

ID50/60

installation,
commissioning &
configuration
manual

997-263-000-11, Issue 11 January 2010

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1 Introduction

1.1 Manual Purpose

The purpose of this manual is to provide the user with all recommended procedures and full technical details for the successful installation, commissioning and programming of a NOTIFIER ID50 Series Panel.

The descriptions and procedures also apply to the NOTIFIER ID60 panel. Differences between the ID50 and ID60 panels are given in **Appendix 2**.

Procedures described in this manual include appropriate warnings and cautions to guide the user towards adopting safe and methodical work practices during the installation, commissioning and programming phases.

The ID50 Series panels support OPAL protocol devices. These devices support both OPAL and CLIP loop polling protocols so they can be added to an existing CLIP protocol loop. However, when OPAL protocol is enabled on a loop a maximum of 10 CLIP device addresses can be supported as part of the total of 99 sensors and 99 modules.

Important Note

This manual must be read, and its content clearly understood, before proceeding with any work relating to the ID50 Series Panel. Damage to the control panel may result from NOT following the recommended procedures described in this manual.

This manual provides all necessary instructions for the ID50 Series Panel and applies only to fire panels fitted with compatible software.

CAUTION: In particular, care must be taken when powering up/down any repeaters.

If there are any areas of doubt, consult your supplier before continuing with the system installation, commissioning and programming.

1.2 System Design and Planning

It is assumed that the system, of which the ID50 Series Panel equipment is a part, has been designed by a competent fire alarm system designer in accordance with the requirements of EN54 Part 14 and any other local codes of practice that are applicable.

The design drawings should clearly show the positions of all the ID50 Series Panel control equipment and field devices.

1.3 General

The ID50 Series Panel is designed for use with NOTIFIER's range of addressable analogue sensors, control and monitoring modules and addressable call points. A unique signalling protocol is used, having digital address and control signals and analogue pulse width monitoring for the reply data from devices.

The serial communications interface operates under RS485 protocol and enables communications between the fire panel and repeaters.

While every effort is made to ensure the accuracy of the content of this manual, the manufacturer reserves the right to change the information without notice.

Installation

The ID50 Series Panel is easy to install providing the recommended procedures described in this manual are followed. To avoid inadvertent contamination of the PCB Assembly, the manufacturer recommends it be installed in the back box only after all other trades have completed their tasks.

Commissioning

To commission the ID50 Series Panel, follow the recommended procedures described in this manual. The manufacturer recommends that during commissioning and maintenance, ALL RS485 signal cables are disconnected at the Panel end, BEFORE powering down the system and are connected AFTER powering up the system.

Configuration

To configure the panel and system, carefully read and follow the procedures given in this manual. These procedures describe the menus that are displayed on the Liquid Crystal Display (LCD) Unit.

Refer to the ID50 Series Operating manual (ref: 997-264-000-X) for a description of compatible addressable Signalling Loop Circuit (SLC) analogue devices.

1.3.1 Date-dependent Functions

The calendar end date for this product is 31/12/2063 (two thousand and sixty-three) and it will perform correctly up to this date.

The calendar function has not been tested beyond this date.

1.4 CE Marking

CE

This panel is CE Marked to show that it conforms to the requirements of the following European Community Directives:



The EMC Directive 2004/108/EEC, by the application of the following EMC Standards:

- EN 61000-6-3: Electromagnetic Compatibility (EMC) Generic emission standard for Residential, Commercial and Light industrial environments
- EN 50130-4: EMC Product family standard: Immunity requirements for components of fire, intruder and social alarm systems.

Low Voltage Directive 2006/95/EEC, by the application of the safety standard:

- EN 60950-1: Safety of information technology equipment.

The Construction Products Directive 89/106/EEC, by the application of the following standards:

- EN 54-2:1998, (Amd. 1 & 2): Fire detection and fire alarm systems - Control and indicating equipment.
- EN 54-4: 1998 (Amd. 1 & 2): Fire detection and fire alarm systems - Power supply equipment.

1.5 EN54 Functions

This fire control panel is designed to comply with the requirements of EN 54 Part 2/4. In addition to the basic requirements of EN 54-2, the panel may be configured to conform with the following optional functions - the applicable clauses of EN 54-2 are referenced as follows:

Options	Clause
Indications:	
Fault signal from fire protection equipment	7.10.4
Recording of the number of entries into fire alarm condition	7.13
Fault signals from points	8.3
Controls:	
Delay to Outputs	7.11.1
Manual or automatic switching of delays to outputs	7.11.2
Dependency on more than one alarm signal, Type B	7.12.2
Disablement of each address point	9.5
Test condition	10
Outputs:	
Fire alarm device(s)	7.8
Fire alarm routing equipment	7.9.1
Fire alarm routing equipment with alarm confirmation	7.9.2
Automatic fire protection equipment: Type A	7.10.1
Automatic fire protection equipment: Type C	7.10.3
Fault warning routing equipment	8.9

The following features are provided by the Power Supply Unit (PSU) of the ID50 Series Panel to comply with EN 54-4.

Features of the ID50 Power Supply Unit (PSU)	EN54-4 Clause
Derive power supply from main power source	5.1
Derive power supply from and monitor a standby battery source	5.2
Charge and monitor the standby battery source	5.3
Detect and signal PSU faults	5.4

1.6 Ancillary Functions

The following is a list of ancillary functions that are provided by the ID50 Series panel in addition to the those required by EN54-2/4. These functions are described in the section of this manual as referenced (except those marked thus '*' which are described in **997-264-000-X, ID50 Series Panel - Operating Manual**):

Ancillary Functions	Manual Section Refs.
Site Specific Setup Options	5.5
Access Options	5.9
Voltage Indications	*4.12
Control-by-Event	5.7
Output modes	5.7.1
Input type pattern	5.7.9
Disable/enabement	*4.9
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Module supervision options	5.6.1
Module silence options	5.7.4
Text editing	5.8
Sensor LED blinking on/off	5.5.3.4
Bell pulsing ratio	5.5.3.5
Display of alarm count	*4.11.6
Extend delay timer	5.5.5.3
Sounder Volt-free contact options	4.4.5
Relay drive output option	4.4.6
Extinguishing system features	5.5.3.7, 5.5.3.8, 5.5.3.9, 5.7.1, 5.7.2, 5.7.10



CAUTION:

This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.

1.7 Related Documents



This manual only describes the installation, commissioning and configuration of the ID50 Series Panel. All operating functions are covered by the:

- ID50 Series Panel Operating Manual (ref: 997-264-000-X)

The Panel can support repeaters via the RS485 communications link. This manual does not provide details about the repeaters or Compact Mimics; these are described in:

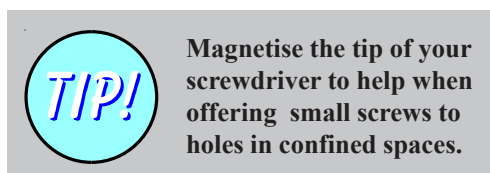
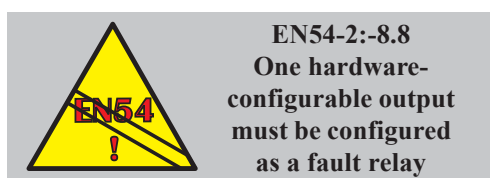
- IDR-2A, -2P & -6A Repeater User Manual (ref: 997-411-000-X).
- IDR Mimic Installation and Commissioning Manual (ref: 997-412-000-X).
- Compact Mimic Installation Instructions (ref: 997-497-000-X).

Note: The '000' part of the manual reference is the UK country code for the manual.

The ID50 Panel can also support the VIEW™ sensor. This manual does not attempt to cover all the VIEW™ sensor programming and calibration issues as these are described in some detail in the following, which is available from NOTIFIER's Technical Support Department:

- VIEW™ Application Guide (ref: 997-198).

1.8 Warnings and Cautions



Where appropriate, the manual includes advisory warnings and cautions to remind you to consider safety at all times, especially when following the procedures described herein.

You are alerted to any areas where high voltage [i.e. non-Safety Extra-Low Voltage (SELV)] is present, or where there may be a risk of damage to static-sensitive devices if the recommended procedures described in this manual are not followed.

An example of a high voltage warning and an anti-static caution is provided to the left of this paragraph.

The ID50 Series Panel incorporates some features which, if used inappropriately, may contravene the requirements of EN 54. Where there is a possibility of such an occurrence, a suitable warning is given with brief details of the EN 54 requirement. A typical EN 54 non-compliance warning is illustrated at left.

1.9 Tips

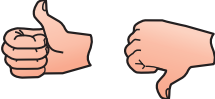
'Handy tips' are included, where appropriate, to assist you in following quick and safe procedures for fire detection system installation and integration.

Look for the 'TIP!' icon and supporting text, typically illustrated at left.

1.10 Glossary of Icons

Throughout this manual, and the other related ID50 Series Panel manuals, a number of icons are used either as part of the illustrated process descriptions, or in the main text to help clarify, or simplify, particular configuration procedures.

The following icons are used to advise or indicate:

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- a. DO follow the recommended procedure or method.
 - b. DO NOT use this procedure or method.
 - c. Inspection of an item or sub-assembly is required at this point.
 - d. Following a defined process **meets/ does not meet** the required approval/inspection criteria or standards.
 - e. Additional items to be considered.
 - f. This icon placed next to a pushbutton requires you to press it while configuring the panel. Where two or more icons are used, a number may be placed on or near each hand to indicate the order of selection: 1 coming before 2.
 - g. Activity process step - flow arrow for single action or iterative actions.
 - h. Leader arrow - used with activity processes.
 - i. Internal buzzer operating/not-operating or silenced.
 - j. Sounder operating/not-operating or silenced.
 - k. Power connected and switched ON/disconnected and switched OFF.
 - l. Manual Call Point (MCP)/Sensor.

2 Installation Guide

2.1 How to Use this Section

This Installation Guide provides guidelines on how to install an ID50 Series Panel quickly and safely.

For each stage in the panel installation and commissioning procedures a brief description is given of its purpose, complete with detail drawings, flow diagrams and/or other graphics to make the instructions easy to follow. Where required, procedures may be broken down into one or more related diagrams, the number being dependent upon the complexity of the defined task.

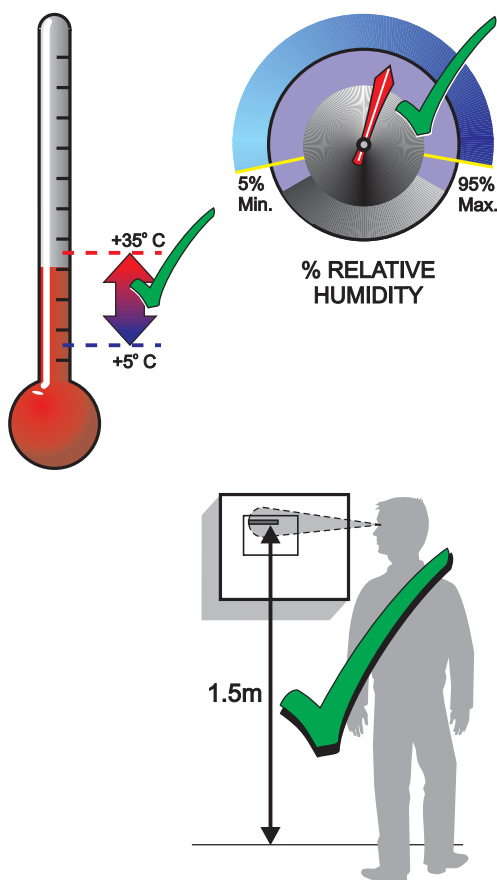
2.2 Pre-installation Check List

Before installing the ID50 Series Panel or fitting sensors, you must first ensure that the following criteria have been met. Failure to do this may not only result in damage to the equipment, but may also cause problems when commissioning the equipment or adversely affect its performance.

2.2.1 Some Panel DO's and DON'T's

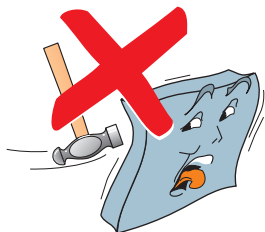
Before selecting a location for the ID50 Series Panel, DO make sure that:

- The operating ambient temperature is in the recommended range:
+5°C to +35°C and
- The relative humidity is between:
5% and 95%
- The panel is wall mounted in a position which allows clear visibility of displays and easy access to operating controls. The height above floor level should be chosen such that the LCD is just above normal eye level (approximately 1.5 metres).

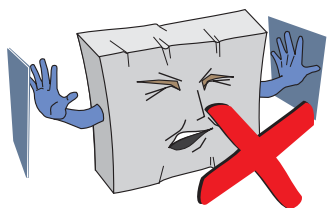




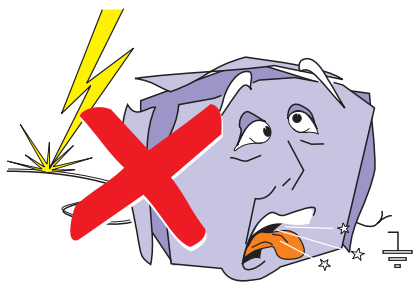
d. DO NOT locate the panel where it is exposed to high levels of moisture.



e. DO NOT locate the panel where there are high levels of vibration or shock.



f. DO NOT site the panel where there would be restricted access to the internal equipment and cabling/wiring connections.



2.3 Transient Protection

This equipment contains transient-protection devices. Although no system is completely immune from lightning transients and interference, for these devices to function correctly, and to reduce susceptibility, this equipment must be earthed correctly.

As with all solid state devices, this system may operate erratically or can be damaged if subjected to lightning-induced transients.

The use of overhead or outside aerial wiring is not recommended due to the increased susceptibility to nearby lightning strikes.

2.4 Product Inspection

The ID50 Series Fire Control Panels are relatively simple to install providing the recommended procedures described in this Installation Guide are followed.

Follow all installation instructions described in this manual. These instructions must be understood and the manufacturer's recommendations followed to avoid damage to the control panel and associated equipment.



2.4.1 Checking Your Panel for Damage

It is important to check all supplied equipment for damage before proceeding with the installation!

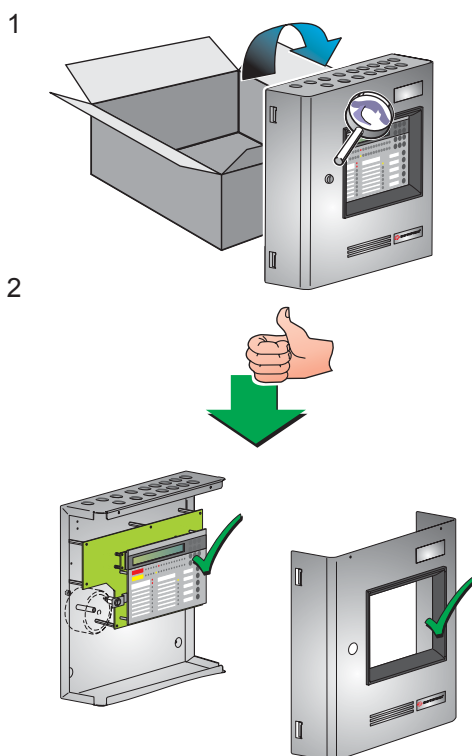
Before attempting to install your ID50 Series Panel, you should do the following:

- 1 After removing the panel, from its packing, and before you proceed with installing it in its chosen location, check for any damage that may have been caused during transit.

Note: In the unlikely event that the panel supplied has been damaged, you **MUST NOT** install it but return it to your supplier. The procedure for returning faulty items is described in **Section 2.4.2, What to do if Your Panel is Damaged or Suspect.**

- 2 If you are satisfied that the panel has NOT been damaged you can now proceed with the installation procedure. This manual addresses the recommended installation methods of the panel. Refer to the relevant sections that apply to your configuration requirements.

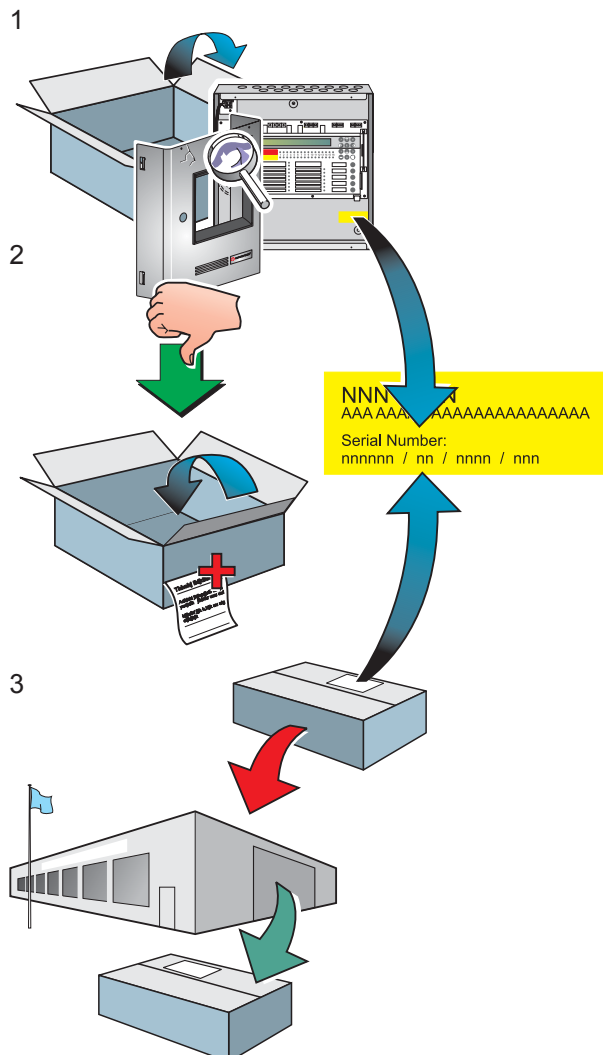
To prevent unnecessary damage to the electronic components, the back box should be installed without the electronics fitted. Refer to **Sections 2.5.1 to 2.5.3** for details.





2.4.2 What to do if Panel is Damaged or Suspect

If you have problems regarding the quality of any supplied order items including the control panel, its ancillaries or this manual or items are missing, follow the procedure below:



- 1 DO NOT continue with the installation but contact your supplier for advice on what to do next.

Similarly, if the product is found to be faulty during installation or while in use contact your supplier immediately.

- 2 To aid your supplier and the manufacturer, you are requested to:

- a. Quote the manufacturer's unique batch reference number which can be found on the packaging or inside the back box.
- b. With reference to PCB's, quote the part number and revision level which can be found along one edge of the PCB - refer to the applicable section of this manual for specific details.
- c. Note all the details relevant to your complaint, date of receipt, packaging condition, etc. and forward this to your supplier.

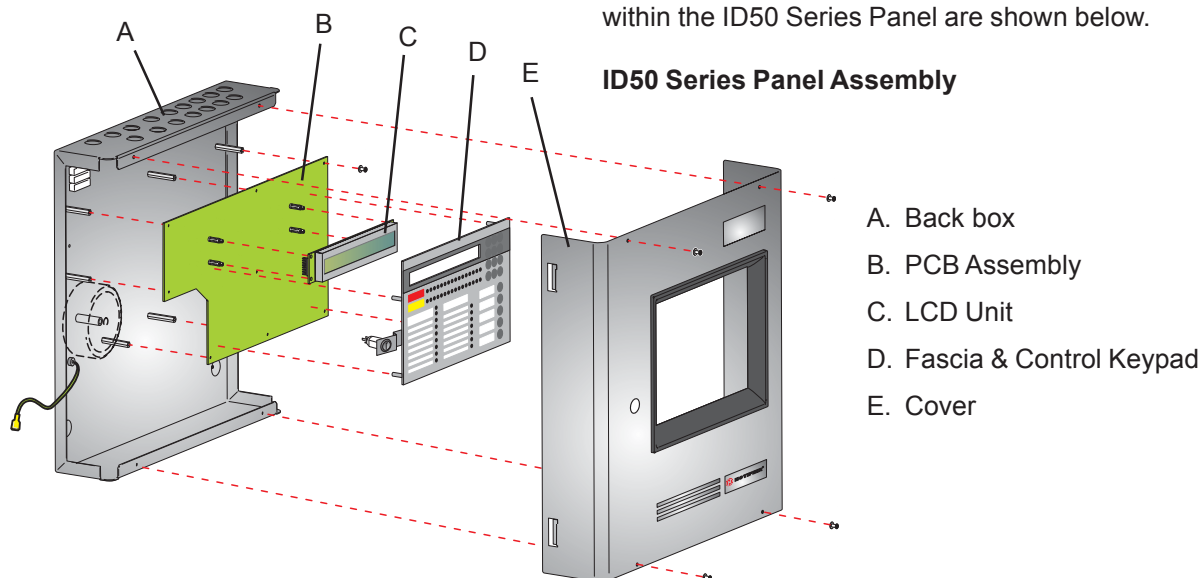
- 3 Where the product needs to be returned to your supplier, you are requested to use the original packaging, or **suitable anti-static** equivalent, wherever possible.

2.5 Dismantling the Panel



For installation purposes, it is recommended that the cover is removed from the back box and stored in a safe place until ready for commissioning.

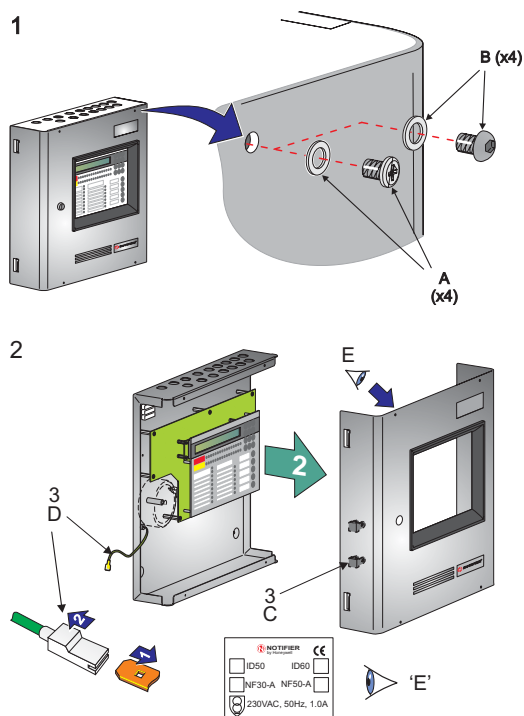
If any other trades, e.g. plasterers or decorators, will be working in the vicinity after fitting the ID50 Series Panel, it is strongly recommended that before re-fitting the cover you remove the panel electronics and store in a safe place until ready for commissioning. The main components within the ID50 Series Panel are shown below.



