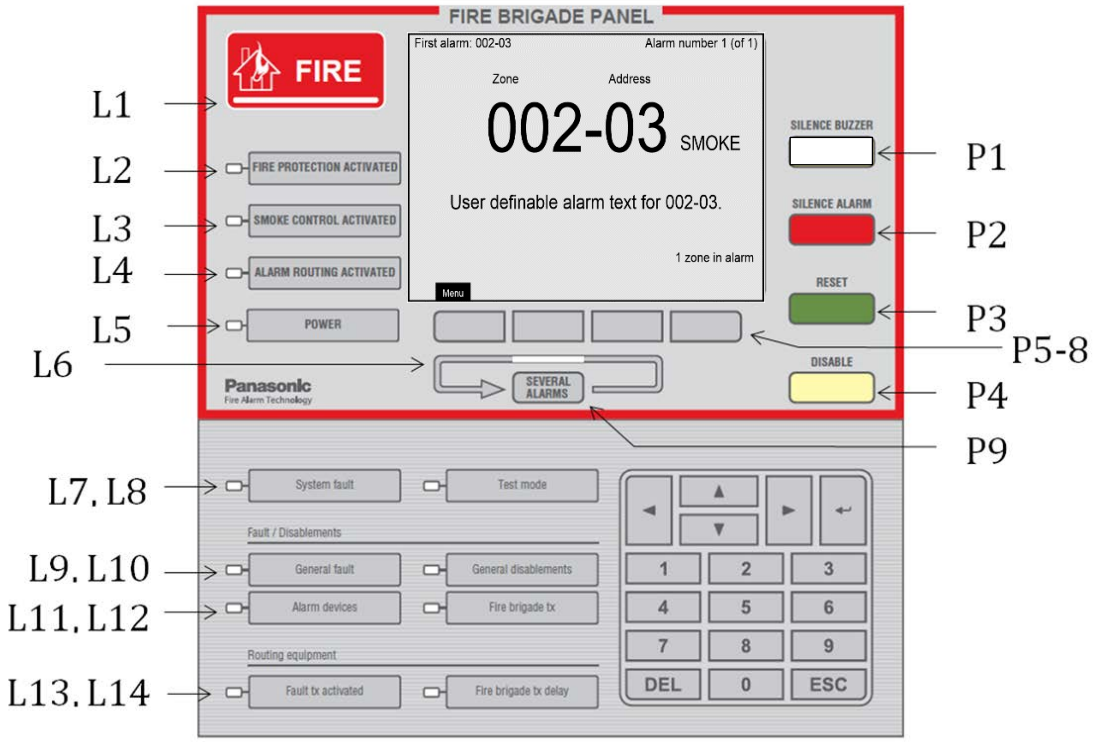


Figure 3 FT1020G3 front display

The fire brigade or fire services personnel use the integrated **FBP** inside red boarder to see which alarm point / zone(s) have activated a fire alarm and take the required operational control of the system. Fire brigade personnel can control active alarms via the buttons and keys P1-P9 within the FBP. In the graphical display, the information displayed in the upper part is dependent on how many alarm points / zones have generated fire alarm. In the middle part, the fire alarms will be shown, i.e. one alarm point or one zone together with a user definable alarm text (if programmed) plus some other information.

The **CP** is used to "communicate" with the system, i.e. for commissioning, monthly tests, maintenance, etc. Access code for different access levels is required. To get access to the system (a menu tree with main and sub menus) and for operational control of the system, up to ten **User names** can be used for three different **User level types**. A **Password** (six digits) for each User name is required to logon to the panel and Webserver.

3.4.1 LED Indicators and Push Buttons

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 LED indicators and push buttons on Fire Brigade Panel (FBP)

No	Label	Colour	Indicating / Action
L1	FIRE	5xRed	Fire alarms, Quiet alarm, etc. See chapter "Alarm types", page 48.
L2	FIRE PROTECTION ACTIVATED	Red	Output(s) for extinguishing (suppression) equipment activated. (Or a programmable input type "Extinguishing" is activated.)
L3	SMOKE CONTROL ACTIVATED	Yellow	Output(s) for fire / smoke ventilation equipment activated (fire fan). Or a programmable input type "Ventilation" is activated.
L4	ALARM ROUTING ACTIVATED	Red	Output "Fire alarm" for Fire Brigade TX (routing equipment) and/or corresponding programmable output(s) of type "Routing equipment") is/are activated (or a programmable input type "Activated routing equipment" is activated.) Test of routing equipment in progress (see menu H1).
L5	POWER	Green	The FDCIE is powered via the primary power supply and/or the battery.
L6	SEVERAL ALARMS	2xRed	More than one unit / zone has activated fire alarm. Use push button "SEVERAL ALARMS" (P9) to scroll amongst the alarm points (zone-address) or soft key "Next zone" (P6) to scroll amongst the zones.
P1	SILENCE BUZZER	White	Used to silence the buzzer in the FDCIE when it is sounding
P2	SILENCE ALARM	Red	Used to silence alarm devices e.g. OWS / sounders[19] in the building when they sound. Silenced alarm devices is indicated to the right in the display's soft key area (a symbol near this button), see page 17
P3	RESET	Green	Used to reset fire alarms, co-incidence alarms, etc. for more information see "Fire alarm reset", page 58. **Note:** P3 has to be pressed for > 0.5 sec.
P4	DISABLE	Yellow	Used to disable active alarm(s), all outputs of the device or zone in alarm will be disabled.
P5 to P8	Soft keys	Grey	The operation/function is shown above the key in the display (i.e. the soft key area). The function of a soft key may vary depending on the FDCIE condition. If nothing is shown above the key in the display, the key has no function at this moment[20].
P9	SEVERAL ALARMS	Grey	Used when LEDs "SEVERAL ALARMS" (L6) are lit, scroll through the queued alarm points or zone-addresses. For more details, see chapter "Fire alarm" page 49. **Note:** To scroll/browse through the queued zones, use the soft key "Next zone" (P5).

[19] Outputs of type "Alarm devices" will be de-activated.

[20] The soft key "P8" has the function Alert Annunciation Acknowledge, if a COM loop unit is configured for alert annunciation.

3.4.1.2 FT1020G3 Display CP Indicators

Table 5 LED indicators on Control Panel (CP)

No.	LED Indicator	Colour	Indicating
L7	System fault	Yellow	FT1020G3 is not running due to one of the following: S/W fault CPU fault Memory fault No contact between main board and MMI board FDCIE restart (fault code ≠ 00 / 03 / 25 / 50 / 53).
L8	Test mode	Yellow	One or more zones are in "test mode", see page 91 and 129.
Fault / Disablements			
L9	General fault	Yellow	Fault(s) in the system, i.e. not acknowledged fault(s) and/or not corrected fault(s)[21]. See also page 128.
L10	General disablements	Yellow	Disablement(s) in the system, see page 59.
L11	Alarm devices	Yellow	**Steady**: Output(s) type "Alarm devices" is disabled. **Flashing**: One or more supervised outputs type "Alarm devices" have generated fault(s). This is also valid when the FDCIE has no "contact" with a unit with such an output, e.g. 3379, 4477, 3364, etc.
L12	Fire brigade TX	Yellow	**Steady**: Output(s) for "Routing equipment" disabled[22] via menu (H2/B5). **Flashing**: Routing equipment power supply output[23] or one or more supervised outputs (of type "Routing equipment" have generated fault(s). This is also valid when the FDCIE has lost "contact" with a unit with such an output, e.g. 3361.
Routing equipment			
L13	Fault TX activated	Yellow	One or more not acknowledged faults[24]. Output "Fault condition" for fault TX (routing equipment) is activated. Test of routing equipment in progress (see menu H1). Sensitive fault detection mode is on (see menu H5/A2).
L14	Fire brigade TX delay	Yellow	The **A**lert **A**nnunciation function is enabled.

Note: Acknowledged alarm and isolated alarm are used only in the NZ convention.

[21] Acknowledged or serviced fault will clear if the fault is set to non-latching in the system properties.

[22] In the AU convention, it is not permitted to disable routing equipment or via the menu, only via the ASE.

[23] Main board 5010 Terminal Block "J3:3-4", fuse F8 (T500mA L 250 V – TR5).

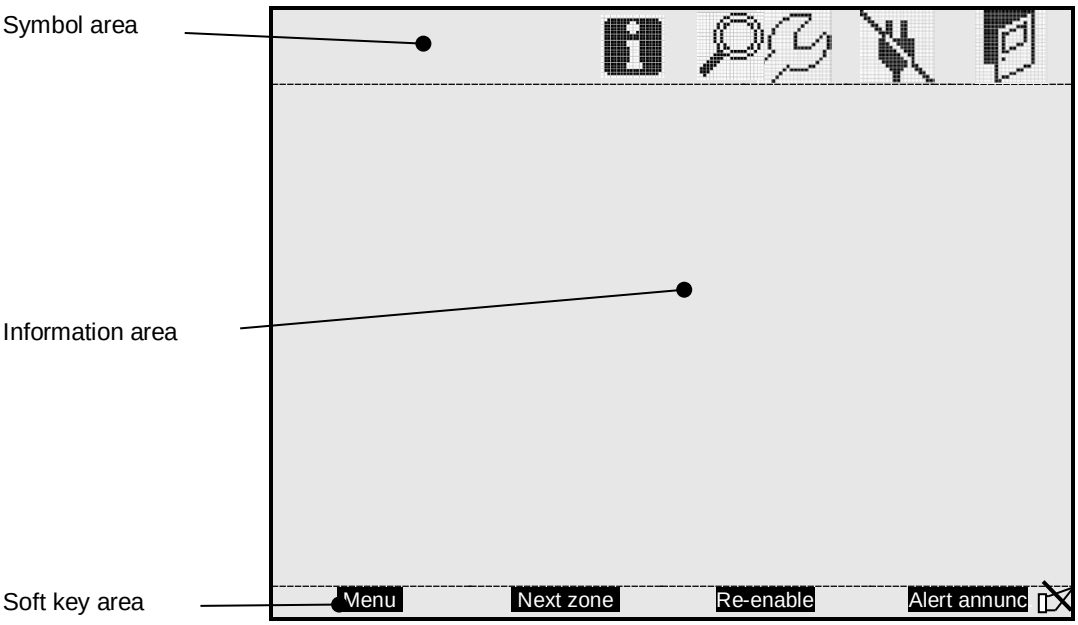
[24] See also chapter “Fault acknowledge”, Page 72

Table 6 Push buttons / keypad on Control Panel (CP)

Key/push button		Operation/function
	↵(Enter)	Used to accept / select a menu or input of data. Also used to acknowledge fault signal and service signal.
	◄ ► ▲ ▼	Left / right keys used to move the cursor in a menu. Up / down keys used to scroll between the menus.
	0 - 9	Numeric key pad for the digits 0-9. Can be used to input data and in the menu system to jump to a menu with a corresponding number (e.g. 5 for a jump to menu H5).
	DEL	Used to clear /delete all visible entry fields.
	ESC	Used to stop input of data or to step upwards "one step up" in the menu system (e.g. from a sub menu to the main menu). **Note:** The soft key "Escape menu" (P5) is used to leave the menu system.

3.4.2 The Display (LCD)

3.4.2.1 Areas in the Display



The display is divided into three areas:

- **Symbol area:** Some events are indicated with symbols, see Table 7 below.
- **Information area:** General area for all other information and the menu system.
- **Soft key area:** The functions of the soft keys are shown in the bottom section of the display. The keys will vary depending on the situation and convention. If no text is shown, the soft key has no function. The last soft key is used to acknowledge an "Alert Annunciation" alarm. In the New Zealand convention, it is used to "Acknowledge Alarm".
  Silenced Alarms is indicated by the symbol to the right in this area.

3.4.2.2 Symbol Area

The symbol area is located at the top of the display, see chapter 3.4.2.1 above.

Table 7 Symbol indications

Symbol area	
Symbol	**Indicating**
	The door is open in any FDCIE. See “Open Door” page 47. See also menu H4/U3.
	Loss of mains in any FDCIE or external power supply unit in the system, i.e. blackout or mains is switched off and the power is supplied via battery backup.
	The week average sensor value has exceeded the service level for one or more analogue smoke sensors in the system. See also page 113 and menu H4/U5. When the symbol is flashing, the system will be in service mode: • A COM loop is disconnected • A COM loop is in service mode • A Zone line input is disconnected • Check loop, Autogenerate loop or Auto-addressing function, etc. is in progress
	The FDCIE is set in “Sensitive fault detection mode” via menu H5/A2, see page 118.
	One or more “Technical warnings” are generated in the system. See also menu H4/U6.

Note that the symbol area may be suppressed see chapter Priority Order, Table 8 below.

3.4.2.3 Information Area Priority Order

When the FT1020G3 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 inputs/outputs, and/or Alert Annunciation function not enabled, only the LED "POWER" (L5) should be lit and some **system information** is shown in the Control Unit display. However, the system information has the lowest priority and more important information suppresses less important. In some cases, also valid for the symbol area. The priority order is shown in Table 8.

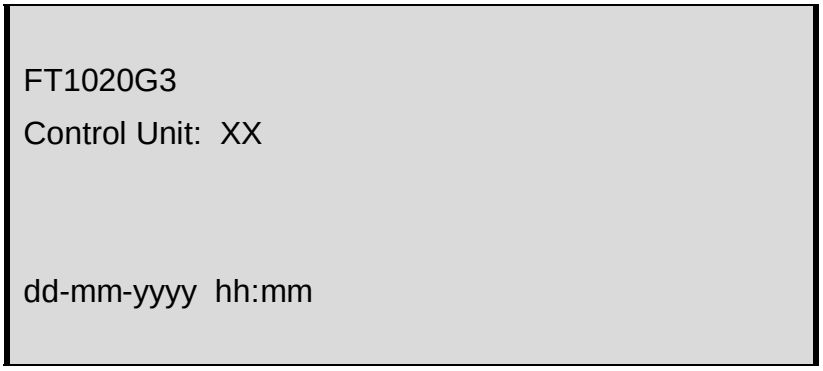
Table 8: Priority Order

Priority	Event	Symbol area is visible
1	Fire alarms: • Fire alarm • Heavy smoke / heat alarm • Alert Annunciation (AA) alarm	No
2	Quiet alarm	No
3	Co-incidence alarm	No
4	Delayed alarm	No
5	Pre-warning	No
6	Test mode alarm	No
7	LAA (AAF) alarm	Yes
8	*New Zealand convention only:* Routing equipment left isolated	Yes
9	Fault (not acknowledged)	Yes
10	Disablement	Yes
11	Zones in "Test mode"	Yes
12	Interlocking input / output active	Yes
13	System information	Yes

3.5 System Information in the LCD

FT1020G3, Control Unit number, date and time are displayed.

An example of the information area:



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

3.5.1 User Definable System Information

User definable system / installation information (created and downloaded via EBLWin) can be displayed in the middle of the display. Two rows are available, 40 characters in total. This information is shown in all Control Units in the system.

One example:

4 Control Unit Options

4.1 I/O Matrix 4582[25]

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 24 of the I/O matrix boards 4582 can be used in FT1020G3 if no Expansion Boards type 4580, 4581 or 4583 are used. The limitation of the I/O matrix configuration as follows:

- Up to six I/O matrix boards can be programmed in FT1020G3 FDCIE as type "Zone control" and / or "Generic" e.g. NZ fire brigade panel, LED mimic, etc.
- Up to 24 I/O matrix boards can be programmed as type "Fan control" if no other I/O matrix are used for generic or zone control i.e. up to 96 fans can be controlled and displayed in FT1020G3.
- A combination of any of the two previous options can be used if the maximum number of each application is maintained.

In the generic applications, 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 24VDC 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.

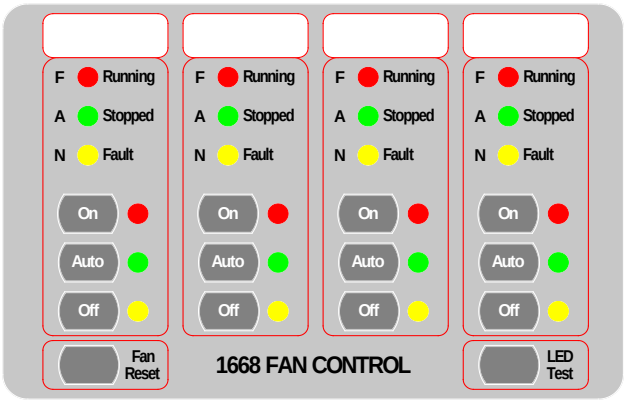


Figure 4 AS1668 Fire fan control Display

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 24 x AS1668 fan control modules can be used to provide 96 fan interfaces if no other Expansion Boards 458X or 4582 are used.

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.

[25] 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.

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 FT1020G3 Technical / Programming Manual and to drawing no. F765 in Figure 28 page 155.

Table 9 Indicators and buttons in AS1668 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 but 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 access to disable (isolate) individual zones for service and maintenance purposes as well as providing zone alarm and zone fault indications. The front display layout is shown in Figure 5 below.

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. F765 in Figure 28 page 155.

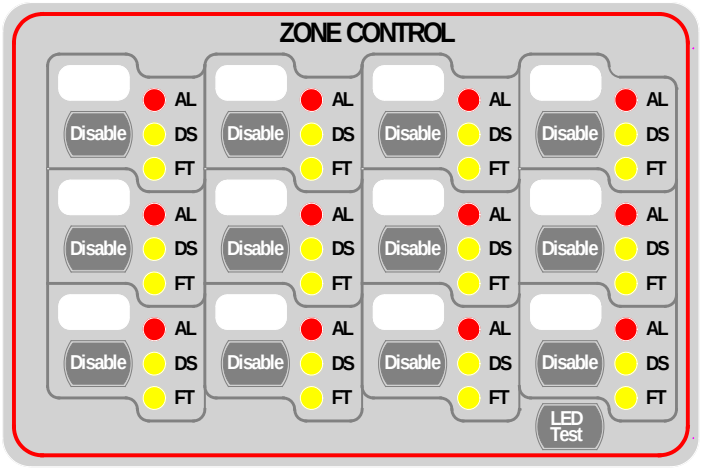


Figure 5 Zone disable and indications

Table 10 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 indication or sprinkler flow switch indication. Two of the four inputs are used to interface the fire brigade 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 six I/O matrix boards can be used in the NZ mimic applications, if no Zone Control Modules used.

Figure 6 below shows an example of a mimic display used in conjunction with FT512 in New Zealand Steel project.

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.

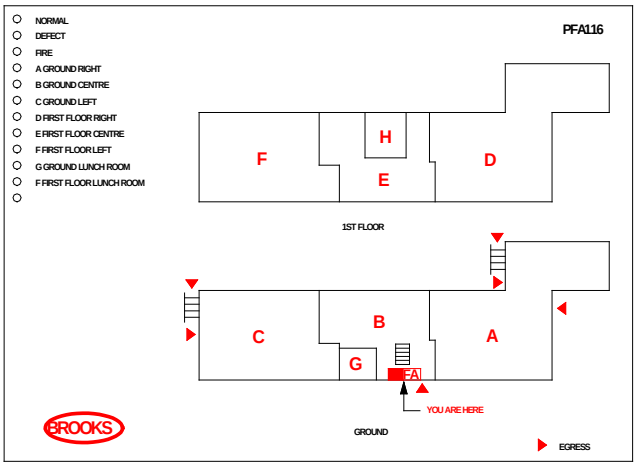


Figure 6 NZ Fire Brigade Mimic Sample Drawing

4.5 Occupant Warning System (OWS)

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

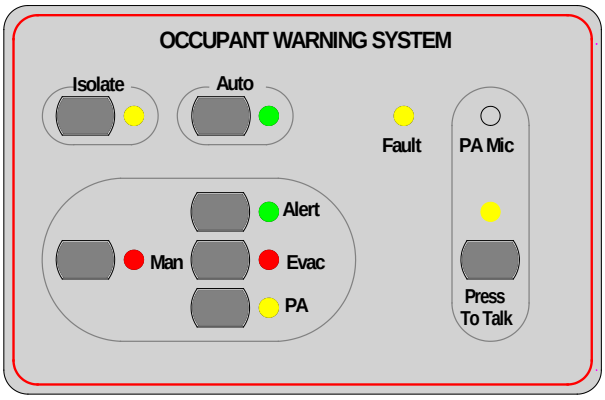


Figure 7 Occupant Warning System Display

Brooks Occupant Warning System is a single speaker zone intelligent system designed to provide warning to the occupant to evacuate the building in the event of fire or emergency. It can be incorporated in FT1020G3 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.

The Brooks OWS provides high quality audio output utilising high efficiency class D amplifier, sizes available: 60W, 120W and 250W[26].

The front display push buttons / indicators and its function are explained in Table 11 below.

Note: 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)

[26] 60W OWS can be powered directly from FT1020G3 power supply while 120W or 250W require separate power supply. Care must be taken when the battery capacity is calculated, refer to FT1020G3 battery calculation spreadsheet.

Table 11 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.

4.6 Gaseous Extinguishing Control Module

The gaseous extinguishing control module is provided for use as an option in FT1020G3. 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 clauses 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 front display is shown in Figure 8 below. All LED indicators on the front display are covered by a polycarbonate decal clearly labelled with their functions.

When the system is in normal condition, all LED indicators will be extinguished.

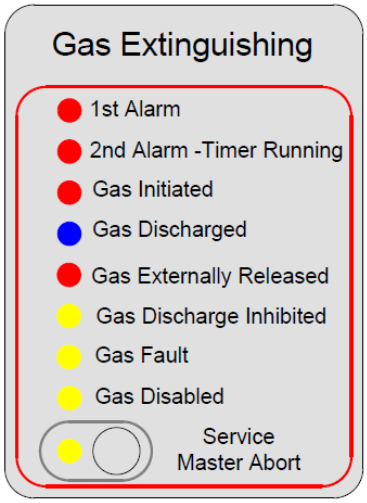


Figure 8 Gas Extinguishing Display Layout

The gaseous extinguishing system status indicating LEDs and flash patterns are described in Table 12 below. The default state of the LED indicators is OFF, if it is not defined in the table.

Table 12 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	

5 New 19” Rack Cabinet & New Loop Modules

5.1 Cabinet Overview

The design of the new Brooks 19” rackmount FT1020G3 cabinet is in accordance with the industry standard for 19” rackmount equipment. The enclosures are available in the following cabinet size:

- Large enclosure 1078mm High x 600mm wide x 250mm Deep, Figure 9.
- Small enclosure 678mm High x 600mm wide x 250mm Deep.
- 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.

These addressable FT1020G3 19” rack panels are fully customisable to site requirements and its racks are modularised in design.

A possible layout for FT1020G3 Mounted in Large 19" Rack Cabinet is shown in Figure 9. Small enclosure can also be used for FT1020G3.

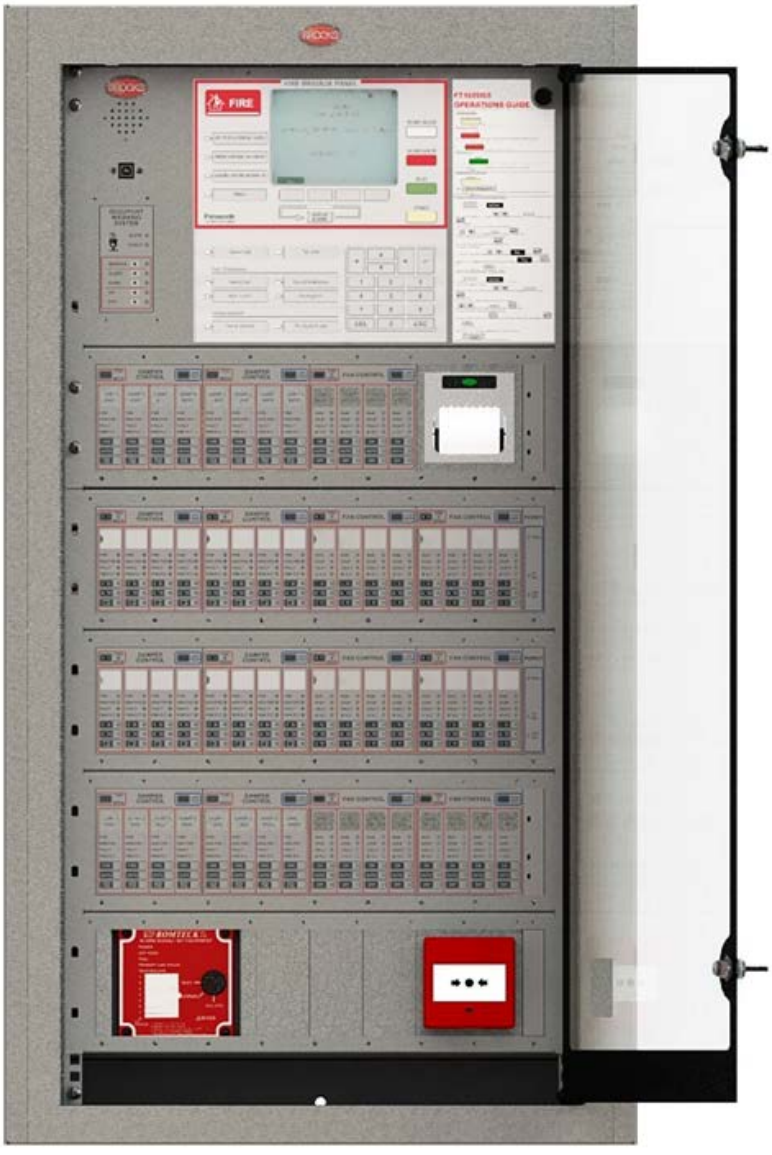


Figure 9 FT1020G3 Mounted in Large 19" Rack Enclosure

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:

- **FT1020G3 6U** face plate with OWS display module (CB673)
- FT1020G3 Large 19 Inch Rack Equipment Plate (CB672)
- FT1020G3 Networked Equipment Plate for Large 19 Inch Rack, used to mount additional 5010 board (CB690)
- 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 10 below.

Figure 10 3U Ancillary Modules Face Plate (CB681)

Any combination of modules in Figure 11 to Figure 18 will fit onto the 3U Ancillary Modules Face Plate (CB681) as shown in Figure 10. 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 11: 1204 Power Monitor Module

Figure 12: 1205 Zone Control Module

Figure 13: 1206 Fan Control Module

Figure 14: 1211 Damper Control Module

Figure 15: 1207– 8 Key/ 8 LED Control & Display Module

Figure 16: 1208 - 4 Key/ 8 LED Control and Display Module

Figure 17: 1209 – 8 LED Display Module

Figure 18: 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 FT1020G3. 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 shown in Table 3 page 12.
- **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 limitations of 4582 shown in Table 3 page 12.
- **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 limitations of 4582 shown in Table 3 page 12.
- **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 software ≥ 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 COM loop 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 short circuit active 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 (all modules).
- 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 24VDC 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.

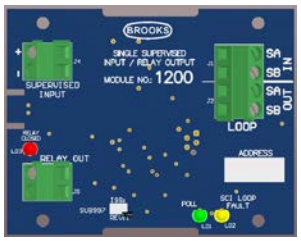


Figure 19 SUB997 Single Supervised Input / Single Relay Output

1200

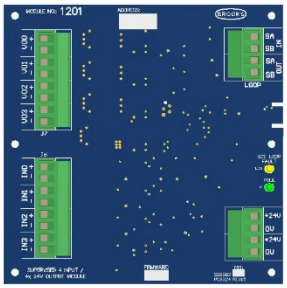


Figure 20 SUB983 4 Supervised Input / 4 Supervised 24V Output

1201

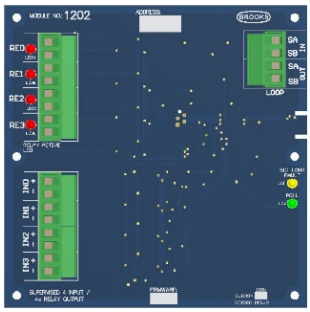


Figure 21 SUB994 Four Supervised inputs / four latching relay outputs

1202

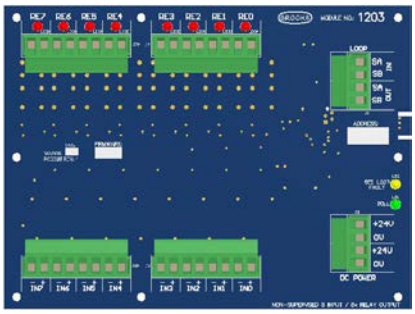


Figure 22 SUB991 8 Non-supervised Input / 8 Relay Output

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, Figure 23.

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 23 Field Module Enclosure BAFMES

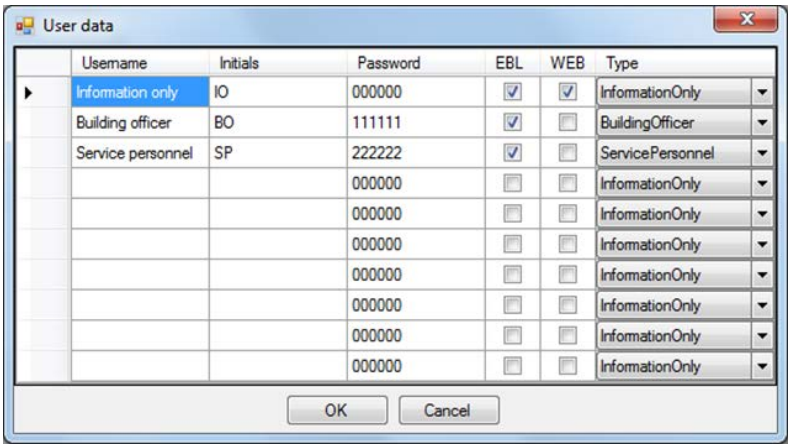
6 User Data & Access Levels

6.1 User Data

FT1020G3 supports different levels for different users. To log on to an FT1020G3 (version ≥ 2.0) a **User name** and **Password** are required. Ten different User names with individual Passwords can be used.

Via EBLWin (menu “System”), ten different User names with individual Passwords can be defined in the "User data" dialog box. One of three different levels /Types can be selected for each user name. They have to be used to log on to an FT1020G3 (version ≥ 2.0) and/or for Web-server access.

Three User names and Passwords are default:



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 30, page 146 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 FT1020G3 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. * * * * * *)[27]

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 soft key →| to toggle between different functions.
- Press ↵ to select / accept.
- Press the digits on the numeric pad to choose a menu or enter data.
- A successful disablement is indicated by a beep and a "√". It will also be shown in the Re-enable list.
- A non-successful disablement is indicated by another beep and a "X".
- To leave a menu press ESC.
- To leave the menu system, press the soft key Escape menu.
- To logout, close the door.

Quick jump can be used within each menu, fe.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 soft key "Menu". A new login is not required.

[27] Default password “000000” for information only, “111111” for building officer and “222222” for service personnel.

6.3 User Level

Each user level type has access to specific menus according to Table 13.

Table 13 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 14.

Table 14: Access Levels and user names

User level	User level 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, hot buttons zone disablement
2A	Information only	003 key + log on as “Information only”	Same as 1 + keypad. Menu H4, H6 [a)], H9 [b)] & H10
2B	Building officer	003 key + log on as “Building officer”	Same as 2A + keypad. Menu H1-H4, H6, H7, H9 & H10
3A	Service personnel	003 key + log on as “Service personnel”	Same as 2B + keypad. Menu H1-H10
3B	-	003 Key + PC + EBLWin	SSD & S/W download
4	-	003 Key + PC + EBLWin + special password	SSD & S/W download + reset of alarm counter

a) Information only, i.e. the faults cannot be acknowledged.

b) Menu H9/C1 only.

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.

Note: Initials are required in system FT1020G3 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, controls indicators are viewed through outer door.

6.3.3 User level 1[28]

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

Push button	Operation/function
P1	Silence the buzzer in FT1020G3
P2	Silence all alarm devices (OWS or sounders).
P3	Reset fire alarms (S) (see below)
P4	Disable active alarm (S)
P9	Scroll / browse through the active queued alarms
OWS	OWS controls, if fitted
AS1668 Fan / Damper Control	Manual override of AS1668 fans or Damper Control, if fitted
Zone Disablement	Quick access to zone disable / re-enable, if fitted

6.3.4 User level 2A

After the door has been opened with 003 key ("Door open" symbol in the symbol area), you have access to 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 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT Acknowledge, **Note:** *Information only*
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
H10 Change password (In this case for “Information only”)

[28] Access to new 19” rack display modules as shown in Figure 11 page 29 will also be possible.

6.3.5 User Level 2B

After the door has been opened using 003 key ("Door open" symbol in the symbol area), you have access to level 1 and after log on as “Building officer” (level 2B), access to the following menus:

H1 Perform monthly test
H2 Disable or re-enable
B1 Zone or Zone / Address
B2 Output
B3 Output type
B4 Alarm devices
B5 Routing equipment
B6 Alert annunciation function
H3 Set calendar and clock
H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT Acknowledge
H7 Perform ZONE TEST ("Test mode")
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
C2 Activate / deactivate interlocking output
C3 Disable / re-enable interlocking output
H10 Change password (In this case for “Building officer”.)

6.3.6 User level 3A

After the door has been opened using 003 key ("Door open" symbol in the symbol field), **the service / maintenance personnel** have access to level 2B and after log on as “Service personnel” (level 3A), access to all menus, i.e. same as level 2B and also to the following menus:

Same menus as in access level 2B **plus** the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in Control Unit
A5 Display current consumption on COM-loop
A6 Display statistics for communication

A7 Activate address setting mode for DU
A8 Setup wireless detectors
A9 SSD information
H8 Maintenance
S1 Dis- / Re-connect loop / zone line input
S2 Acknowledge SERVICE signal
S3 Clear weekly average
S4 Test of alarm devices
S5 Safe shut down of Control Unit
S6 Activate address in alarm mode
S7 Synchronize the Control Units
S8 Activate / Reset outputs
H10 Change password (In this case for “Service personnel”.)

6.3.7 User level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **EBLWin**) is to be connected to FT1020G3 for backup (upload), download of Site Specific Data 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.

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/S5) is done following the password change, this password will be valid also after power down else not.

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 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 number “NN N NNN” is used when programming any unit connected to the COM loops.

Technical number 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.

NN	N	NNN
00-29	**0-3**	**001 - 255**
The control unit addresses (numbers), Don’t have to be in sequence. The connections to the TLON network don’t have to be in sequence. The address is set with a PC SW; TLON Manager	COM loop number	The technical address on the COM loop. The addresses don't have to be in sequence. The connections on the COM loop don't have to be in sequence. The address is for each unit set with the programming tool 4414.

Notes:

Maximum of 1020[29] COM loop (technical) addresses can be used in one Control Unit.

A brand new detector is factory set to COM loop (technical) address 000. If a detector is connected on a COM loop without setting up an address (001 – 255), the detector LEDs will start blinking every second, indicating that the detector has not been addressed.

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, alarm presentation unit 1728 and alert annunciation unit 1736 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
001-999	**00-99**
Zone number	01 – 99 = The address within the zone. 00 = Only the zone number will be displayed, e.g. used for conventional zone line inputs.

[29] Since **(technical)** address 000 cannot be used, the total number of addresses is 4 x 255 = 1020

8 Silence Alarm Devices

In FT1020G3 front (FBP section) the push button "**SILENCE ALARM**" (P2) is available, used to silence the warning devices, refer to Figure 3, page 14.

When the alarm devices are activated (sounding) and the push button "**SILENCE ALARM**" is pressed during a pre-warning, a fire alarm [30] or a Co-incidence alarm, the following will happen:

- The symbol is shown in the display, to the right of the "Soft key" area.
- Activated outputs programmed for OWS or sounders (type "Alarm devices"), will be silenced[31].

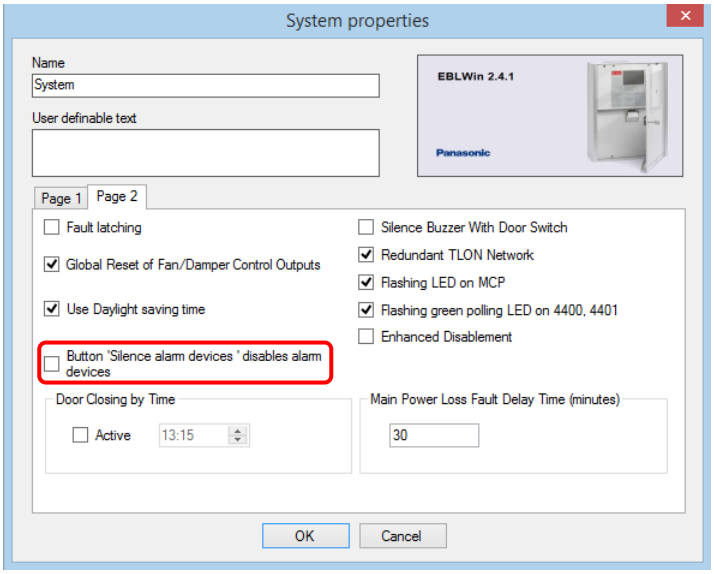
In case of a new alarm or if the push button "**SILENCE ALARM**" is pressed again, the fire alarm devices will automatically re-sound.

In EBLWin, if the option b*utton "Silence alarm devices" disables alarm devices* is selected, the button "**SILENCE ALARM**" (P2) will have the same function as the menu "Alarm Devices (H2/B4)" page 100. See chapter "Disable / Re-enable alarm devices", page 42.

If sounders or OWS are programmed with type "Alarm devices for evacuation" they will not be silenced by the "**SILENCE ALARM**".

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 (inside switch)

Note: The functions in this chapter are used only in the New Zealand convention.

The button "SILENCE ALARM" (P2) is called inside switch, it operates slightly different in the NZ convention as shown in the following section.

[30] In the New Zealand convention "Acknowledged alarm" (ACK) as well.

[31] Including Addressable siren 3377/4477, Addressable sounder base 3379, Addressable light indicator 4383, Wireless smoke detector 4611, and all Visual Alarm Devices 448X.

The button SILENCE ALARM (inside switch) toggles between two states:

- **Alarm devices disabled**
  when the button is pressed, all programmable outputs of type "Alarm devices" are isolated, i.e. sounders, OWS, strobes, etc. and prevents new alarms from activating the warning devices.
- **Alarm devices not disabled**
  when the button is pressed again, all programmable outputs of type "Alarm devices" will be enabled, i.e. any alarm can activate the warning devices.

If the “SILENCE ALARM” 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 display. This feature is required in NZS4512:2010 standard to ensure that the door cannot be closed while the alarm devices are isolated. For priority order see chapter “The information area priority order” page 18.

Note: The "SILENCE ALARM" button on the front display has no function if the “Silence alarms” Bulgin key in the FT1020G3 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 IO matrix board 4582 with the trigger condition "NZ Silence switch".

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

1. **The Bulgin key switch is turned ON** (from non-activated to activated state).
   a. All programmable outputs of type "Alarm devices" are disabled. The "SILENCE ALARM” switch in FT1020G3 front display (see above) has no function.
   b. LEDs "Fire" (on FT1020G3 front display) changes from blinking to steady (continuous). [32]
   c. The FDCIE built-in buzzer is silenced.
   d. A fault is generated[33] **"FAULT: FB Silence switch active"**
2. **The Bulgin key switch is turned OFF** (from activated to non-activated state).
   a. The fault **"FAULT: FB Silence switch active"** will be Serviced[33]
   b. Any “Alarm” or ”Acknowledged alarm” will be automatically disabled (isolated), i.e. it must be re-enabled via menu H2/B5 and is indicated by LED “General disablement” on the FDCIE front.
   c. Any "Alarm" or "Acknowledged alarm" will automatically change state to "Isolated alarm" (see below) and in the fire alarm list (presented in the display) "**Alarm**" or “**Acknowledged alarm**” will be replaced by "**Isolated alarm**".

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

[33] The fault (defect) in the NZ convention is always non-latched, no need to be acknowledged via menu H6.

An example:

1234567890123456789012345678901234567890

9 Disable / Re-enable Alarm Devices

Outputs programmed for sounders or OWS[34] i.e. type "Alarm devices" can be **collectively** disabled for all control units during Fire alarm or Alert Annunciation alarm, this is done via menu H2/B4. The disablement is indicated by LED **Fault / Disablements** "General disablements" (L10) and "Alarm devices" (L11), which are steady ON.

In case of a fire, the sounders or OWS will **remain** disabled, i.e. the alarm devices will not sound until they are re-enabled again via menu H2/B4.

Note: Outputs of type "Alarm devices" cannot be individually disabled, not even via menu H2/B2 “Disable or Re-enable Output”

See also chapters "Test of alarm devices” (H8/S4), page 135. All outputs of type "Alarm devices" for a specified or all Control Units, can be activated for an alarm device test.

[34] Including Addressable siren 3377/4477, Addressable sounder base 3379, Addressable light indicator 4383, Wireless smoke detector 4611, and all Visual Alarm Devices 448X.

10 "SILENCE BUZZER"

The **buzzer** in FT1020G3 will sound for:

- Fire alarm[35] (0.4 / 0.4 sec.)
- Co-incidence alarm (2-zone or 2-unit dependent fire alarm): When only one zone or one zone / address (alarm point) is in alarm status (0.8 / 5 sec.)
- Pre-warning (0.8 / 5 sec.)
- Quiet alarm (0.8 / 5 sec.)
- Fault (continuous)
- Disablements and Faults (1 sec. directly after the door to the FDCIE is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.
- Delayed alarm

Press "SILENCE BUZZER" (P1) to silence the buzzer.

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

10.1 Silence buzzer by open door

In EBLWin, the function "Silence Buzzer by Door Switch" can be selected. The buzzer will then be disabled as long as the FT1020G3 cabinet 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 FT1020G3 is closed, the FT1020G3 buzzer will sound continuously directly after the door is closed, the fault and disablements messages will be shown in the display.

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 FT1020G3 is being closed, the 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.

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

11 Disable or Re-enable Output

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

- Loop unit xxxxxx output x
- Control unit xx Sx
- Control unit xx Rx
- Control unit xx Expansion Board x output x

This is indicated by LED **Fault / Disablements** "General disablements" (L10).

They will remain disabled until they are re-enabled again via menu H2/B2.

See also chapter Output Type (H2/B3), page 98

See also chapter “Activate / Reset Outputs (H8/S8)”, page 141.

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

12 Disable/Re-enable Control Outputs[36]

All control outputs programmed as type:

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

….. can be collectively disabled via menu H2/B3 for a specified control unit or all Control Units. This is indicated by LED **Fault / Disablements** "General disablements" (L10).

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

See also chapter “Activate / Reset Outputs (H8/S8)”, page 141. An output can be activated for an output test.

See also chapter “Activate / Deactivate Interlocking Output (H9/C2)”, page 144. An interlocking output can be activated for an output test, even if it is disabled.

[36] Terminology of Extinguishing and Ventilation has been changed in the fire brigade panel standard AS4428.3:2010. Extinguishing re-named to “FIRE PROTECTION ACTIVATED” and Ventilation to “SMOKE CONTROL ACTIVATED”.

13 “DISABLE” Button

When the push button "**DISABLE**" (P4) 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 “General disablement” LED L10.

The “**DISABLE**” push button (P4) 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 (P4) 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” button has been activated first as required by AS4428.3:2010 [37].

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

14 Open Door

A standard 003 key is used to open FT1020G3 door to get access to the front membrane and other optional modules e.g. OWS, zone disable, AS1668 fan control, etc.

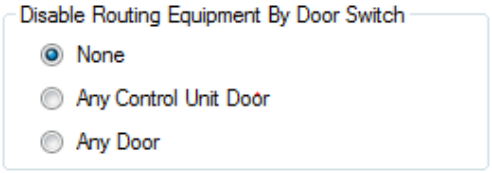
If a door in the system (any Control Unit) is open, the following symbol is shown in the display's symbol area:

Door open may be programmed via EBLWin to disable any external strobe or sounder/strobe combination located at the designated building entry point. See also chapter Open doors (H4/U3), page 109.

14.1 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:



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

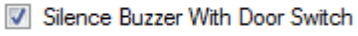
Any Control Unit door: Open door in any FDCIE will disable the output(s) for routing equipment (Fire brigade TX and fault TX) in all FDCIE's.

Any door: Open door in any FDCIE and/or external fire brigade panel will disable the output(s) for routing equipment (Fire brigade TX and fault TX) in all FDCIE's.

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

14.2 Silence Buzzer by Door Switch

In EBLWin the following can be programmed:



The control unit buzzer will be turned off as long as any FT1020G3 door is open.

15 Alarm Types

In case of a fire, analogue detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can activate **fire alarm**.[38]

A fire alarm could be an **Alert Annunciation alarm**, i.e. the activation of the routing equipment (Fire Brigade TX) is delayed during an acknowledgement and investigation time. The analogue detectors can also activate two other types of "alarm", i.e. **Pre-warning** and **Heavy smoke alarm / Heavy heat alarm**. "Two unit dependent" addressable alarm points (normally only smoke detectors) and "2-zone dependent" zones, can activate a **Co-incidence alarm**.

Quiet alarm is 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[39] (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.

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

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

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.

15.1 Pre-warning

Activation of Pre-warning is an option that has to be enabled via EBLWin for the Control Unit.

Note: Pre-warnings activated in any Control Unit in the system will always be presented in all Control Units and all programmable outputs in the system (with trigger condition pre-warning) will be activated (if not disabled).

An analogue detector generates a pre-warning at a lower alarm level than the fire alarm level.[40] Pre-warning can be used when an early warning 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 the FDCIE sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated.[41]
- In the FDCIE display, a presentation number (zone/address) is shown (for the first pre-warning).
- In the FDCIE display, a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

[38] In the New Zealand convention only, a Fire alarm (ALARM) can be "changed" to an Acknowledged alarm (ACKNOWELDGED) or an isolated alarm (ISOLATED).

[39] 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.

[40] See FT1020G3 Technical Manual. Any programmable input can also be used to activate a pre-warning, e.g. for a High Sensitivity Smoke Detector system.

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

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

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

Note: The text "Menu" for the soft key “P5” is visible in the display, only if the door in the FDCIE is open.

If more than one pre-warning is activated, the LEDs "SEVERAL ALARMS" (L6) are blinking and the pre-warnings will be automatically scrolled (every five seconds). Pre-warnings are automatically reset, see chapter "Alarm reset", page 58.

15.2 Fire Alarm

The FT1020G3 system can handle up to 15360 fire alarms but only 512 fire alarms can be presented in the FDCIE display. If more than 512 fire alarms are activated, no additional fire alarms can be displayed until one or more of the first 512 fire alarms are reset.

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

See also chapter "The information area priority order", page 18.

The following occurs in case of a fire alarm:

- The buzzer in the FDCIE sounds 0.4 sec. each 0.4th sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire brigade TX) and outputs type "Routing equipment" are activated.[42]
- Programmable outputs for fire alarm are activated.[43]
- In the FT1020G3 display, a presentation number (zone/address) with a user definable text message (if programmed) will be shown (for the first fire alarm).
- In the FDCIE display, some additional information is also presented.

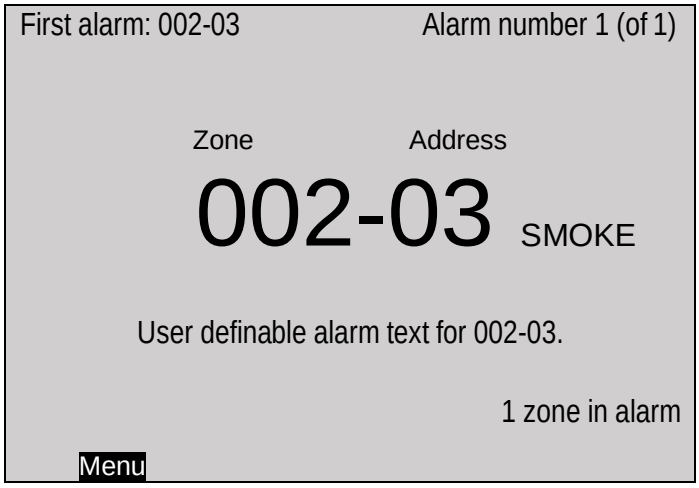
Note: Normally the FDCIE relay output "R0" is used as the output for Routing equipment (Fire Brigade TX). The output will then be activated for fire alarm from any alarm point or Zone Line Input.

One alarm point activating fire alarm.

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

[42] In case of **Selective alarm presentation** only for the selected alarms.