2.5.1 Removing the Cover



To remove the ID50 Series Panel cover, it is recommended that the following procedure is carried out on a work bench BEFORE siting the panel on the wall:



Remove and store the cover in a safe place.

The power supply ratings label (view 'E') is affixed to the inside face of the fire control panel cover.

Before installing the back box, remove the panel electronics (see **Section 2.5.2, Panel Electronics**).

2.5.2 Removing the Panel Electronics

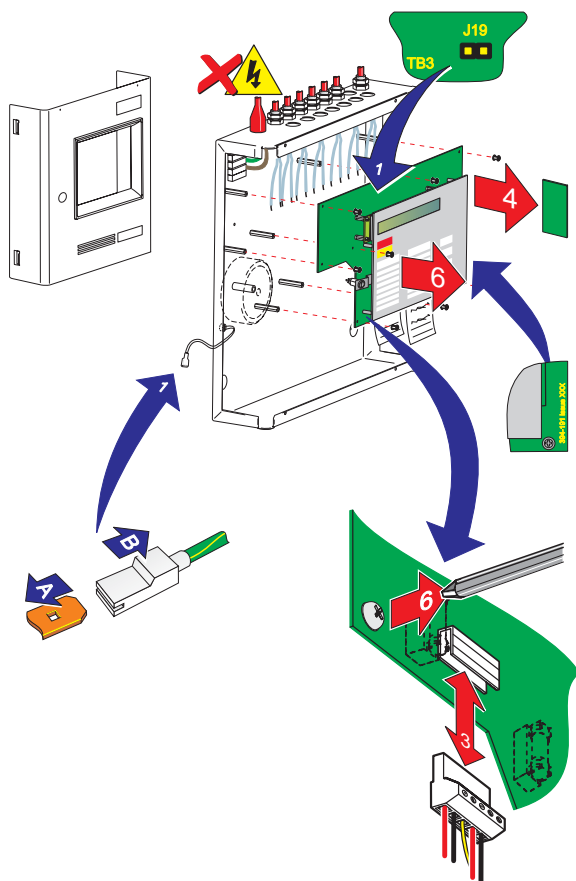
The ID50 Series Panel electronics comprises the PCB assembly with mounted LCD unit and the mounted fascia. These are supplied as one spared item in kit PN: 020-635-XXX. This assembly is located within the back box, but should **ONLY** be removed when installing the back box or if the PCB requires replacement.



CAUTION: The electronic circuits of the ID50 Series Panel use CMOS devices which can be damaged by static discharge. Suitable precautions **MUST** be taken when handling circuit boards.

Procedure

When installing the back box or, if it becomes necessary to remove the PCB assembly for another reason, follow this recommended procedure:



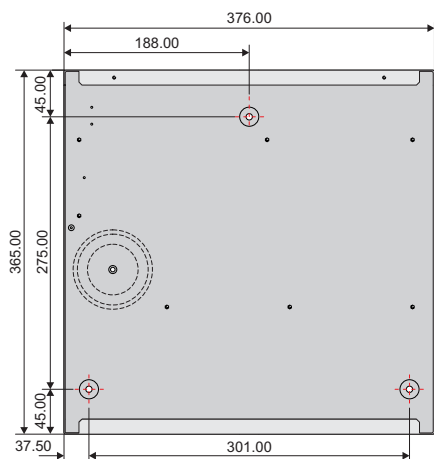
- 1 Remove the cover and store in a safe place, see **Section 2.5.1, Removing the Cover**. Then make a back-up of the current system configuration, remembering to disconnect the link at jumper J19.

Note: The blade connection to the cover fitted in back boxes incorporates a locking bar. To remove this connection, pull the shroud (B), NOT the earth wire, from the earth blade terminal (A).

- 2 Isolate the mains power supply and disconnect the battery interlink wire if fitted.
- 3 At the two-part connector TB1 (on the PCB assembly), using a constant pulling action carefully disconnect the mains and battery power supply wiring.
- 4 Taking **suitable anti-static precautions** remove the RS485 Interface PCB, if fitted (refer to **Section 2.7.1, Installing the RS485 Interface Module PCB**).
- 5 At the PCB assembly, note the polarity and connections of all cables and any jumper configuration settings. Using a screwdriver, loosen all the connector securing screws. Carefully secure all external cable tails away from the electronics and from the back box.
- 6 Using a No. 1 Posidriv screwdriver, remove the eight (8) M3 x 8mm clinch screws from the PCB assembly. Gently lift the PCB assembly clear of the supporting pillars, place it in an anti-static bag and store safely.

Note: If the PCB is to be returned to the manufacturer note its Serial Number and Revision Level (located along one edge).

2.5.3 Back Box Fixing



All dimensions are in millimetres. Fixing hole diameters are 6mm.



DO NOT use the back box as a guide when drilling

The ID50 Series Panels (PN: 002-455-XXX) are 110mm deep (external dimensions including fixing dimples). The back box holds two 12V batteries, up to a maximum rating of 12Ah each.

The back box must be fixed to the wall with screws at three fixing locations (see drawing) using the procedure given below.

The back box **must only** be installed when the panel electronics have been removed (see **Section 2.5.2, Removing the Panel Electronics**).

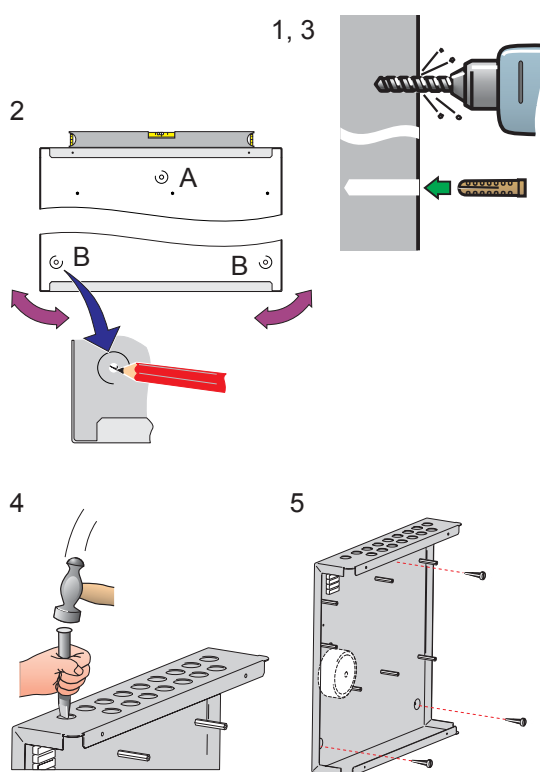
Wall Flatness

To prevent distortion, the back box **MUST** be installed on the wall as flat as possible, i.e. with a maximum flatness deviation between any two points of 3mm. Where the wall is out of tolerance, use appropriate packing pieces when installing the back box to meet the above requirements.

Failure to comply with this requirement will result in the misalignment of the cover's securing screws, which may cause difficulties in fitting the cover.

Procedure

When a suitable location has been found for installing the panel and the panel electronics have been removed, fix the back box to the wall as follows:



1 Using a suitable-sized drilling bit - for holes to take up to 6mm (No. 12-sized) wood screws - drill a hole at position A in the wall. Fit a suitable-sized Rawl-plug, or equivalent.

2 Hold the back box in position at hole A (**ensure the panel is level**) and mark the position of the remaining fixing holes (B). Remove the back box and store safely.

3 Drill two holes at positions B in the wall, and fit suitable-sized Rawl-plugs, or equivalent.

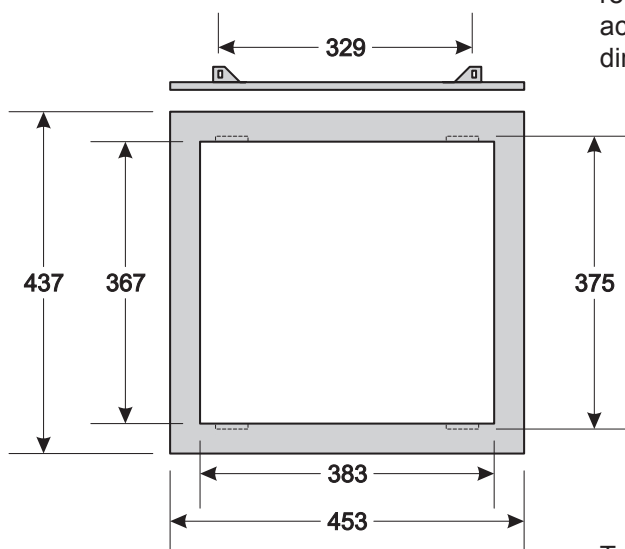
4 Prepare apertures (20mm knockouts) required for cable access.

Note: Make sure paint is scraped from the area surrounding the knockouts, to ensure good earthing for glands.

5 Secure the back box to the wall using all three fixing holes and appropriate-sized screws (up to 6mm [No. 12-sized] round or pan-head screws - do **not** use countersunk screws).

2.5.4 Semi-Flush Mounting Bezel (Optional)

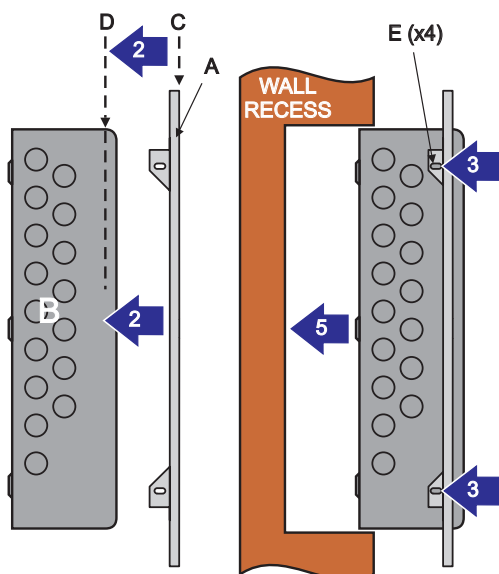
If semi-flush mounting of the ID50 Series Panel is required, a recess 80mm deep and just large enough to accommodate the back box must be cut in the wall (see dimensions below).



All dimensions in millimetres



Before drilling the back box, make sure that no equipment is fitted



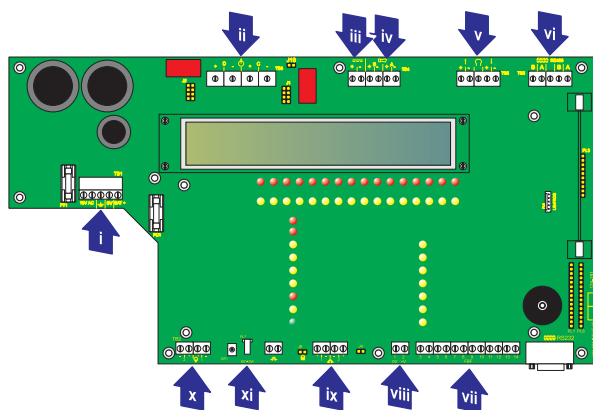
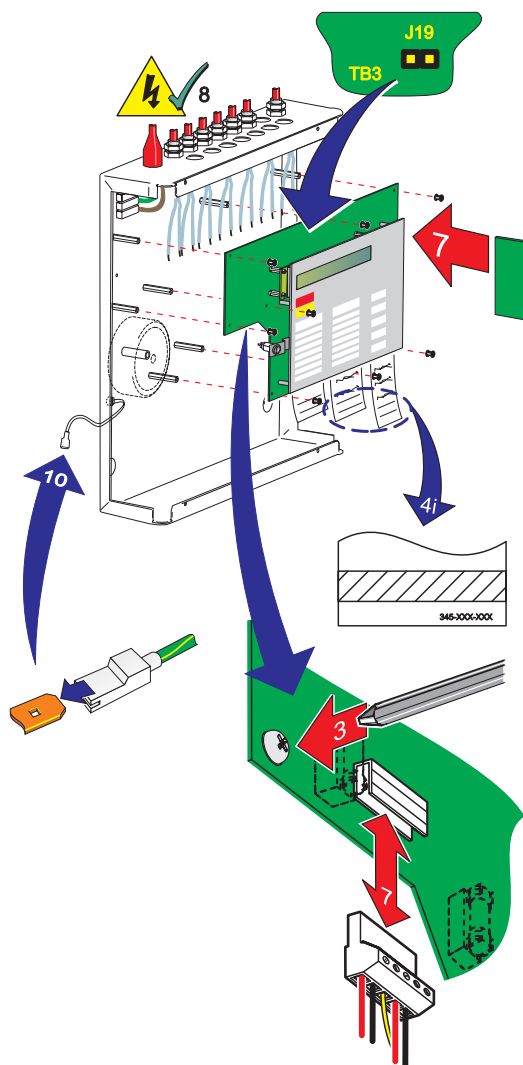
To fit the bezel:

- 1 Before continuing, remove panel electronics and batteries (if fitted) - see **Section 2.5, Dismantling the Panel**.
- 2 Offer the bezel (A), flat sideways towards you, to the front of the back box (B) and position it so the bezel front face (C) is lined up with the rear of the rounded sides of the back box (D).
- 3 With the bezel held in position, use the slotted holes (E) on the bezel as guides and drill four appropriate sized holes to fit M3 screws centrally in the slots. Remove any swarf created.
- 4 Secure the bezel using suitable M3 fixings. Ensure the fixings are accessible from the outside of the back box.

Note: The ID50 Series Panel back box must be fixed to a solid vertical surface, or sub-frame inside the recess, using its rear fixing holes. Do NOT rely on the bezel as a means of fixing.

- 5 Fit back box with attached bezel to the wall recess and assemble the panel, see **Section 2.6**.

2.6 Assembling the Panel



With the back box secured to the wall and all external cabling ready for termination, assemble the panel as follows:

- 1 Ensure that all power to the panel is isolated and observe ALL safety and **anti-static precautions** when installing the PCB assembly.
- 2 Install all kits that require the removal of the PCB assembly.
- 3 Align the PCB assembly to the supporting pillars and, using a No. 1 Posidriv screwdriver, screw the eight (8) M3 x 8mm SEM screws into position.
- 4 Fit the labels. They may require the application of a low tack adhesive:
 - i Apply low tack adhesive to hatched area indicated.
 - ii Slide each label into position.
 - iii Apply slight pressure to the area along the bottom edge of the fascia to ensure the labels are secure.
- 5 Apply the mains power supply and then connect the batteries. Check the PCB assembly operates correctly and then **isolate all power** to the panel.
- 6 At the PCB assembly:
 - i Noting the cable polarity, connect all cables and secure at the correct termination blocks, see **Cables & Wiring**.
 - ii Set all required hardware jumper configurations, refer to the **Section 4 Commissioning**.
- 7 Fit the RS485 Interface Module PCB, if applicable, refer to **Section 2.7.1 Fitting the RS485 Interface Module PCB**.
- 8 Re-apply the mains power supply and then connect the batteries.
- 9 Disconnect the links at the earth fault monitoring jumper, J19, and configuration lock, J9. Then connect the RS232 9-way 'D' type Data Transfer Lead (PN 082-173) to the panel at the RS232 connector, PL5. Using the Support Tool, transmit the latest system configuration to the panel.
- 10 Remove the lead and fit the links at J9 and J19, then fit the cover.

Note: Connect the earth wire to the inner side wall of the cover at the tag marked with the earth symbol.

Cables & Wiring

- i Power Supply from transformer (TB1),
- ii CFG Outputs D and C (TB3),
- iii 24 V Auxiliary Power Supply (TB4),
- iv Sounder Outputs B and A (TB4),
- v Loop Cable Output (TB5),
- vi RS485 Communications Cable (TB6),
- vii FBF Communications Cable (VdS Only) (TB10),
- viii FBF Power Supply (VdS Only) (TB9),
- ix Digital / ÛE Cable (TB8), and
- x Switchable -VE Outputs (TB2),
- xi Keyswitch (PL7).

2.7 RS485 Communications Link

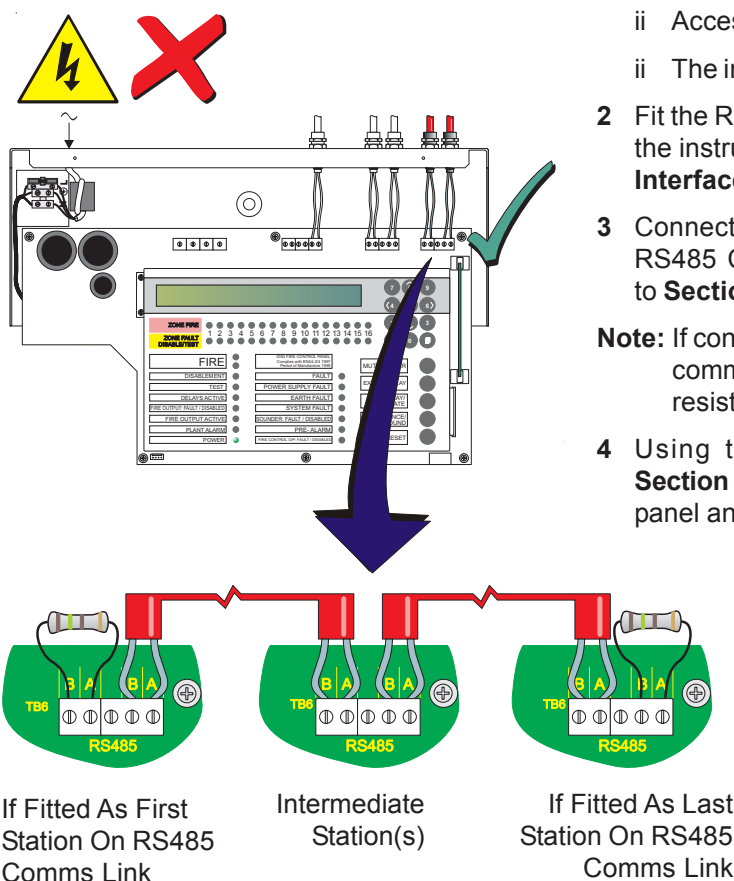


The panel is capable of communicating with a maximum of sixteen (16) repeaters (active IDR-2A or passive IDR-2P) or mimic panels (IDR-M) (for further details concerning the repeaters refer to **997-411, IDR-2A, -2P & -6A Repeater User Manual** or **997-412, IDR Mimic Installation and Commissioning Manual**). The panel is connected to the repeaters in a 'daisy-chain' arrangement via the RS485 Communications terminal block, TB6, on the PCB assembly. The panel must be fitted with the RS485 Interface Module PCB at connector PL3 on the PCB assembly (see **Section 2.7.1, Fitting the RS485 Interface Module PCB**).

The two end stations require a termination resistor to be fitted as illustrated below.

To connect a panel to an RS485 communications link:

- 1 Ensure the following:
 - i All power to the panel is isolated.
 - ii Access to the panel electronics is possible.
 - iii The interlink wire is disconnected at the batteries.
 - 2 Fit the RS485 Interface Module PCB as described in the instructions in **Section 2.7.1, Fitting the RS485 Interface Module PCB**.
 - 3 Connect the RS485 communications cable to the RS485 Communications terminal block, TB6, refer to **Section 4.4.2, RS485 Communications Link**.
- Note:** If connecting the panel at either end of the RS485 communications link, connect a 150R termination resistor (supplied separately) as shown below.
- 4 Using the configuration procedure - refer to **Section 5.5.4.6, Number of Repeaters**, configure the panel and RS485 communications link.



2.7.1 Fitting the RS485 Interface Module PCB



With the back box fitted to the wall, install the RS485 Interface Module PCB as described below (ensure suitable **anti-static** precautions are taken):

- 1 Remove the cover (see **Section 2.5.1**) to expose the panel electronics. Disconnect the battery interlink wire from the batteries and isolate the mains supply.
- 2 Carefully fit the two plastic PCB support pillars (A) in to the holes (B) on the right-hand side of the PCB Assembly (C).
- 3 Fit the RS485 Interface Module PCB (D).

Fitting to PCB Assembly PN: 394-191-001, 002 or 003

- i Make sure the RS485 Interface Module PCB components are facing the membrane and rest the PCB in the PCB Support pillar guides.
- ii Gently ease the RS485 PCB and PCB Support pillars away from the membrane and carefully slide the RS485 PCB down the pillars until the 10-way socket (E) aligns with the connector, PL3 (F) on the PCB Assembly. Ensure that the components do NOT foul on the membrane.
- iii Carefully return the PCB Support pillars to their normal position and, with a firm and constant pushing action, connect the PCB.

Fitting to PCB Assembly PN: 394-191 Issue 4, or later, or PCB Assembly PN: 394-390, or later.

- i Make sure the RS485 Interface Module PCB components are facing away from the membrane and rest the PCB in the PCB Support pillars' guides.
- ii Carefully slide the PCB along the pillars until the 10-way socket (E) aligns with the connector, PL3 (F) on the PCB Assembly.
- iii With a firm and constant pushing action, connect the RS485 PCB to the PCB Assembly.

- 4 Connect RS485 Communications wiring at TB6 (see left), ensuring correct polarity where applicable, and fit the cover.