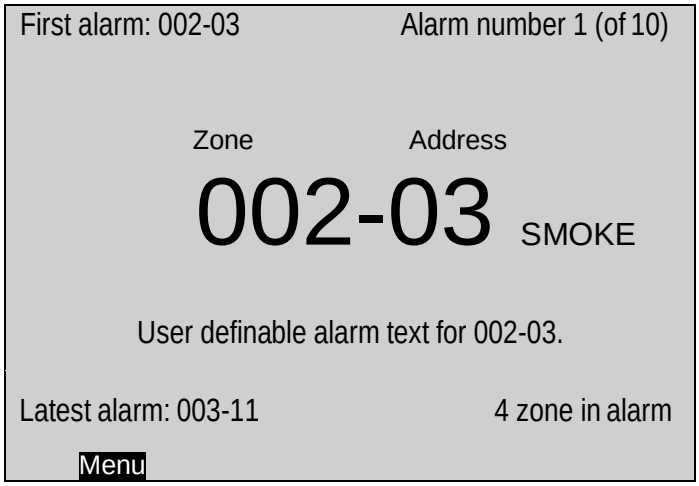
[43] Outputs programmed for General fire alarm and outputs programmed for the activated fire alarm(s).



The presentation number is automatically followed by: SMOKE, HEAT, MULTI or MCP depending on the type of alarm point.

More than one alarm point activating fire alarm.

Example; fire alarm in zone 002, address 03 (within zone 002) and nine other fire alarms (of which the latest alarm is 003-11) in four different zones:



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

User definable alarm text, for each alarm point and zone line input, an individual alarm text can be shown. Each zone has its own individual alarm text (if programmed). Up to 40 alphanumeric characters can be used.

Additional information

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

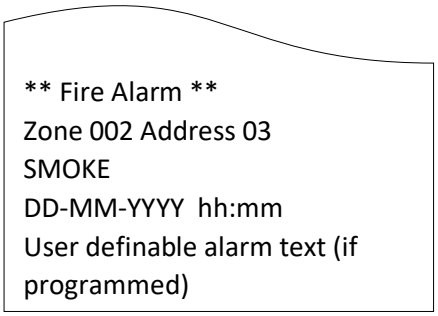
LEDs "**SEVERAL ALARMS**" (L6) blinking (0.4 / 0.4 sec.) are indicating that more than one fire alarm is activated. To scroll through the alarm points, use the push button "SEVERAL ALARMS" (P9).

Next zone. Use the soft key "Next zone" (P6) to scroll through the **zones** in alarm.

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

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

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

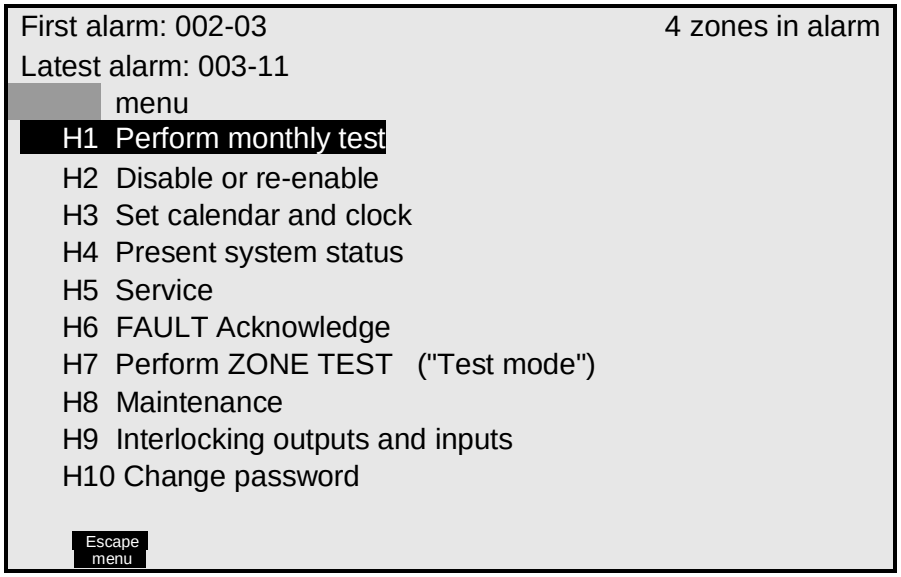


To **reset** fire alarms, see chapter "Alarm reset", page 58.

15.2.1 Entering the Menus during Fire Alarm

By pressing the soft key "Menu" (P5) during fire alarm, you will get access to the menu system (see Access, page 33).

Note: Access code is required, in this case, part of the display's alarm window will be temporarily suppressed to permit the display of the menu system.



The normal alarm window will be automatically displayed again after the menu system is left as escaped or 5 minutes after the latest manoeuvre in the menu system.

The alarm window will also be automatically displayed again if any of the soft keys "Esc menu" (P5) or "ESC" is pressed or push button "SEVERAL ALARMS" (P9).

15.2.2 Test Mode Alarm

Regarding Test mode, see chapter "Perform Monthly Test (H1)", page 91 and chapter "Perform Zone Test (Test mode) (H7)", page 129.

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

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

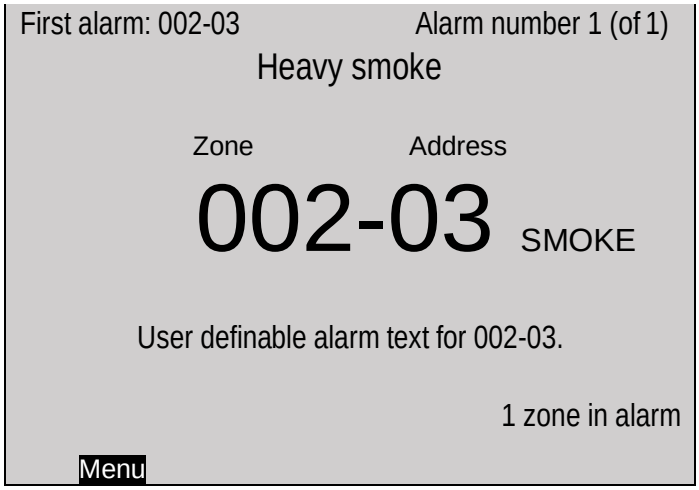
15.3 Heavy Smoke Alarm / Heavy Heat Alarm

An analogue detector (sensor) can activate a heavy smoke / heat alarm for a higher alarm level[44] than the normal fire alarm level, i.e. a normal fire alarm is already activated by a detector activating a heavy smoke / heat alarm, for more details refer to the FT1020G3 Technical/Programming Manual.

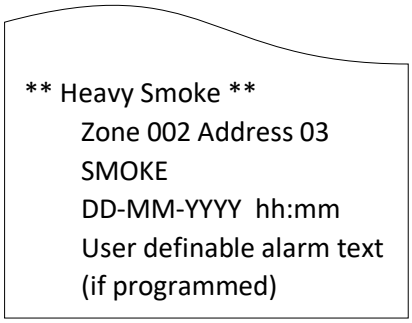
Heavy smoke / heat alarm is a confirmation that the smoke or heat is increasing and can be used for specific actions, e.g. activation of smoke ventilation, etc.

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

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



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



Heavy smoke / heat alarm will be reset when the fire alarm is reset, see chapter "Alarm reset", page 58.

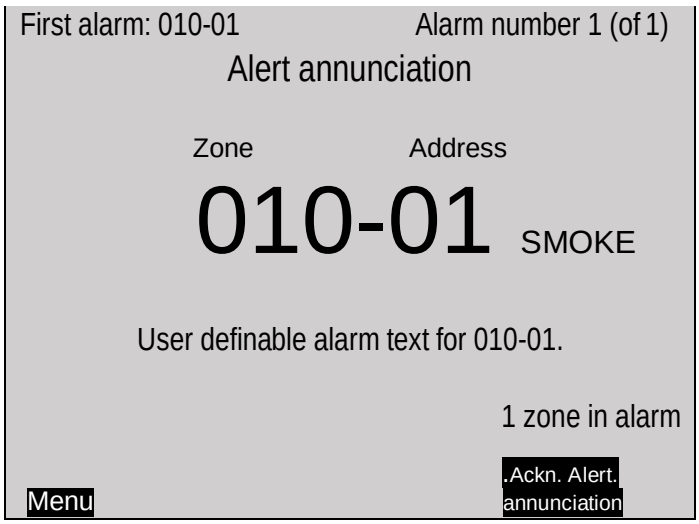
15.4 Alert Annunciation Alarm (AA alarm)

When the **AA** function is enabled, indicated by the LED "Fire brigade TX delay" (L14), the indications, print-outs, actions etc. are similar to a normal fire alarm (see above) **except** for the FT1020G3 output for routing equipment (Fire Brigade TX), **will not** be activated directly.

There will also be a "title", i.e. "Alert annunciation" or "Alert annunciation acknowledged" added to the normal fire alarm information.

[44] See FT1020G3 Technical Manual.

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 FT1020G3 Technical / Ptogramming Manual for more information regarding the **AA** function. Acknowledgement and reset of the **AA** alarm can be performed on an **AA** unit 1736. See also chapter "Alert Annunciation", page 59.



Note: The "Ackn. alert annunciation" text is only visible if an AA alarm is activated.

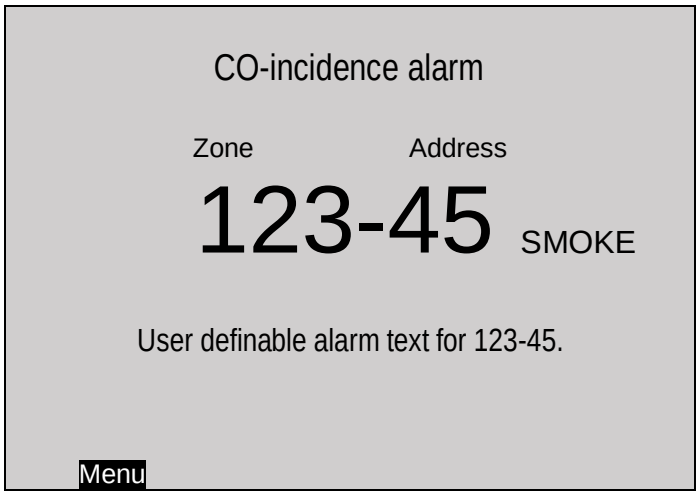
15.5 Co-Incidence Alarm (2-Address / -Zone Dependence)

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

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

The co-incidence alarm will be automatically **Reset** after 5 minutes or via the "Reset" button (P3). See chapter "Alarm reset", page 58.

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



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

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

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

15.6 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.

15.6.1 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 [45] 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 FT1020G3 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.

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

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 sec. each 5th sec. (0.8 / 5 sec.).
- Outputs programmed for delayed alarm will be activated.
- In the FDCIE display, a presentation number (zone/address) is shown (for the first delayed alarm). Also, a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

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

Note: The text "Menu" for the soft key "P5" is visible in the display, only if the door in the CU is open.

[45] This function was added in since EBLWin software version V2.1.2

If more than one Delayed alarm is activated, the LEDs "SEVERAL ALARMS" (L6) are blinking and the Delayed alarms will be automatically scrolled (each 5th second).
Delayed alarms are 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.

15.6.2 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.

15.7 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 FT1020G3 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 (1 - 9 min.), the following information (a list if many) is shown in the FDCIE display[47]:

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

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.

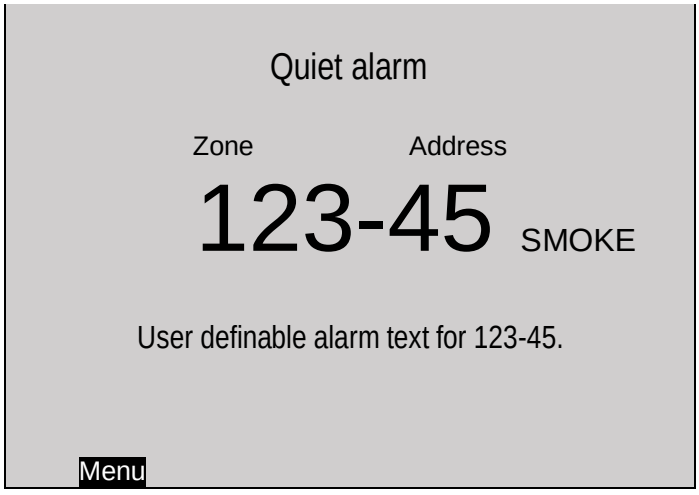
15.8 Quiet Alarm

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[48] 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.

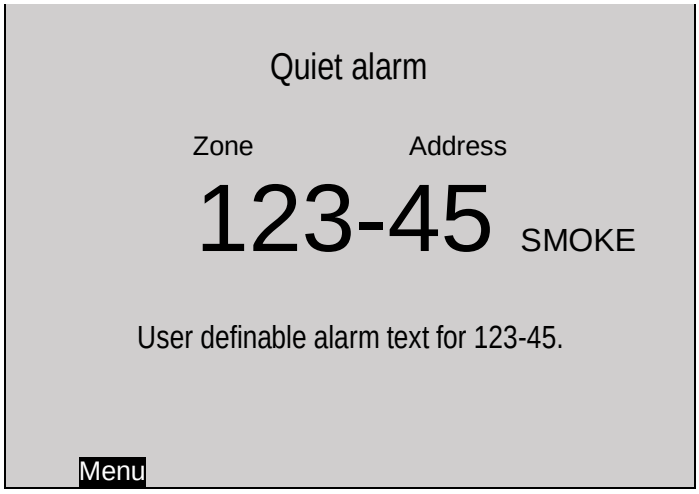
[46] When the discontinued Brooks AAM (3340) is used, the display shows “AAF zone, activated”.

[47] When the discontinued Brooks AAM (3340) is used, the display shows “AAF zone, investigation in progress”.

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

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.



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, see “Quiet Alarm Reset” page 60.

15.9 Acknowledged and Isolated Alarm

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

15.9.1 Acknowledged Alarm

A fire alarm presented in the display can be acknowledged by pressing the soft key "Acknowledge" (P8).

Acknowledged alarms are indicated in the display by "Acknowledged alarm" in the same position as "Heavy smoke" / "Heavy heat", see below. This indication is the only difference between a normal fire alarm and an acknowledged alarm.

Acknowledged alarms have to be reset same as normal fire alarms.

15.9.2 Isolated Alarm (for only NZ)

A normal fire alarm or an acknowledged alarm presented in the display can be isolated as follows:

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

Isolated alarms are indicated in the display by "Isolated alarm" in the same position as "Heavy smoke" / "Heavy heat".

Isolated alarms do not activate any control outputs, output for routing equipment (Fire brigade TX), FT1020G3 buzzer and do not activate the LEDs "Fire" (L1) in the FDCIE.

Isolated alarms have to be reset same as normal fire alarms.

Isolated alarms also have to be re-enabled via menu H2/B1 before they can activate a new fire alarm again.

16 Alarm Reset

Note: The alarm “RESET” button will not function unless the programmed alarm devices have been silenced i.e. “SILENCE ALARM” button is activated.

16.1 Pre-warning Reset

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

16.2 Fire Alarm Reset

In the New Zealand convention, **fire alarms** are shown in the LCD as normal fire alarms with “**Alarm**”, acknowledged alarms shown with “**Acknowledged**” and isolated alarms shown with “**Isolated**”.

Note: The detectors having activated fire alarm should, after reset, be inspected, tested and replaced when required.

The default setting “All” must be used.

16.2.1 All (Default)

All activated fire alarms (alarm points / zones) will be reset by pressing "RESET" (P3) once but must be preceded by “SILENCE ALARM” button (P2) 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 "SEVERAL ALARMS" (L6) are turned off. If other conditions exist (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 18.

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.**

16.2.2 Single

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

Press "RESET" (P3) to reset the fire alarm currently shown in the middle of the display with large font.

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 "SEVERAL ALARMS" (L6) are lit) the next fire alarm in the queue will be shown in the middle of the display. It has to be reset the same way as the first one.

When all fire alarms are reset, LEDs "FIRE" (L1) and "SEVERAL ALARMS" (L6) are turned off. If any other conditions exist e.g. fault condition, the corresponding information will be shown (fault message), for priority order see section 3.4.2.3, page 18.

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

16.2.3 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 it is still in alarm status, it will activate a new fire alarm within 20 seconds.

When "Single with automatic disablement" option is selected in EBLWin, if a reset is performed whilst an alarm point or zone still in alarm condition, the alarm will reset but the alarm point or zone will also be disabled, i.e. it will not activate a new fire alarm.

It has to be re-enabled via menu H2/B1 before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to the AS7240 standard.)

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

When "All" or "Single" reset is used, "automatic disablement" (encapsulation function) can be used by pressing "Reset" (P3) and approx. 0.1 sec. later also press "SEVERAL ALARMS" (P9) and hold them pressed for > 0.5 sec.

The alarm point or the whole zone (conventional) currently shown in the middle of display with large fonts will be reset and disabled.

16.3 Test Mode Alarm Reset

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

16.4 Acknowledged and Isolated Alarm (for only NZ) Reset

Acknowledged alarms "Acknowledged" or isolated alarm “Isolated” have to be reset same as normal fire alarms "Alarm".

16.5 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.

16.6 Alert Annunciation Alarm Reset

Regarding the function, see chapter "Alert Annunciation alarm (AA alarm)", page 52 and FT1020G3 Technical / Programming Manual, chapter "Alert annunciation".

Reset of the **AA** alarm(s) can be performed via push button "Reset" on an **AA** unit 1736 (or in the FDCIE).

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.

16.7 Co-incidence Alarm

A Co-incidence alarm can be manually reset with the "RESET" button (P3) on the FDCIE front **or** automatically reset after 5 minutes (i.e. if the alarm point / zone is no longer in alarm status). See also chapter "Co-incidence alarm (2-address / -zone dependence)", page 53.

16.8 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).

16.9 Local Alarm Acknowledgement (LAA) Reset[49]

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 terminates 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.

16.10 Quiet Alarm Reset

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

[49] This is also applicable for the discontinued Brooks Alarm Acknowledgement Module 3340 (S/W ≤ V2.1.2)

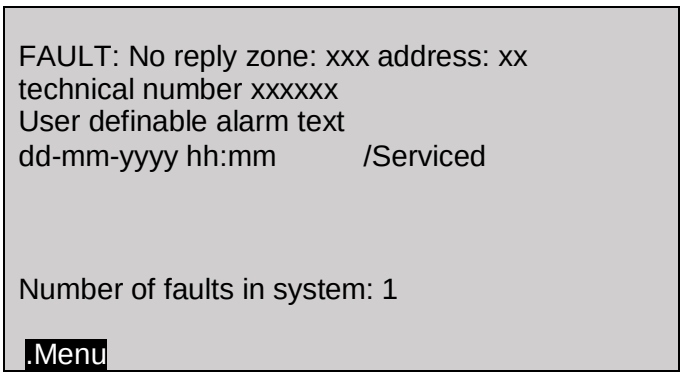
17 Fault

All faults are delayed in order to avoid generating unnecessarily faults e.g. the delay time for COM loop and zone line input faults 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 occur in the FDCIE:

- The buzzer in FT1020G3 sounds continuously (steady)[50].
- The fault relay output for routing equipment (Fault TX) is de-activated (fault relay is normally energised).
- Programmable output(s) for general fault is activated and output(s) for general charger fault might be activated.
- LED Routing equipment "Fault TX activated" (L13) is illuminating.
- LED Fault / Disablements "General fault" (L9) is illuminating.
- LEDs Fault / Disablements "Alarm devices" (L11), "System fault" (L7) and/or Fault / Disablements "Fire brigade TX" (L12) may also illuminate.
- A fault message including date, time and status is shown in the FDCIE display. If the fault is generated by an alarm point or zone, the user definable alarm text will be shown.

Example; fault message:



- In the FDCIE display up to three fault messages can be shown simultaneously. In the display, down to the left, the number of faults is displayed.
- If a fault has been corrected (Serviced) before it has been acknowledged, the status information is "Serviced", see above.
- Fire alarm presentation has higher priority than the fault messages. However, during fire alarm presentation the faults can be shown via the menu system, see “Enter the menu during fire alarm” page 51.

Faults have to be acknowledged, this is done via menu H6 (see page 51). This menu is a list of all faults in the system:

- Not corrected / serviced and not acknowledged fault
- Not corrected / serviced but acknowledged fault (acknowledged)
- Corrected / serviced but not acknowledged fault (serviced)

If a fault cannot be corrected, contact service personnel / engineer immediately.

The faults are normally latched, but can via EBLWin be set to be "not latched". This will make the fault disappear from the list when serviced but not acknowledged.

[50] The buzzer in the Control Unit can be suppressed for faults generated in other Control Units if "Suppressed buzzer during fault" is set via EBLWin.

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

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

17.1 Fault Messages

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

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

FAULT: 24V for external equipment output x, Control Unit xx
x = Power supply output 1-4 (J3:5-12). xx = 00-29. Check fuse F9, F10, F11 and F12 respectively on the Main board 5010 in Control Unit no. xx. Fuse: T**4A** L 250V (TR5).

FAULT: 24V for routing equipment, Control Unit xx
Power supply output 0 (J3:3-4). xx = 00-29. Check fuse F8 on the main board 5010 in Control Unit no. xx. Also indicated by LED **Fault / Disablement** "Fire brigade TX" (L12) blinking. Fuse: T**500mA** L 250V (TR5).

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

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

FAULT: Battery not connected, Control Unit xx
• Battery voltage is below 18.9 V. • Batteries (2 x 12 V) are missing or not connected correctly. • Fuse F2 on the Main board 5010 is blown. • Other battery fuse is blown. This check is done every 14th minute but when the fault is generated the check is done every 30th sec. Fuse: T6.3A H 250V (5x20 mm ceramic).

FAULT: Battery, technical number xxxxxx
The charging function in the external power supply 3366 or 4466 connected on the COM loop is not functioning. • Batteries (2 x 12 V) are missing or not connected correctly. • The PCB is faulty and has to be replaced.

FAULT: Battery zone xxx address xx
Valid for the wireless smoke detector 4611. The battery voltage is < 2.8 V. The batteries have to be replaced.

FAULT: Charger, Control Unit xx
The battery charging function is not OK. The main board 5010 may have be replaced.

FAULT: Charging external power supply, Control Unit xx
The fault is to be found in the external power supply equipment, which has a charging fault output connected to a programmable input in Control Unit no. xx.

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

FAULT: Checksum MMI program, Control Unit xx
A fault in the Control Unit xx MMI board 5011 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Checksum system program, Control Unit xx
A fault in the Control Unit xx Main board 5010 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: Control unit xx has no contact with Control Unit xx, network x
network x = network 0 or network 1 Network 0: In a **redundant network**, the communication is normally on Network 0 only. Network 1: In a **redundant network,** Network 1 is normally in a supervised quiescent state until there is a fault (cut-off or short circuit) on Network 0. • Check the TLON network cables / connections. (Also for mixed Network 0 and Network 1 cables.) • Faulty TLON connection board 1590 / 5090. • The Control Unit has no power. • Can be shown in conjunction with new S/W download.

FAULT: Cut-off loop x, Control Unit xx SCI nn <-> SCI nn
This fault is indicating a cut-off (break) on COM loop x or the COM loop voltage is too low at the end of the loop. SCI **n** <->SCI **n** describes between which Short Circuit Isolators the cut-off is located. **n** = A, B, 0, 1, 2, 3, 4, 5, 6 .....127. A & B is the built-in isolator in the FT1020G3 A-direction and B-direction respectively. If no SCI is used, the information will always be: SCI **A** <-> SCI **B**. If only one SCI is used (e.g. 4313 no. 0), the information will be: SCI **A** <-> SCI **0** or SCI **0** <-> SCI **B** ...and so on. If it is a single break (cut-off) on the loop, there will be no other fault messages. If there are several breaks on the loop the message shows the last isolator before the break in the A-direction (incl. the following isolator).

There will also be a "FAULT: No reply ….." message for each unit that FT1020G3 cannot find and "FAULT: Multiple faults …". **Note:** *Each 10th minute a new attempt is made to communicate in one direction only.* When all breaks are repaired (corrected) the communication automatically returns to communicate in one direction only.

FAULT: Detector removed zone xxx address xx
A wireless smoke detector 4611 has been removed from its base.

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

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

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

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

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

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

FAULT: External presentation unit xx, Control Unit xx
1728 (Ext. Presentation Unit - EPU.) The EPU xx, connected to Control Unit no. xx, is programmed as another type in the SSD or a fault in the unit. **Note:** Sometimes the EPU is called Remote Display Unit (RDU) or Mimic

FAULT: Extinguishing system, Control Unit xx
The fault is to be found in the extinguishing system (FIRE PROTECTION ACTIVATED), which has a fault output connected to a programmable supervised input in the FT1020G3 system, in Control Unit no. xx. Also check the input connections. **Note:** Close to the soft key area in the display there will be an

additional information text: “Extinguishing fault”.

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

FAULT: Fan xx, technical number xxxxxx
The LED "Fault" is lit on a fan control module connected to Control Unit xx. Fan no. xx has been triggered but the corresponding I/O unit 3361 input has not been activated within the programmed time. Check the pressure switch in MSSB and the cables / connections. Or The fan phase fault input is activated. Or Check Cables / connections. **Note:** In the Australian and New Zealand conventions this fault is "not latched" irrespective of if all other faults are "latched".