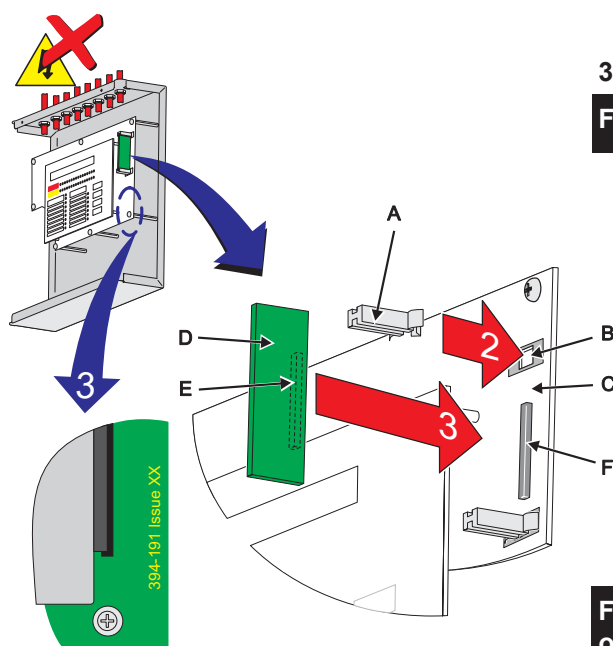
If the panel is the first or last station on the RS485 Communications Link, connect a 150R Termination resistor to the PCB Assembly on the left-hand side or the right-hand side terminals of TB6 respectively.

- 5 Apply the mains power supply and connect the battery interlink wire. Configure the panel, refer to Section 5.

Removing the RS485 Interface Module PCB

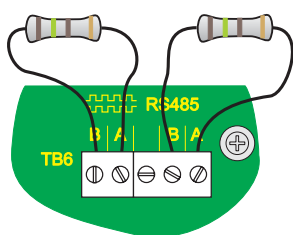
If removing the RS485 Interface Module PCB, follow the procedures above in reverse order.

Ensure a back-up of the current configuration has been made and all power is isolated.



When fitted as first station on RS485 Communications Link

When fitted as last station on RS485 Communications Link



Apply power BEFORE making any RS485 connections!

2.8 RS232 Interface Connections

The panel is fitted with a standard 9-way 'D'-type RS232 Interface connector, located at the bottom right-hand corner of the PCB assembly. The RS232 connector is used for the following purposes:

- Configuration using the PC Support Tool (refer to **997-405, ID50 Series Panel - Offline Configuration Manual**).
- Upgrading the Panel Software (refer to **997-415, ID50 Series Panel - Upgrading Instructions**).

Before starting any of the above operations ensure suitable anti-static precautions have been taken.

The RS232 connector has the following pin out:

Pin	Description
1	Data Carrier Detect (DCD)
2	Receive (RX) Data *
3	Transmit (TX) Data *
4	Data Terminal Ready (DTR)
5	GND *
6	Data Set Ready (DSR)
7	Request To Send (RTS)
8	Clear To Send (CTS)
9	Not Applicable

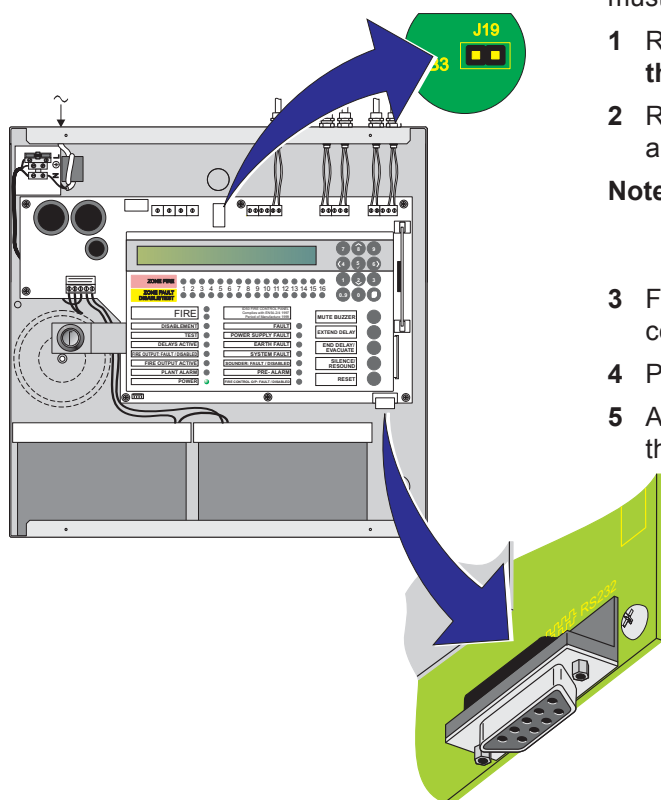
Note: Pin numbers marked thus '*' are the only required connections. Any others fitted will be ignored.

A Data Transfer Lead (PN: 082-173) is required. Jumpers must be removed as follows:

- Remove the cover (refer to **Section 2.5.1, Removing the cover**) to access the panel electronics.
- Remove the Jumper Links J19 (earth fault monitoring) and J9 (configuration memory lock).

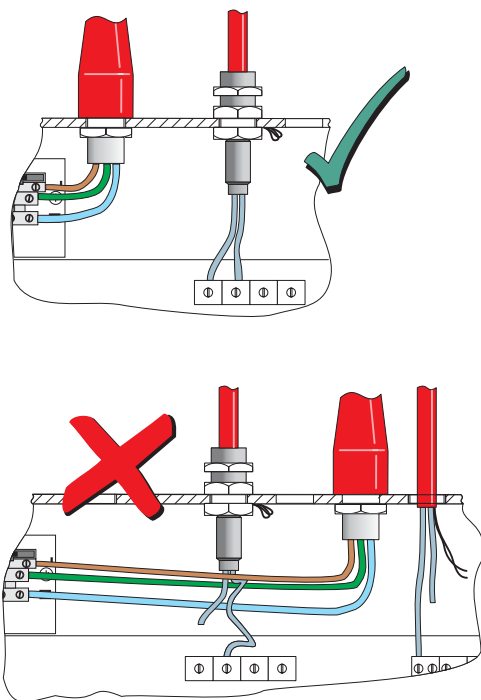
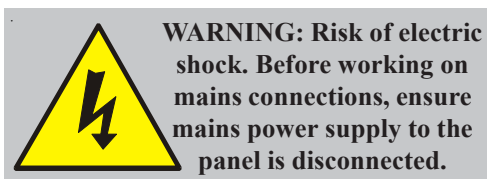
Note: Refer to **Section 4.3.1 Jumper Link Options/ Earth Fault Monitoring (J19)** when connecting third-party equipment to the panel.

- Fit the Data Transfer Lead to the RS232 Interface connector, PL5.
- Perform required operation.
- After satisfactory completion disconnect the lead and then fit the jumpers.



3 Cabling

3.1 Cabling Instructions



All wiring should comply with current IEE wiring regulations (BS7671) or the applicable local wiring regulations. Note also the requirements of EN54-14 for cabling and interconnection of a fire detection and alarm system.

For information on wiring inputs and outputs refer to the appropriate module cable and wiring instructions to identify terminals. Refer also to **Commissioning, Section 4.4 External Wiring Checks** for details.

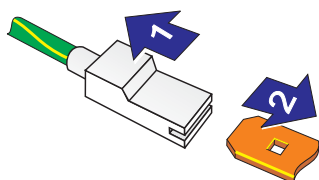
Use the following rules when installing cables:

- 1 Cables should be brought into the cabinet through the 20mm knockouts provided on the top face of the back box. Ensure that all openings in the back box are closed before connecting power to the panel. For example, if more knockouts than required have been removed, then block the holes with blanking glands. This is to prevent access to hazardous voltages.
- 2 Tails should be of sufficient length to connect to the appropriate termination points at the commissioning stage.
- 3 Cables should be screened and should be terminated in appropriate glands to meet local wiring codes and to preserve the integrity of the screen connection. The cable screen is to be clamped inside the cable gland, which must be fitted to ensure a 360° bond is formed with the metal of the back box.
- 4 The supply to the panel must be provided with a suitable and readily accessible double-pole mains disconnect device. The mains supply must be suitably fused and rated according to the specifications (see **Appendix 1, Specifications**).
- 5 The knockout on the extreme left-hand side should be used for mains cable entry. DO NOT bring mains cables in through any other knockout holes and ensure that the mains wiring is always separated from the low voltage wiring. Tails of mains cables should be provided with suitable additional sleeving before connecting to the mains terminal block.
- 6 All low voltage cables should have a minimum 300Vac rating.

General cable installation notes are given in **Section 3.2, Cable Installation Notes**.

Earth Blade Connections

Note: All blade connections to earth incorporate a locking barb. To remove this connection, pull the shroud (1), NOT the earth wire from the earth blade terminal (2).

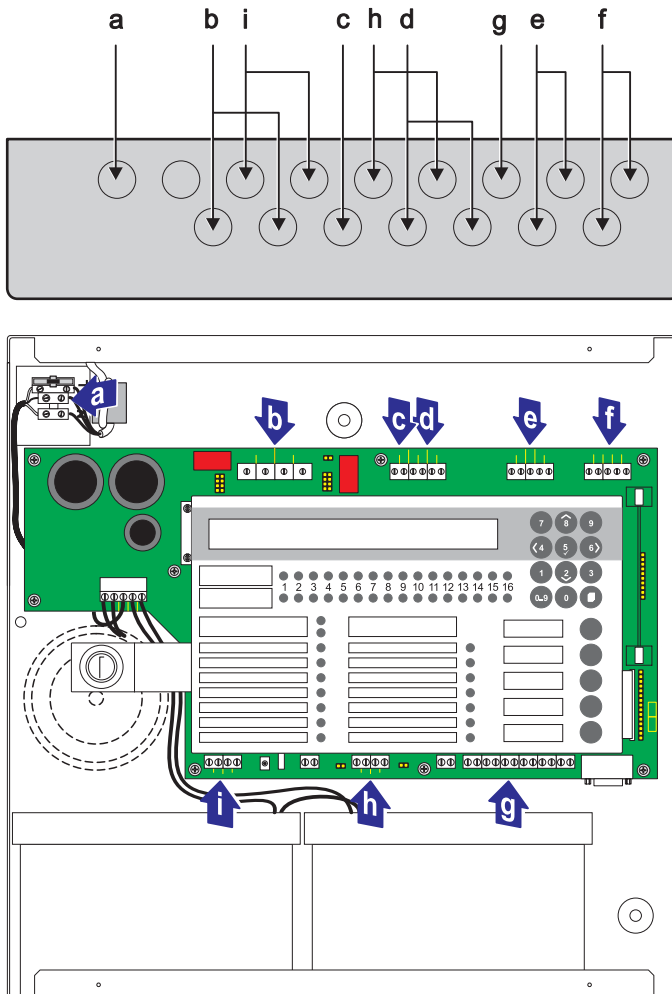


3.1.1 Cable Terminations

This section provides guidance on where to bring cables into the back box for ease of termination:

- The mains supply should be brought into the control panel such that the cable path to the mains termination block is kept as short as possible.
- All loop and ancillary cable terminations should be brought into the panel at suitable positions to ensure tails are kept as short as possible.

The drawings below show recommended points of entry so that cabling can meet these requirements.



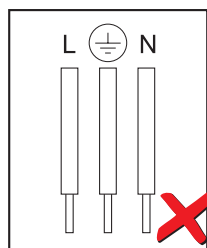
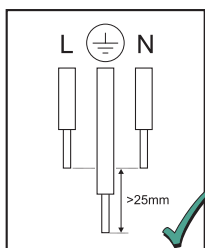
Knockout/ Termination Point	Cable Type
a	Power supply cable
b	Output D and C cables
c	DC Auxiliary Supply
d	Sounder Output B and A
e	Loop Wiring
f	RS485 Communications
g	FBF Connections (Not Supported)
h	Digital / ÜE (ÜE Not Supported)
i	Switched -VE Outputs

Note: The FBF Signal and Power supply cables (g), and Digital / ÜE (h) port 2 are only valid when the panel is in VdS mode.

For specific PCB cable termination details see **Commissioning**:



When preparing mains wiring for termination, ensure the earth wire is longer than the L(ive) and N(eutral) wires.



Section 4.4.1, Loop Wiring,

Section 4.4.2, RS485 Communications Link,

Section 4.4.3, DC Auxiliary Output,

Section 4.4.4, Sounder Circuits Outputs A and B,

Section 4.4.5, CFG Outputs C and D,

Section 4.4.6, -VE Outputs, and

Section 4.4.7, Digital / ÜE Inputs.

3.2 Cabling Installation Notes

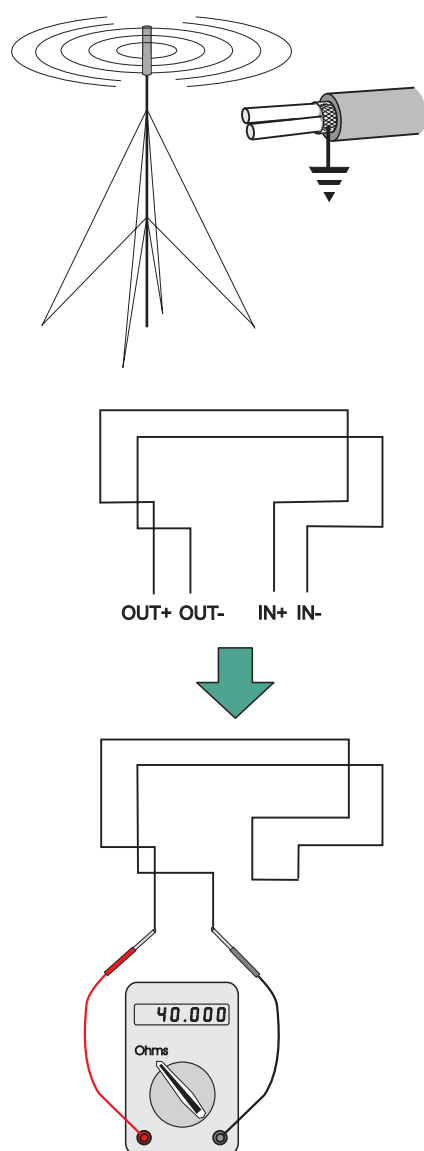
3.2.1 Introduction

The following notes are intended to assist installers of analogue addressable control systems. They have been produced from information derived from the supplier's technical resource and from information fed back concerning existing systems.

3.2.2 Quality of Cable and of Cable Installation

It is vitally important that good quality cable is used, and that correct installation techniques are followed. In general, the following cable installation requirements must be met:

- All cable sections must be circular to allow effective cable clamping using the cable glands.
- The cable must be screened (sheathed) to provide protection against Radio Frequency Interference (RFI) and the screen must be connected to earth at the control panel.
- Multiple earthing of the screen should be avoided. NOTIFIER's field products use insulated mounting bases and back boxes to achieve this. We recommend that this practice be continued if other connections are made. To achieve this with MICC cable may require the use of insulated cable glands at one end of the cable.
- The screen must be continuous throughout the loop.
- The maximum resistance of the loop should not exceed 40 ohms. You may check this by joining the return legs IN+ and IN- together and measuring across the start legs OUT+ to OUT-. Also the cable capacitance should be less than 0.5 μ F. Typically this will allow a maximum loop length of 2000m of screened 1.5mm² cable. Cable recommended for use is MICC with a LSF PVC overcovering, a fire-resilient cable to BS7629 or PVC/SWA/PVC to BS6387.



Recommended Cables:

Manufacturer	Product Name	Part Number	Type ¹
AEI	MICC	2L1.5	Enhanced
AEI	Firetech	298-052	Standard
Draka	FiretufPlus	FTPLUS2E1.5RD	Enhanced
Draka	Firetuf	FTZ2E1.5	Standard
Pirelli	FP Plus	FP Plus 2x1.5 Red	Enhanced
Pirelli	FP200 Gold	FP200 Gold 2x1.5 Red	Standard
Arrow	-	7-2-4S	Not rated

¹For a definition of 'Standard' and 'Enhanced' cable requirements and their different applications, refer to BS 5839-1 Section 26. Enhanced cable is typically required for spur sounder outputs, while standard cables may be adequate for other fire-related I/O provided there is diverse cable routing. The multi-core cable from Arrow is suitable for RS232 connections to a printer.

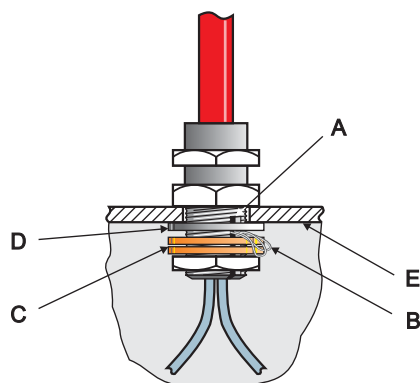
- We recommend that the system should be wired in 2-core cables and each 2-core cable should be specific to one function.
- The RS485 communication cable used should be rated as suitable for up to 200mA in a short circuit condition.

3.3 EMC Considerations

Following the above instructions and by using suitable cables EMC problems will be avoided. In particularly difficult EMC environments, or where non-preferred cabling is used, it is possible to fit additional ferrite suppressors (sleeves) to cables entering the control panel.

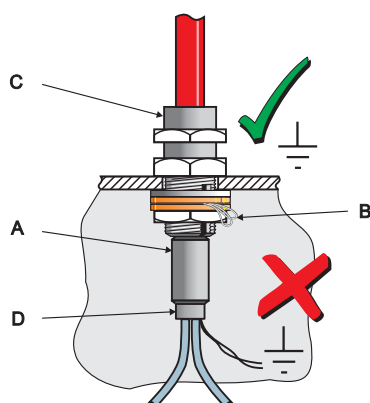
3.3.1 Screen Termination

Use the following method to terminate the cable screens:



Use a metal gland with slots (A) that allow the drain wire or screen (B) to be clamped between flat washers (C). Use a steel locking washer (D) between the brass washers and the internal surface of the back box (E). This will provide the best EMC termination. Suitable glands are the CTX range available from CMP UK Ltd. The part chosen should fit the 20mm knockouts.

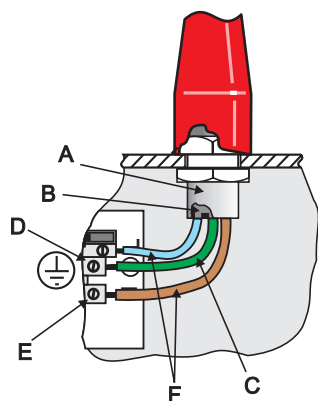
3.3.2 Ferrite Sleeves (Optional)



Ferrite sleeves are not normally required with the panel. In difficult EMC environments, or where non-preferred cables are used, optional ferrite sleeves should be fitted to both the loop and sounder wiring. The ferrite sleeves (A) are to be fitted over the conductor(s) of each cable - and NOT over the screen of the cable, which should pass outside of the sleeve. They should be fitted as close as possible to the entry point of the cable, i.e. as near as possible to the screen termination (B) to the metal cable gland (C). The sleeve should be held in place using a cable tie (D).

The ferrite sleeves are available for purchase from NOTIFIER's distributors (PN: 538-143).

3.4 MICC Cables



MICC cables must be fitted with metal cable glands (use Type A2 glands) to ensure good earthing continuity and correct termination. In particular, the mains cable requires that the cable gland (A) is fitted with an earth tail kit (B). The earth tail kit must be connected, using an insulated wire (C), to the panel safety earth connection (D) at the mains termination block (E). The bare mains wiring from the MICC cable must be suitably-insulated (F) and terminated in accordance with the appropriate local wiring regulations.

4 Commissioning

4.1 Introduction

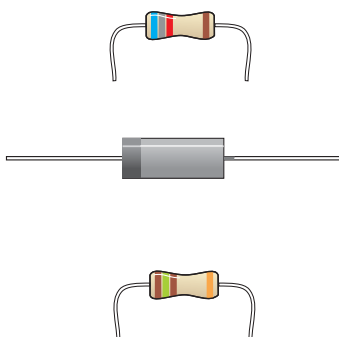
This section describes how to bring the ID50 Series Panel into an operational state (commissioning) ready for configuration. To commission this series of panels follow the steps detailed below. Information on how to configure the panel is given in **Section 5, Configuration**.

- 1 Check that the panel is installed and assembled correctly, refer to **Section 4.2, Preliminary Checks**.
- 2 Check internal panel configuration, **Section 4.3, Internal Checks**.
- 3 Check and connect the external wiring, refer to **Section 4.4, External Wiring Checks**.
- 4 Configure the panel for the particular system requirements, refer to **Section 5, Configuration**.
- 5 Check that the system is working correctly.

4.2 Preliminary Checks

Before connecting the mains power to the panel, check that:

- a. All PCBs are correctly fitted.
- b. All internal wiring is correctly connected.
- c. The loop wiring and external sounder circuits have NOT, at this stage, been connected to the PCB.
- d. Check that there are no more than 10 CLIP device addresses on a mixed-protocol loop. Be aware that some modules, e.g. M720, M721 use more than one loop address - the first device address taken up is OPAL while the others are CLIP, so an M721 module uses one OPAL and two CLIP addresses.
- e. The appropriate end-of-line devices are connected to the sounder outputs. For backwards compatibility, the default is set for 6k8 resistor end-of-line devices. However, an option is provided to select diode end-of-line devices to meet the requirements of EN54-13, which requires the ability to monitor for partial-open and partial-short circuit faults. A diode is provided for each sounder circuit should this option be selected.
- f. The 150R termination resistors are connected to the first and the last panels on the RS485 Communications Link.



4.3 Internal Checks

When all PCBs have been installed and all cabling has been successfully checked, the following jumper links allow the implementation of panel software or configuration updates, as described below.