FAULT: FB Silence switch, Control Unit xx
Only valid in the New Zealand convention. New Zealand FB Silence Alarms Bulgin key (outside switch) is turned on, in Control Unit no. xx, i.e. from not activated to activated state.

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

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

FAULT: High current, COM loop X, Control Unit xx
When starting up the Control Unit or when the COM-loop is re-connected, the loop current in normal condition is measured and the vlue stored. If the stored value is below 100 mA this fault will later be generated for a measured value higher than the stored value plus 20mA. (an example: 75mA (stored) +20mA = 95mA = fault limit If the store value is over 100 mA, this fault will later be generated for a measured current higher than the stored value plus 20%. (an example: 150mA (stored) + 20% = 180mA = 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: High current consumption, Control Unit xx
The Control Unit current consumption is > 2.8A (> 6.3A in alarm state) and because of this, the battery charging is turned off and remains off until the current consumption has decreased to ≤ 2.8A (≤ 6.3 A) again.

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

FAULT: Internal short circuit COM loop x, Control Unit xx
Short-circuit on the connection (ribbon cable) to or between the Expansion Boards (458x) in the Control Unit xx (FT1020G3).

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

FAULT: Loop unit, Technical number xxxxxx
The unit (e.g. a customized unit[51]) is not functioning, i.e. the unit is faulty. The unit has to be replaced.

FAULT: Loop unit zone: xxx address: xx technical number xxxxxx
The unit is not working properly, i.e. the unit may be faulty. The unit has to be replaced.

FAULT: Loop unit zone: xxx address: xx and zone: yyy address:yy technical number xxxxxx
The unit (not a detector) is not working properly, i.e. the unit may be faulty. The unit has to be replaced.

FAULT: Low battery capacity, Control Unit xx
Battery (in Control Unit no. xx) internal resistance > 0.6 Ω. The "Resistance in battery circuit" value shown in menu H5/A4 is > 600mV. • The battery might be too old. • Cables, fuses etc. for externally placed batteries may cause a voltage drop. • Battery cables are long and the conductor is less than 2.5mm • Check / adjust the power supply voltage (24 V_{DC}). • Check the charging voltage over the battery respectively (13.5-13.8 depending on the actual charging step). • Check the voltage over a disconnected battery (fully charged ≥ 13 V). • **In the New Zealand convention only**: The battery charging is turned off for 60 minutes every 24 hours to perform auto battery test. A battery voltage < 24.4 V during these 60 minutes will generate a fault. If a fault is generated it will be automatically **Serviced** after these 60 minutes. 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 is "corrected".*

[51] Customised units may include the new 19' rack display or field modules e.g. 1200-1203, 1207-1210, etc.

FAULT: Low battery capacity, Technical number xxxxxx
Battery in external power supply 4466 unit no. xxxxxx) internal resistance > 0.7 Ω. • The battery might be too old. • Battery cables are long and the conductor is less than 2.5mm • Check / adjust the power supply voltage (24 V_{DC}). • Check the charging voltage over the battery respectively (13.5-13.8 depending on the actual charging step). • Check the voltage over a disconnected battery (fully charged ≥ 13 V). The battery should normally be replaced. **Note:** *The battery check is performed every 5th minute, i.e. it can take up to 5 minutes until the fault status is "corrected".*

FAULT: Low voltage, Control Unit xx
System voltage < 21.6 V_{DC}, in Control Unit no. xx. Check the power supply output voltage, it must be 24 V_{DC}. Replace power supply if required. **Note:** A Control Unit powered by only the battery back-up 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, technical number xxxxxx
System voltage < 21 V_{DC} in the external power supply unit 3366 or 4466. Check the power supply output voltage, which must be 24 V_{DC}. Replace power supply if required.

FAULT: Mains, Control Unit xx
The fault is detected within 1-300 minutes[52] after: • Loss of mains, i.e. no 230 V_{AC} • Blown mains fuse. • Blown fuse F1 on main board 5010. Fuse T**6.3A** H 250V (5x20 mm ceramic).

FAULT: Mains, external power supply, Control Unit xx
This is valid for external power supply equipment, which has a fault output connected to a programmable **input** in the FT1020G3 system. The fault is detected within 1-300 minutes[52] after the **input** is activated. • Loss of mains, i.e. no 230 V_{AC} to the ext. power supply equipment. • Blown mains fuse. • Check the programmable input connections.

FAULT: Mains, technical number xxxxxx
3366AU / 3364 This is valid for the external power supply unit 3366AU and the addressable 2 voltage outputs unit 3364, connected on the COM loop. The fault is detected within 1-300 minutes[52] after: • Loss of mains, i.e. no 230 V_{AC} to the **3366** unit. • Blown mains fuse. • Fuse F1 blown on the 3366 unit (J7:4). • 3364 unit: o Terminal no. 8 (Mains OK) not connected to the 3366 unit

[52] The time is programmable via EBLWin. Default value is 30 minutes.

(J7:4) or 0 V.
- o "No mains signal" from the 3366 unit.

4466
This is valid for the external power supply unit 4466 connected on the COM loop. The fault is activated after 1-300 minutes after:
- Loss of mains, i.e. no 230 V AC to the 4466 unit.
- Blown mains fuse.
- Fuse F1 blown on the 4466 unit's charger board (Fuse T5AH 250 V, 5x20 mm).

The time delay of this fault activation is programmable via EBLWin. Maximum 30 minutes is allowed. Default value is dependent on the convention.

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

FAULT: Network cables mixed, Control Unit xx
In a redundant TLON Network, Network 0 cables and Network 1 cables are mixed. Check the network installation / connections.

FAULT: No connection with MMI board, Control Unit xx
This fault message cannot be shown in the Control Unit's display, only via EBLWin, via Web-server and in other Control Units in the system. Fault in the MMI board 5011 software or the MMI board. Check the cable between the boards. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: No reply, Expansion Board x, Control Unit xx
Valid for the 8 zones exp. board 4580, the 8 relays exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in the Control Unit no. xx. • FT1020G3 cannot communicate with the board. Check / change the address. Check the cables / connections. • Check if the Main board fuse F13 is blown. Fuse: T**4A** L 250V (TR5).

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

FAULT: No reply, alert annunciation unit xx, Control Unit xx
FAULT: No reply, external presentation unit xx, Control Unit xx
Alert Annunciation Unit 1736. External Presentation Unit 1728 • The contact with the unit is interrupted. Check the cable, all connections, etc. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings. • Check if the Main board fuse F19 is blown. Fuse: T**1.6A** L 250V (TR5). • If there is a program memory fault in the unit, there will be a fault message, shown briefly in the unit's display during start

up: **"Memory fault in program area (n)"** (n=1 or 2). The unit will not work.

FAULT: No reply Loop unit xxxxxx

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

- Check the unit's COM loop address (with the programming tool 3314 / 4414).Printer not correctly connected.
- Check the downloaded Site Specific Data (SSD).
- The unit might be faulty.
- The unit might be removed from the COM loop.
- There might be a double break or short-circuit on the COM loop.

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

The unit cannot be found by the Control Unit.

- Check the unit's COM loop address (with the programming tool 3314 / 4414).
- Check the downloaded Site Specific Data (SSD).
- The unit might be faulty.
- The detector may be removed from its base.
- There may be a double break or short circuit on the COM loop.
- Valid for a wireless smoke detector 4611: Battery voltage < 2.3 V or the Base station (4620) does not receive any detector data.

FAULT: Printer, Control Unit xx

This is valid for an FT1020G3, with printer. Control unit no. xx.

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

FAULT: Read / write site data (SSW), Control Unit xx

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

- If the C.U. was powered down (i.e. mains and battery disconnected) without first doing a Safe shut down of Control Unit via menu H8/S6 (see page 136), this fault may be generated when the C.U. is powered again. After fault acknowledge the SSW will get default values and the fault will be corrected (serviced). Supervised outputs have to be calibrated via menu H5/A1.
- Some external influence has caused a fault in the SSW. A system software download might be required, Call for service personnel/engineer.

FAULT: Restart Control Unit nn,
code xx, address yyyyyyyyyy

A restart has occurred in Control Unit no. nn.
SSD and S/W download will automatically be followed by a restart.
Also, you can manually do a restart, see chapter "Restart", page 88.
Regarding the restart codes **00, 03, 13, 25, 50 &53**, see chapter

"Restart" page 88. The following restart codes are due to some external disturbance and are not normal, i.e. call for service personnel / engineer: xx=01: Watchdog Reset. xx=02: Accidental jump to reset vector. xx=04-12: Unexpected interrupt. xx=14-19: 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, technical number xxxxxx
The analogue smoke, heat or multi detector is faulty. The detector's built-in self-verification function has reported a fault. The detector has to be replaced.

FAULT: Short circuit loop x, Control Unit xx, SCInn<->SCInn
SCI **nnn** <-> SCI n**nn** describes between which **S**hort **C**ircuit **I**solators the short-circuit is located. **nn** = A, B, 00, 01, 02, - - 127. A & B is the built-in isolator in the FT1020G3 in A-direction and B-direction. If no SCI is used the information will always be: SCI **A** <-> SCI **B** If one SCI (no. 0) is used, the information will be: SCI **A** <-> SCI **00** or SCI **00** <-> SCI **B** ...and so on. There will also be a "FAULT: No reply ….." message for each unit not found by the FDCIE. If there are several short-circuits on the loop the message shows the isolator just before the break in the A-direction (incl. the following isolators). There will also be shown "FAULT: Multiple faults …". **Note:** Each 10th minute a check is performed, if all short-circuits are corrected (repaired), the communication automatically returns to communicate in the A-direction only[53]. **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), Control Unit xx
The Site Specific Data (SSD) in Control Unit no. xx is not downloaded correctly (a checksum fault, etc.). A new SSD download (via EBLWin) is required.

FAULT: Site specific data, alert annunciation unit xx, Control Unit xx
FAULT: Site specific data, external presentation unit xx, Control Unit
Alert Annunciation Unit 1736. Ext. Presentation Unit 1728. There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

[53] **Note:** The fault has to be acknowledged i.e. it can remain up to 10 minutes after the acknowledgement before the communication returns to communicate in the A-direction only.

FAULT: Supervised input x Expansion Board x, Control Unit xx
A fault on the supervised input x on the Expansion Board 4583 with address x, in Control Unit no. xx. Check the cables / connections (cut-off or short-circuit).

FAULT: Supervised input x, technical number xxxxxx
A fault on the supervised input x on 4461 / 4462. Check the cables / connections (cut-off or short-circuit).

FAULT: Supervised output x, Control Unit xx
If the output is programmed for **sounders or OWS** (type "Alarm devices"), it is also indicated by LED Fault / Disablements" Alarm devices" (L11) blinking. If the output is programmed for Fire Brigade TX (type "Routing equipment"), it is also indicated by LED Fault / Disablements" Fire brigade TX" (L12) blinking. If the output is programmed for an extinguishing system (type "Extinguishing"), there will be an additional information text close to the soft key area in the display: ***Extinguishing wire fault***. • **x=0** (S0): Short circuit/break on the connected cable/ equipment and/or blown fuse F4 on the main board 5010. • **x=1** (S1): Short circuit/break on the connected cable/ equipment and/or blown fuse F5 on the main board 5010. • **x=2** (S2): Short circuit/break on the connected cable/ equipment and/or blown fuse F6 on the main board 5010. • **x=3** (S3): Short circuit/break on the connected cable/ equipment and/or blown fuse F7 on the main board 5010. o Fuse T**500mA** L 250V (TR5). o Calibration not performed via menu H5/A1. o Connected equipment might be "missing". o End of line resistor(s) missing or not correct value (1-5 resistors 33K) **Note:** *The calibrated value has to be in the range 1K-50K.*

FAULT: Supervised output x Expansion Board x, Control Unit xx
A fault on the supervised output x on the Expansion Board 4583 with address x, in Control Unit no. xx. If the output is programmed for sounders (type Alarm devices), it is also indicated by LED Fault / Disablements "Alarm devices" (L11) blinking. If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED Fault / Disablements" Fire brigade TX" (L12) blinking. • Calibration not performed via menu H5/A1. • Short-circuit / break on the connected cable / equipment. • Blown fuse F1 (Output 0) or F2 (Output 1) on the 4583 board. Fuse T**200mA** L 250V (TR5). • Connected equipment may be "missing". • End-of-line resistor(s) missing or not correct value, 1-5 resistors (33K). **Note:** The calibrated value has to be in the range 1K-50K.

FAULT: Supervised output x, technical number xxxxxx
This fault message is valid for a COM loop output unit 3364 output or 4464 output. If the output is programmed for sounders (type Alarm devices), it is also indicated by LED Fault / Disablements "Alarm devices" (L11)

blinking.
If the output is programmed for Fire Brigade TX (type Routing equipment), it is also indicated by LED Fault / Disablements "Fire Brigade TX" (L12) blinking.

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

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

FAULT: Temperature sensor, Control Unit xx
The sensor is not correctly connected or is missing.

FAULT: TLON-board (Network 0), Control Unit xx
FAULT: TLON-board (Network 1), Control Unit xx
TLON connection board 5090. No communication / connection with the TLON network. The board for Network 0 or 1 in Control Unit no. xx has to be replaced.

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

FAULT: Wrong type Expansion Board x loop x, Control Unit xx
This is valid for the I/O Matrix board 4582 no. x connected on COM loop x in the Control Unit no. xx. Check the board type, set with jumpers JP4 and JP5 on the I/O Matrix board. The type should be the same as it is programmed via EBLWin.

FAULT: Wrong type, Expansion Board x, Control Unit xx
Valid for the 8 zones exp. board 4580, 8 relay outputs exp. board 4581 and Inputs / outputs exp. board 4583, mounted in Control Unit no. xx. Check the type of board, which should be the same as programmed via EBLWin.

FAULT: Wrong type of unit xxxxxx
Check the type of unit, which should be the same as programmed via EBLWin.

FAULT: Wrong type of unit zone: xxx address: xx technical number xxxxxx
Check the type of unit, it should be same as the type programmed via EBLWin.

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

FAULT: Zone Line Input, zone: xxx address: xx technical number xxxxxx
Valid for the Multipurpose I/O unit 3361/4461 monitored zone line input Z. Break on the zone line or wrong / no end-of-line capacitor (470 nF) or short-circuit (if not programmed for fire alarm at short-circuit).

No contact with main board
Shown only in the affected Control Unit. • Check that "MMI board" is selected in the SSD (EBLWin Control unit properties). • Fault in the Main board 5010 software or hardware. Check the cable between the Main board and MMI board. It may require system software download, this will erase SSD. Call for service personnel/engineer immediately. • In conjunction with SSD download: Erase the SSD in the Control Unit and download the SSD again.

(External fault; User programmable text)
Programmable input is connected to any external equipment's fault output. User definable fault message (≤ 40 characters) has to be programmed via EBLWin. Note, the prefix "**FAULT:**" will **not** be automatically added.

17.2 Fault Acknowledge

When a fault is generated in FT1020G3, the following may occur:

- The LEDs **Routing equipment** "Fault TX activated" (L13) and **Fault / Disablements** "General fault" (L9) are turned on to indicate that the output for routing equipment (Fault tx) is activated
- LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade TX" (L12) may be turned on as well.
- Output for routing equipment (Fault TX) is activated.
- Output for general fault is activated.
- Output for general charger fault might be activated.
- One or more fault messages including date and time are shown in the Control Unit display.

If “Fault latching” is selected in EBLWin (default), once the fault is corrected, the "Serviced" message will be shown after the time i.e. the fault is already serviced / corrected. When the “Fault latching” check box is not selected in EBLWin, the “Serviced” fault will automatically disappear from the list.

Any already acknowledged fault in the list is indicated by “Acknowledged”.

Example: Fault messages shown in the Control Unit display:

```
FAULT: No reply zone: 123 address: 01
technical number 000025
"….alarm text…."
30-07-2015   15:22          /Serviced

FAULT: No reply zone: 123 address: 03
technical number 000027
"….alarm text…."
30-07-2015   09:25

FAULT: No reply zone: 234 address: 01
technical number 002112
"….alarm text…."
30-07-2015   15:25          /Acknowledged

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

To acknowledge the faults shown:

- Login, according to chapter "Access", page 33.
- Use **menu H6** (access level 2A) for fault acknowledge, see chapter "FAULT Acknowledge (H6)", page 128. Menu H6 is a list showing a maximum of 300 faults (not acknowledged faults and/or acknowledged but not serviced / corrected faults).
- All faults must be individually acknowledged one by one by the key pad button ↵ . Use ▲ or ▼ to scroll.
- When a fault is corrected before it has been acknowledged, the text "Serviced" is added after the time, still has to be acknowledged to remove it on the display.
- When a fault is corrected / serviced and acknowledged, it will disappear from the list (H6).
- When **all** faults have been acknowledged, the output for routing equipment (Fault TX) will not reset and the LED for **Routing equipment** "Fault TX activated" (L13) remains activated until there are no faults in the system[54].
- As long as there are faults still not corrected in the system (Acknowledged faults corrected or not corrected), the LED **Fault / Disablements** "General fault" (L9) will be lit and general fault (and maybe general charger fault) output(s) are activated. The fault relay also stays energised.
- Faults, corrected faults and acknowledged faults are shown in the General event log (menu H4/U6).

[54] The fault outputs will not reset in the Australian and New Zealand conventions even if all faults have been acknowledged.

18 Commissioning an FT1020G3

18.1 General

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 in section 18.2 below.

Basic operation of the FT1020G3 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 FT1020G3, it is strongly recommended to use Brooks USB isolator BA-PCISO. If no isolator is used and if several earth faults exist in the system when a PC is connected, damages may result on both PCBs (5010) 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 x, CU xx". This is due to some loop unites e.g. panel MCP, I/O matrix boards, panel display modules etc. in FT1020G3 being wired to a COM loop as Class B wiring (no loop return wiring used). In NZ control panels, the MCP mounted on the outer door is normally 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 terminal J5:1 comes back at terminal J5:3 and so on. If the loop has short circuit isolators, only the C-wire (SB) can be measured. Also measure the resistance between the loop wires and 24V, 0V and Earth (J2:1, 2 and 3). The resistance should be very high (mega ohm).

18.2 Single Control Unit

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. Terminate the COM loop and any field wiring into the plug-in connector but ensure the plug-in connectors are not plugged in the main board 5010.
3. 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 24VDC 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.

4. Remove the battery fuse F2 on the main board 5010 (or the in-line fuse between batteries.
5. Connect the batteries to the battery leads.

Note: An in-line fuse (F) rated 6.3A fitted on the cable between the batteries, see drawing F725-02 FT1020G3 Block Wiring Diagram.

CAUTION: Risk of explosion if battery is replaced by incorrect type. Dispose used batteries according to the instructions.

6. Turn “ON” the mains isolate switch (230 V_{AC})[55]

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

7. Re-place the battery fuse (F2) on the main board 5010.
8. LED "POWER" (L5) indicates that the 24 V_{DC} power supply is okay (PSU and/or battery).
9. An automatic restart will now take place (see chapter "Restart", page 88).
10. Once the basic operation of the panel is confirmed, plug-in the COM loop and field wiring connectors into the main board.
11. The Site Specific Data (SSD) – created in EBLWin can now be downloaded, see chapter "Software Download", page 80.

See also chapter "Calibration of supervised outputs (H5/A1)", page 118.

Note: A “Safe shutdown” must be performed once FT1020G3 is cleared of all faults and the system becomes in normal operational mode.

18.3 Control Units in a TLON Network

The FT1020G3 system can be build up as a single TLON Network or as a redundant TLON Network, i.e. 2 networks (dual path).

In the **single TLON Network**, one TLON connection board (5090) has to be plugged in each Control Unit (Network no. 0) whereas in the **redundant TLON Network**, two connection boards (5090) have to be plugged in each Control Unit.

Note: Single TLON network is used only when additional 5010 board is to be fitted inside the same enclosure otherwise a redundant TLON network is used i.e. two TLON boards 5090 must be used in each control panel. A single TLON Network is a violation to the Australian standard AS1670.1.

The redundant TLON Network supports full functionality in case of a network path failure, i.e. open circuit or short circuit in one of the TLON networks.

When the 5090 boards are plugged-in and the network cables are connected[56], **for each Control Unit**, the same procedures as for a single Control Unit must be followed, see 1-11 above.

When all Control Units are powered, the TLON network installation (see below) has to take place **before** the Site Specific Data (SSD) can be downloaded, see chapter "Software Download”, page 80.

If you know that one or more of the Control Units might be added at a later date, follow the procedures below:

- In EBLWin, create the SSD only for the Control Units that should be connected now. Do not download the SSD until the TLON Network installation is ready.

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

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

- In TLON Manager, perform the TLON Network programming for the project, i.e. only the Control Units that will be connected now.
- When the TLON Network installation – see below – is ready, download the SSD.

Later, when one or more Control Units is to be added to the TLON Network:

- Open the project in TLON Manager, add the new Control Unit(s) and install (download) it according to the separate TLON Manual MA437.
- Open the SSD in EBLWin, add the Control Unit(s) and download the SSD to all Control Units.

18.3.1 TLON Network Installation (Single)

a) Create a project in the PC program TLON Manager.

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

For more information see Technical / Operation Manual M437.

A PC is connected to the modular connector "J10" (Network no. 0) in the Control Unit (main board 5010). Open the project in **TLON Manager** and install (download) the project, see separate TLON Technical Manual.

18.3.2 TLON Network Installation (Redundant)

In a redundant network, **two Projects** must be created and installed. The Projects have to be identical but with different Project names. One project has to be installed for Network no. 0 and another project to be installed for Network no. 1.

In a redundant TLON system, a PC is connected to the modular connector "J10" to download the TLON configuration for Network no. 0 then connected to J11 to download Network no. 1 configuration.

Note: After the TLON Network installation is completed (download), it is highly recommended to restart the Control Units.

18.3.3 Add a Control Unit in a TLON Network

When adding a Control Unit to an "existing" installation, the same system software (S/W) version must be used in all Control Units. Often the new Control Unit has a newer version than the existing Control Units. Normally the latest version is the best to use, i.e. the Control Units in the "existing" installation have to be upgraded. As an alternative, it is possible to download an earlier S/W version in the new Control Unit.

Both options are described in chapter "New system program (S/W) version download", page 84.

The following procedures are to add a new Control Unit to an existing system:

a) Open the current project in **TLON Manager.**

b) Add one Control Unit and install (download) as shown in section 18.3.2 above, refer to the TLON technical manual for more details.

c) Open the SSD for the current system in EBLWin. Add one Control Unit (and the units connected to it).

d) Download the new SSD according to chapter "Software Download", page 80.

18.3.4 Merge Two TLON Networks

a) Ensure the system properties are the same in the two systems.

b) Ensure that no presentation numbers in the network system are the same.

c) Select one of the systems as the starting point, for example the largest system, and add the control units and all other units from the other system[57].

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

If it is known from the beginning that two systems are to be one in the future, it is possible to give the Control Units in the system respectively, the "final" Control Unit numbers right from the beginning in order to get the correct technical numbers in the system documents.

Note: Two or more presentation numbers (Zone or Zone-Address) in the systems must not be the same.

18.3.5 Delete a Control Unit in a TLON Network

To delete a Control Unit from a TLON network:

a) Physically disconnect the Control Unit. This action will generate faults in the other Control Units.
b) Acknowledge the faults.
c) Open the current project in **TLON Manager**, delete the Control Unit according to the TLON technical manual.
d) Open the SSD for the current system via EBLWin. Delete the Control Unit (and the units connected to it) and download the new SSD according to chapter "Software Download", page 80.

18.4 Upgrade Number of Alarm Points

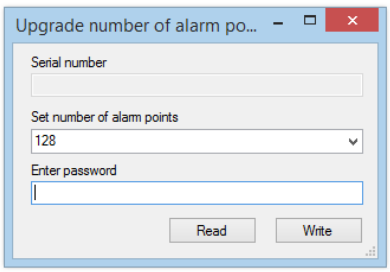
All FT1020G3 settings are normally factory downloaded before delivery, default setting is 512 addresses. It is however, possible to upgrade the maximum number of **alarm points** (512 → 1020) on site. Note that the maximum number of COM loop addresses is always 1020, i.e. address 1 – 255 on each COM loop.

Note: Standard FT1020G3 FDCIE is supplied with 510 addresses except when a request to upgrade the number of addresses is received before manufacturing.

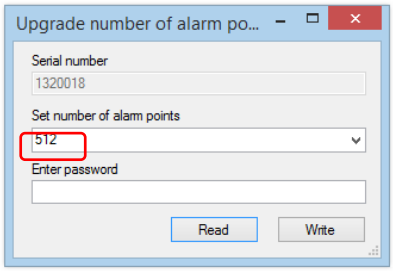
If you require upgrading the number of addresses, a PC and **EBLWin** are used. Before download, the PC has to be connected to the USB connector in the Control Unit and the hardware key is also plugged in. Open EBLWin and the FDCIE where the upgrade is to be performed and follow the procedures below:

1. Logon (Tools | Log on Control unit...)

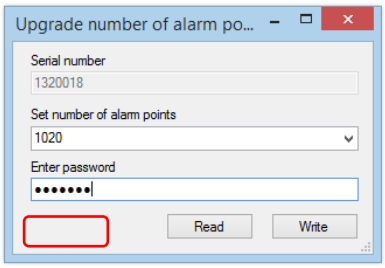
2. Select the Control Unit icon, right click and in the pop-up menu select “Upgrade number of alarm points”. A dialog box opens as shown.



3. Click "Read" to get the serial number from the Control Unit you are connected to, normally the no. of alarm points is 512 as shown below.



4. Report the **Serial number** to Brooks engineering office in order to get the password.[58]
5. Write the new number of alarm points and the received password in the field respectively and click "Write".



Follow the same procedure in each Control Unit if a TLON network requires upgrade.

After you enter the password, right click on the respective Control Unit icon and choose “Properties”. The Control Unit Properties dialog box opens:

Depending on the upgrade password you received, under the “Misc” section, the “Configured number of alarm points” will be made available.

Note: All Control Units connected in a TLON network do not have to have the same maximum number of alarm points.

[58] To upgrade the maximum number of alarm points, a special PC program is used to generate a password. The password will be unique for every serial number and number of alarm points combination.

19 Software Download

19.1 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. For TLON installation refer to TLON Technical / Operation Manual M437.

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. Sentinel_LDK_Run-time_setup file named HASPUserSetup.exe
4. EBLWin V2.4.4 file named EBLWin.msi and setup.exe
5. Australian_EBL512G3_244.BIN or NewZealand_EBL512G3_244.BIN

Hardware required:

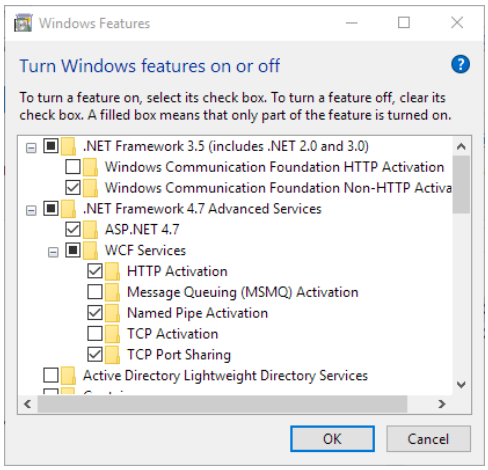
1. EBLWin key 5094
2. USB Type A to USB Type B cable
3. Laptop with Win7 - Win10

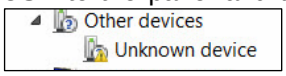
19.1.1 Installation procedure:

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.

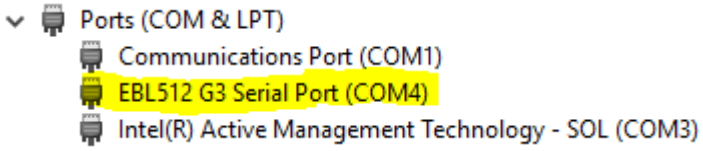
   If running on Win10, it is probably already installed as part of its system. To ensure that .NET is turned on, ask Cortina with this keyword “Windows Features” and ensure that .NET Framework are turned on as shown below:



2. Next install the USB drivers 2.10.00 WHQL (Win7_Win8_Win8.1). Plug in your USB to the panel and to your PC then open device manager. You should see 

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) then click “Next”. The drivers will be installed, when the installation is completed, you should see the message “Windows has successfully updated your drivers” and you can see now EBL G3 512 as shown below.



3. 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 Figure 24 and click “OK” :

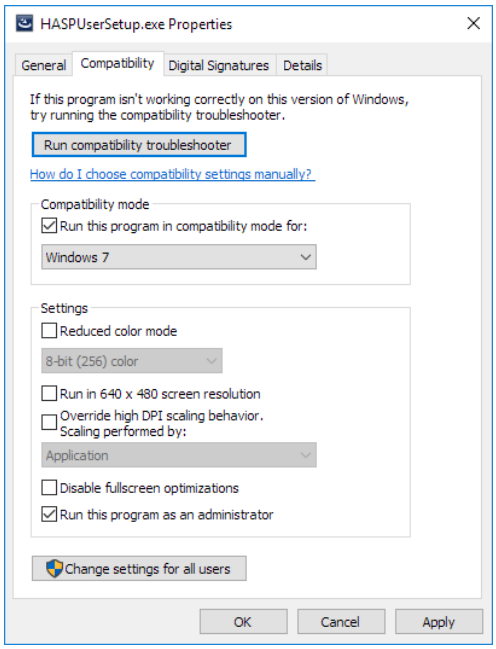


Figure 24 Installing HASPUserSetup in compatibility mode

4. 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 Figure 24.
5. Plug in EBLWin key 5094 into another available USB port
6. Launch EBLWin, go to Tools > Log on control unit, the COM port number in step 2 should be displayed.

19.2 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 FT1020G3 Control Unit(s), the 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. When a number of Control Units are connected in a TLON network, the network should be running before the SSD download can take place.

Version Control for SSD Download

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

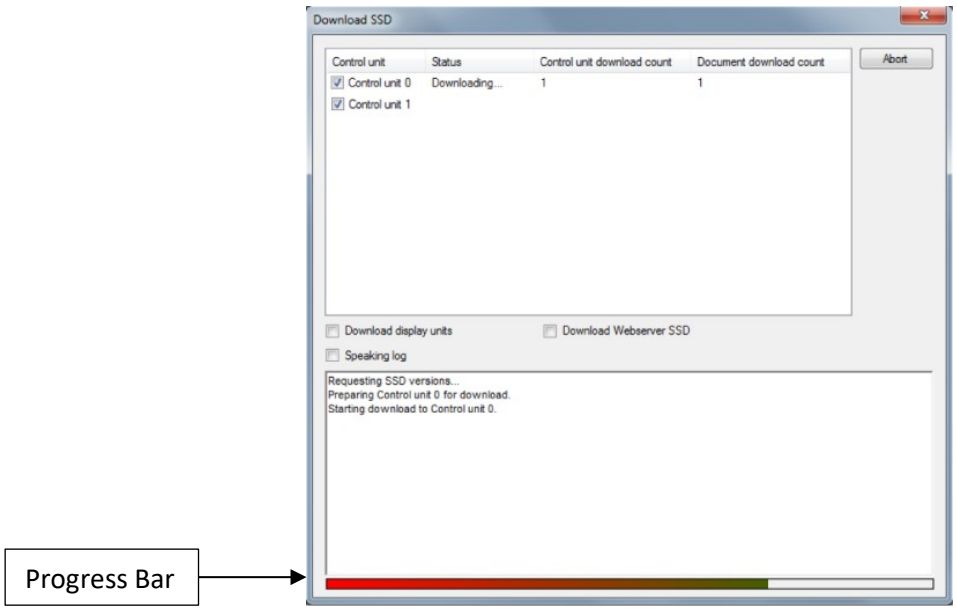
If the check shows that the SSD doesn't match the SSD in one or more control units, there will be a dialog window, asking if the download shall proceed anyway.

In a networked system all control units will be checked.

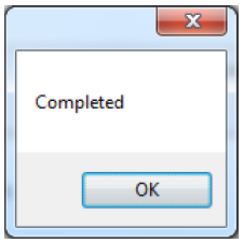
Note: No password / access code is required to log on to the Control Unit, instead an EBLWin 5094 key is required.

SSD Download procedures:

1. Connect the PC to the USB port (type "B") in one of the Control Units.
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. See version control for SSD download above.



The download is not completed until the following box is shown:

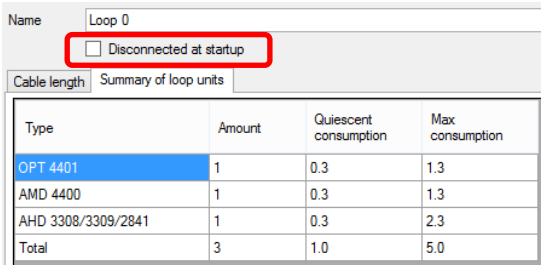


7. Click “**OK**”

After the SSD download, the FT1020G3 will restart. A number of faults may then be generated due to the loop units being not connected yet. This will cause "heavy traffic" on the network, which might affect and delay the SSD download to the other units.

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 be disconnected again following a new restart. Finally, the SSD for that Control Unit has to be downloaded again with the option "Disconnected at start up" not selected.

For more details, refer to The FT1020G3 Technical Manual.

19.2.1 SSD Download to Single Control Unit

Start the SSD download from EBLWin as shown above, a text message will be shown in the FT1020G3 display “Downloading SSD”. When the download is completed and the Control Unit restarts, a fault message will be shown in the display:

```
FAULT: Restart Control Unit nn, 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), CU nn
DD-MM-YYYY    HH:MM
```

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

19.2.2 SSD Download to Control Units in a TLON Network

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

When the SSD download to a Control Unit is completed, that Control Unit will automatically restart and generate a restart fault.

19.2.3 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 in FT1020G3 display and in all the remote display units 1728 and 1736 together with its user definable alarm text.

All user definable text messages are created and downloaded via **EBLWin**.

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

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

19.3 Download Software (System Firmware)

Note: When existing system requires software upgrade, first, logon to the Control Unit using a compatible EBLWin (or WinG3) software version with the existing firmware version in FT1020G3 then perform SSD backup to save the existing Site Specific Data file. This must be performed prior to any software download.

The latest software version of EBL512G3 system software[59] is factory downloaded before delivery. Due to continual development and improvement, different S/W versions may be found.

FT1020G3 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 for the Main board 5010 and the MMI board 5011 is shown in menu H4/U8 (information) 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).

19.3.1 Download Software to Single FDCIE

Note: Before downloading a new software in existing system, SSD[60] backup (upload) must be performed using compatible EBLWin (or WinG3) software then saved in the new version of EBLWin you intend to use.

To download a new software (system firmware) version, a PC and **EBLWin** are used. The BIN file required to be downloaded contains software for the main board 5010, MMI board 5011 and a text file, i.e. there is one BIN file for each convention (AU or NZ).

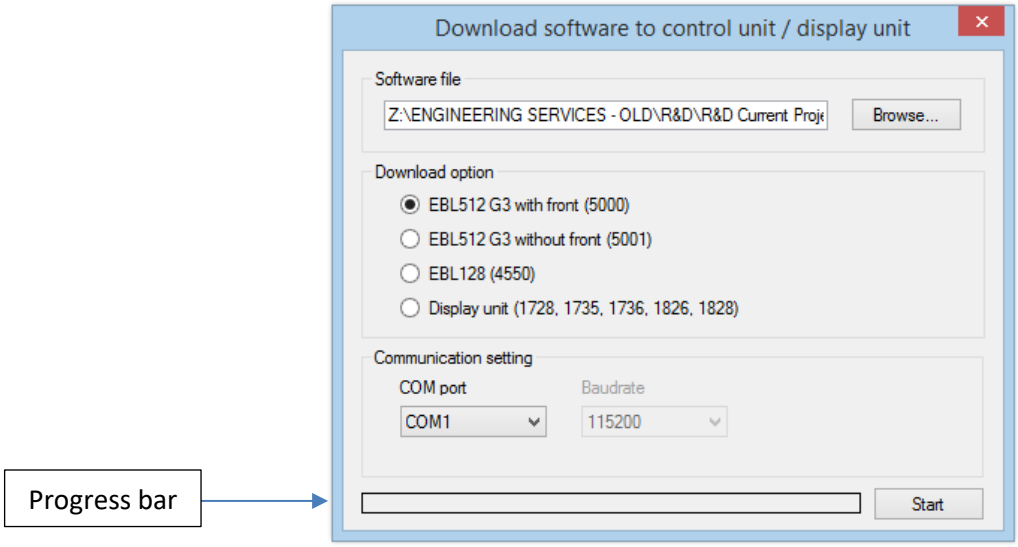
Note: Brooks strongly recommends using the USB isolator device when you connect your PC to the Control Unit.

The following procedures to be performed to download the system software to the FDCIE:

1. Plug in the **USB key** (5094) into a spare USB port on your PC.
2. Connect the PC to the USB connector in the FDCIE and start EBLWin,
3. Start EBLWin, do not log on to FT1020G3. In the **Tools** menu, select "**Download Software…"** to open the **Download software to control unit / display unit** dialog box and set as required.
4. Select the path and the software file name, e.g. ***Australian_EBL512G3_244.BIN*** (244 = version 2.4.4).
5. Select the control panel type "EBL512G3 with front", if the control panel is not fitted with front display, select "EBL512G3 without front".

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

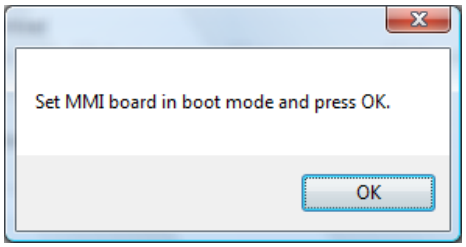
[60] It is highly recommended to make a copy of the SSD file in its original version as well.



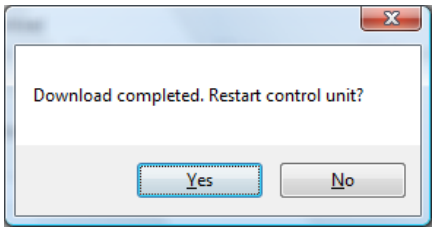
6. Select the COM port to be used on your PC[61]. **Do not** click “Start” yet.

A tip: Check in Control Panel / Device Manager / Ports (COM & LPT) | EBL512 G3 Serial Port (COMx).

7. Set the main board 5010 in "boot" mode, i.e. press and hold the "**Boot**" button (SW2) then press the "**RESET**" button (SW1) momentarily. Release the "BOOT" button. The Main board LED "D24" is turned off while the Main board is in "boot" mode.
8. Click "**Start**" to start the download. Another dialog box opens when display is fitted.



6. Set the MMI board 5011 in "boot" mode, i.e. press and hold the "**BOOT**" button (SW2) and press the "**RESET**" button (SW1) momentarily. Release the "**BOOT**" button. The MMI board LED "D18" will be turned off and the buzzer is turned on while the MMI board is in "boot" mode.
7. Click "OK", the buzzer is turned off and the download continues. The download status is indicated by the progress bar.
8. When the progress bar has gone from "red to green", the download will be completed and the following dialog box opens:



9. Click "Yes" and the Control Unit will restart.

After the restart, the following messages will be shown:

[61] If several USB ports are used on your PC, and you want to find which COM port is connected to the panel, go to Device Manger and look for EBL G3 Serial Port (COM#) under Ports (COM & LPT). # will be the COM port number.

FAULT: Restrt control unit nn, code 00 DD-MM-YYYY HH:MM

FAULT: Restart control unit nn, code 50 DD-MM-YYYY HH:MM

Code 00 / 50 indicates a normal restart of the main board / MMI board after the software download. Acknowledge the restart faults.

10. LED “Operation” (L5) on the FT1020G3 front should now be turned on and all other LEDs are normally turned off.
11. New SSD 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.

19.3.2 Download Software in a TLON Network

All Control Units connected to a TLON network **must** have the same software version.

Also, in a network system, the system software is downloaded separately to every Control Panel.

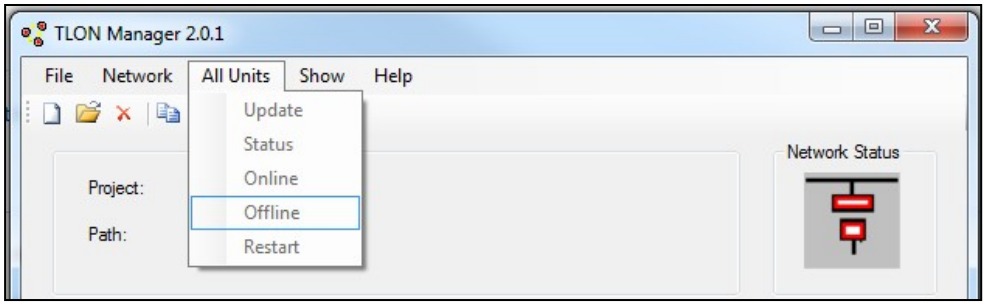
Before upgrading the software in a TLON network, it is recommended to disconnect the control units from the network. It can be carried out physically (disconnect the TLON cable from the FDCIE, or via TLON Manager.

Note 1: It is highly recommended to disconnect the TLON network during upgrade in large networks. Otherwise it will result in large amount of fault messages.

Note 2: The TLON PCBs must remain mounted in the control units, or the control units will lose their TLON configuration.

To download new software in each Control Unit, follow the procedures below:

1. Disconnect the webserver, RS232 in the FDCIE (if any).
2. Open TLON manager in your PC. Connect the FT1020G3 System to TLON Manager and set all control units to “Offline”.



3. Follow the procedure 1 to 10 in section 19.2.2.
4. One by one, as the control units start up after download, they will automatically get “online” in TLON Manager, and the communication will start to run as normal.
5. Download compatible software in the webserver via TCP/IP (if any).
6. Download SSD to the control units, follow the procedures shown in section 19.2.2. In large systems, it is preferable to download SSD to one control unit at a time. This, to avoid a large amount of traffic on the TLON network.
7. Re-connect the webserver in the Control Unit (if any).

Note: If the downloaded S/W version is only a small bug-correction, there is no need to follow the procedure above. If so, download S/W to one control unit at a time, and then in the control unit, acknowledge all the 'No contact' faults.

If the software download carried out with TLON network connected, some Control Units will not have contact with other Control Units during the downloading, the following faults may be generated:

FAULT: Control unit nn has no contact with Control Unit nn, network x

dd-mm-yyyy hh:mm

Since control units with new and old S/W will have different information, there will be "wrong information" fault massages.

FAULT: Restart control unit nn has wrong information

dd-mm-yyyy hh:mm

The faults should be acknowledged.

Note: In large TLON networks, there might be a large amount of fault massages generated.

19.4 Software Versions

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

The S/W versions listed in Table 15 below were the valid S/W when this document was written (the date of this document or date of revision).

Table 15 Latest Software Versions for FT1020G3

Software version for:	Latest version	Required version
Standard FT1020G3	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
5090; TLON connection board	1.0.0	1.0.0
1728; Ext. Presentation unit (EPU)	1.5.0	1.4.1
1735 / 1736; Alert Annunciation unit (AAU)	1.5.0	1.4.1
EBLWin	2.4.3	2.4.1
TLON Manager	2.0.1	1.2
1598 Web-server II	2.4.1	2.4.1

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.

20 Restart

A restart may delete some data in FT1020G3. Below follows an explanation of the different data and abbreviations and a table describing the different reset 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 & performance factor, passwords[62], supervised output calibration values and event logs.

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

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

S/W = Software, i.e. the EBL512 G3 system program.

The date & time and alarm counter value is stored in the memory of the real time clock, i.e. the value will be retained also after the FDCIE has been powered down.

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

20.1 Safe Shut Down

Safe shut down of Control Unit via menu **H8/S6** will save the **SSW** data in a Flash ROM in FT1020G3. 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 FT1020G3 is powered up, a restart takes place and the RAM (working memory) will read the **SSW** data saved in the Flash ROM.

20.2 Restart Table

Table 16 below describes the different reset alternatives and how the data is affected.

Table 16 Data affected by restart

Action	Data Deleted	Data not Deleted	Restart Code
Power down and then power up again. (both mains and batteries disconnected)	SSW, FFD, WASV	SSD, S/W	00 (+ 50)[63]
Via menu H8/S5 Safe shut down of Control Unit.	FFD, WASV	SSD, S/W, SSW	00 (+50)[63] 03 (+53)[63]
Via RESET button on Main board 5010. If this reset is done in the middle of a process, also the SSW might be deleted.	FFD, WASV	SSD, S/W, SSW	03
Via RESET button on MMI board		SSD, S/W, SSW FFD, WASV	53
Reset command via EBLWin or TLON Manager.	FFD, WASV	SSD, S/W, SSW	03 (+53)[63]
Automatically after download of Site Specific Data (SSD) via EBLWin.	FFD, WASV	SSD, S/W, SSW	25

[62] Changed via menu H10

[63] Code 50 / 53 only if the FDCIE has an MMI board (5011).

Automatically after download of S/W via EBLWin.	FFD, WASV	SSD, S/W[64], SSW	00 (+50)[63]
Automatically (by the S/W itself) S/W watchdog.	FFD, WASV	SSD, S/W, SSW[65]	13[66]
Automatically due to external disturbance.[67]	FFD, WASV	SSD, S/W, SSW[65]	01, 02 alt. 04-12 &14-20

Note: During a restart, the fault output (relay) for the Fault TX will be "activated" for few seconds, the supervised 24 V_{DC} outputs S0-S3 will not be supervised and S0-S3 programmed as normally high will be low for few seconds.

20.2.1 Explanation of Restart Codes

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

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

Code 50 – 99 = MMI board restart. No data is lost.

20.3 During Restart

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

And after few seconds (the control panel starts the normal restart procedures else see Memory fault below):

Booting.....

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

[64] The old S/W will be deleted.

[65] Depending on the restart reason, also the SSW may be deleted.

[66] Always followed by an address.

[67] If this happens, call for service personnel / engineer. Depending on the restart reason, also the SSW might be deleted.

FAULT: Restart Control Unit nn, code xx, address yyyyyy

Regarding code **xx** and address **yyyyyy**, see Table 16. This fault is also indicated by LEDs **Routing equipment** "Fault TX activated" (L13) and **Fault / Disablements** "General fault" (L9).

After the fault is acknowledged (via menu H6 or EBLWin), the LEDs will be turned OFF, if no other faults exist in the system.

After any restart, if any units were disabled before restart, an individual disablements for these unit should be done.

Memory fault

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

FAULT: Checksum system program, Control Unit xx

(Main board software.)

FAULT: Checksum MMI program, Control Unit xx

(MMI board software.)

FAULT: No connection with MMI board, Control Unit xx

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

No contact with Main board

This is also indicated by LED "System fault" (L7) and the buzzer sounds steady (continuous). The Fault TX output is "activated".

A new download of the S/W (system programs) is required and/or the Main board and/or the MMI board have to be replaced.

Note: After **SSD download,** the following messages may be shown:

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

After restart:

FAULT: Restart Control Unit nn, code xx, address yyyyyyyyy

FAULT: Site specific data (SSD), control unit xx

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

21 Perform Monthly Test (H1)

The FT1020G3 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 OWS or sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4.)

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 or OWS) 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).

See also chapter "The information area priority order", page 18.

See also chapter “Perform ZONE TEST (Test mode) (H7)", page 129.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
	H1 Perform monthly test	
"↲"	Check that all LEDs light up! Press ↲	
"↲"	[All dots are visible]	The buzzer (in the C.U.) sounds and all dots in the display are shown. All LEDs light up, including LEDs in units connected via I/O Matrix board 4582. If a printer is mounted in the FDCIE it will print: ABCDE……Z abcde……z
"↲"	Zones to be set in test mode: ??? ??? ??? ??? Start test: ↲	
Write zone no, (e.g. 001, 002, 003, 004)	Zones to be set in test mode 001 002 003 004	Press "↲" to start the test mode.
"↲"	Zones in test mode: 001 002 003 004 End test: ↲	LED "Test mode" (L8) will light up. Perform the tests.

The zone(s) will **remain in test mode until the test mode is terminated**. The test mode is terminated in this menu or automatically one hour after the latest alarm test.
You will be automatically logged out 15 minutes after the latest "action" (using any of the keys) but the zone(s) will **remain in test mode until the test mode is terminated**, see above.
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 conditions.
In the tested alarm point, the built-in LED will illuminate and the LEDs "Fire" (L1) in the FDCIE will illuminate for approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).
A detector in test mode is not able to generate a fault.

After 15 minutes **or** "ESC" and "Escape menu"	Zone 001 in test mode Zone 002 in test mode Zone 003 in test mode Zone 004 in test mode *(**Note:** See chapter "*Information Area Priority Order*", page 18, regarding priority order.)*	You are logged out but the zone(s) are still in test mode.
"Menu" Log in (see above), select menu H1, step down to this view.	Zones in test mode: 001 002 003 004 End test: ↵	Press "↵" to end test.
"↵"	Please wait....	
	Test of routing equipment?[68] No Yes	The LED "Test mode" is turned OFF.
Press "↵" (i.e. select "No") to bypass the routing equipment test. If so, the monthly test is completed, or Press "▼" and "↵" (i.e. select "Yes") to start the test (not recommended). If so, the following will happen in the system: The FDCIE "Fault tx" output will be de-activated (note that, this output is **activated** in normal state), indicated by the LED "Fault tx activated" (L13). 60 seconds count-down starts. After 30 seconds, also the FDCIE "Fire Brigade TX" output (and corresponding programmable outputs type "routing equipment") will be activated, indicated by the LED "Fire Brigade TX" (L3). After another 30 seconds, the test will be terminated and the outputs and LEDs will return to "normal".		
"▼" and "↵"	Test of routing equipment in progress. nnn seconds left.	"nn" starts at 060 and will count down to 000.
	Monthly test is completed! Press ↵	
"↵"	▒▒ menu H1 Perform monthly test H2	Scroll to another menu or press "ESC".

Note 1: During the test, the following information will be shown in all other FDCIE displays:

Zone 001 in test mode

Zone 002 in test mode

Zone 003 in test mode

Zone 004 in test mode

Note 2: If an alarm point (e.g. a manual call point) is in alarm state when the test mode is terminated, there will be a fire alarm activated.

Note 3: When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.

[68] Prior testing the routing equipment, the ASE must be isolated or set to test mode.

22 Disable or Re-enable (H2)[69]

A whole zone[70], one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B2. This function can be used for temporary disablement (e.g. building maintenance, 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.

An Addressable manual call point can be disabled (normally should not be disabled). However, when a whole zone is disabled, the addressable manual call points will not be disabled for safety reasons.

Up to 512 whole zones can be disabled via menu H2/B1.

Up to 200 alarm points (zones / addresses) can be individually disabled via menu H2/B1 (Alarm points disabled via time channels are not limited and must not be counted).

Up to 200 outputs can be individually disabled via menu H2/B2. Disabled output will stay in (or return to) the normal condition for the output respectively. (Collectively disabled outputs via menus H2/B3 – B4 are not limited and must not be counted).

Up to 200 Interlocking outputs can be individually disabled via menu H9/C3.

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

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

Don't forget to re-enable (via menus H2/B1-B2) or use automatic re-enablement for zones and alarm points.

Disablements are listed in menus H4/U1 & U2 from which it can also be printed.

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

Disablements are also shown in the display. An example:

```
Zone 001 disabled
dd-mm-yyyy   hh:mm

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

Note: See chapter "Information Area Priority Order", page 18, for priority order.
Disablements (and faults) are indicated by a 2-sec. beep when you close the CU door.