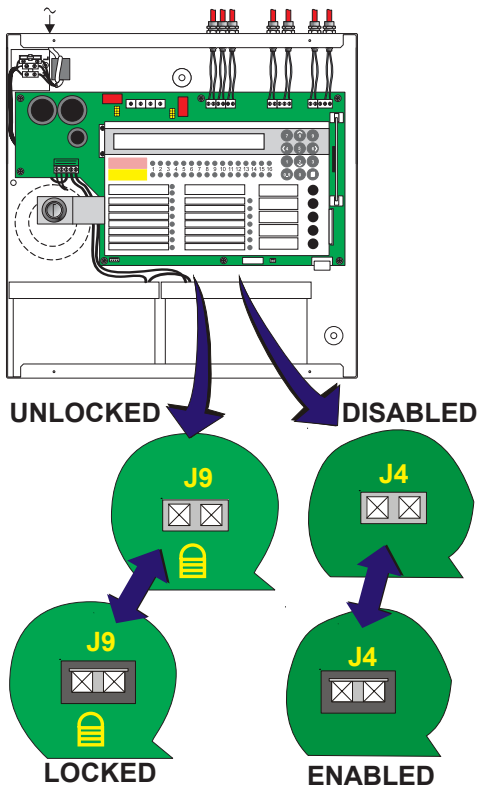
4.3.1 Jumper Link Options

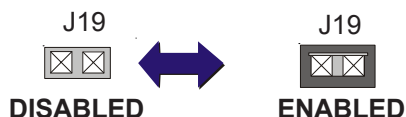
Software Upgrade (J4)

The Software Upgrade Jumper in conjunction with the Upgrade kit is used to upgrade the panel operating software. To enable the panel upgrade, fit a link to J4 and connect the appropriate cable. The link J4 must be removed on completion of the upgrade (see **997-415, ID50 Series Panel - Upgrading Instructions**). This jumper is situated to the right of the Digital/ÜE terminal block (TB8).

Configuration Lock (J9)

The Configuration Lock Jumper is used to lock and unlock the system configuration. If the link is fitted the system configuration is locked and changes will NOT be allowed. If the link is removed system configuration is possible. The panel can only be configured with the Configuration Lock (J9) in the unlocked position. The jumper is situated to the left of the Digital / ÜE terminal block (TB8).





Earth Fault Monitoring (J19)

Earth fault monitoring should be enabled during normal operation; this is the default condition and is indicated by a fitted jumper link on J19 to the right of the CFG Outputs C and D terminal block (TB3). To disable the earth fault monitoring, remove the link.

The presence of an earth fault is indicated by a yellow Earth Fault and general Fault LED.

Warning: If an earth fault already exists, **DO NOT** attempt to connect additional equipment likely to cause earth faults as damage may result, i.e. inhibiting the monitoring will not protect the equipment.

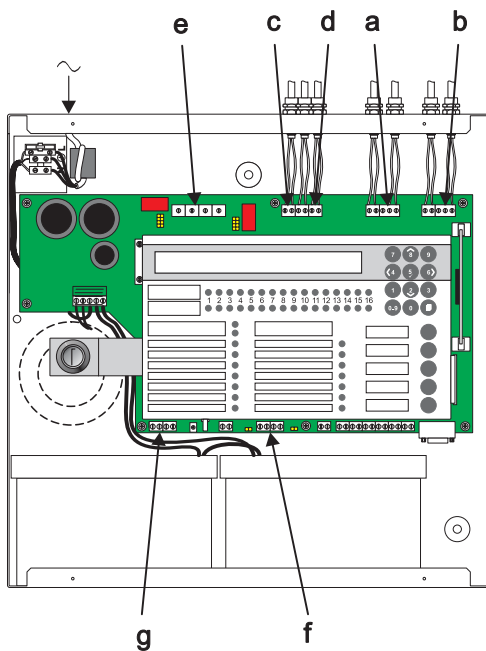
Note: Direct connection of a VDU etc. to the RS232 serial port D-type plug connector PL5, will result in an earth fault and potential damage to the connecting equipment. This fault can be removed by use of an isolated RS232 link or by (temporarily) disabling the earth leakage detection. Wait at least one minute after disabling the earth fault monitoring circuit before plugging into PL5.

4.4 External Wiring Checks

The following sections describe the procedures for checking and connecting the external wiring:

- See **Section 4.4.1, Loop Wiring***,
- See **Section 4.4.2, RS485 Communications Link**,
- See **Section 4.4.3, DC Auxiliary Output**,
- See **Section 4.4.4, Sounder Circuit Outputs A and B**,
- See **Section 4.4.5, CFG Outputs C and D**,
- See **Section 4.4.6, -VE Outputs**, and
- See **Section 4.4.7, Digital / ÜE Inputs**.

* Notifier has a PC-based Loop Diagnostic Tool (LDT). This tool is easy to use and its purpose is to reduce the amount time spent resolving cable and wiring termination faults. Contact Notifier Technical Support for details.



4.4.1 Loop Wiring

Typical connections of analogue addressable loop pair to a loop are shown below.

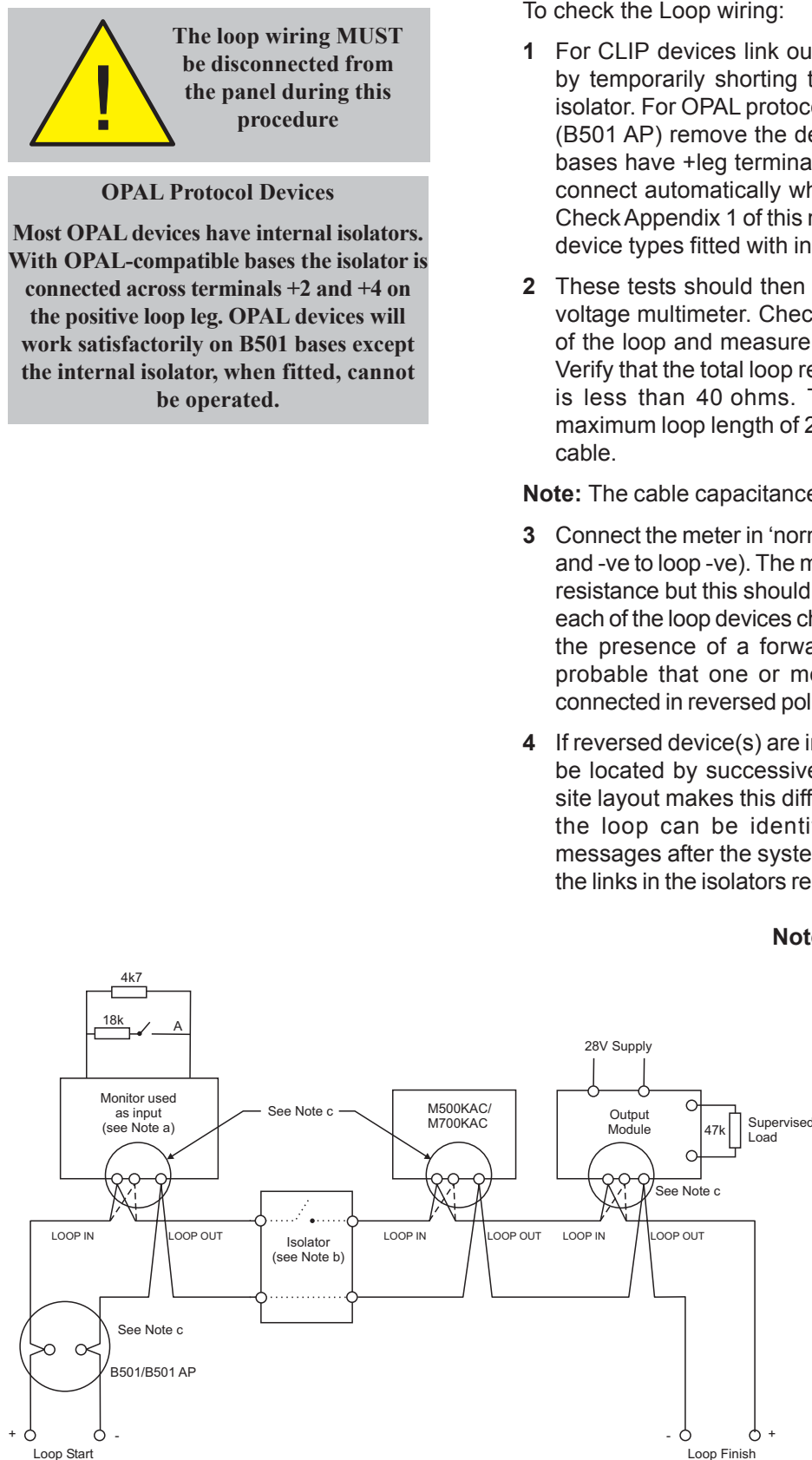
Checks Before Connection

To check the Loop wiring:

- 1 For CLIP devices link out any isolators on the Loop by temporarily shorting terminals 2 and 4 on each isolator. For OPAL protocol-compatible sensor bases (B501 AP) remove the device from the base. These bases have +leg terminals (+2 OUT and +4 IN) that connect automatically when the sensor is removed. Check Appendix 1 of this manual or the LBC for OPAL device types fitted with internal isolators.
 - 2 These tests should then be carried out using a low-voltage multimeter. Check the continuity of each leg of the loop and measure the end-to-end resistance. Verify that the total loop resistance (sum of both legs) is less than 40 ohms. Typically, this will allow a maximum loop length of 2,000m of screened 1.5mm² cable.
- Note:** The cable capacitance should be less than 0.5µF.
- 3 Connect the meter in 'normal' polarity (+ve to loop +ve and -ve to loop -ve). The meter should initially read low resistance but this should increase as the capacitor in each of the loop devices charges. If the meter indicates the presence of a forward-biased diode then it is probable that one or more of the loop devices is connected in reversed polarity or the wiring is crossed.
 - 4 If reversed device(s) are indicated in step 3, they may be located by successive halving of the loop (if the site layout makes this difficult, the affected section of the loop can be identified from the panel fault messages after the system has been configured and the links in the isolators removed - CLIP devices only).

Notes:

- a. A = Normally open switch - closes under an alarm condition.
- b. To comply with the requirements of EN54, isolators should be fitted between a maximum of 32 loop devices. For the ID50 Series Panel, do not place more than 25 loop devices between isolators (20 if FET isolators are used).
- c. Refer to device instruction sheet for wiring terminations.



Connecting to the Panel

When the Loop wiring has been checked and found to be satisfactory, do the following:

- 1 Remove the temporary links on the isolator units (OPAL protocol-compatible sensor bases, B501 AP, automatically link out so these can be ignored at any addresses where devices with an internal isolator are installed).

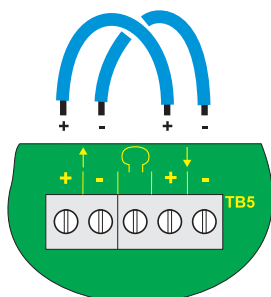
- 2 Connect the loop wiring to the panel.

When connecting, observe correct polarity! The ends nominated as + and - must be fitted to the correct terminals.

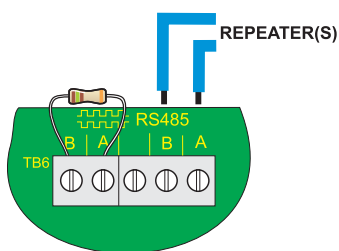
- 3 When the Loop wiring has been connected, apply the mains supply and then fit the interlink wire to the batteries.

- 4 Check the LCD and LEDs for indications of any faults. If faults exist, correct them and reset the panel.

- 5 Configure the Loop following the procedures in **Section 5.6.1, Signalling Line Circuit (SLC) - Devices** and/or **Section 5.6.2, Signalling Line Circuit (SLC) - Learn**.



**Apply power
BEFORE making any
RS485 connections.**



4.4.2 RS485 Communications Link

When the RS485 Communications link has been installed in the back box, checked and found to be satisfactory:

- 1 Connect the RS485 Communications Link to the panel at terminal block TB6, located on the PCB assembly, as shown at left.

When connecting, observe correct polarity! The ends nominated as B and A must be fitted to the correct terminals.

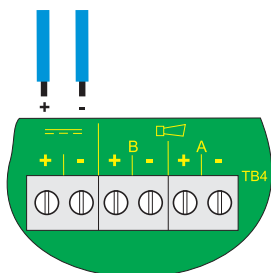
- 2 When the RS485 Communications link has been connected, apply the mains supply and then fit the interlink wire to the batteries.

4.4.3 DC Auxiliary Output

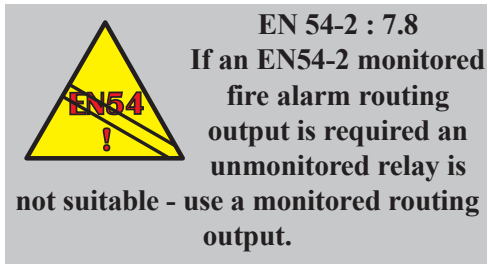
BEFORE connecting any circuit to the monitored DC Auxiliary Output, check that:

- 1 The external wiring is not short circuit.
- 2 There are no forward-biased diodes (as used for example with end-of-line power monitoring relays) connected across the external wiring.

When connecting, observe correct polarity! The ends nominated as + and - must be fitted to the correct terminals.



4.4.4 Sounder Circuit Outputs



The sounder circuits are designed to work either with a resistor end-of-line (EOL) device (default) or, to comply with the requirements for partial shorts and open monitoring of EN54-13 (Compatibility Assessment of System Components), where a diode EOL device is required. If resistor EOL devices are to be used follow the first procedure described below. If diode EOL devices are to be used refer to the procedure described overleaf.

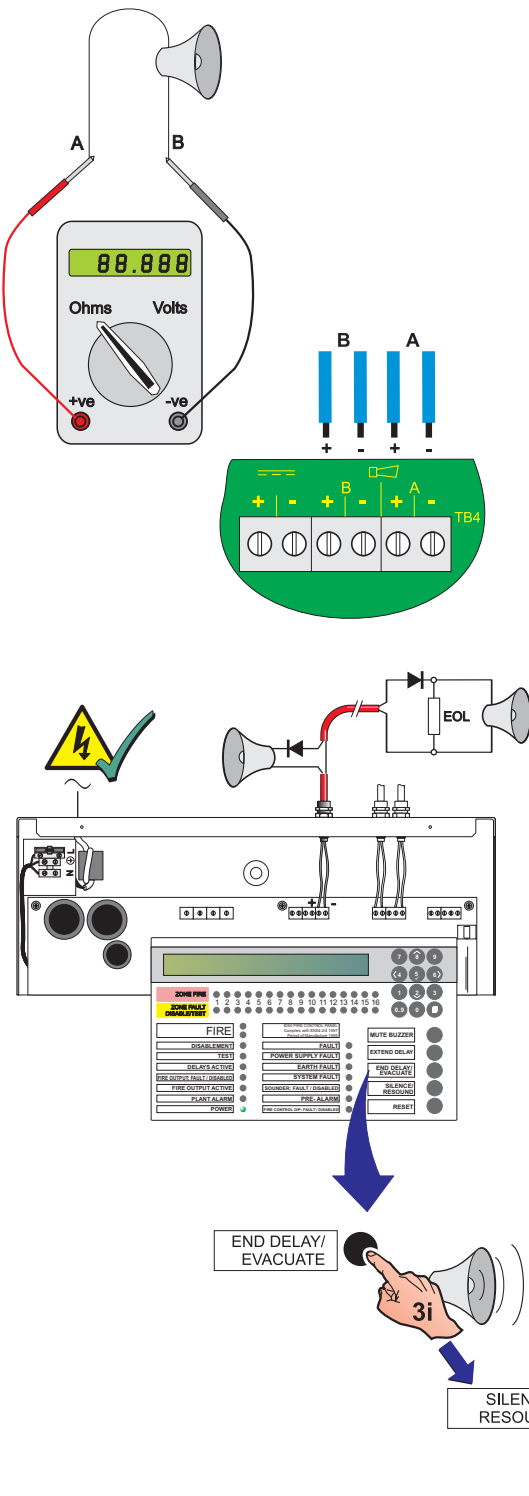
4.4.4.1 Using Resistor EOL Devices

Before the sounder circuits are connected it is recommended that all detection circuits have been checked and that there is no possibility of spurious alarm conditions being generated. The sounders should be polarized and suppressed using IN4002 (or similar) diodes and the circuits should be fitted with 6k8 end-of-line resistors. Perform the following checks:

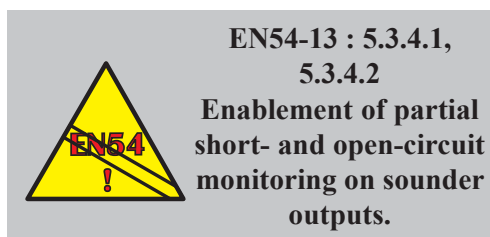
- 1 Use a low-voltage multimeter to check the resistance across each of the sounder circuits:
 - i With the meter connected in reverse polarity (+ve to -ve and -ve to +ve) the reading should be 6k8.
 - ii With the multimeter connected to the circuit in normal polarity (+ve to +ve and -ve to -ve) the meter may indicate a lower value. This is because of the forward-biased diodes in series with the sounders.
- 2 If electronic sounders are used this test will not reveal reversed devices. It is, therefore, recommended that if the circuit resistance appears correct, the following be done:
 - i Remove the 6k8 resistors from the panel outputs.
 - ii Connect the circuit to the panel output while observing correct polarity.
 - iii If there are any reversed devices the panel will then indicate:

'Sounder cct. n SHORT-CCT.'

- 3 When the output circuits have been connected, they may be tested using the 'END DELAY / EVACUATE' pushbutton.
 - i Press the 'END DELAY / EVACUATE' pushbutton to activate the Output circuits.
 - ii Press the 'SILENCE/RESOUND' pushbutton to silence all activated output circuits.
 - iii If the outputs operated correctly press the 'RESET' pushbutton. If not, check all possible causes and correct any faults that exist, then repeat Step 3.



4.4.4.2 Using Diode EOL Devices



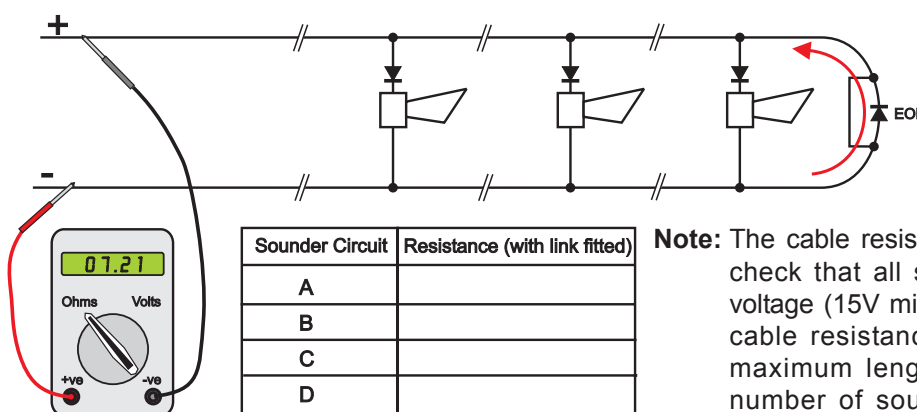
The procedure described below is based on the following assumptions:

- All sounder circuit cables are *in situ* with all sounders connected but not yet connected to the panel.
- The sounders are of the electronic type, polarized and suppressed using IN4002 (or similar) diodes. For correct operation these sounder devices require a minimum of 15V.
- The supplied EOL diode is fitted to each sounder circuit - **not** the usual 6k8 resistor required with previous equipment.

Note: Before the sounder circuits are connected it is recommended that all detection circuits have been checked and that there is no possibility of spurious alarm conditions being generated.

Procedure:

- Link out the end-of-line diode. Use a low-voltage multimeter, connected in reverse polarity (+ve to -ve and -ve to +ve), to measure the resistance of each sounder circuit cable. Note the resistance reading in the table provided below:



Note: The cable resistance must be measured to check that all sounders receive sufficient voltage (15V min) for correct operation. The cable resistance not only determines its maximum length but also the maximum number of sounder devices that can be connected to ensure correct sounder operation.

Setting sounder fault monitoring type:

- If the sounder circuit will draw less than 350mA leave the sounder monitoring type as 'SDR'.
- If the sounder circuit will draw up to 700mA change the sounder monitoring type to 'SDH'.

- Set the sounder type - SDR or SDH. The sounder cannot be of type SDR if more than 350mA is being drawn. The sounder cannot be of type SDR if the resistance is more than 16.1Ω. If the sounder circuit is of type SDH and the resistance is more than 8.1Ω, a 'OUTPUT B0 n OPEN CCT' fault will be displayed.

Current (mA)	Type	Cable length (m) ¹	Resistance (Ω)
0-700mA	SDH	< 350	< 8.1
0-350mA	SDR	< 700	< 16.1

¹ Cable lengths based on a conductor CSA of 1.5mm²

Refer to Section 5.6.3.1 Output Type Setting for details on changing the sounder type.

If the panel detects a resistance of less than 390Ω (approx) between the sounder circuits conductors, a partial short-circuit fault will be generated.



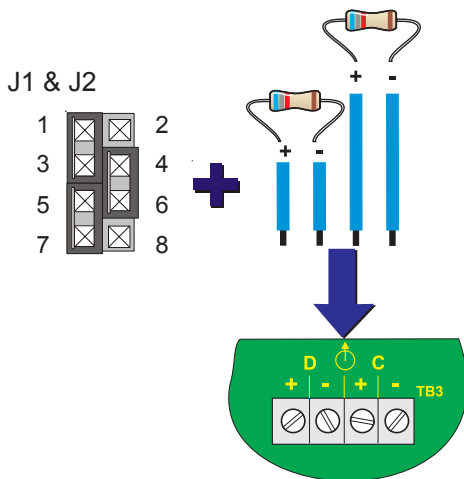
EN 54-2 : 7.7.1
One output must be configured as a fire output.

EN 54-2 : 7.8
If an EN54-2 monitored sounder output is required an unmonitored relay is not suitable. Use a monitored sounder output.

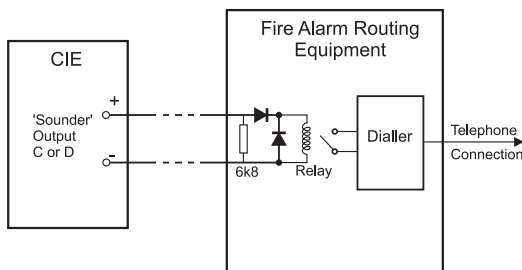


EN 54-2 : 8.8
Either a relay¹ or a sounder output¹ may be configured as a fault output.

¹ These outputs are not monitored and they should not be used as a fault routing output (EN 54-2: 8.9).



CFG Outputs C and D have a default configuration of unmonitored relay outputs (see next page).



4.4.5 CFG Outputs C and D

CFG Outputs C and D can be configured as sounder or relay output circuits using configurable jumper links. Output C is configured using jumper link J1 and Output D is configured using jumper link J2.

The link settings for J1 and J2 are defined in the table below. These changes must only be made with the system powered down and become effective automatically on power-up.

CFG Outputs C and D can be connected as:

- Monitored Sounder Circuits, or
- Un-monitored Relay Outputs

Note: A sounder output can be used to drive an external relay to provide a monitored relay output.

Before connecting CFG Outputs C and D to the PCB assembly, the appropriate hardware links may need to be set.

CFG OUTPUT	Fit Jumper Links Over:	Sounder/ Remote Relay	For Unmonitored Normally-Open	For Unmonitored Normally-Closed
Output C (default un-monitored NC)	J1	1 & 3 4 & 6 5 & 7	1 & 2 3 & 5 7 & 8	1 & 2 5 & 6 7 & 8
Output D (default un-monitored NO)	J2	1 & 3 4 & 6 5 & 7	1 & 2 3 & 5 7 & 8	1 & 2 5 & 6 7 & 8

Fault Relay - In the panel's quiescent state a relay configured as a fault relay is energised. Make the appropriate '+' and '-' wiring connections.

Sounder Circuits

If these connections are to be configured as sounder circuits make sure:

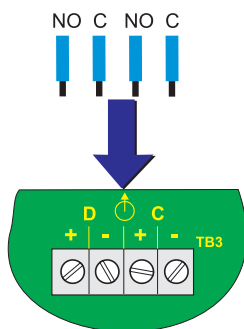
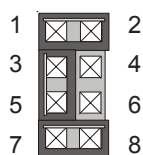
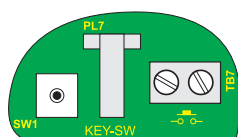
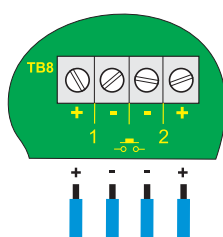
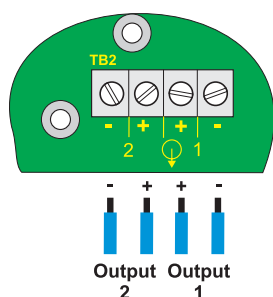
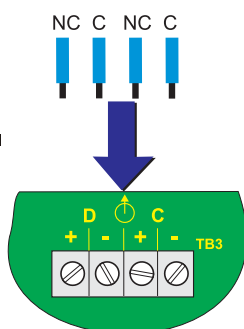
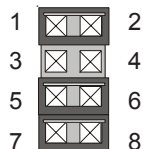
- The 6k8 end-of-line resistors¹ are correctly connected to the end of the circuit, and
- Correct polarity is used when terminating at the back box, i.e. terminal 1 being positive and terminal 2 being negative.

Monitored Remote Relay /Fire Routing Outputs

If these connections are to be configured to monitor for open and short circuits make sure:

- The 6k8 end-of-line resistors¹ are connected correctly to the end of the circuit, and
- Correct polarity is used when terminating at the back box, i.e. terminal 1 is positive and terminal 2 is negative.
- A blocking diode is connected in series with the relay coil.
- A back-emf diode should be connected across the relay coil.

¹ Alternatively, for partial-open- and partial-short-circuit monitoring use one of the diodes supplied with each sounder circuit in place of the 6k8 resistor.

J2 - OUTPUT D**J1 - OUTPUT C****Unmonitored Relays**

The unmonitored relay Output C is factory set as a fault output, and Output D as a fire output. When configured as volt-free relay outputs, the outputs are NOT power-limited.

If these connections are to be configured as unmonitored relays make sure that:

- Jumper Links are set accordingly, refer to **Section 4.3.1, Jumper Link Options**,
- Correct polarity is used when terminating at the back box, i.e. terminal 1 being normally-open (or normally-closed) and terminal 2 being common contact.

Maintain adequate segregation from power-limited wiring.

4.4.6 -VE Outputs

The two -VE Outputs, located at TB2 at the bottom left-hand corner of the PCB assembly, are normally used to provide a DC power supply for up to two relays located externally to the panel.

When the -VE Outputs are initially connected, the default software outputs are set as follows:

- Output 1 - Pre-Alarm and
- Output 2 - Plant Warning.

During commissioning these outputs can be individually configured to become active if any fire alarm, pre-alarm, fault or plant warning conditions occur (see **Section 5, Configuration**).

4.4.7 Digital / ÛE Inputs (TB8)

These inputs are located at the bottom centre of the PCB assembly. Digital Input 1 can be configured for use as either a Day Mode or Class Change function. To select the required function use the 'Digital Input 1' menu, see **Section 5.5.3.8 Digital Input 1**.

Digital Input 2 is currently not supported.

4.4.8 Switch Connections**KEY-SW**

The Key Switch connector is a digital input on the PCB. Operation of the key switch permits access at level 2.

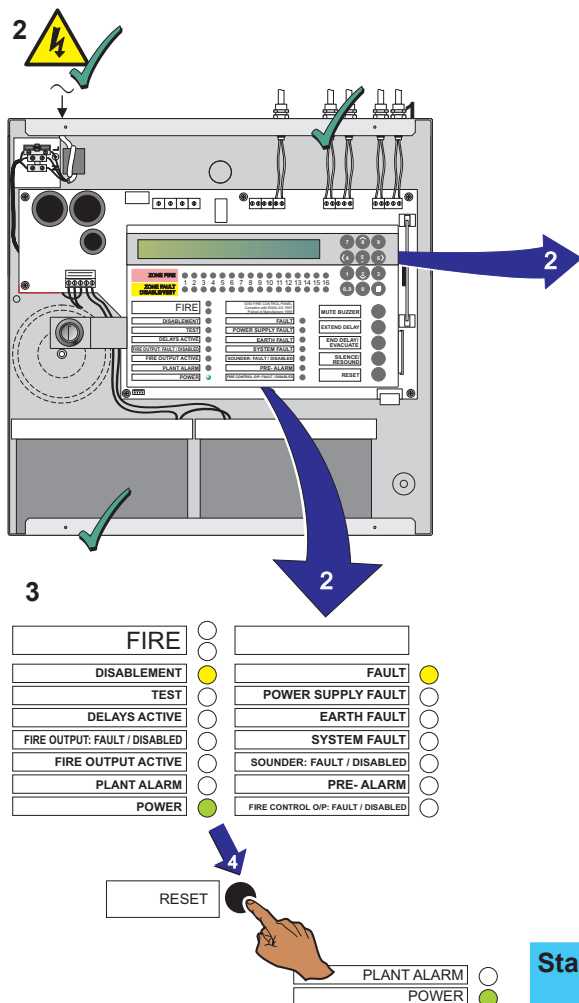
Cover Switch

This connector is not used.

4.5 Powering the Panel

To power up an ID50 Series panel:

- 1 Ensure all wiring is terminated correctly and all PCBs are fitted correctly.
- 2 With the batteries in the back box, connect the mains/ battery supply wiring plug to the power socket, between the transformer secondary fuse (FT1) and the battery fuse (FC1). Turn on the mains supply. The panel will display CPU RESTART with the buzzer sounding, and the FAULT, SYSTEM FAULT and 'POWER' LEDs will illuminate.



FAULT 01/01 00:00
CPU RESTART

- 3 Connect the battery power supply (refer to **Section 4.5.2 Batteries**).
- 4 When powered up, press the RESET button (then enter an appropriate access code if required). The panel should settle to a quiescent state. The LCD should display the 'Status: NORMAL' message unless fault(s) are present on the system. The internal buzzer will sound intermittently.

Note: If the panel indicates fault(s) are present, clear them before you proceed further with the commissioning procedure.

- 5 When all fault LEDs have been extinguished, the system is ready for testing, see **Section 4.7, Commissioning Tests**.

Note: The panel may be powered up satisfactorily from batteries alone. However, first ensure the batteries are fully charged to avoid the risk of the panel powering down due to insufficient voltage being available.

Status: NORMAL
Sat 05/01/2002 00:00:00

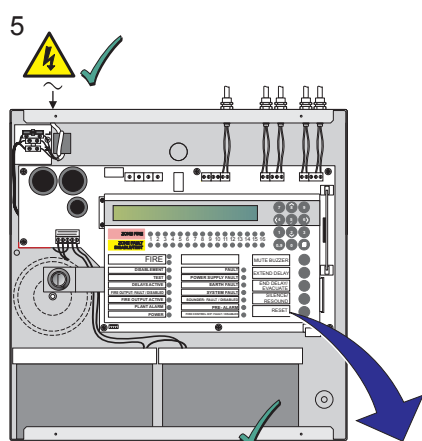
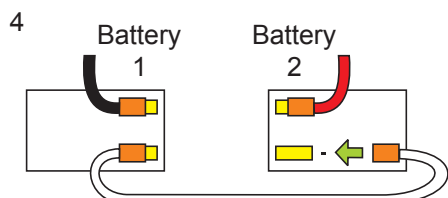
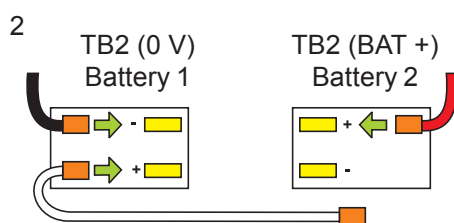
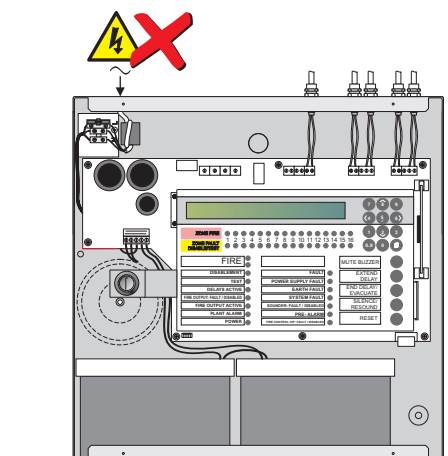
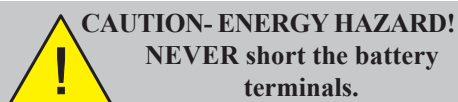
4.5.1 Start-up Language Selection

At panel start-up, and with a non-configured memory, you will be prompted to select the appropriate panel language from a displayed screen similar to the one below:

1: English 2: España 3: Portugues
4: Islanska 5: Italiano

Press the appropriate numeric pushbutton to select the desired language. If a selection is not made within 30 secs the panel will use the first language listed. The list of languages may vary from those listed above.

Note: If the memory is unlocked (refer to **Section 4.3.1 Jumper Link Options**) selection of the desired language will be stored and this language will be used the next time the panel is re-started. If the memory is locked when a language selection is made, the panel will not store this change and the Startup Language screen will be displayed again at the next panel startup. However, the language can be changed at any other time using the 'Language' setup menu (refer to **Section 5.5.1**).



RESET

4.5.2 Batteries

The ID50 Series Panel back box holds up to two 12V, 12Ah batteries. The batteries are not supplied with the panel. A valve-regulated, lead-acid type **MUST** be used.

To avoid contact damage resulting from repeated connection point arcing, it is recommended that the mains is connected before the batteries.

To connect the batteries:

- 1 Externally isolate the mains supply at the third-party-supplied isolation unit, remove the cover and fit the batteries in the back box. If not done already, connect the mains/battery/ supply wiring plug to the power socket, between the transformer secondary fuse (FT1) and the battery fuse (FC1).

- 2 Connect the red wire from the terminal block, TB2 (BAT+) to the positive terminal of battery 2 and the black wire from the terminal block, TB2 (0V) to the negative terminal on battery 1.

Connect one end of the interlink cable to battery 1 positive terminal only. **DO NOT** connect both ends of the interlink cable at this stage.

- 3 Turn on the AC mains supply and verify that after power-up:

- i The panel indicates 'CPU RESTART'.
- ii The buzzer sounds.
- iii The FAULT and SYSTEM FAULT LEDs illuminate.

- 4 Connect the interlink cable to the negative terminal on battery 2.

- 5 Reset the panel and check that the LCD displays the 'Status: NORMAL' message and that the FAULT and SYSTEM FAULT LEDs extinguish.

Battery Disposal

As a minimum, replace the batteries every four years.

Always dispose of the batteries in accordance with the battery manufacturer's recommendations and local regulations.

Status: NORMAL
Sat 05/01/2002 00:00:00

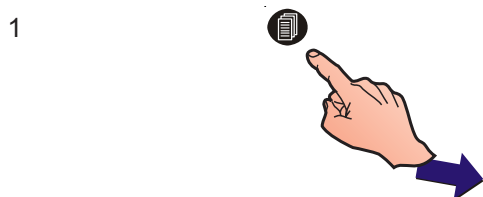
PRE-ALARM ☐
POWER ☒

4.6 Configuration and Handover

After all external wiring has been connected to the panel and with the LCD displaying the 'Status: NORMAL' message, the panel can be configured for the particular system requirements. Refer to **Section 5, Configuration**.

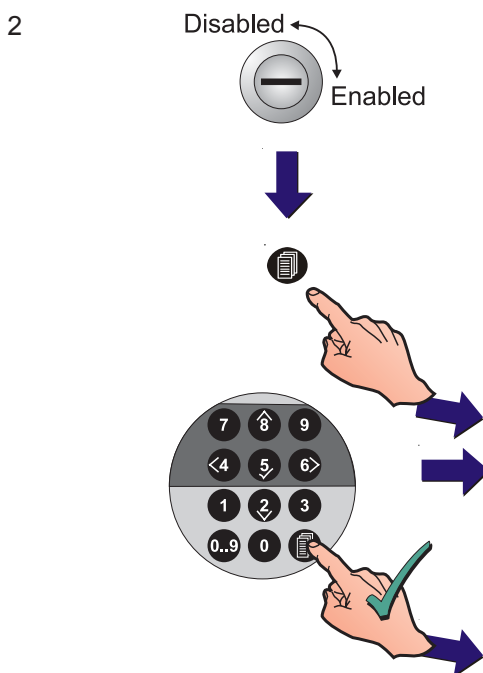
After configuration has been completed and any faults revealed have been rectified, the system will be ready for commissioning tests (see **Section 4.7, Commissioning Tests**), as required by the appropriate standards, prior to handover to the user.

Panel configuration is performed via the 'Commission' menu:



- 1 When the 'Status: NORMAL' message is displayed, press the 'Commission' button. The LCD prompts for entry of an access code as displayed below:

ACCESS TO MENUS RESTRICTED
Enter Level 2/3 Passcode: < : BackSp



- 2 Either turn the keyswitch or, using the numeric keypad (see **997-264-000-X, ID50 Series Panel - Operating Manual, Section 4.6, Numeric Keys**), enter either the:
- Level 2 access code, or
 - Level 3 access code.

Refer to **Appendix 1 - Specifications** for the default passcodes.

If the correct Level 2 access code (User) is entered, the Access Level 2 Menu and a user number (U0 - U9) is displayed in the top left-hand corner of the LCD (this is always U9 if the keyswitch is used):

[U0] 1:Test 2:Disable/Enable 3:Clock
4:View Mode 5:Commission

or if the Level 3 access code (Service) is correctly entered, the LCD displays [S1] in the top left-hand corner:

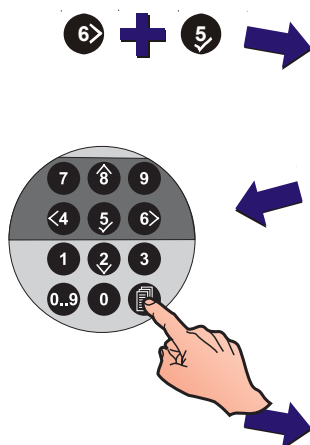
[S1] 1:Test 2:Disable/Enable 3:Clock
4:View Mode 5:Commission

If an incorrect access code is entered, the LCD displays a message:

ERROR - INCORRECT PASSCODE !!!

To return to the normal quiescent state, press the '<4' button.

- 3 Using the numeric keypad, press '6>' to select the Commissioning option and confirm using the '5↓' pushbutton. The Commissioning option is automatically displayed if a Level 3 passcode was previously entered.



[S1 COMM] 1:Setup 2:Circuit
3:CBE Rules 4:Zones 5:Access ↑: More

If a Level 2 passcode was entered the LCD prompts:

COMMISSION MODE ACCESS
Enter Level 3 Passcode: <: BackSp

- 4 Enter the correct Level 3 passcode using the numeric keypad and confirm using the '5↓' pushbutton (or press '<4' to cancel the last operation).

[S1 COMM] 1:Setup 2:Circuit
3:CBE Rules 4:Zones 5:Access ↑: More

4.7 Commissioning Tests

The following paragraphs list tests that should be performed after configuration has been completed. A successful result from these tests indicates that the panel is working properly.

4.7.1 Test LEDs

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.1.**

4.7.2 Test LCD

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.2.**

4.7.3 Test Zones

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.3.**

4.7.4 Test Auto High Test

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.4.**

4.7.5 Test Outputs

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.5.**

4.7.6 Test Buzzer

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.6.**

4.7.7 Test Keyboard

This procedure is described in the **ID50 Series Panel - Operating Manual, 997-264-000-X, Section 4.8.7.**

4.8 Sensors and Modules

Each of these devices is packaged with an instruction leaflet showing the correct interconnections for various applications. OPAL Protocol devices are now supported. To include the internal isolator (not all OPAL devices incorporate these) use the B501 AP sensor base which has an additional positive leg loop wiring connector for the device's internal isolator.

4.8.1 EN54 Requirements

Isolators

Isolators must be used on the analogue loop to separate sensors and/or MCPs, **including** any conventional zone detectors and/or MCPs connected.

- CLIP devices or OPAL devices without internal isolators: To comply with the requirements of EN54-2, isolators should be fitted between a maximum of 32 loop devices. For the ID50 Series, do not place more than 25 CLIP loop devices between isolators (20 if FET isolators are used).
- OPAL devices with internal isolator fitted when used with the B501 AP sensor base: Ensure loop the complies with the requirements of EN54-2.

Failure to comply contravenes the requirements of EN54-2 in the event of a transmission path fault.

4.8.2 BS5839 Part 1 Requirements

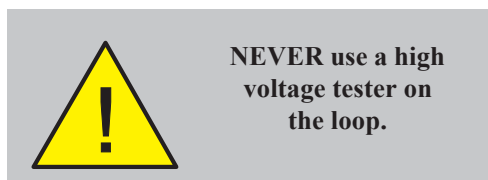
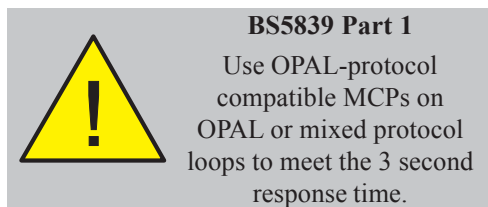
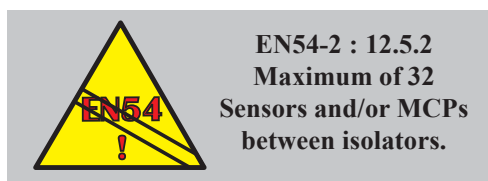
All MCPs should be OPAL protocol compatible on OPAL or mixed OPAL and CLIP protocol loops

Note: CLIP MCPs may be installed but the panel may not to meet the 3 second response time required by BS5839 Part 1. If CLIP MCPs are used the maximum number of CLIP devices **MUST** be 6 to allow all CLIP devices to have been polled in 3 seconds.

4.8.3 Loop Wiring Testing

Before connecting the panel or devices, the wiring of the loop may be tested for continuity and insulation. Once any components are connected, including isolators or devices with internal isolators, no high-voltage testers such as Meggers may be used on the loop; low-voltage testers such as multimeters may be used.

Note: If isolators or devices with an internal isolator are fitted (without power on the loop), the +ve conductor of the loop will be open circuit.



5 Configuration

5.1 Introduction

The following sections contain instructions to configure a panel.

For each configuration option, a brief description of its purpose is given, followed by the configuration procedure accompanied by illustrations of appropriate LCD displays.

The panels use menu-driven software which is divided into Level 2 Configuration Options (see **Section 5.3**) and Level 3 Configuration Options (see **Sections 5.4 - 5.11**).



5.2 Navigation and Number Entry

To navigate around the menus and enter numeric values, refer to the **ID50 Series Operating Manual 997-264-000-X, Section 4.6**.

5.3 Level 2 Configuration Options

The Level 2 Configuration Options are described in the **ID50 Series Panel Operating Manual 997-264-000-X**. The applicable sections are listed below:

- a. Test - **Section 4.9**
- b. Disable/Enable - **Section 4.10**
- c. Clock - **Section 4.11**
- d. View Mode¹ - **Section 4.12**
- e. Commissioning - **Section 4.13**
- f. Print - **Section 4.14**

¹ With ID60 panels there is a View Mode menu option for displaying VIEW, Optiplex and SMART 4 sensor maintenance log data (Access Level 3 required).