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

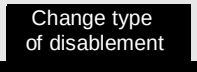
[70] When the zone control module is used, a whole zone can be disabled without entering the menu.

22.1 Zone or Zone Address (H2/B1)

When a whole zone is disabled, all alarm points within the zone are disabled.

Alarm points can be individually disabled

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
"↲"		- Via **menu B1,** a Zone or Zone Address or Zone Address "Smoke only" can be disabled. - A time for automatic re-enablement can be set. - Disabled zones and alarm points are shown in a Re-enable list.
"↲"	Disable Zone 000 Automatic re-enable: No Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **Zone** 000 and **Zone** 000..**address** 00.
"Change type of disablements"	Disable Zone 000 address 00 Automatic re-enable: No Change type of disablement	Write the zone number and address. To set an automatic re-enable time press "▼" and "►". Write the time (default is current time + 3 hours). Press "↲" to disable, which will be indicated with "√" and a beep. The zone will be automatically shown in the Re-enable list.
Write the zone number and address (e.g. 003, 01). "▼" "►" "↲"	Disable Zone 003 address 01 √ Automatic re-enable: No Yes, at 17:05 -- Re-enable list (1) ---------- Zone 003 address 01 auto. re-enable at 17:05 →| Change type of disablement	If the specified zone / unit is not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable ---------- Zone _ _ _ address _ _ Automatic re-enable: No Re-enable list (1) Zone 003 address 01 autom. re-enable at 17:05 	Select in the Re-enable list "▼" (in this example there is only one item) and press "↲". Re-enabled zone or zone / address will disappear from the list, indicated with a beep.
"↲"	Disable Zone 000 address 00 Automatic re-enable: No  	Disable (or Re-enable) another Zone, Zone / Address or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function 	Scroll to another menu or press "ESC" or "Escape menu".

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.

22.2 Output (H2/B2)

All programmable outputs in the FDCIE 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, see below.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B2.	B2 Output	Via menu B2, a loop unit output, C.U. output S0-S3 / R0-R1 and exp. board 4581 output can be disabled.
"↲"	Disable output Loop unit 000000 output 0 Change type of disablements	Use the soft key "**Change type of disablements**" to toggle between: **Loop unit output** **Control unit output S0-S3** **Control unit output R0-R1** **Exp. board output** Write loop unit technical number and output number and press "↲" to disable, which will be indicated with "√" and a beep. The output will be automatically shown in the Re-enable list
Write loop unit technical number and output number, (e.g. 000001 and 0). "↲"	Disable output Loop unit 000000 output 0 √ -- Re-enable list (1) ---------- Loop unit 000001 output 0 →| Change type of disablements	If the specified output does not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable output ---------- Loop unit _ _ _ output _ Automatic re-enable: No Re-enable list (1) Loop unit 000001 output 0 →| Change type of disablement	Select in the Re-enable list with "▼" (in this example there is only one item) and press "↲". Re-enabled output will disappear from the list, indicated with a beep.
"↲"	Disable output Loop unit 000000 output 0 Change type of disablements	Disable (or Re-enable) another output or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

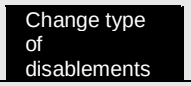
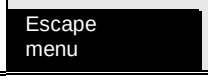
22.3 Output Type (H2/B3)

Outputs of the same type can be collectively disabled via menu H2/B3 in a selected Control Unit or in all Control Units.

Disabled output will stay in (or return to) the normal condition for the output respectively.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B3.	B3 Output type	Via menu B3, outputs of the same type can be collectively disabled in selected Control Unit or all.
"↲"	Disable output type Control outputs in Control unit 00 All Change type of disablements	Use the soft key "Change type of disablements" to toggle between: **Control** **Ventilation** **Extinguishing** **Interlocking** Write Control Unit no. when required. Press "↲" to disable which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable output type Control outputs in Control unit 00 All √ -- Re-enable list (1) ---------- All control outputs →| Change type of disablements	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable output type ---------- Control outputs in Control unit 00 All Re-enable list (1) All control outputs 	Select in the Re-enable list with "▼" (in this example there is only one item) and press "↲". Re-enabled type will disappear from the list, indicated with a beep.
"↲"	Disable output type Control outputs in Control unit 00 All  	Disable (or Re-enable) another type or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function  	Scroll to another menu or press "ESC" or "Escape menu".

22.4 Alarm Devices (H2/B4)

All outputs of type "Alarm device" can be collectively disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B4.	B4 Alarm devices	Via menu B4, outputs of type "Alarm device" can be collectively disabled in a selected Control Unit or all Control Units.
"↲"	Disable All alarm devices	Press "↲" to disable, which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable All alarm devices √ -- Re-enable list ---------- All alarm devices →|	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	Disable ---------- All alarm devices Re-enable list All alarm devices →|	Press "↲" to re-enable. Re-enabled type will disappear from the list, indicated with a beep.
"↲"	Disable All alarm devices	Disable (or Re-enable) another type or press "ESC".

"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm device B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

22.5 Routing Equipment (H2/B5)[71]

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

Outputs for routing equipment (Fire Brigade TX and Fault TX) can be disabled and re-enabled via this menu however disabling and re-enabling is always carried out via the ASE itself. Can be useful during an installation and test period, when only local alarms are required.

Disabled output for routing equipment is indicated by LEDs Fault / Disablements "General disablements" (L10) and "Fire Brigade TX" (L12).

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B5.	B5 Routing equipment	Via menu B5 the standard outputs (fire and fault) for routing equipment can be disabled.
"↲"	Disable Routing equipment Fire Fault	Use "◄", "►"to toggle between: **Fire** **Fault** Press "↲" to disable, which will be indicated with "√" and a beep. The "type" will be automatically shown in the Re-enable list
"↲"	Disable routing equipment Fire Fault √ -- Disabled routing equipment ---------- Fire alarm routing →|	Use the soft key "→|" to toggle between **Disable** and **Disabled**.

[71] Disable routing equipment from the FDCIE is not permitted, it must be disabled from the ASE itself.

"→|"	Disable routing equipment ---------- Fire Fault Disabled routing equipment Fire alarm routing 	Press "↲" to re-enable. Re-enabled routing equipment will disappear, indicated with a beep.
"↲"	Disable Routing equipment Fire Fault	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

22.6 Alert Annunciation (H2/B6)

Normal function:

The **AA** function for alarm points / zones programmed for **A**lert **A**nnunciation (via EBLWin) is normally enabled via a time channel, e.g. enabled daytime (during working hours) and disabled night time.

As an alternative, the **AA** function can be continuously enabled (always on).

The **AA** function can be disabled via this menu (H2/B6) i.e. the **AA** function will be turned off for the alarm points / zones programmed for **A**lert **A**nnunciation although the time channel is "on" or if they are programmed to be continuously enabled.

The **AA** function will remain off until re-enabled again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H2.	H2 Disable or re-enable	
"↲"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B6.	B6 Alert annunciation function	Alert Annunciation function can be disabled via menu B6
"↲"	Disable Alert annunciation	Press "↲" to disable, which will be indicated with "√" and a beep. The disablement will be automatically shown in the Re-enable list
"↲"	Disable Alert annunciation √ -- Re-enable list ---------- Alert annunciation off →|	Use the soft key "→|" to toggle between **Disable** and **Re-enable**.
"→|"	Disable ---------- Alert annunciation Re-enable list Alert annunciation off	Press "↲" to re-enable. Alert annunciation off will disappear from the list, indicated with a beep.

"↲"	Disable Alert annunciation	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

23 Set Calendar and Clock (H3)

The real time clock (RTC) component has a capacitor as a backup supply. When the Control Unit is turned on for the first time[72], only the date, time and day of the week required to be set. If required, the clock might be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct. Upon the completion of the commissioning work, the clock must be checked and corrected if required.

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

Note: If no changes required, press "ESC" instead of "↵" to return to menu H3.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H3.	H3 Set calendar and clock	
"↲"	DD=MM-YYYY hh:mm Monday Tuesday Wednesday Thursday Friday Saturday Sunday	The date & time shown is valid when this menu is opened. If required, change the date, time and/or weekday (press "▼" or "▲" to select the weekday). The "clock" starts again as from the date, time, etc. *shown in the display* when you press "↲". If no changes required, press "ESC" instead of "↲".
"↲"	H3 Set calendar and clock	Scroll to another menu or press "ESC".

23.1 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.

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

24 Present System Status (H4)

If a printer is mounted (an option for Control Unit FT1020G3), it is possible to get a print-out from some of the menus. In this case, the soft key "Print" (P6) is used.

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

24.1 Disablement (H4/U1)

This is a dynamic list of all disablements in the system. A disabled **zone** programmed with address 00 will be displayed as ZZZ-00. Disablements by time channels are listed in menu H4/U2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All disablements in the system, except disablements by time channels, will be shown in menu U1. Press "↲".
"↲"	Zone XXX address XX disabled dd-mm-yyyy hh:mm Zone XXX is disabled Automatic re-enable hh:mm dd-mm-yyyy hh:mm Alarm points disabled by time channel in Control Unit XX dd-mm-yyyy hh:mm .... Disablement 1 to 3 of 7 Print	If there are no disablements --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". (Information is shown about disablements by time channels.) If a printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U1 Disablement	Scroll to another menu or press "ESC".

24.2 Disablement by Time Channel (H4/U2)

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

Note: All other disablements are listed in menu H4/U1.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All disablements by time channels, will be shown in menu U2. Press "↲".
Scroll to menu U2.	U2 Disablement by time channel	
"↲"	Zone XXX address XX disabled by time channel Zone XXX address YY disabled by time channel. .... Number of disablement by time channel: 2	If there are no disablements --List is empty-- will be shown. It is a static list (up to 4 items per page) in which you can scroll with "▼" or "▲".
"ESC"	U2 Disablement by time channel	Scroll to another menu or press "ESC".

24.3 Open Doors (H4/U3)

If any door in the system is open, the door open symbol is shown in the symbol area of the display.

See also chapter "Open door" page 47.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	All open doors in the system will be shown in menu U3. Press "↲".
Scroll to menu U3.	U3 Open doors	
"↲"	Door open Control Unit 00 dd-mm-yyyy hh:mm Door open Control Unit 01 fire brigade panel 00 dd-mm-yyyy hh:mm .... Open door 1 to 2 of 2 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If a printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U3 Open doors	Scroll to another menu or press "ESC".

24.4 Sensor Values (H4/U4)

Momentary: Momentary value in this menu will be updated after every detector polling, i.e. approximately every 6 seconds.

Weekly in NORMAL Mode: The very first week average sensor value for the 430x and 440x detectors in **NORMAL mode** is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes, 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 AVANCED Mode: For the 440x detectors in **Advanced Mode** the "Weekly" value is 00.0%/m on delivery. It will be updated the very first time after 13 minutes. Thereafter, it will be calculated every 13 minutes but then will only be changed downwards if required. After 18 hours it can be changed downwards or upwards and after additional 18 hours (36 hours in total) 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 power is disconnected from the detector. 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, refer to the Technical Manual of FT1020G3.

Algorithm: shows the algorithm currently in use.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U4.	U4 Sensor values	
"↲"	Start sensor: 000000	Write the technical number and/or press "↲" to start as from sensor 000001.
"↲"	*For an Analog multi detector **4300 / 4400** in **NORMAL mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: X-XX Max: XX.X%/m Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C *For an Analogue heat detector **3308 / 3309** in **NORMAL mode**:* Sensor: 001-03 (technical address 000002) Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C	If there are no sensors (analogue detectors) when "↲" is pressed, the list view will not open. It is a list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out.

	*For an Analogue multi detector **4400** in **Advanced Mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: Xxxxxx Max: XX.X%/m Momentary: XX°C Min: XX°C Max: XX°C Print	
"↲"	Start sensor: 000000	Write another technical number and press "↲" or press "ESC".
"ESC"	U4 Sensor values	Scroll to another menu or press "ESC".

Note: During printing, "Print" will be replaced with "Abort printing".

24.4.1 Performance Factor:

The Performance factor can be 0.00 – 2.55.

The Performance factor is normally close to 0.00, which means that the detector is mounted in a "stable" environment. The momentary sensor values during 24 hours do not differ a lot from the week average sensor value.

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.

If some other short name is required, it can be changed in EBLWin. Up to six characters can be used.

24.4.2 Algorithms

Table 17 Algorithms and abbreviations in normal mode

Algorithm – Normal Mode Detectors 3308/3309, 430x and 440x	**Abbreviation**[73]
Normal sensitivity (3%/m) & Normal detection (15 s), **Default**	**N-15**
High sensitivity (2.4%/m) & Normal detection (15 s)	H-15
Low sensitivity (3.6%/m) & Normal detection (15 s)	L-15
Normal sensitivity (3%/m) & Slow detection (35 s)	N-35
High sensitivity (2.4%/m) & Slow detection (35 s)	H-35
Low sensitivity (3.6%/m) & Slow detection (35 s)	L-35
Heat algorithm, **Class A1**, **Default**	**A1**
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec[74]

[73] If some other short name is required, it can be changed in EBLWin. Up to six characters can be used.

[74] Analogue multi detector 4300 only.

Table 18 Algorithms for 4400 in advanced mode

Algorithm – Advanced Mode **Detector 4400**	**Abbreviation**
Normal area, default	Normal
Clean area	Clean
Cooking-Welding area	Welding
Heater area	Heater
Smoke-Steam area	Smoke

Table 19 Algorithms for 4401 in advanced mode

Algorithm – Advanced Mode **Detector 4401**	**Abbreviation**
Normal area	Normal
Clean area	Clean
Smoke-Steam area	Smoke

24.5 Sensors Activating SERVICE Signal (H4/U5)

When SERVICE signal is generated in the system, the search symbol is shown in the display's symbol area.

Regarding the SERVICE signal levels, see Technical / Programming Manual, chapter "SERVICE signal".

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

Note: SERVICE signal provides only information to indicate that the sensor has to be replaced soon with a new/clean sensor. After the replacement, the SERVICE signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S2)", page 133.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U5.	U5 Sensors activating SERVICE signal	
"↲"	Sensor, Zone ZZZ address AA needs service technical number xxxxxx 30-07-2015 09:09:15 Sensor, Zone ZZZ address AA needs service technical number xxxxxx 30-07-2015 19:09:35 Number of sensors: 2 Print	If there are no sensors activating service signal, --List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U5 Sensors activating SERVICE signal	Scroll to another menu or press "ESC".

Note: During printing "Print" will be replaced with "Abort printing".

24.6 Technical Warning (H4/U6)

A technical warning is an event that is neither a fire alarm nor a fault. It is information to indicate that an event has occurred as a result of activating a programmable input. The text message, shown in the FDCIE display, is user definable message (up to 40 characters). One or more activated technical warnings are indicated by in the display's symbol area.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U6.	U6 Technical warning	
"↲"	Technical warning text message 29-07-2015 09:09:15 (User definable text message) 29-07-2015 19:09:35 1 to 2 of 2 Print	If there are no technical warnings, --List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all items in the list.
"ESC"	U6 Technical warning	Scroll to another menu or press "ESC".

Note: During printing, “Print” will be replaced by “Abort printing”.

Technical warnings can be used to activate programmable output.

24.7 Event Log (H4/U7)

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

- Alarm log (alarm events, e.g. fire alarm, fire alarm reset, etc.)
- Interlocking log (only interlocking events)
- General event log (all other type of events)

The origin of the event, e.g. **CU00** (see below), may be originated from **EBLWin**, **EBLWeb** or **Ext#** (External system no. # connected via Web-server).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U7.	U7 Event log	
"↲"	Select event log: Alarm log Interlocking log General event log	Use "▼" or "▲" to select a log. (e.g. the "Alarm log".)
"↲"	Command: Reset all alarms 28-05-2014 09:25:30 CU00 FIRE ALARM zone 123 address 45 28-05-2014 09:09:15 CU00 FIRE ALARM zone 123 address 46 28-05-2014 09:07:01 CU00 Event 15 to 13 of 21 Print	If there are no events, --List is empty-- will be shown. The list is dynamic in which you can scroll with "▼" or "▲". The most recent event is on top of the list. If printer is mounted, the soft key "Print" will be visible. Press "Print" to select and print the events during the latest **hour, day, week, month** or **All**. Scroll with "▼" or "▲" to view more events.
"ESC"	U7 Event log	Scroll to another menu or press "ESC".

Note: During printing, "Print" will be replaced with "Abort printing".

24.8 Information (H4/U8)

This menu can be used to show the following information for the specific Control Unit you currently use:

Main board version: The S/W (software / firmware / system program) version downloaded to the Main board 5010.

MMI board version: The S/W (software / firmware / system program) version downloaded to the MMI board 5011.

Alarm counter: The alarm counter is increased with "1" every time the FDCIE enters a real "fire alarm condition" (i.e. fire alarm indication in the display, LEDs "Fire" are illuminating and the FDCIE buzzer is sounding). Alarms from zones in test mode will not be counted. The alarm counter starts at 000 and goes to 999. It can be reset to 000 via EBLWin (Control unit menu "Reset alarm counter…"). The value will be retained also after the FDCIE has been completely powered off.

Max. number of allowed alarm points that can be used in this Control Unit, i.e. 512 or 1020. (Configured number of alarm points.)

Serial number: The manufacturer's serial number (year YY, week WW, number of the main board NNN) used e.g. when upgrading max. no. of allowed alarm points.

Control unit number: 00-29.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H4.	H4 Present system status	
"↲"	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U8.	U8 Information	
"↲"	Main board version: 2.4.0 MMI board version: 2.4.0 Alarm counter: nnn Max number of allowed alarm points: xxx Serial number: xxxxxxx Control unit: NN Print	If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out.
"ESC"	U8 Information	Scroll to another menu or press "ESC".

25 Service (H5)

Menu H5 can be used to display certain information to help during commissioning an installation or maintaining existing system (e.g. when you power up and when you are programming a Control Unit / system).

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

Some tasks for service technician can be carried out via a PC[75] and EBLWin:

- Download / backup (upload) the Site Specific Data (SSD)
- Create and download software (S/W), settings, configurations, Control Unit and system properties.
- Create and download the user definable text messages (alarm texts) shown in the display of the Control Unit and Display units (if used).

Note: To be able to log on to an FT1020G3 FDCIE via a PC using EBLWin, the PC has to be provided with an EBLWin key (5094). This USB device has a number (a key) required for the log on.

Via a PC[76] and **TLON Manager** you can create and download (install) the TLON network configuration (TLON project).

[75] Connected to the "USB" connector in the front panel.

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

25.1 Calibration of Supervised Outputs (H5/A1)

Supervised (monitored) outputs:

- Voltage outputs (S0-S3) in each Control Unit.
- Voltage outputs (VO0-VO1) in the COM loop output unit 3364.
- Voltage outputs (0-2) on the I/O exp. board 4583.

When all alarm devices (sounders, etc.) are connected, including required end-of-line devices and when the SSD is downloaded, a **calibration** of the supervised outputs must be performed.

Function: If the actual value at any time differs from the calibrated value ± a small tolerance or if the calibrated value is outside the calibration range, a fault will be generated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
"↲"	Start calibration of supervised outputs (press ↲)	
"↲"	Calibration completed successfully √	
"ESC"	A1 Calibration of supervised outputs	Calibration is ready. Scroll to another menu or press "ESC".

Note: After the calibration is completed, it is recommended to do a "Safe shut down of Control Unit (H8/S5)" page 136. This will save the SSW data (e.g. the calibration values) in a Flash ROM.

END-OF-LINE DEVICES

Control unit outputs S0-S3: One end-of-line resistor (33K) in the last unit or one resistor (33K) in up to five units.

4583 outputs 0-1: Calibration value range 1K-50K.

3364 outputs (VO0-VO1): One end-of-line capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

25.2 Sensitive Fault Detection Mode (H5/A2)

During commissioning, the "Sensitive fault detection mode" can be used to enable the commissioning personnel to detect the faults faster than normal mode. The time delay for each fault will then be reduced, i.e. you may find some faults now instead of later on.

When the "Sensitive fault detection mode" is turned on, it is indicated by the LED **Routing equipment** "Fault TX activated" (L13), "Fault" output for routing equipment is "activated" and the search symbol appears in the symbol area of the display.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A2.	A2 Sensitive fault detection mode	
"↲"	Sensitive fault detection mode is not active Press ↲to activate	
"↲"	 Sensitive fault detection mode was activated Press ↲to deactivate	
"↲"	Sensitive fault detection mode is not active Press ↲to activate	
"ESC"	A2 Sensitive fault detection mode	Scroll to another menu or press "ESC".

25.3 Service Mode for COM-Loop (H5/A3)

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

A voltmeter can be used to check the voltage / voltage drop on different segments 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 the power of FT1020G3 is supplied via the backup battery only, since the battery voltage can be different (compared with the power supply voltage) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED **Fault / Disablements** "General disablements" (L10) and the symbol 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 when a COM loop is in service mode, the loop will be disabled and a fault message will be displayed.

FAULT: Short-circuit SCI A <-> SCI B,
loop x, Control Unit xx

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A3.	A3 Service mode for COM-loop	
"↲"	Service mode for loop: 0 CU: 00 A Direction B Direction Both	Write loop and Control Unit numbers. Use "▼" or "▲" to scroll to the required direction(s) and press "↲".
"↲"	Service mode Control Unit 00 COM-loop 0 Supplied from A-direction only	When you leave this menu by pressing "ESC" or "↲" the service mode will be terminated, i.e. the communication will return to the normal mode.
"ESC" or "↲"	A3 Service mode for COM-loop	Scroll to another menu or press "ESC".

25.4 Display Current Consumption in Unit (H5/A4)

25.4.1 Power Supply (Control Unit)

Voltage: The 24V measured by the CPU on the main board. Corresponds to the output voltage at the power supply outputs on connector J3.

Earth voltage: Measured from 0V (connector J4:2) to earth.