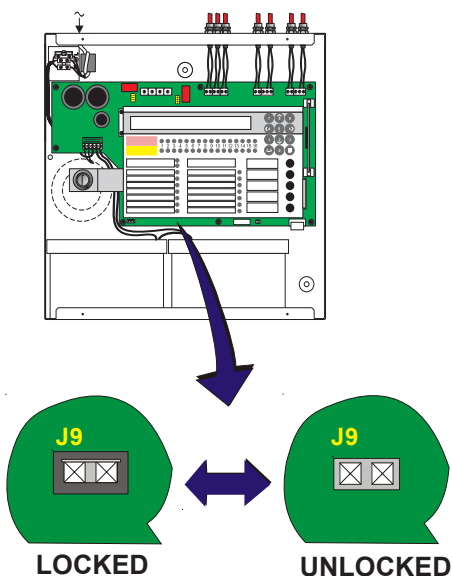
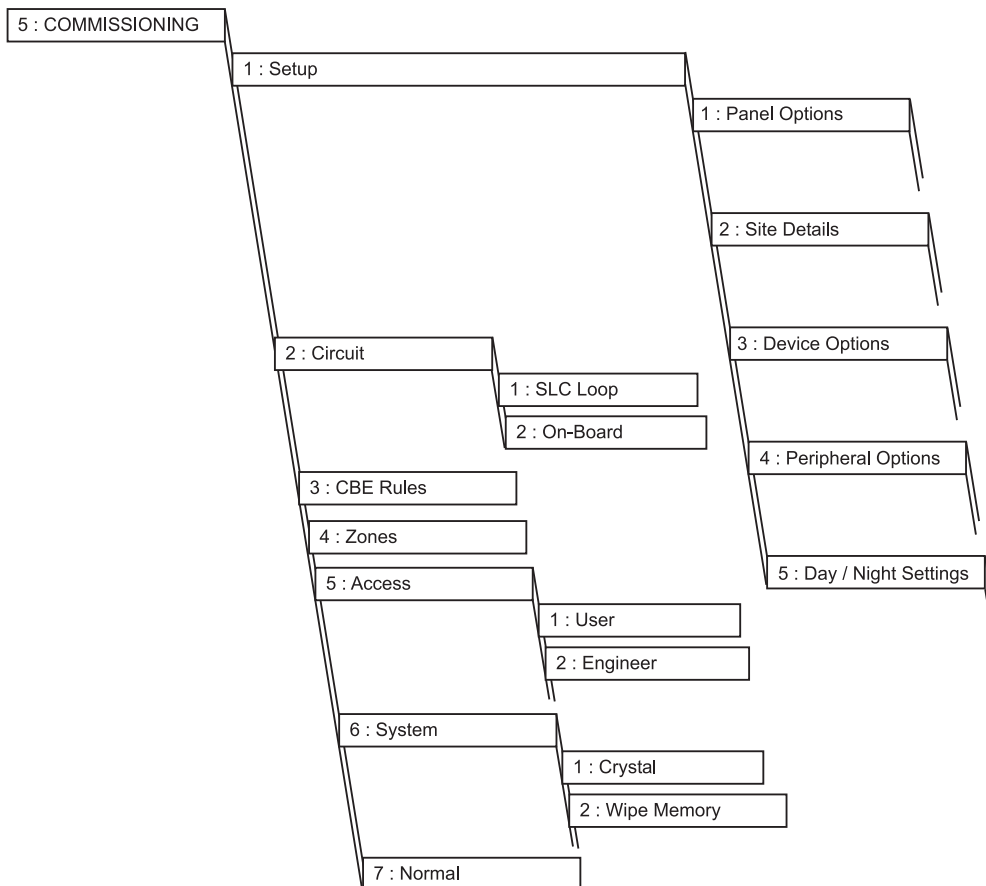
The **Operating Manual** also includes a Level 2 menu map.

For the default Level 2 passcode refer to **Appendix 1 - Specifications**.

5.4 Level 3 Configuration Options

The Level 3 Configuration Options allow you to configure the panel. These Options are listed in the menu map at left. The default Level 3 passcode is given in **Appendix 1 - Specifications**.

Before any configuration changes can be made, the memory lock must be set to the unlocked position (see below).



Memory Lock Jumper Link

Jumper link J9 locks/unlocks the system configuration. J9 is located to the left of terminal block TB8 (Digital / ÜE). To configure the panel, J9 must be in the 'unlocked' position (link NOT fitted).

Fit the link to the jumper (J9) before returning to normal operation.

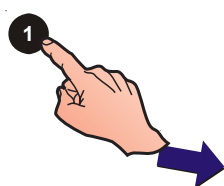
Any attempt to access a configuration menu option while the link is fitted will cause the following message to be briefly displayed:

Memory is Locked!

5.5 Setup Options

The Setup options menu allows the configuration of all site-specific panel settings. These configurable settings are sub-divided into the following categories:

- a. Panel Options
- b. Site Details
- c. Device Options
- d. Peripheral Options
- e. Day/Night Settings



[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More

With the Commissioning menu displayed and using the numeric keypad, press the '1' button to display the Setup menu:

[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

Use the numeric keypad to select the appropriate option from the Setup menu as described below.

5.5.1 Panel Options

This allows you to set or change the basic panel configuration settings such as the user interface options and operator access settings. The Panel Options menu comprises the following configurable options:

- a. Language (See Note 1)
- b. Date Format
- c. Control Keys Access Level
- d. LED 1H Mode (See Note 2)
- e. LED 2C Mode (See Note 2)
- f. Un-mute
- g. Mains Fault Delay
- h. Diagnostic Mode
- i. VdS Compatibility
- j. Automatic Re-sound

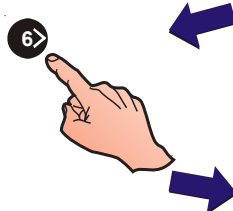
With the Setup menu displayed, press '1' to select Panel Options. Use the '2'/'8' buttons to cycle through the options.

Notes:

- 1** The default panel language is English. The default language can also be changed at initial power up of the panel.
- 2** Text inserts are provided for both LED configuration options - refer to Section 5.5.1.4 LED 1H Mode and Section 5.5.1.5 LED 2C Mode.

5.5.1.1 Language

- 1 When the Panel Options menu option is selected the Language edit screen is displayed.



[Setup] Language =	English
> : Change	↑ : More < : Exit

- 2 Press the '6>' button to step through the available languages.

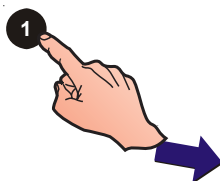
[Setup] Språk =	Svenska
> : Change	↑ : Mer < : Exit



- 3 When the desired language is displayed, press the '<4' button to return to the Setup menu screen. The language selection is saved automatically.
- 4 Make another Panel Options menu selection or press the '<4' button to return to the Commissioning Menu.

5.5.1.2 Date Format

This option is used to select one of three available date formats for display on the LCD. The options available are dd/mm/yyyy, mm/dd/yyyy or yyyy/mm/dd. To change the date format:

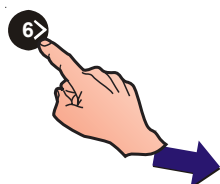


- 1 From the Setup menu screen, press the '1' button on the numeric keypad to display the Panel Options menu. Initially the Language screen is displayed:

[Setup] Language =	English
> : Change	↑ : More < : Exit

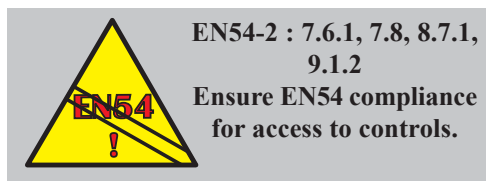
Press the '2/8' buttons to scroll through the Panel Options until the Date Format screen is displayed.

- 2 Press the '6>' button to step through the alternative Date Format settings. When the desired format is displayed, press the '<4' button to return to the Setup menu screen. The date format selection is saved automatically.



[Setup] Date Format =	mm/dd/yyyy
> : [Setup] Date Format =	yyyy/mm/dd
> : [Setup] Date Format =	dd/mm/yyyy
> : Change	↑ : More < : Exit

- 3 Make another Setup menu selection or press the '<4' button once more to return to the Commissioning Menu.



5.5.1.3 Control Keys Access Level

EN54-2 requires the following access to controls:

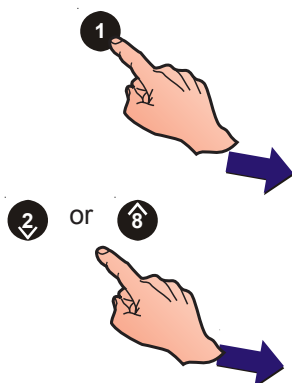
Level 2: Reset (EN54-2 Clauses 7.6.1 & 8.7.1)

Silence Sounders (EN54-2 Clause 7.8)

Extend Delays (EN54-2 Clause 9.1.2)

Level 1: End Delays (or MCP) (EN54-2 Clause 7.11d).

The Control Keys option allows the access level at which the panel control keys can be operated to be changed. To select the required access level:



- From the Setup menu screen, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

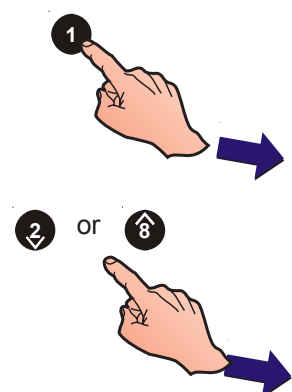
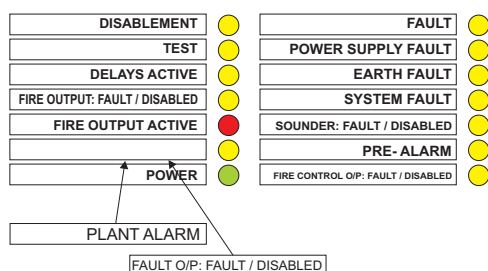
- Press the '2'/'8' buttons to step through the Panel Options menus until the Control Keys screen is displayed.

[Setup] Control Keys Access Level = 2
> : Change ↑ : More < : Exit

- Press the '6' button to change the setting to level 1 (no passcode) or level 2 (user passcode). The default access level is level 2.
- Press '4' to return to the Setup menu screen. All changes will be saved on exiting.

5.5.1.4 LED 1H Mode

The default function for this LED is PLANT ALARM. This option allows this LED on panels with the new 5-button membrane to be configured as FAULT O/P: FAULT/DISABLED.



[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

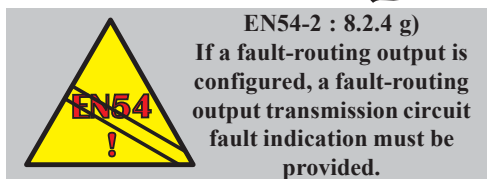
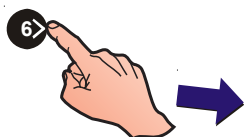
[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

- From the Setup menu, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

- Press the '2'/'8' buttons to step through the Panel Options menus until the LED 1H Mode screen is displayed.

[Setup] LED 1H = Plant Alarm
> : Change ↑ : More < : Exit



- Press the '6>' button to toggle the LED function.

[Setup] LED 1H = Fault Output: F/D
> : Change ↑ : More < : Exit

- Press '4' to return to the Setup menu screen. All changes will be saved on exiting.

5.5.1.5 LED 2C Mode

The default function of this LED is PRE-ALARM. This option allows the LED to be configured as SOUNDERS SILENCED.

- From the Setup menu screen, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

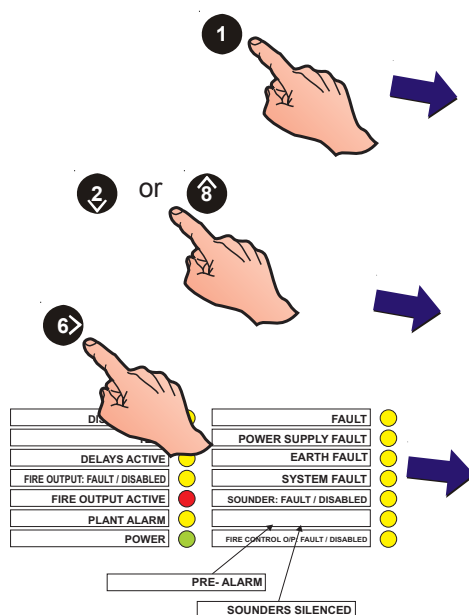
- Press the '2' or '8' buttons to step through the Panel Options menus until the LED 2C Mode screen is displayed.

[Setup] LED 2C = Pre-alarm
> : Change ↑ : More < : Exit

- Press the '6>' button to toggle the LED function.

[Setup] LED 2C = Sounders Silenced
> : Change ↑ : More < : Exit

- Press '4' to return to the Setup menu screen. All changes will be saved on exiting.



5.5.1.6 Un-mute

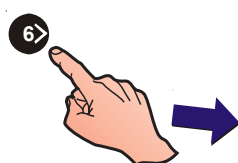
This option is used to control how new alarms un-mute the internal buzzer, i.e. new alarms occurring in zones not previously in alarm or for any new device going into alarm. To set the desired un-mute option:

- From the Setup menu screen, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

- Press the '2' or '8' buttons to step through the Panel Options menus until the Un-mute screen is displayed.

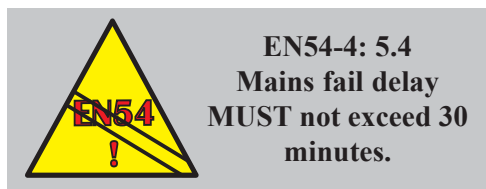
[Setup] Un-mute = On new zone alarm
> : Change ↑ : More < : Exit



- Press the '6>' button to toggle between 'On new zone alarm' and 'On new point alarm' input options.

[Setup] Un-mute = On new point alarm
> : Change ↑ : More < : Exit

- Press '<4' to return to the Setup menu screen. All changes will be saved on exiting.



5.5.1.7 Mains Fault Delay

By default, a mains fault is indicated within 10 seconds. This option allows the delay to be extended up to 60 minutes in one minute increments. **A fault indication delay of more than 30 secs does not comply with EN54** (see information at left). To configure a fault output delay, proceed as follows:

- From the Setup menu, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

- Press the '2/8' buttons to step through the Panel Options until the Mains Fault Delay screen is displayed.

[Setup] Mains Fault Delay = 10
> : Change ↑ : More < : Exit

- Press the '6>' button to change the delay time to the required setting:

[Setup] Mains Fault Delay = 10
Enter new value _ ✓ : Confirm < : Cancel

- Use the numeric keypad to enter the new value:

[Setup] Mains Fault Delay = 20
> : Change ↑ : More < : Exit

- Press '<4' to return to the Setup menu screen. All changes will be saved on exiting.

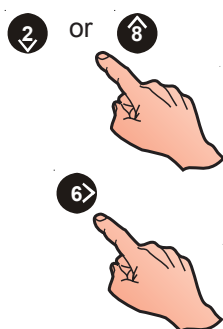
5.5.1.8 Diagnostic Mode

The Diagnostic Mode option allows extended fault and fire reporting and determines whether events are suppressed until confirmed. To enable Diagnostic Mode:

- From the Setup menu, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.

[Setup] Language = English
> : Change ↑ : More < : Exit

- Press the '2/8' buttons to step through the Panel Options until the Diagnostic Mode menu is displayed.



[Setup] Diagnostic Mode = ON
> : Change ↑ : More < : Exit

- 3 Press the '6>' button to select the required setting, either ON or OFF.

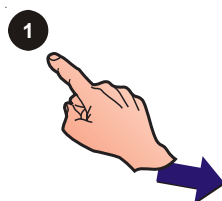
[Setup] Diagnostic Mode = OFF
> : Change ↑ : More < : Exit

- 4 Press '<4' to return to the Setup menu. All changes will be saved on exiting this menu.

5.5.1.9 VdS Compatibility

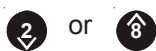
The VdS Compatibility option must be set to 'Disabled'.

- 1 From the Setup menu, using the numeric keypad press the '1' button to enter the Panel Options menu. The Language screen is displayed first.



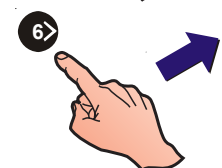
[Setup] Language = English
> : Change ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to step through the Panel Options until the 'VdS Compatibility' menu is displayed.



[Setup] VdS Compatibility = DISABLED
> : Change ↑ : More < : Exit

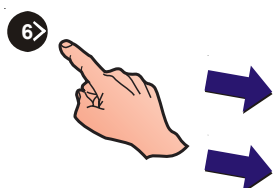
- 3 If necessary, press the '6>' button to change VdS Compatibility from 'ENABLED' to 'DISABLED'. Press '<4' to return to the Setup menu. All changes will be saved on exiting this menu.



5.5.1.10 Automatic Resound

By default, after the panel has received a fire event and the sounders have been silenced using the SILENCE/RESOUND pushbutton a new fire event, in ANY zone, will re-activate the sounder outputs. This option allows the configuration of sounder outputs either to re-activate with NEW zone-in-fire events or ignore any new fire events after the sounders have been silenced.

- 1 From the Setup menu, using the numeric keypad press the '1' button to enter the Panel Options menu.
- 2 Press the '2'/'8' buttons to step through the Panel Options until the 'Automatic Resound' menu is displayed.
- 3 Press the '6>' button to select the required setting, either NEW ZONE or NO. Press '<4' to return to the Setup menu. All changes will be saved on exiting this menu.



[Setup] Automatic Resound = ANY ZONE
> : Change ↑ : More < : Exit

[Setup] Automatic Resound = NEW ZONE
> : Change ↑ : More < : Exit

[Setup] Automatic Resound = NO
> : Change ↑ : More < : Exit

5.5.2 Site Details

The Site Details Setup option enables site name and service contractor information to be displayed on the panel. With ID60 panels there is an option for configuring a service due date (refer to Appendix 2 for details).

5.5.2.1 Service Phone Number

This option allows a service contact phone number to be displayed with fault messages. To enter or change the number:

- 1 From the Setup menu screen, press the '2' button on the numeric keypad to select the Site Details option. The Service Phone Number option is displayed:

[Setup] Phone = < blank/existing text >
> : Change ↑ : More < : Exit

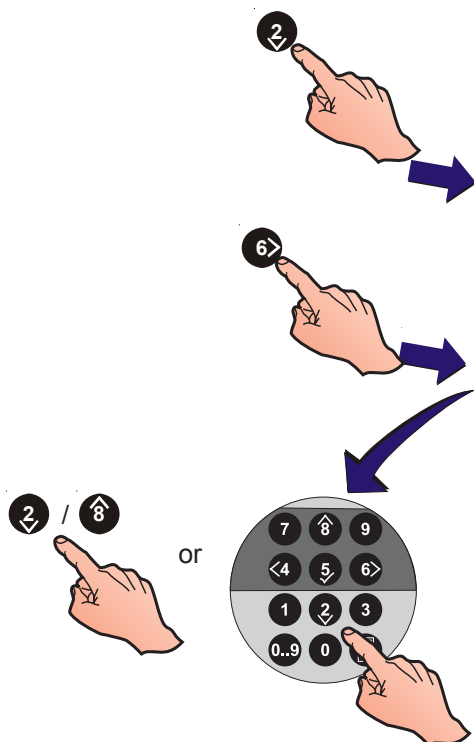
- 2 Press the '6' button to enter the text editing menu.

[↑ : Char ✓ : Done
> : Next < : Previous u1:Delete u3:Insert

- 3 The existing 20-characters of text are shown on the upper line (for new panels this area is blank). The current cursor position is indicated by a flashing character. Enter the required telephone number via the numeric keypad or use the '2'/'8' buttons to scroll through the available alphanumeric characters.

Note: For further information on how to edit text, refer to **Section 5.8, Zone Texts**.

- 4 Press the '5' button to confirm and return to the Setup menu screen.



5.5.2.2 Site Name

The Site Name option allows the entry of up to 20 characters to replace the 'Status: NORMAL' display on the LCD. To edit/change the characters:

- 1 From the Setup menu screen, press the '2' button on the numeric keypad to select the Site Details option. The Service Phone Number option is displayed first:

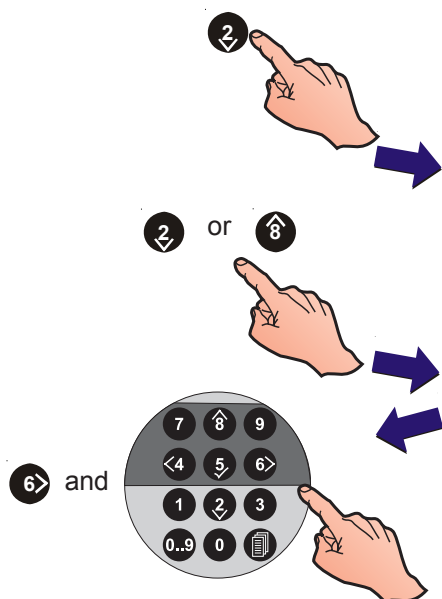
[Setup] Phone = < blank/existing text >
> : Change ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to display the Site Name screen.

[↑ : Char ✓ : Done
> : Next < : Previous u1:Delete u3:Insert

- 3 To edit/change the site name, press the '6' button. The LCD display is replaced by a text editing menu with the existing 20-characters of text on the upper line. The current cursor position is indicated by a flashing character.

Note: For further information on how to edit text, refer to **Section 5.8, Zone Texts**.



- 4 Using the appropriate buttons, edit the text then confirm the new text using the '5' button. The LCD returns to the Setup menu screen. All changes are saved on exiting.

5.5.3 Device Options

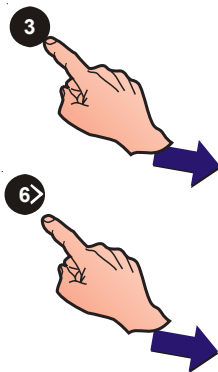
Setup menu Device Options allows the configuration of the following system inputs and outputs:

- a. Device blinking
- b. Output Pulse ON/OFF ratio
- c. Auto High Test
- d. Digital Input 1
- e. Maximum LEDs ON
- f. Day Mode Sensitivity
- g. Weekend Night Sensitivity
- h. Extinguishing System delay and soak timers
- i. Extinguishing System Hold Switch operation
- j. Transmission Device (VdS only)
- k. Fireman's Work Panel
- l. FWP2 Output Circuit (VdS only)
- m. Double Address Detection
- n. TD/ES Disablement at Access Level 2

5.5.3.1 Device Blinking

The Device Blinking option configures the LED's of sensors and modules on the SLC Loop to blink or not when polled. To configure this option:

- 1 From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device Blinking screen is displayed first.