Current from power supply: The total current consumption (including the charging current at 24V) for the selected control unit (FDCIE) when it is connected to the mains (230 VAC), i.e. this function is not working by battery backup.

25.4.2 Battery

Voltage: The battery voltage at connector J4:4-5.

Charging current: The battery charging current for the selected control unit (FDCIE). Also battery temperature and "low capacity voltage" will be shown.

Temperature: The temperature detected by the battery temperature sensor.

Resistance in battery circuit: During the battery capacity check the resistance I the battery circuit is measured. A resistance > 500 mΩ will result in a "Low battery capacity" fault. Checked every 4th hour.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A4.	A4 Display current consumption in Control Unit	
"↲"	Select Control Unit: : 00 (press ↲)	Write Control Unit number and press "↲".
"↲"	Please wait.....	
	No reply from Control Unit.....	If the Control Unit is not exist or doesn't respond.
	Power supply (Control Unit 00) Voltage: xx.xx V Earth voltage: xx.xx V Current from power supply: xxx mA Battery Voltage: xx.xx V Charging current: x mA Temperature xx°C Resistance in battery circuit: xxxxx mΩ	Information is automatically updated every 5 second.
"↲" or "ESC"	A4 Display current consumption in unit	Scroll to another menu or press "ESC".

Note: If you get “No reply from control unit.....” the control unit doesn't exist or doesn't answer.

25.5 Display Current Consumption COM-loop (H5/A5)

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

Note: very small current consumption (< 10 mA) cannot be presented correctly / precisely since the accuracy is ±5 mA.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A5.	A5 Display current consumption on COM-loop	
"↲"	Display current consumption on COM-loop: 0 Control Unit: 00 (press ↲)	Write loop number and Control Unit number and press "↲".
"↲"	Please wait.....	
	No reply from Control Unit..... Current consumption on COM-loop: 0 Control Unit 00 is xxxx mA	If the Control Unit is not exist or doesn't respond.
		The current consumption accuracy is ±5 mA. Information is automatically updated every 5 second
"↲" or "ESC"	A5 Display current consumption on COM-loop	Scroll to another menu or press "ESC".

Note: If you get “No reply from control unit.....” the control unit don't exist or don't answer.

25.6 Display Statistics for Communication (H5/A6)

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

Number of pollings is the number of pollings / "questions" sent out by the Control Unit to all the units connected on the COM loop.

Parity fault is the received number of parity faults and % (faults in relation to pollings). **Number of bit faults** is the received number of bit faults and % (faults in relation to pollings).

No answer is the received number of answer faults / no answers and % (faults in relation to pollings).

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

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

All values are set to "0" after restart and/or after re-connection of COM loop (via menu H8/S1).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A6	A6 Display statistics for communication	
"↲"	Display statistics for COM-loop: 0 Control Unit: 00	Write loop number and Control Unit number and press "↲".
"↲"	Please wait.....	
	No reply from Control Unit.....	If the Control Unit is not existing or doesn't respond.
	Number of pollings: nnnnnnn Parity fault: 000000 00.0% Number of bits fault: 000000 00.0% No answer: 000000 00.0% Bit length fault: 000000 00.0%	**Note:** The values are not live updated.
"↲" or "ESC"	A6 Display statistics for communication	Scroll to another menu or press "ESC".

The information is automatically updated every 5 seconds

25.7 Activate Address Setting Mode for DU (H5/A7)

This function can be used by commissioning / service technicians to activate the address setting mode[77] in the following Display Units connected to the FDCIE:

- External Presentation units 1728
- Alert Annunciation units 1736

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

Note: The units should be in operation and in quiescent condition, i.e. the units should already have an address.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A7	A7 Activate address setting mode for DU	
"↲"	Activate address setting mode for DU: Control unit: 00, display unit: 00 All	Write Control Unit number, and the unit's address or press "►" to select "All" (i.e. all display units on the selected Control Unit).
"↲"	Address setting mode for display unit 00, Control Unit 00 activated	The address can now be edited in the display unit (DU) respectively.
"↲" or "ESC"	A7 Activate address setting mode for DU	Scroll to another menu or press "ESC".

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

[77] Can as an alternative be done via jumper "J4" inside the D.U. respectively.

25.8 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.

For more information, see the wireless technical description.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A8	A8 Setup wireless detector	
"↲ "	Set base station mode Set base station 000000 to Register Unregister Install	Write the technical number for the Base station. Select the required mode. Press "↲ ". Base station in Register mode is indicated with "√" and a beep. It will be shown in the Base station mode list
E.g.: "000001" "Register"	Set base station mode Set base station 000000 to Register Unregister √ Install -- Base station mode (1) ---------- Register, base station 000001 →	If the specified Base station doesn't exist, it will be indicated by "X" instead of "√" and a beep. Use the soft key "□|" to toggle between "Set base station mode" and the "Base station mode" list.

"□|"	Set base station mode Set base station ------ to Register Unregister Install -- Base station mode (1) ---------- Register, base station 000001 	Select a Base station in the list and press "↲ " to go from Register mode back to Normal state. The Base station will disappear from the list, indicated with a beep.
"↲ "	Set base station mode Set base station ------ to Register Unregister Install	The same procedure is valid for the Unregister and Install modes. Press "ESC" to go back to menu "A8".
"ESC".	A8 Setup wireless detector	Scroll to another menu or press "ESC".

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.

25.9 SSD Information (H5/A9)

SSD name: as written in the EBLWin dialog box "System Properties" (Name).

Downloaded: date and time when the SSD was downloaded.

User: 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: (i.e. country specific functions, default EBLWin settings, etc.) is set in conjunction with the installation of EBLWin.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H5.	H5 Service	
"↲"	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in Control Unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 Setup wireless detectors A9 SSD information	
Scroll to menu A8	A9 SSD information	
"↲"	SSD name: Xxxxxxxxxxxxxxx Downloaded: yyyy-mm-dd hh:mm User: Nnnnnnn Computer: Ccccccccccccc Domain: Ddddddddddd EBLWin key: 1234567890 Convention: XXX Print	If printer is mounted the soft key "Print" will be visible. Press "Print" to print the SSD information.
"↲" or "ESC"	A9 SSD information	Scroll to another menu or press "ESC".

26 FAULT Acknowledge (H6)

Regarding fault indication, etc., see chapter "Fault", page 61 See also chapter "Fault acknowledge", page 73.

All faults and the status / action are stored in the event log and can be listed, see chapter "Event log (H4/U7)", page 115.

Up to 300 faults in menu H6 can be listed:

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

The most recent fault is shown on the top of the list

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H6.	H6 FAULT Acknowledge	
"↲"	FAULT: Low battery capacity, Control Unit 00 dd-mm-yyyy hh:mm FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) dd-mm-yyyy hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) dd-mm-yyyy hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	If there are no faults --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible. Press "Print" for a print-out of all faults during the latest: **hour** **day** **week** **month** **All** To acknowledge a fault, select it and press "↲". The selected fault has a boarder around it.
"↲"	FAULT: Low battery capacity, Control Unit 00 dd-mm-yyyy hh:mm /Acknowledged FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) dd-mm-yyyy hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) dd-mm-yyyy hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	A corrected / serviced fault that is acknow-ledged will disappear from this list.
"ESC"	H6 FAULT Acknowledge	Scroll or press "ESC".

27 Perform Zone Test (Test mode) (H7)

Zones can be tested via menu H1, refer to the maintenance standard AS1851 for more information in regards to the requirements. However, it is also possible to perform a zone test via menu (H7). Up to 100 zones can be set in test mode.

In test mode, only the alarm points are tested, i.e. no outputs (e.g. OWS or sounders) will be activated during the test (Alarm devices can be tested via menu H8/S4 and any output via menu H8/S8 or via EBLWin (when you are logged on).

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

See also chapter "Information Area Priority Order", page 18.

One or more zones in test mode are indicated by the LED "Test mode" (L8). The green polling LED in the 440x detectors will be turned off in test mode.

The zones are set one by one in test mode and the test mode has to be terminated for each zone one by one.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H7.	H7 Perform ZONE TEST	
"↲"	Set in test mode Zone 000	
Write the zone number (e.g. 001). "↲"	Set in test mode Zone 001 √ -- End test mode ---------- Zone 001 →|	Press "↲" to start the test mode. Indicated by "√" and a beep. If the specified zone is not exist, it will be indicated with "X" instead of "√" and a beep. All zones set in test mode will be shown in the "End test mode" list. Use the soft key "→|" to toggle between **Set in test mode** and **End test mode list**.
"→|"	-- Set in test mode ---------- Zone _ _ _ √ End test mode Zone 001 →|	After the testing, select a zone in the "End test mode" list and press "↲". The test mode has to be ended for all zones.

The zone(s) will **stay in test mode until the test mode is terminated**. The test mode is terminated in this menu or automatically after one hour. You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will **stay in test mode until the test mode is terminated**, see above. 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 LEDs "Fire" (L1) in the FDCIE will light up for approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM). An detector in test mode will not be able to generate a fault.		
"↲" for each zone to end the test mode.	Set in test mode Zone 000	No zones in test mode. Set new zones in test mode or press "ESC".
"ESC"	H7 Perform ZONE TEST	The LED "Test mode" (L8) is turned OFF. If more zones are to be tested, continue as above. If not, scroll to another menu or press "ESC".

Note 1: During the test, the following information will be shown in all other FDCIE displays:

Zones 001 in test mode

Zones 002 in test mode

Etc.

Note 2: If an alarm point (e.g. a manual call point) is in alarm state when the test mode is terminated, a fire alarm will be activated.

Note 3: When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested, in test mode.

28 Maintenance (H8)

Password for Service / Maintenance:

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

28.1 Disconnect / Reconnect Loop / Zone Line Input (H8/S1)

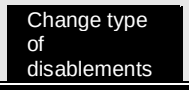
Before physical connection / disconnection of loop units, etc. the loop (or zone line input) must be disconnected (voltage free) in order to avoid any damage to the units or the FDCIE, i.e. there will be no voltage on the "loop" or the zone line input.

Zone Line Input requires 8 zones Expansion Board 4580 in the Control Unit or an Addressable multipurpose I/O unit 3361 connected on a COM loop.

One or more disconnected "loops" are indicated by LED **Fault / Disablements** "General disablements" (L10), the symbol is flashing and listed in menu H4/U1.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	Via menu S1 a COM loop, a zone line input on Expansion Board and an addressable zone interface input can be Disconnected / Re-connected
"↲"	Disconnect COM loop 0, Control Unit 00 Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **COM loop** **Zone Line Input** (exp. board) **Zone Interface Input** (loop unit) to disconnect, which will be indicated with "√" and a beep.
Write COM loop number and Control Unit number. "↲"	Disconnect COM loop 0, Control Unit 00 √ -- Re-connect list (1) ---------- COM loop 0, Control Unit 00 →| Change type of disablements	The loop will be automatically shown in the Re-connect list. If the specified loop etc. is not exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between the **Disconnect** and **Re-connect list**.

"→|"	-- Disconnect ---------- COM loop _, Control Unit _ _ Re-connect list (1) COM loop 0, Control Unit 0 	Select in the Re-connect list with "▼" (in this example, there is only one item) and press "↲". Re- connected loop will disappear from the list, indicated with a beep.
	Disconnect COM loop 0, Control Unit 00  	Disconnect (or Re-connect) another "loop" or press "ESC".
"ESC"	S1 Dis- / Re-connect loop / zone line input	Scroll to another menu or press "ESC".

28.2 Acknowledge SERVICE Signal (H8/S2)

When SERVICE signal is generated in the system, the search symbol is shown in the display's symbol area. See also chapter "Sensors activating SERVICE signal (H4/U5)", page 113.

Sensor = analogue smoke detector.

Only 430x, 4400 and 4401 sensors in NORMAL mode can be acknowledged. When service signal from such a sensor (smoke detector) is acknowledged, the sensor is given a default week average sensor value (same as for a new / clean sensor, i.e. "1" = 0.1 %/m). **First** replace the sensor and **then** acknowledge the service signal **as soon as possible**. The first week average sensor value after acknowledge will be calculated within one hour, then each week.

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

Note: If a sensor 430x and 440x in NORMAL mode is replaced without having generated service signal, it has to be reset to the default week average sensor value via menu H8/S3, page 134.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S2.	S2 Acknowledge SERVICE signal	
"↲"	Sensor, Zone ZZZ address AA needs service technical address xxxxxx 28-05-2014 09:09:15 Sensor, Zone XXX address AA needs service technical address xxxxxx 28-05-2014 19:09:35 Sensor 1/2 is selected Previous page / Next page	If there are no sensors --List is empty-- is shown. This is a dynamic list in which you can scroll. The most recent service signal / sensor is shown on top of the list. Use "▼" or "▲" to select a sensor (the selected sensor has a border). Press "↲" to acknowledge the sensor.
"↲"	Sensor, Zone XXX address AA needs service technical address xxxxxx 28-05-2014 09:09:35 Sensor 1/1 is selected Previous page / Next page	The acknowledged sensor disappears from the list. Continue as above or press "ESC".

"ESC"	S2 Acknowledge SERVICE signal	Scroll to another menu or press "ESC".

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

28.3 Clear Weekly Average (H8/S3)

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. It is possible to clear the week average sensor value for each sensor individually via this menu.

Note: First, replace the sensor and then clear the week average value as soon as possible. Authorised service personnel only, must do this. Using the function incorrectly may cause nuisance fire alarms.

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S3.	S3 Clear weekly average	
"↲"	Clear weekly average zone: 000 address: 00 (press ↲)	Write the required zone and address and press "↲".
Write the zone and address numbers, (e.g. 001 and 01). "↲"	Weekly average zone 001 address 01 cleared	
"ESC"	S3 Clear weekly average	Continue as above or scroll to another menu or press "ESC".

28.4 Test of Alarm Devices (H8/S4)

The programmable outputs of type "Alarm device" can be collectively activated via this menu (H8/S4), which allows for the alarm devices to be tested. This procedure includes Addressable siren 3377 / 4477 and Addressable sounder base 3379, wireless detector 4611, and all alarm devices 4480, 4481, 4482, 4487 and OWS.

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

One or all Control Units can be selected. When the test starts, the alarm devices will sound continuously (steady) for approx. 5 seconds, be silent for approx. 25 seconds, sound for approx. 5 seconds and so on.[78]

Note: Disabled and silenced alarm devices will also be tested. The test will continue for one hour if not terminated via this menu (H8/S4) or if a fire alarm is activated in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S4.	S4 Test of alarm devices	
"↲"	Test of alarm devices Control Unit: 00 All Press ↲ to start test.	Write Control Unit number or press "►" for "All". Press "↲" to start the test.
"↲"	Test of alarm devices, Control Unit 00 in progress. Press ↲ to end test	The test will continue for one hour if not stopped via this menu (S4) or if a fire alarm is activated in the system. Press "↲" to terminate the test.
"↲"	Test of alarm devices ended. Press ↲ to return to menu	
"↲"	S4 Test alarm devices	Scroll to another menu or press "ESC".

[78] For the alarm devices 3377/ 4477 and 3379, the tone with the highest priority level (and type "alarm device") will be automatically selected.

28.5 Safe Shut Down of Control Unit (H8/S5)

It's not recommended to power down a Control Unit (i.e. no 230 V_{AC} and no battery) without first performing a safe shut down of the Control Unit. Safe shut down will save the SSW in a Flash ROM and put the CPUs at rest. See also chapter "Restart", page 88. If no safe shutdown is performed, a fault ("FAULT: Read/write site data (SSW), CU xx") may be generated when you power up the Control Unit again.

It's highly recommended to do a safe shut down after completing the commissioning of an installation and calibrating the supervised outputs, changing passwords etc. in order to save the new valid values and codes.

If safe shut down is not done, it might also generate a fault when you power up the control unit again.

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

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

Note: By restart and power down, the Fault TX output(s) will be "activated".

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S5.	S5 Safe shut down of Control Unit	
"↲"	Shut down Control Unit 00? No Yes	Write Control Unit number and press "▼" to select "Yes".
"▼" "↲"	Ready for shut-down, break the power. Automatic restart within xxx seconds! ***xxx** will start at 300 seconds and countdown to 000 before the Control Unit will restart automatically. During the countdown the buzzer will start sounding since the communication between the Main and MMI boards has stopped. (Can be silenced via push button "Silence buzzer".)*	The SSW is now saved and the Main board and MMI board CPUs are at rest. <u>You can now power down the Control Unit.</u> If not, the Control Unit will restart automatically after 300 seconds (5 minutes).
Power off / Power on <u>or</u> after 5 min.	FAULT: Restart Control Unit 00, code 50, address 0 dd-mm-yyyy hh:mm /Serviced FAULT: Restart Control Unit 00, code 00, address 0 dd-mm-yyyy hh:mm /Serviced Fault 1/2 is selected Print | Previous page | Next page	After a restart (see page 88), two restart faults will be always exist. The code will be 00 / 50 after Power off / Power on restart and 03 / 53 after a countdown restart, address 0. This fault has to be acknowledged, see chapter "FAULT Acknowledge (H6)", page 128.

Note: Prior the very first *safe shut down,* 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 FDCIE is powered up, the data stored in the Flash ROM will be used.

WARNING: If *safe shut down* is not performed just before a FDCIE power down, then when powered on, the Flash ROM may be empty (default setting will be used) or the stored data may be old / not valid.

28.6 Activate Address in Alarm Mode (H8/S6)

One alarm point (zone-address), not a whole zone, can be set in alarm. It will be presented in this Control Unit as a fire alarm, the built-in LED in the alarm point (detector) will be turned on to indicate the alarm and all outputs, standard and programmable, which would have been activated by a real fire alarm from the same alarm point, will now be activated.

In all other Control Units in the system, the alarm will be presented as a Test mode alarm.

Note: A detector programmed for "Quiet alarm" will activate a Quiet alarm instead of a fire alarm

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S6.	S6 Activate address in alarm mode	
"↲"	Select zone: 000 address: 00 (press ↲)	
Write the zone number and address e.g. 123-45. "↲"	Select zone: 123 address: 45 (press ↲)	
"↲"	First alarm: 123-45 1 zone in alarm Latest alarm: 123-45 --- Select zone: 123 address: 45 (press ↲)	Press "ESC" to exit this menu. The fire alarm has to be reset as a normal fire alarm (press "Reset").
"ESC" "Reset"	S6 Activate address in alarm mode	Scroll to another menu or press "ESC".
	First alarm: 123-45 Alarm number 1(of 1) Test mode Zone Address 123-45 SMOKE Alarm text for 123-45 Menu	This manually activated fire alarm will be presented in the display of all Control Units and indicated by the LEDs "Fire" (L1) and "Fire Brigade TX" (L4). This manually activated alarm must be reset by the push button "Reset" (P3)

28.7 Synchronise the Control Units (H8/S7)

After any Control Unit restart, synchronisation will start automatically in a network system.

Synchronisation can also be started via EBLWin and this menu (H8/S7).

The Control Units must be synchronised when the following fault message is shown:

> FAULT: Control unit xx has wrong information

During the synchronisation, the following information will be displayed in all Control Units in the system:

↻ (rotating clockwise) = Synchronisation in progress for the Control Unit (CU).

√ = Synchronisation completed successfully for the Control Unit (CU).

<Blank> = Synchronisation failed for the Control Unit (CU).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33..
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S7.	S7 Synchronize the Control Units	
"↲"	Start synchronization? No Yes	Press "▼", to select "Yes". Press "↲" to start the synchronisation.
"▼" "↲"	Synchronisation in progress... CU00 ↻ CU10 ↻ CU20 ↻ CU01 ↻ CU11 ↻ CU21 ↻ CU02 ↻ CU12 ↻ CU22 ↻ CU03 ↻ CU13 ↻ CU23 ↻ CU04 ↻ CU14 ↻ CU24 ↻ CU05 ↻ CU25 ↻ CU06 ↻ CU26 ↻ CU07 ↻ CU17 ↻ CU27 ↻ CU08 ↻ CU18 ↻ CU28 ↻ CU09 ↻ CU19 ↻ CU29 ↻	During the synchronisation, the progress symbol for each Control Unit is shown. In the example shown, CU15 & CU16 are not programmed.
After a while.	Synchronisation completed dd-mm-yyyy hh:mm	

	CU00 √ CU10 √ CU20 √ CU01 √ CU11 √ CU21 √ CU02 √ CU12 √ CU22 √ CU03 √ CU13 √ CU23 √ CU04 √ CU14 √ CU24 √ CU05 √ CU25 √ CU06 √ CU26 √ CU07 √ CU17 √ CU27 √ CU08 √ CU18 √ CU28 √ CU09 √ CU19 √ CU29 √	Date and time for the latest completed synchronisation. The symbol "√" means that the synchronisation process has been completed successfully. If the symbol "√" is missing, the synchronisation is failed.
"ESC"	Start synchronization? No Yes	
"ESC"	S7 Synchronize the Control Units	Scroll to another menu or press "ESC".

28.8 Activate / Reset Outputs (H8/S8)

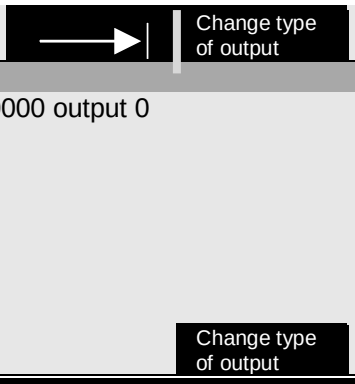
Via this menu, a loop unit output, control unit output and expansion board output can be activated and reset.

Any output can be activated, i.e. the function can be tested (Can also be done via EBLWin). This is including Addressable siren 3377 / 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 (not true). If the control expression is true when you reset the output via menu H8/S8, the output will remain activated until the control expression becomes false (not true) again.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H8.	H8 Maintenance	
"↲"	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of Control Unit S6 Activate address in alarm mode S7 Synchronize the Control Units S8 Activate / Reset outputs	
Scroll to menu S8.	S8 Activate / Reset output	Via menu S8, loop unit output, Control Unit output and Expansion Board output can be activated and reset.
"↲"	Activate Loop unit 000000 output 0 Change type of output	Use the soft key "Change type of output" to toggle between: **Loop unit output** **Control unit output** (S0-S3 & R0-R1) **Exp. board output.** Write loop unit technical number and output number and press "↲" to activate, which will be indicated with "√" and a beep. Output will be shown in the Reset list
Write loop unit technical number and output (e.g. 000001, 0). "↲"	Activate Loop unit 000000 output 0 √ -- Reset list (1) ---------- Loop unit 000001 output 0	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Reset list**.
"→|"	-- Activate ---------- Loop unit _ _ _ _ _ _ output _ Reset list (1) Loop unit 000001 output 0	Select in the Reset list with "▼" (in this example there is only one output) and press "↲". The reset output will disappear from the list, indicated with a beep.

		
"↲"		Continue as above or press "ESC".
"ESC"	S8 Activate / Reset output	Scroll to another menu or press "ESC".

29 Interlocking Outputs and Inputs (H9)

29.1 Activated Interlocking Outputs / Inputs (H9/C1)

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
"↲"	C1 Activated interlocking outputs / inputs	Activated interlocking outputs and inputs can be listed in menu C1.
"↲" Depending on activated outputs, and/or inputs, the following will be shown:	Interlocking area AAA point PP output active User definable text message (if programmed) dd-mm-yyyy hh:mm Interlocking area AAA point PP input/output active User definable text message (if programmed) dd-mm-yyyy hh:mm Interlocking area AAA point PP input active User definable text message (if programmed) dd-mm-yyyy hh:mm 3 of 5 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted, the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	C1 Activated interlocking outputs / inputs	Scroll to another menu or press "ESC".

29.2 Activate / Deactivate Interlocking Output (H9/C2)

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

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

Note: The output will be deactivated if its control expression still true and can't be activated again until the control expression has been false. Also a latched output will be deactivated.

If an interlocking output is activated via its control expression and with latching output selected (in EBLWin), the output **must** be deactivated via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C2.	C2 Activate / deactivate interlocking output	
"↲"	Activate Interlocking output area: 000 point: 00	Write area number and address and press "↲" to activate, which will be indicated with "√" and a beep. The output will directly be shown in the Deactivate list.
Write the area number and point (e.g. 001 and 01. "↲"	Activate Interlocking output area: 001 point: 01 √ -- Deactivate list (1) ---------- Interlocking output area: 001 point: 01 	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Deactivate list**.
"→|"	-- Activate ---------- Interlocking output area: _ _ _ point: _ _ Deactivate list (1) Interlocking output area: 001 point: 01 	Select in the Deactivate list with "▼" (in this example there is only one output) and press "↲". The deactivated output will disappear from the list, indicated with a beep.
"↲"	Activate Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C2 Activate / deactivate interlocking output	Scroll to another menu or press "ESC".

29.3 Disable / Re-Enable Interlocking Output (H9/C3)

Interlocking outputs (Type = Interlocking) can be individually disabled via this menu (and collectively via menu H2/B3).

The "Interlocking Combination" (Area / Point) is to be entered to disable the output. Up to 100 interlocking outputs can be disabled in the whole system.

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

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

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲"	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C3	C3 Disable / re-enable interlocking output	Interlocking outputs can be disabled / re-enabled via menu C3.
"↲"	Disable Interlocking output area: 000 point: 00	Write area number and address and press "↲" to disable, which will be indicated with "√" and a beep. The output will be automatically shown in the Re-enable list.
Write the area number and point (e.g. 001 and 01). "↲"	Disable Interlocking output area: 001 point: 01 √ -- Re-enable list (1) ---------- Interlocking output area: 001 point: 01 →|	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	-- Disable ---------- Interlocking output area: _ _ _ point: _ _ Re-enable list (1) Interlocking output area: 001 point: 01 →|	Select in the Re-enable list with "▼" (in this example there is only one output) and press "↲". The re-enabled output will disappear from the list, indicated with a beep.
"↲"	Disable Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C3 Disable / re-enable interlocking output	Scroll to another menu or press "ESC".

30 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). When a password is required to be changed via EBLWin, a new SSD download must be downloaded.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 33.
Scroll to menu H10.	H10 Change password	
"↲"		
"↲"	Log in name Password: ▮ New password: Verify:	
Enter the old password, the new password and again the new password.	Log in name Password: ****** New password: ****** Verify: ******	The six digits are replaced by ****** in the display.
	Incorrect password, NO change or Password changed	
"ESC"	▒▒▒ menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change password Escape menu	The password is now changed to the new one. Scroll to another menu or press "ESC" or "Escape menu".

Note: After change of password, it is recommended to do a "Safe shutdown of the Control Unit" (see menu H8/S5). This will save the SSW data (e.g. the new password) in a Flash ROM (see page136).

31 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/B5 (or via an open door, see chapter "Open door" page 47. However, in Australia the routing equipment must be isolated via the ASE.

Regarding the fault condition, see chapter "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 5010). The following fault message is to be shown:

FAULT: Battery not connected CU xx

Note: xx is dependent on Control Unit (xx=00-29).

- Re-place the fuse and acknowledge the fault (menu H6).
- Remove fuse F4 on the Main board 5010.

The following fault message is to be shown:

FAULT: Supervised output 0, CU xx
Note: xx is dependent on Control Unit (xx=00-29).

31.1 Replacing Printer Paper

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

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

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

Change the paper roll as follows:

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

31.2 Replacing a TLON Connection Board and/or the Main Board

In a TLON network programming, some unique data is stored in a memory on the 5090 TLON connection board and some stored in a memory on the 5010 main board.

Replacing a TLON connection board 5090

After replacing the board:

- In TLON Manager version 1.2 do "Replace", "Update" and "Save".
- In TLON Manager version ≥ V2.0 do "Replace" and "Update" ("Save" is automatically done).

Replacing both a TLON connection board 5090 and also the Main board 5010

After replacing the boards:

- In TLON Manager version 1.2 do "Replace", "Update" and "Save".
- In TLON Manager version ≥ V2.0 do "Replace" and "Update" ("Save" is automatically done).

Replacing the Main board 5010

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

- In TLON Manager version 1.2 do "Update" and "Save".
- In TLON Manager version ≥ V2.0 do "Update" ("Save" is automatically done).

31.3 Battery Maintenance

The batteries 2 x 12 V (battery size is dependent on the backup requirement), are placed inside the Control Unit. Larger batteries can be placed in a separate battery cabinet attached to the FT1020G3 cabinet.

The Control Unit 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'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.

32 How to Avoid Nuisance Fire Alarms

We all realise when life, buildings, production facilities, etc. should be protected, 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 troubles 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 it still influences the smoke detectors (sensors).

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc.

Warning: Be careful when smoke detectors (sensors) are mounted near / close to such activities.

Special environments

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 FT1020G3), 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.
- Two-zone or two-unit dependent (co-incidence) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. FT1020G3), the affected detectors can be individually disabled (or whole zones) for temporary work in the premises. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors / zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2/B1-B2). Automatic re-enabling can be used. Zone 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.

33 Block Wiring Diagram

All drawings and connection diagrams quoted in this manual are shown on Table 20. These drawings are subject to change without notice, as are other technical features and data, resulting from continual development and improvement.

Table 20 Other Drawing Lists

Item	Drawing No.	ssue	Description
1	F725-01	1	FT1020G3 Block wiring diagram Sheet 1
2	F725-02	2	FT1020G3 Block wiring diagram Sheet 2
3	F726	1	FT1020G3 Main Board 5010
4	F727	1	FT1020G3 MMI Board 5011
5	F728	2	4580 - 8 Zone Expansion Board
6	F729	2	4581 - 8 Relay Expansion Board
7	F730	2	4582 - I/O Matrix Board
8	F731	2	4583 - 5 Inputs 3 Outputs Expansion Board
9	F732-01	2	FT1020G3 5010 AC & DC Power Connections
10	F732-02	1	FT1020G3 5010 Programmable Inputs & Outputs
11	F732-03	1	FT1020G3 5010 External Communications
12	F733	2	COM Loop Units Connection Diagram
13	F734	2	Web-Server II1598 Connection Diagram
14	F735	2	3361 Addressable Multi-purpose Module
15	F737	2	3364 / 3366AU Connection Diagram
16	F738-01	2	FT1020G3 TLON examples Sheet 1 of 3
17	F738-02	2	FT1020G3 TLON examples Sheet 2 of 3
18	F738-03	1	FT1020G3 TLON examples Sheet 3 of 3
19	F520	1	FT1020G3 General Arrangement
20	F765	6	FT1020G3 Standard connection Diagram
21	F768	2	FT1020G3 Gas Module Interface
22	F779	1	WA ASE Connection Diagram
23	F781	2	FT1020G3 Standard NZ Block Wiring Diagram
24	F784-01	0	COM Loop Cable Length & Specifications Sheet 1
25	F784-02	0	COM Loop Cable Length & Specifications Sheet 2
26	F786-01	1	FT1020G3 TP/FT10 TLON Connection Sheet 1
27	F786-02	1	FT1020G3 TP/FT10 TLON Connection Sheet 2

The above drawings are available in a separate document (M436), only four drawings are shown in this manual:

- F763 FT1020G3 General Arrangement
- F725-01 FT1020G3 Block Wiring Diagram Overview
- F765 FT1020G3 Standard Block Wiring Diagram
- M520-00 FT1020G3 19” Rack General Arrangement.

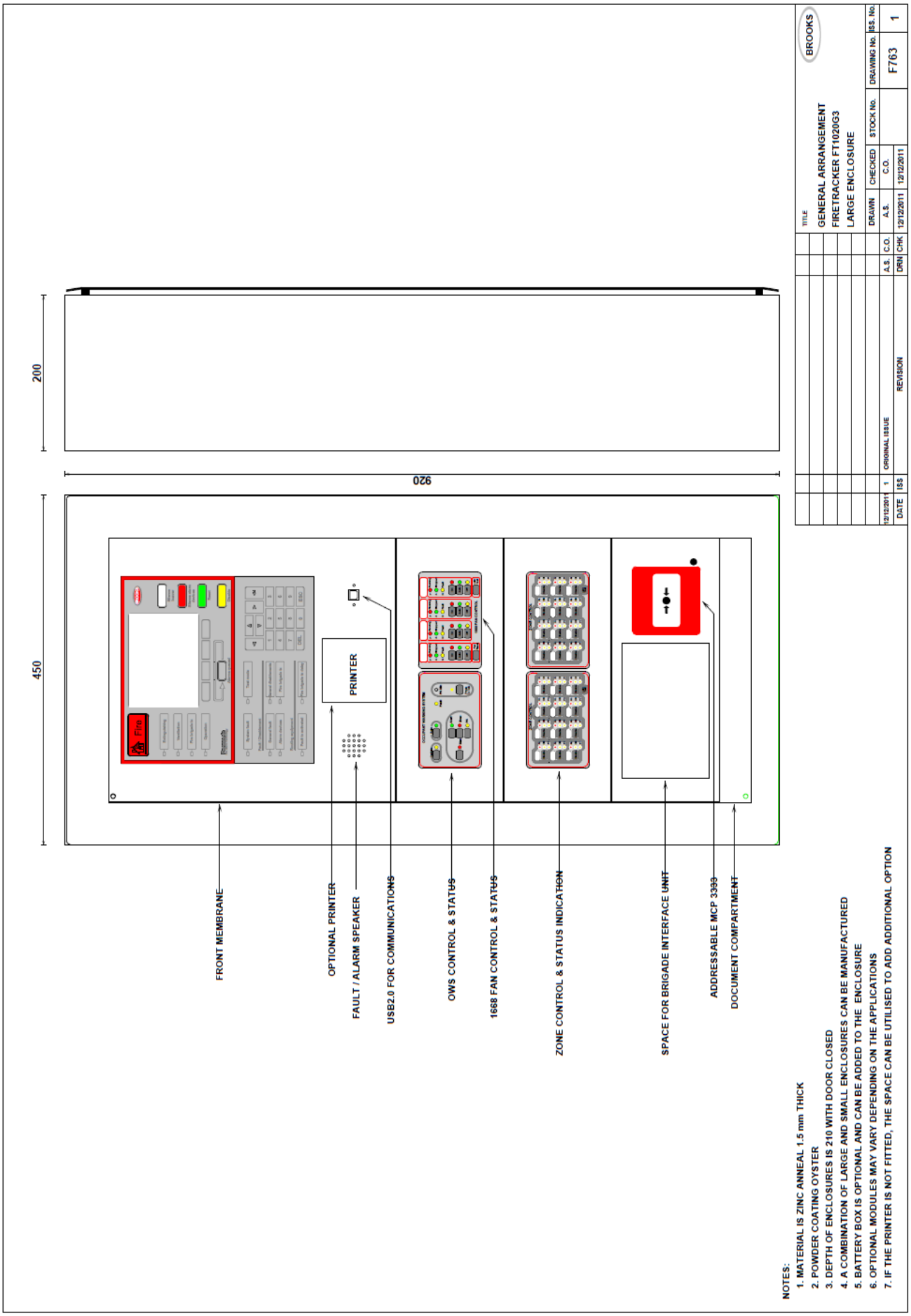


Figure 25 Standard FT1020G3 General Arrangement

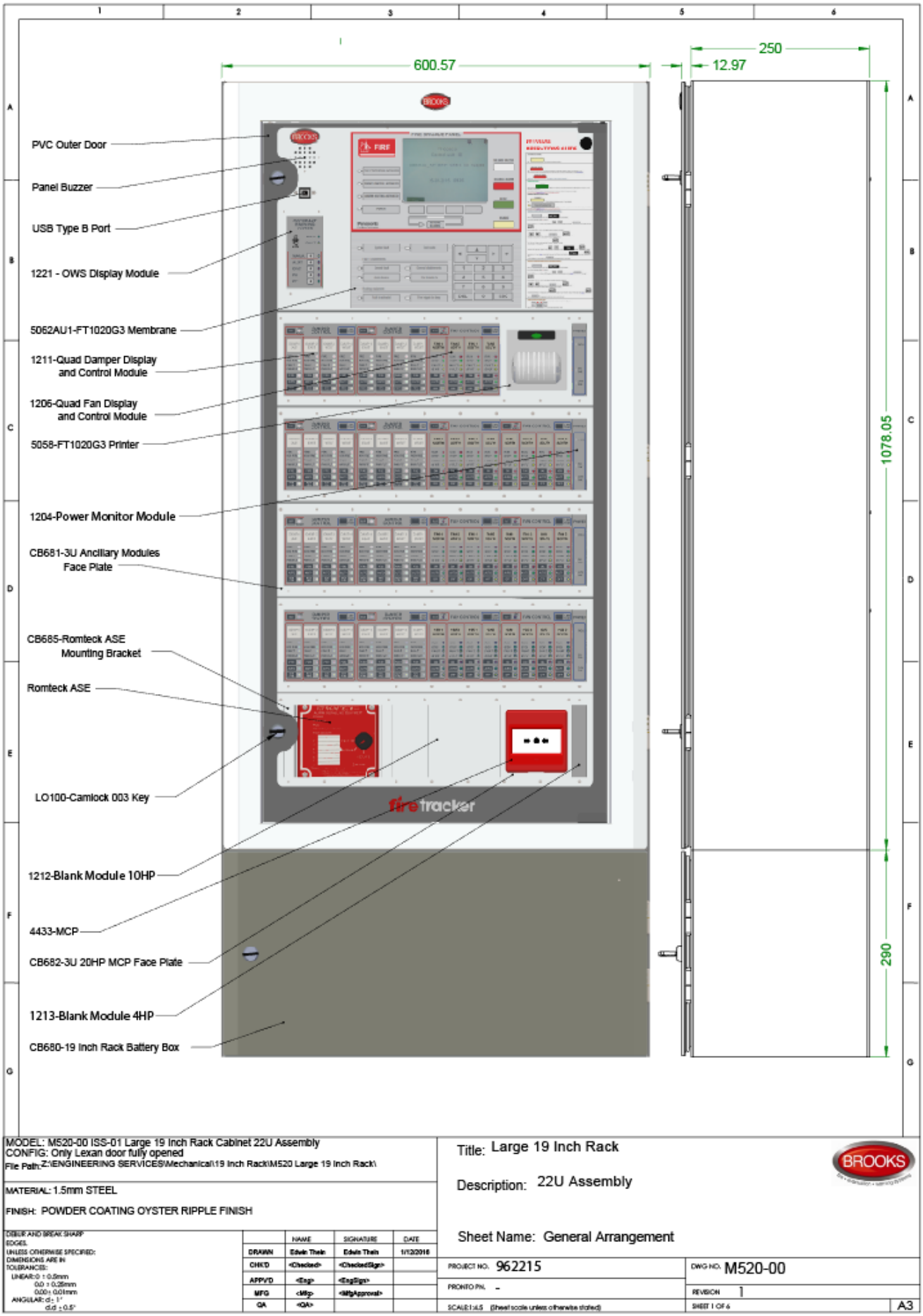


Figure 26 19” Rack FT1020G3 General Arrangement

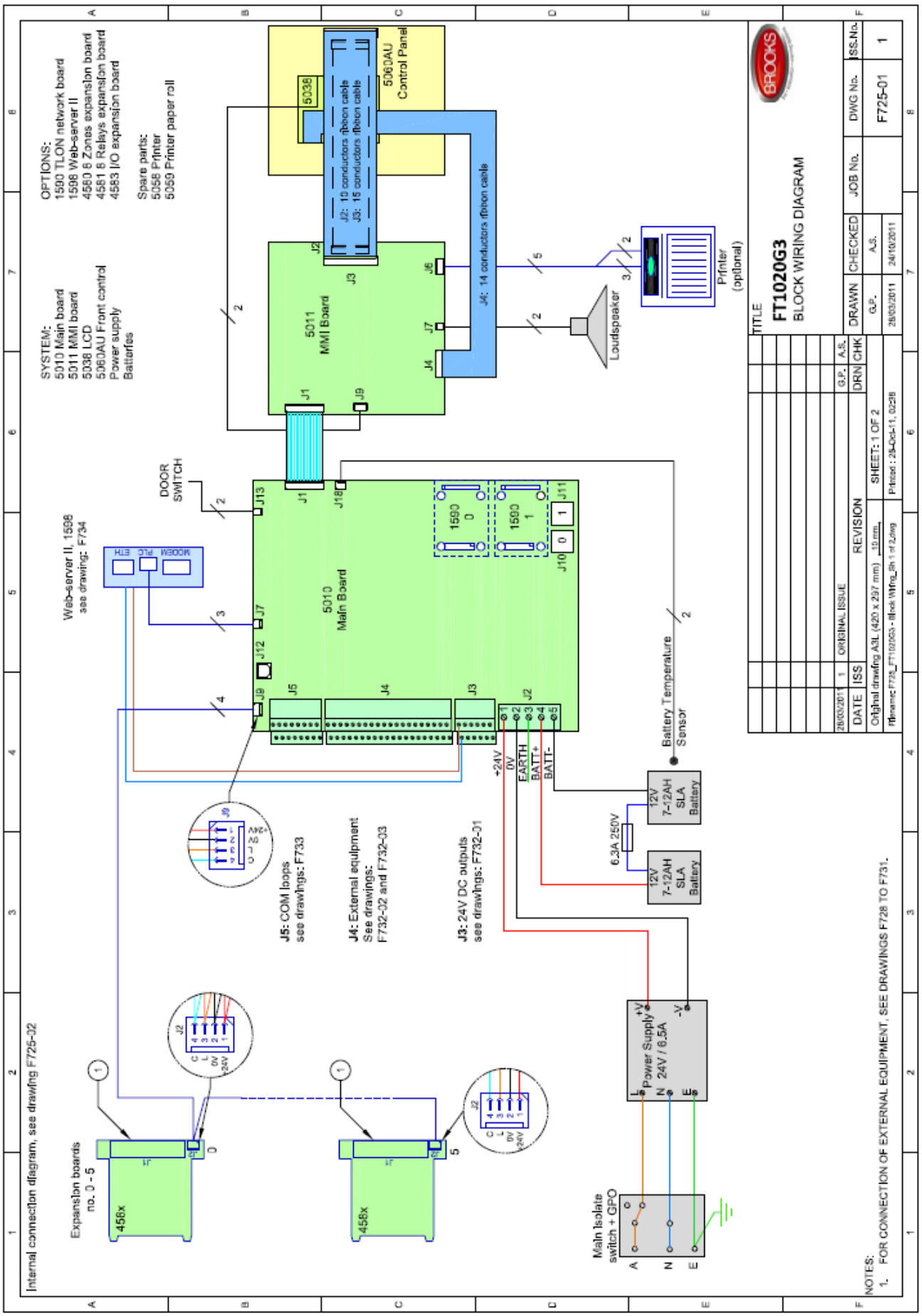


Figure 27 FT1020G3 Block Wiring Overview

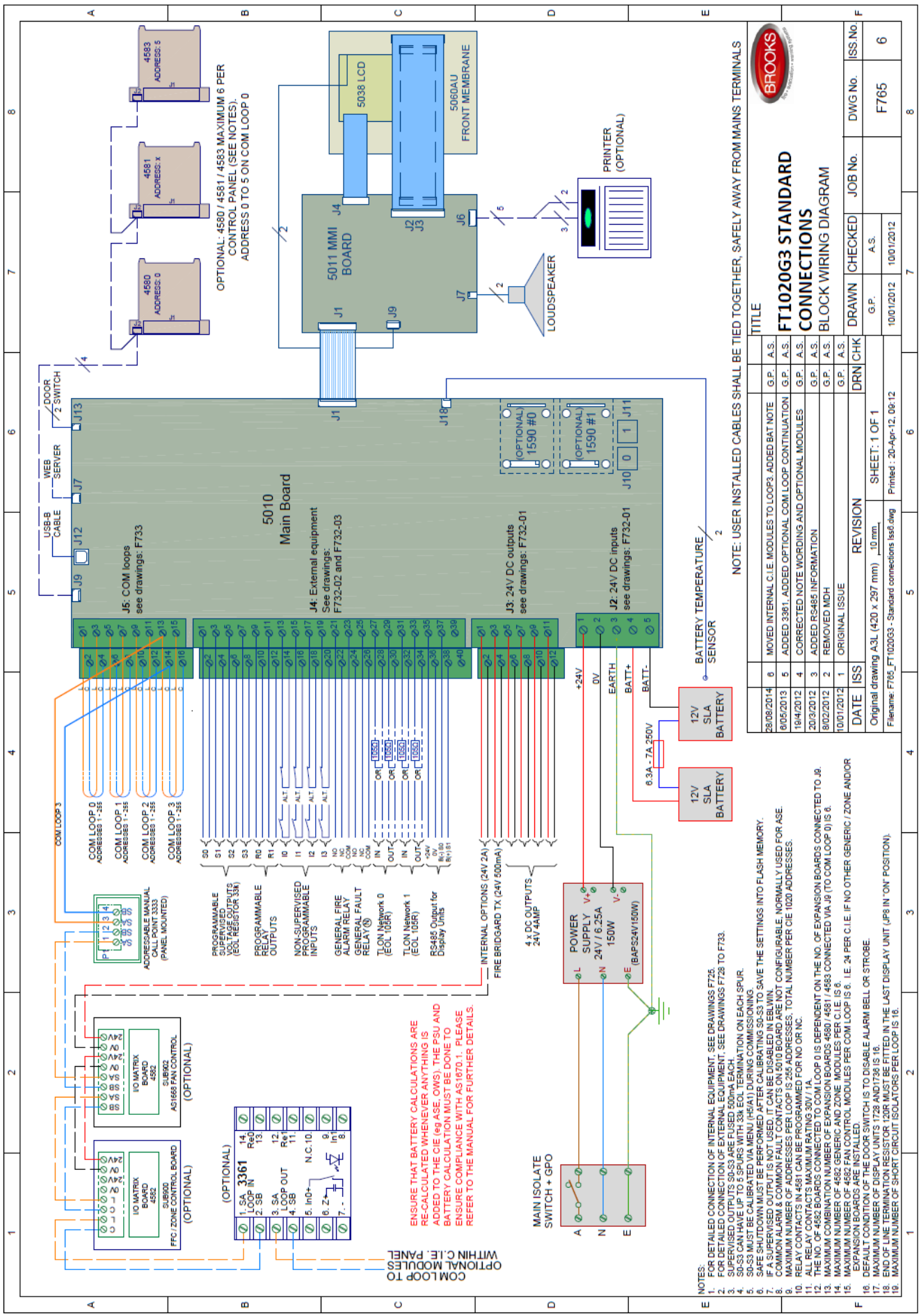


Figure 28 FT1020G3 Standard Block Wiring Diagram

34 Guarantee

If the product has any defect due to faulty workmanship or material it is to be returned to BROOKS freight paid. BROOKS will, at its sole discretion, repair or replace the item free of charge.

On returning a component or complete product, proof of purchase will be required. If returning the complete product all accessories and documentation MUST be returned.

This guarantee does not cover damage caused to the product or its components as a result of incorrect installation, accident, negligence, misuse, unauthorised dismantling or contamination howsoever caused, careless handling or where repairs have been made or attempted by others. Onsite warranty repairs will be carried out at the discretion of the manufacturer.

No other guarantees written or verbal are authorised to be made on behalf of BROOKS. All other conditions and warranties whether expressed or implied are, to the extent permitted by law, hereby excluded.

As BROOKS has no control over the system's design, installation to the relevant Australian Standard or maintenance, the Company and its agents take no responsibility for any damage, consequential loss or injury caused to any equipment, property or persons resulting from the use of FT1020G3.

Brooks guarantees FT1020G3 for a period of three years from the date of purchase the equipment.

35 Revision history

35.1 Operation Manual Revisions Table

Issue	Date	Description	Written By	Checked By
Rev 0	11/06/10	Original Panasonic manual	J.P.	
Rev 1	4/01/12	Update the original MEW01351 Rev 1 document to suit AU & NZ market	A.S.	ET / AS
Rev 1.1	20/04/12	Update drawing F765 to Issue 4	E.T.	A.S.
Rev 2.0	22/02/13	Update for S/W V2.0.0	A.S.	C. O.
Rev 2.1	30/05/14	Update for software V2.1	A.S.	
Rev 2.1.1	20/11/14	Minor update to include S/W V2.1.1	A.S.	
Rev 2.2	12/08/15	Minor update to include S/W V2.2.x & added Local Alarm Acknowledgement (LAA). Update Section 35 Block Wiring Diagram and drawings.	ET / AS	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.	ET / AS	A.S.

35.2 Software Revision 2.4.4

35.2.1 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 26.

35.2.2 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 FT1020G3 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 FT1020G3 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:

  - A COM loop is disconnected
  - A COM loop is in service mode
  - When Check loop, Auto address loop etc. is in progress
  - 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'.

35.2.3 Corrected bugs in FT1020G3

- 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.
- Some installation might not be possible to backup due to too large size of the SSD (message: ‘Backup data too large’. Backup will not be possible.’ in the validation).
- Under certain circumstances only one alarm is displayed in the remote display units when two co-incidence alarms generated fire alarm.
- In some cases, fault on the temperature sensor is not indicated.

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