[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

- 2 Press the '6>' button to select the required setting, either ON or OFF.

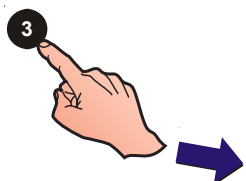
[Setup] Device Blinking = OFF
> : Change ↑ : More < : Exit

- 3 Press '<4' to return to the Setup menu screen.

5.5.3.2 Output Pulse On/Off Ratio

The Pulse On/Off Ratio option is used to set the sounder output pulse ratio to either 1/1 or 4/1. To configure the ratio:

- 1 From the Setup menu screen, use the numeric keypad and press the '3' button to enter the Device Options menu. The Device blinking screen is displayed first.



[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

2 or 8



- 2 Press the '2/8' buttons to step through the Device Options until the Pulse On/Off Ratio menu is displayed.

[Setup]	Pulse On/Off ratio = 1/1
> : Change	↑ : More < : Exit

6>



- 3 Press the '6>' button to change the required setting to either 1/1 or 4/1.

[Setup]	Pulse On/Off ratio = 4/1
> : Change	↑ : More < : Exit

- 4 Press '<4' to return to the Setup menu screen.

5.5.3.3 Auto High Test

The Auto High Test setup menu configures the panel to test each device on the loop at a specified time. The test checks that each device is able to produce an alarm reading at the panel. To configure the Auto High Test:

- 1 From the Setup menu screen, using the numeric keypad press the '3' button to enter the Device Options menu. The Device blinking screen is displayed first:

[Setup]	Device Blinking = ON
> : Change	↑ : More < : Exit

- 2 Press the '2/8' buttons to step through the Device Options until the Auto High Test screen is displayed.

[Setup]	Auto High Test = DISABLED
> : Change	1 : Disable ↑ : More < : Exit

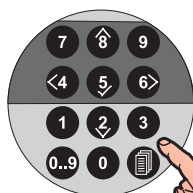
- 3 Press the '6>' button to enter (edit) the time at which Auto High Test will start.

[Setup]	Auto High Test = DISABLED
Enter start time :	-0:00 < : Cancel

- 4 Using the numeric keypad, enter an appropriate start time in the 24-hour clock format and confirm the set time using the '5' button. The LCD automatically returns to the Auto High Test screen. Alternatively, press '<4' to cancel all changes and return to the Auto High Test screen.

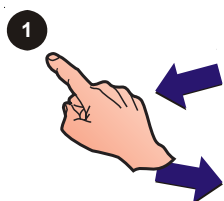
[Setup]	Auto High Test = 07:46
> : Change	1 : Disable ↑ : More < : Exit

[Setup]	Auto High Test = DISABLED
> : Change	1 : Disable ↑ : More < : Exit



To disable this function

- 1 To disable Auto High Test, press the '1' button:



[Setup]	Auto High Test = 07:46
> : Change	1 : Disable ↑ : More < : Exit

[Setup]	Auto High Test = DISABLED
> : Change	1 : Disable ↑ : More < : Exit

- 2 Press '<4>' to return to the Setup menu screen.

5.5.3.4 Digital Input 1

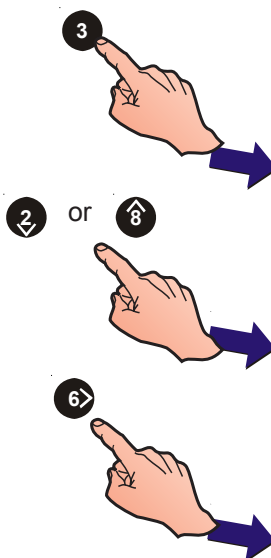
Digital Input 1 can be configured as either Day Mode Start or Class Change function.

When configured as Day Mode Start, activation from the input during the Day Mode period starts/ends Day Mode delays, depending on their current state.

When Class Change is selected outputs assigned to CBE Rules that have Class Change configured will activate when Digital Input 1 is operated.

To configure Digital Input 1:

- 1 Using the numeric keypad, press '3' at the Setup menu screen to enter the Device Options screen. The Device blinking screen is displayed first.



[Setup]	Device Blinking = ON
> : Change	↑ : More < : Exit

- 2 Press either '2'/'8' to step through the Device Options until the Digital Input 1 menu is displayed.

[Setup]	Digital Input 1 = Day Mode Start
> : Change	↑ : More < : Exit

- 3 Press '6>' to toggle between Day Mode Start and Class Change.

[Setup]	Digital Input 1 = Class Change
> : Change	↑ : More < : Exit

- 4 With the required configuration of Digital Input 1 displayed, press '<4>' to return to the Setup menu screen.

5.5.3.5 Maximum LEDs ON

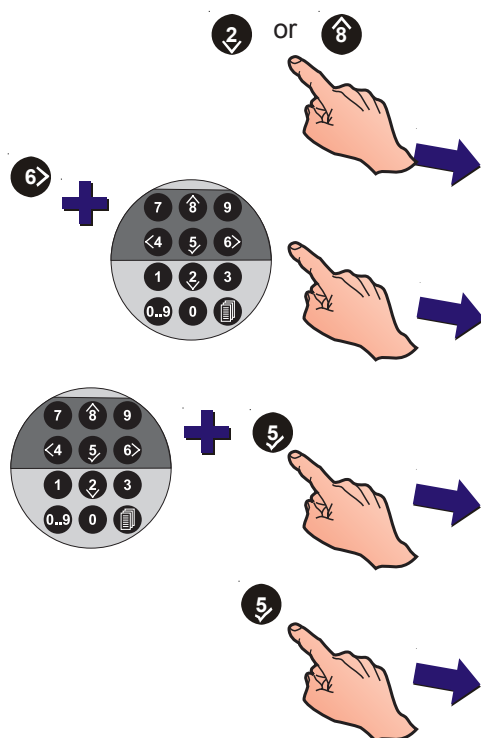
The maximum number of LEDs turned on in alarm or fault conditions can be set to 10 or 2. Fire takes priority; a fault LED will be turned off to allow a fire LED to be turned on if the LED maximum has been reached.

[Setup]	Max. LEDs ON = 10
> : Change	↑ : More < : Exit

- Press '6>' to toggle between 10 (default) and 2 or press '<4>' to return to the Setup menu screen.

5.5.3.6 Day Mode Sensitivity

This option allows a change in sensor sensitivity to be set during the same period each day (including weekends unless Weekend Night Mode is enabled). Refer to Section 5.6.1.2 Sensor Sensitivity Setting for day mode sensitivity setting. Day mode start and end times need to be specified as follows:



- 1 From the Device options menu, press either '2'/'8' to step through the Device Options until the Day Mode Sensitivity screen is displayed.

[Setup] Day Mode Sensitivity = DISABLED
> : Change 1: Disable ↑ : More < : Exit

- 2 Press '6' to enter a start time (using the 24hr clock):

[Setup] Day Mode Sensitivity = DISABLED
Enter Start time: 08:00 < : Cancel

- 3 Press the '5' button to confirm the start time. You are now prompted to enter an end time:

[Setup] Day Mode Sensitivity = DISABLED
Enter Finish time: 17:00 < : Cancel

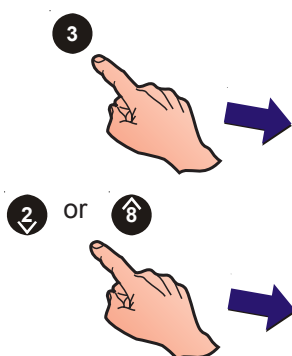
Press the '5' button to confirm the finish time. The day mode start and end times are now displayed:

[Setup] Day Mode Sensitivity = 08:00 ->17:00
> : Change 1: Disable ↑ : More < : Exit

Press either '2'/'8' to select another device option or press '<4' to return to the Setup menu screen.

5.5.3.7 Weekend Night Sensitivity

If Weekend Night Sensitivity is enabled, the panel disregards the Day Mode Sensitivity period on the two days of the week that coincide with the weekend. To set this mode active:



[Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

- 1 From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device Blinking screen is displayed first.

[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

- 2 Use '2'/'8' to scroll through the device options until Weekend night Sensitivity is displayed:

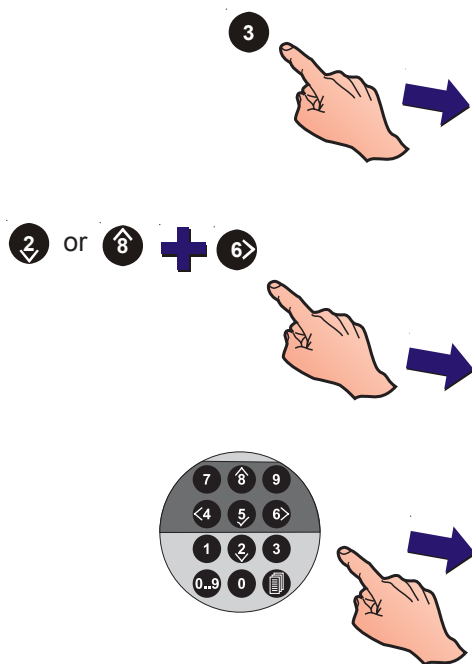
[Setup] Weekend night Sens. = ENABLED
> : Change ↑ : More < : Exit

- 3 Press '6' to toggle between ENABLED and DISABLED. Press either '2'/'8' to select another device option or press '<4' to return to the Setup menu screen.

**CAUTION:**

This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.



5.5.3.8 Extinguishing System Delay

The extinguishing system delay allows an evacuation period of up to 180 seconds to be entered (default 60 secs, minimum of 10 secs). To configure the delay, proceed as follows:

[Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

- From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device blinking screen is displayed first.

[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

- Press the '2'/'8' buttons to step through the Device Options until the Ext. System Delay screen is displayed. Press the '6' button to change the delay time. The display then prompts you for the new value:

[Setup] Ext. System Delay = 60 Seconds
Enter new value ____ ✓ : Confirm < : Cancel

- Enter the required delay time using the numeric buttons, e.g. 30 secs:

[Setup] Ext. System Delay = 60 Seconds
Enter new value 30 ✓ : Confirm < : Cancel

- Press the '5' button to confirm and return to the Setup menu screen.

5.5.3.9 Extinguishing System Soak

To specify for how long the extinguishing system operates after being turned on:

Note: The timer will only be triggered by CBE rules that have the **Soak Timer Enable** activated.

[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

- From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device blinking screen is displayed first.

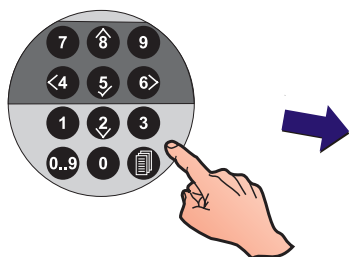
[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

- Press the '2'/'8' buttons to step through the Device Options to display the Ext. System Soak screen.

[Setup] Ext. System Soak = 0 Seconds
> : Change ↑ : More < : Exit

- Press the '6' button. The display then prompts you for the new value:

[Setup] Ext. System Soak = 0 Seconds
Enter new value ____ ✓ : Confirm < : Cancel



- 4 Enter a delay time using the numeric buttons, between 0 and 999 secs, e.g. 90 secs:

[Setup] Ext. System Soak = 0 Seconds
Enter new value 90 ✓ : Confirm < : Cancel

Note: Entering a value of '0' means that the output, after switching ON, is not switched OFF.

- 5 Press the '5' button to confirm and return to the Setup menu screen.



CAUTION:
This product is not compliant with EN 12094-1.
Fire extinguishing installations in Europe are required to be certified as compliant to this standard.

5.5.3.10 Hold Switch Operation

AUX modules, configured as one of four Hold Switch categories, can be used to affect the Extinguishing System Delay timer function. The four categories are:

AHJ - While this input is active, the Extinguishing System Delay timer is reset to the configured value and paused.

NYC - While this input is active, the Extinguishing System Delay timer is reset to the configured value plus 90 secs and paused.

ULI - While active, the Extinguishing System Delay timer continues to count down but pauses at 10 secs before release.

IRI - Hold switch activity is ignored if two or more zones associated with CBE rules with a category of 'Extinguishing System' are in alarm. Otherwise operation is the same as type ULI.

Note: Only one of the above Hold Switch input types may be used per panel.

- 1 From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device blinking screen is displayed first.

[Setup] Device Blinking = ON
> : Change ↑ : More < : Exit

- 2 Press the '2/8' buttons to step through the Device Options until the LCD shows the Hold Switch Operation menu.

[Setup] Hold Switch Operation = AHJ
> : Change ↑ : More < : Exit

- 3 Press the '6>' button to select alternative settings of NYC, ULI or IRI, as required. Changing the setting saves the change automatically.

Note: The default selection is AHJ.

- 4 Press the '5' button to confirm and return to the Setup menu screen.

5.5.3.11 Transmission Device

The Transmission Device activates in response to an alarm condition. The 'Transmission Device' menu enables the configuration of either a continuous or a 6 second

pulse response. This feature is required for VdS-compliant operation only.

5.5.3.12 Fireman's Work Panel

This option allows the panel to be configured to work with a German or Swiss Fireman's Work Panel (FWP).

5.5.3.13 FWP 2 Output Activation

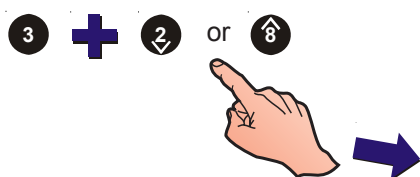
This option is used to control the way the Transmission Device-triggered output, FWP 2, is activated by the Fireman's Work panel (FWP).

This feature is required for VdS-compliant operation only.

5.5.3.14 Double Address Detection

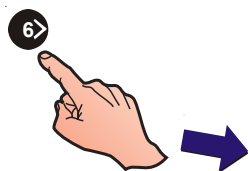
Automatic detection of devices with the same address is the default condition. If this facility is not required it may be turned off using this menu option.

- 1 From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. The Device blinking screen is displayed first. Press the '2'/'8' buttons to step through the Device Options until the LCD shows the Double Address Detection menu.



[Setup] Double Address Detection = ON
> : Change ↑ : More < : Exit

- 2 Press the '6' button to deactivate double address detection. Press this button again to cancel.

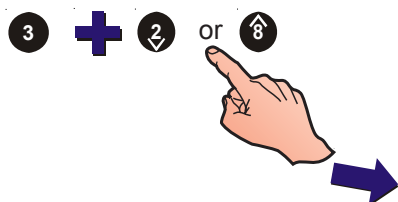


[Setup] Double Address Detection = OFF
> : Change ↑ : More < : Exit

5.5.3.15 TD/ES Disablement at Access Level 2

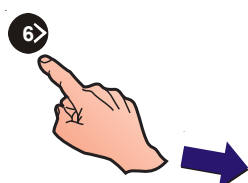
The Transmission Device (TD) and Extinguishing System (ES) outputs can be configured for automatic disablement at access level 2 via the panel keyswitch or cover-off switch.

- 1 From the Setup menu screen, press the '3' button on the numeric keypad to enter the Device Options menu. Press the '2'/'8' buttons to step through the Device Options until the LCD shows the TD/ES Auto Disable menu.



[Setup] TD/ES Auto Disable = No
> : Change ↑ : More < : Exit

- 2 Press the '6' button to select the TD/ES automatic disablement function. Press this button again to cancel.



[Setup] TD/ES Auto Disable = Yes
> : Change ↑ : More < : Exit

5.5.4 Peripheral Options

This option is used for setting up the connection of peripheral equipment via the RS232 and RS485 communication ports.

Select either RS485 or RS232 and then one of the specific equipment options available.

If RS485 is selected, the repeater protocol options available are:

- NOTIFIER
- ARP50/RP50
- BFT/LLT (for use with Swedish repeaters only)
- DISABLED

Refer to Section 5.5.4.3 for further details on repeater protocol selection.

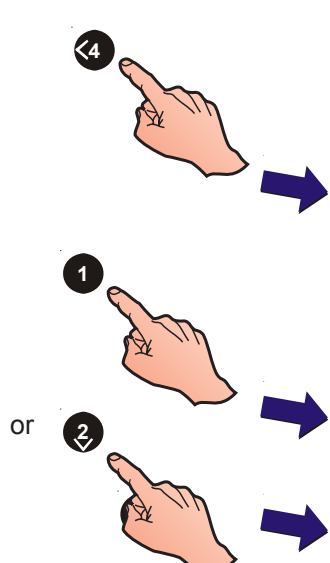
If RS232 is selected, the protocol options available are:

- PRINTER
- THIRD PARTY
- GSM MODEM (for use with GSM Communications Module)

Refer to Section 5.5.4.6 for further details on RS232 protocol selection.

5.5.4.1 Communications Port Selection

The Communications Port selection is made through the Peripheral Options screen.



[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

1 From the Setup menu screen, press the '**<4**' button on the numeric keypad to display the Communications Port Selection screen:

[S1 Peripheral Options] 1: RS485
2: RS232

2 Using the numeric keypad, press the '**1**' button to select RS485 port options or the '**2**' button to select RS232 port options:

[Setup] RS485 Protocol = NOTIFIER
> : Change ↑ : More < : Exit

[Setup] RS232 Protocol = PRINTER
> : Change ↑ : More < : Exit

3 Press the '**6>**' button to select an alternative RS485 or RS232 protocol option (refer to Sections 5.5.4.3 and 5.5.4.6 for further details).

- Press the '**<4**' button to return to the Setup menu screen.

5.5.4.2 Number of Repeaters

The Number of Repeaters menu allows the quantity of repeaters connected to the RS485 Communications Link to be entered. The panel displays a fault if this quantity does not equal the number of repeaters connected. To enter the number:

- From the Peripheral Options screen, press the '**1**' button on the numeric keypad to select the RS485 Communications port option. The RS485 Protocol setup screen is displayed:

[Setup] RS485 Protocol = NOTIFIER
> : Change ↑ : More < : Exit

- Press the '**2**'/**8**' buttons to step through the Peripheral Options until the Number of Repeaters menu is displayed.

[Setup] No. of Repeaters = 0
> : Change ↑ : More < : Exit

- Press the '**6>**' button to enable the number or repeaters to be entered.

[Setup] No. of Repeaters = 0
Enter new value ____ ✓ : Confirm < : Cancel

- Enter the required number using the numeric buttons; for example if entering a value of 10, first press '1', then '0'.

[Setup] No. of Repeaters = 0
Enter new value 10 ✓ : Confirm < : Cancel

- Press the '**5**' button to confirm the selection or press '**<4**' repeatedly to cancel and return to the Setup menu screen.

5.5.4.3 RS485 Protocol

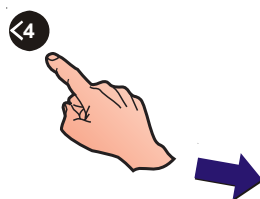
This option is used to select one of two available protocol formats when repeaters are connected to the panel via the RS485 communications link. The options available are:

- NOTIFIER
- ARP50/RP50.

The NOTIFIER protocol supports the IDR-2A and IDR-2P Repeaters.

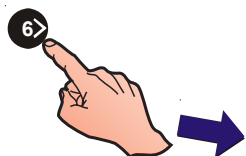
There are two additional options:

- BFT/LLT repeater (Sweden only) communications link.
- DISABLED - disables communication to any device connected to the panel via the RS485 port.

To change the RS485 Protocol:

- 1 From the Setup menu screen, press the '**<4**' button on the numeric keypad to enter the Peripheral Options screen. The RS485 Protocol screen is displayed:

[Setup]	RS485 Protocol =	NOTIFIER
> : Change	↑ : More	< : Exit



- 2 Press the '**>6**' button repeatedly to step through the alternative protocol settings.

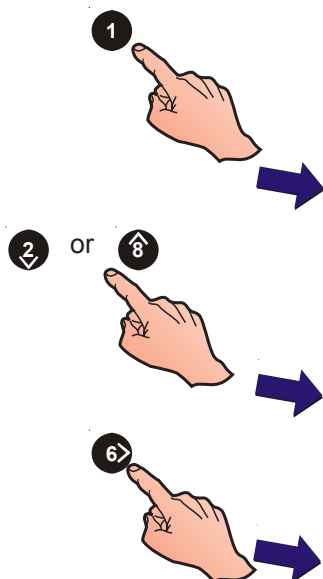
[Setup]	RS485 Protocol =	THIRD PARTY
> : Change	↑ : More	< : Exit

[Setup]	RS485 Protocol =	BFT/LLT
> : Change	↑ : More	< : Exit

- 3 Press '**<4**' to return to the Peripherals menu screen.

5.5.4.4 Third Party Datalink Monitoring

This function is only selectable if Third Party was selected at the RS485 Protocol screen. Monitoring of the third party datalink can be enabled or disabled as follows:



- 1 From the Peripheral Options screen, press the '**1**' button on the numeric keypad to select the RS485 Communications port option. The RS485 Protocol setup screen is displayed:

[Setup]	RS485 Protocol =	THIRD PARTY
> : Change	↑ : More	< : Exit

- 2 Press the '**2**' / '**8**' buttons to scroll through the Peripheral Options until the Data Link Monitoring screen is displayed.

[Setup]	Data Link Monitoring =	ENABLED
> : Change	↑ : More	< : Exit

- 3 If required, press the '**>6**' button to select DISABLED.

[Setup]	Data Link Monitoring =	DISABLED
> : Change	↑ : More	< : Exit

- 4 Press '**<4**' to return to the Peripheral Options menu screen.

5.5.4.5 Suspend Comms Limit

This function is only selectable if Third Party was selected at the RS485 Protocol screen. A time for suspending the RS485 Third Party Datalink of up to 300 minutes can be set. Alternatively, a value of '0' can be entered when an indefinite period is required.

- 1 From the Peripheral Options screen, press the '1' button on the numeric keypad to select the RS485 Communications port option. The RS485 Protocol setup screen is displayed:

[Setup] RS485 Protocol = THIRD PARTY
> : Change ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to scroll through the Setup menu until the Suspend Comms Limit screen is displayed.

[Setup] Suspend Comms Limit = 0 mins
> : Change ↑ : More < : Exit

- 3 Press the '6>' button if the limit is to be changed.

[Setup] Suspend Comms Limit = 0 mins
Enter new value 60 ✓ : Confirm < : Cancel

- 4 Using the numeric keypad, enter the new value (in minutes) and confirm using the '5' button. The LCD automatically returns to the Suspend Comms Limit screen. Alternatively, press '4' to cancel the change.

5.5.4.6 RS232 Protocol

This option enables the protocol of the RS232 port to be configured for use with either driver:

- a. External printer (default selection).
- b. Third party equipment
- c. GSM Modem.

- 1 From the Peripheral Options screen, press the '2' button on the numeric keypad to select the RS232 Communications port option. The RS232 Protocol setup screen is displayed:

[Setup] RS232 Protocol = PRINTER
> : Change ↑ : More < : Exit

- 2 Press the '6>' button to toggle between 'PRINTER', 'THIRD PARTY' or 'GSM MODEM'.

[Setup] RS232 Protocol = THIRD PARTY
> : Change ↑ : More < : Exit

[Setup] RS232 Protocol = GSM MODEM
> : Change ↑ : More < : Exit

- 3 Press '4' to return to the Peripheral Options menu screen.

5.5.4.7 Print Control or Third Party

This option is dependent upon the selected RS232 operating mode (see **Section 5.5.4.6**).

If the RS232 port is set to PRINTER, the available 'Print Control' options are:

- BASIC - slow mode, no handshaking (default option).
- XON/XOFF - software control of data flow.

If the RS232 port is set to THIRD PARTY, the available 'Third Party' options are:

- Full duplex (default option).
- Half duplex.

If the RS232 port is set to GSM MODEM, refer to Section 5.5.4.9 for details.

- From the Peripheral Options screen, press the '**2**' button on the numeric keypad to select the RS232 Communications port option. The RS232 Protocol setup screen is displayed first:

[Setup] RS232 Protocol = PRINTER
> : Change **↑ : More** **< : Exit**

- Press the '**2**'/'**8**' buttons to scroll through the options until the Print Control screen is displayed.

[Setup] Print Control = BASIC
> : Change **↑ : More** **< : Exit**

- Press the '**6**' button to toggle between 'BASIC' and 'XON/XOFF'

[Setup] Print Control = XON/XOFF
> : Change **↑ : More** **< : Exit**

- Press '**4**' to return to the Peripheral Options menu screen.

5.5.4.8 Third Party Datalink Monitoring

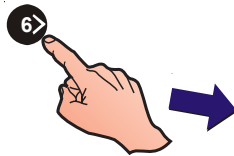
This function is only selectable if Third Party was selected at the RS232 Protocol screen. Monitoring of the third party datalink can be enabled or disabled as follows:

- From the Setup menu screen, press the '**2**' button on the numeric keypad to select the RS232 Communications port option. The RS232 Protocol setup screen is displayed:

[Setup] RS232 Protocol = THIRD PARTY
> : Change **↑ : More** **< : Exit**

- Press the '**2**'/'**8**' buttons to scroll through the Peripheral Options until the Data Link Monitoring screen is displayed.

[Setup] Data Link Monitoring = ENABLED
> : Change **↑ : More** **< : Exit**



- 3 If required, press the '6>' button to select DISABLED.

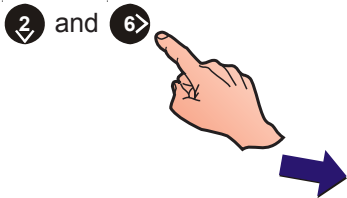
[Setup] Data Link Monitoring = DISABLED
> : Change ↑ : More < : Exit

- 4 Press '<4' to exit the Data Link Monitoring screen and return to the Peripheral Options menu screen.

5.5.4.9 GSM Communications Module Event Messaging

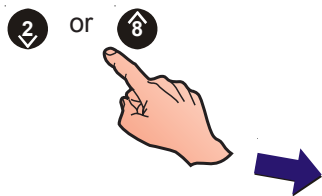
The ID50/60 Series panels are now able to be configured for use with a GSM Communications Module (GCM) (panel software version 5.07, or later). This function is selected through the RS232 Protocol option screen. The available options are: changing the GSM PIN number; entry of up to five GSM network telephone numbers and selecting panel event categories for text message notification.

- 1 From the Setup menu screen, press the '2' button on the numeric keypad to select the RS232 Communications port option. The RS232 Protocol setup screen is displayed. The PRINTER (default) option is displayed first. Press the '6>' pushbutton twice to select the GSM MODEM RS232 protocol option:



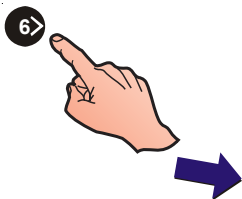
[Setup] RS232 Protocol = GSM MODEM
> : Change ↑ : More < : Exit

- 2 Press the '2/8' pushbuttons to display more configuration options for the GSM. The editable options are: GSM PIN Number (to enable a change of PIN number) and discrete GSM edit screens which allow up to 5 GSM network numbers to be configured to receive event messages from the ID50/60 Series fire alarm control panels.



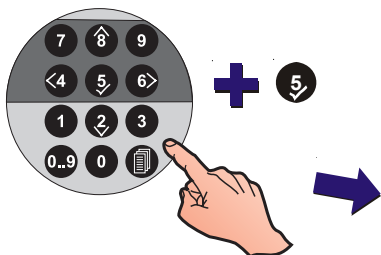
[Setup] Change GSM PIN Number:
> : Change ↑ : More < : Exit

- 3 To change the GSM PIN number, press the '6>' pushbutton and the screen asks for the current PIN to be entered (this is provided with the SIM card):



[Setup] Enter current PIN : _ < : Exit

- 4 Using the numeric keypad enter the new PIN number and press '5' when finished. You will now be prompted to enter the new PIN number again as confirmation:



[Setup] Confirm new PIN : _ < : Exit

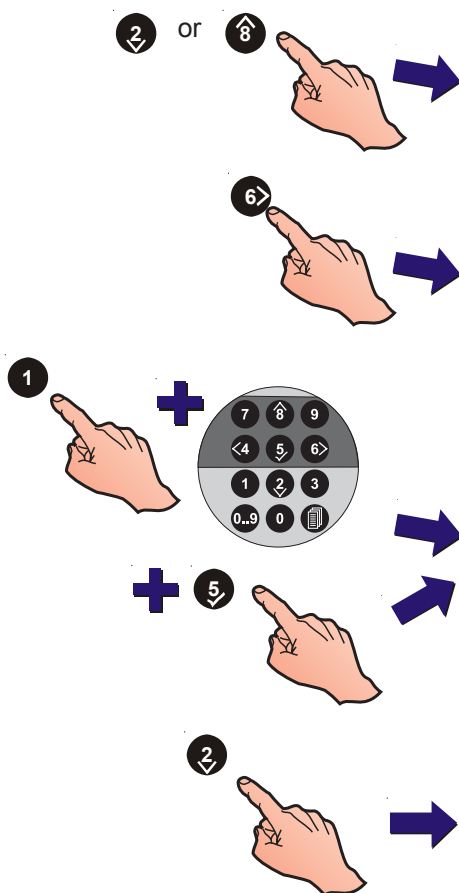
If the GSM PIN number change was successful you will get the following message:

[Setup] PIN Change complete < : Exit



Use care when entering the PIN number to avoid a failed PIN change. You are only allowed three attempts at entering a PIN code before it is locked out.

Likewise, if you have entered an incorrect PIN and restart the panel you are only allowed one more attempt before the PIN is locked out. **Don't restart the panel if the PIN is incorrect.**



However, if the change was not successful the following message is displayed:

[Setup] PIN Change failed <: Exit

The PIN change failure may be due to an incorrect PIN number having been entered.

- 5 To enter the GSM network telephone numbers, press the '2/8' pushbutton repeatedly until the GSM Item 1 screen is displayed:

[Setup] GSM Item 1:
 >: Change ↑: More <: Exit

- 6 To enter the GSM network contact number, press the '6' pushbutton to display the following options:

[Setup] GSM Item 1:
 1: Number 2: Notifications [A1F1P1.....]

- 7 Using the numeric keypad press '1' to select the number entry option. Again, using the numeric keypad enter the required number, without spaces and press the '5' pushbutton when finished.

[GSM number entry field] ↑: Char ✓: Done
 >: Next <: Previous u1:Delete u3:Insert

Note: The number entry is limited to 20 digits although the first character may be a '+'.

- 8 Using the numeric keypad press the '2' pushbutton to select the 'Notifications' option. Selection of Alarm, pre-alarm, fault and various disable classes can be made. The following event notification options are selectable (see table below left for a description of the Notifications code letters used and, for A, F and P events, the first one, first five or all events that can be configured to be sent.

Notifications: Code Letters

- A* - Alarm condition (A1, A5, or AA)
- F* - Fault condition (F1, F5, or FA)
- P* - Pre-alarm condition (P1, P5, or PA)
- C - Controls (user action at panel)
- G - General Disablement
- Z - Zone Disablement
- D - Device Disablement
- S - System Disablement, e.g. sounder output disabled, transmission output disabled.

* Can be configured to send the first event (default), first five events or all events.

[Setup] Options [A1F1P1.....]: 1: Alarm
 2: Fault 3: Pre-Alarm 4: Controls ↑: More

[Setup] Options [A1F1P1.....]:
 5: General Disable 6: Zone Disable ↑: More

[Setup] Options [A1F1P1.....]:
 7: Device Disable ↑: More

[Setup] Options [A1F1P1.....]:
 8: System Disable ↑: More

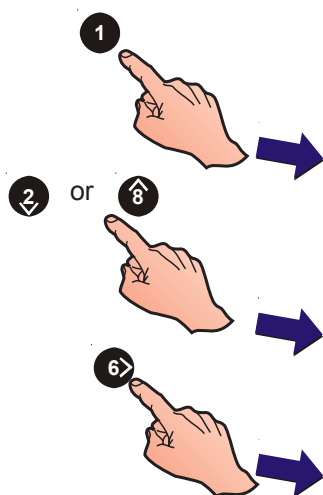
- 9 Use the numeric keypad to select/deselect any of the event notification options. The characters displayed in the square brackets indicate which options have been selected. For Alarm, Fault and Pre-alarm repeatedly pressing the '5' pushbutton toggles the selection of: not selected, 1st event, first 5 events or All events.

Note: For each GSM number entered the following options are assigned by default: Alarm, Pre-alarm and Fault.

- 10 Use the '2' pushbutton, select the remaining four GSM Number entry fields, as required, and repeat steps 4 to 9 above. Once all the required numbers have been entered, press '5' to exit. All numbers are saved on exiting.

5.5.4.10 Suspend Comms Limit

This function is only selectable if Third Party was selected at the RS232 Protocol screen. Used to limit the maximum time for suspending the RS232 Third Party Datalink. Up to 300 minutes can be set. Alternatively, a value of '0' can be entered when an indefinite period is required.



- 1 From the Setup menu screen, press the '2' button on the numeric keypad to select the RS232 Communications port option. The RS232 Protocol setup screen is displayed:

[Setup] RS232 Protocol = THIRD PARTY
> : Change ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to scroll through until the Suspend Comms Limit screen is displayed.

[Setup] Suspend Comms Limit = 0 mins
> : Change ↑ : More < : Exit

- 3 Press the '6' button if the limit is to be changed.

[Setup] Suspend Comms Limit = 0 mins
Enter new value 60 ✓ : Confirm < : Cancel

- 4 Using the numeric keypad, enter the new value (in minutes) and confirm using the '5' button. The LCD automatically returns to the Suspend Comms Limit screen. Alternatively, press '4' to cancel the change.

5.5.5 Day/Night Settings

The Day/Night Settings menu allows configuration of the following functions:

- a. Day Mode
- b. Weekend Night Mode
- c. Day Mode Start
- d. Primary Delay Time
- e. Extend Delay Time
- f. Heat Detector End Delay
- g. Day Mode 2 Zone End Delay
- h. Delay Indication.

5.5.5.1 Day Mode Activity

The Day mode function enables the panel to switch between two (2) preset sensitivity levels. Day mode is set for one time period per day for seven days unless the Weekend night mode is also configured (Section 5.5.5.2, Weekend Night Mode). The manual activation/deactivation of delayed outputs when the Day mode is active or inactive can also be configured.

Optiplex multi-sensors: the smoke detection component is turned off during the Day Mode period.

To configure the Day mode period:

[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

- 1 From the Setup menu screen, using the numeric keypad press the '5' button to enter the Day/Night Settings menu. The Day Mode Activity screen is displayed first.

[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

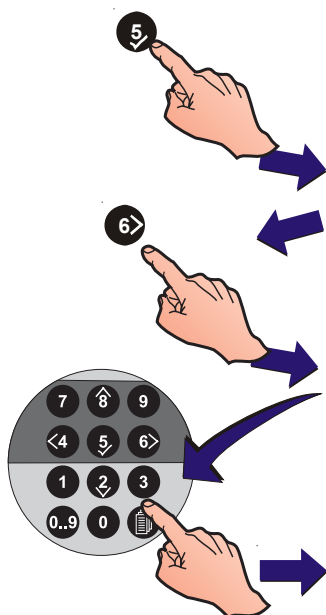
- 2 Press the '6>' button to enter the day mode active period start time.

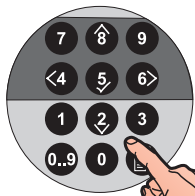
[Setup] Day mode activity = DISABLED
Enter start time : _ < : Cancel

- 3 Using the numeric keypad, enter the appropriate time in the 24-hour clock format and confirm using the '5' button.

[Setup] Day mode activity = DISABLED
Enter start time : 08:00 < : Cancel

- 4 The LCD displays a prompt to enter an end Day mode time. Use the numeric keypad to enter the appropriate time in the 24-hour clock format and confirm using the '5' button.





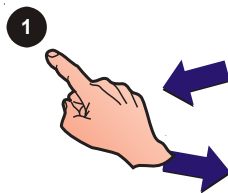
[Setup] Day mode activity = DISABLED
Enter finish time : _0:00 < : Cancel

[Setup] Day mode activity = 08:00 -> 18:00
> : Change 1 : Disable ↑ : More < : Exit

- 5 Press '<4>' to save all changes and return to the Setup menu screen.

To disable Day mode

- 1 With the Day mode activity menu displayed, press the '1' button on the numeric keypad.



[Setup] Day mode activity = 08:00-> 18:00
> : Change 1 : Disable ↑ : More < : Exit

[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

- 2 Press '<4>' to exit and return to the Setup menu screen.

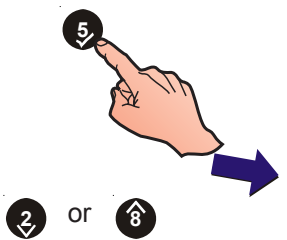
5.5.5.2 Weekend Night Mode

If Weekend night mode is enabled, the panel disregards the Day mode period on the two days of the week that coincide with the weekend. To set this mode active:

[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

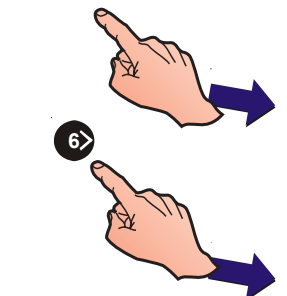
[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

- 1 From the Setup menu screen, using the numeric keypad press the '5' button to display the Day/Night Settings screen. The Day Mode Activity screen is displayed first.



[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

- 2 Press the '2/8' buttons to step through the Day/ Night Settings options until the Weekend night mode screen is displayed.



[Setup] Weekend night mode = Disable
> : Change ↑ : More < : Exit

- 3 Press the '6>' button to toggle this function.

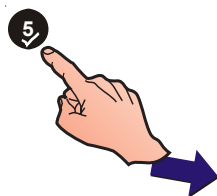
[Setup] Weekend night mode = Enable
> : Change ↑ : More < : Exit

- 4 Press '<4>' to exit and return to the Setup menu screen.

5.5.5.3 Day Mode Start

This option enables the start of the day mode period to be set manually (default) or automatically.

Digital Input 1 can be configured for manual activation of day mode (see Section 5.5.3.4). When the day mode period is activated via Digital Input 1, a continuous (rather than momentary) condition is required. However, if a day mode period has been configured (refer to Section 5.5.5.1 Day Mode Activity) and is currently active, an input via Digital Input 1 will de-activate day mode until it is released or the day mode activation expires at the end of the set period. Delays to outputs, manually-activated using Digital Input 1, will be cancelled automatically at the end of the set day mode period. To set Day Mode Start:



- 1 From the Setup menu screen, press the '5' button on the numeric keypad to enter the Day/Night Settings menu. The Day Mode Activity screen is displayed first.

[Setup]	Day mode activity = DISABLED		
> : Change	1 : Disable	↑ : More	< : Exit

- 2 Press the '2'/'8' buttons to step through the Day/Night Settings options until the Day Mode Start screen is displayed.

[Setup]	Day Mode start =	Manual
> : Change	↑ : More	< : Exit

- 3 Press the '6' button to select Automatic:

[Setup]	Day Mode start =	Automatic
> : Change	↑ : More	< : Exit

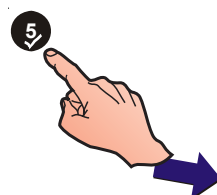
- 4 Press '<4' to exit and return to the Setup menu screen.

5.5.5.4 Primary/Extend Delay Timers

As part of Day Mode configuration (see Section 5.5.5.1) the Primary Delay Timer allows an initial investigation time of up to 300 seconds (default 30 seconds) to be entered or changed. The Extend Delay Timer allows an additional delay (default - 3 minutes) to be entered or changed. The total delay time cannot exceed 10 minutes. To set delay times:

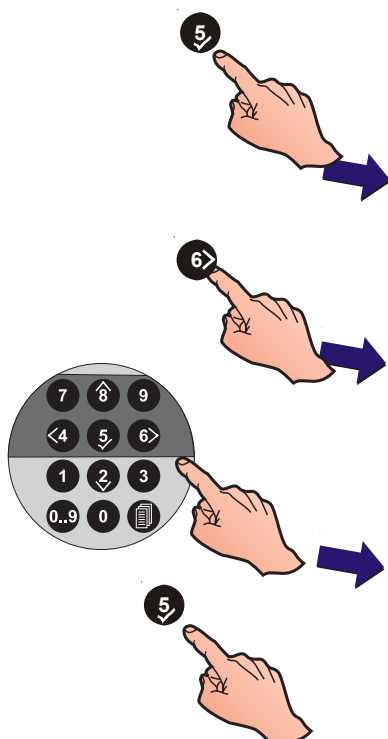
[S1 Setup]	1: Panel Options	
2: Site Details	3: Device Options	↑ : More

[S1 Setup]	4: Peripheral Options
5: Day / Night Settings	↑ : More



- 1 From the Setup menu screen, press the '5' button on the numeric keypad to enter the Day/Night Settings menu. The Day Mode Activity screen is displayed first.

[Setup]	Day mode activity = DISABLED		
> : Change	1 : Disable	↑ : More	< : Exit



- 2 Press the '2'/'8' buttons to step through the Day/Night Settings options until the Primary Delay Time screen is displayed.

[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

- 3 Press the '6' button. The display then prompts you for the new value:

[Setup] Primary Delay Time = 30 Seconds
Enter new value ____ ✓ : Confirm < : Cancel

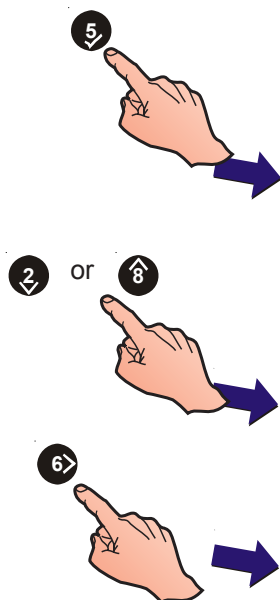
- 4 Enter the required delay time using the numeric buttons; (e.g. to set the delay time to the maximum value of 300 seconds, first enter '3', then enter '0', '0').

[Setup] Primary Delay Time = 30 Seconds
Enter new value 300 ✓ : Confirm < : Cancel

- 5 Press the '5' button to confirm and return to the Setup menu screen.
- 6 Repeat steps 1 to 5 for the Extend Delay Time, using the Extend Delay Time display and a maximum value of 10 minutes.

5.5.5.5 Heat Det. End Delay

The Day Mode function, Delays to outputs, can be cancelled when a heat sensor goes into alarm. To select the Heat Det. End Delay option:



[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

- 1 From the Setup menu screen, press the '5' button on the numeric keypad to enter the Day/Night Settings menu. The Day mode activity screen is displayed first.

[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to step through the Day/Night Settings options until the Heat Det. End Delay screen is displayed.

[Setup] Heat Det. End Delay = No
> : Change ↑ : More < : Exit

- 3 Press the '6' button to toggle this function.

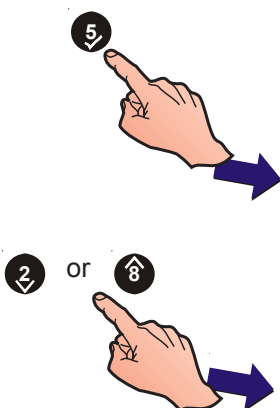
[Setup] Heat Det. End Delay = Yes
> : Change ↑ : More < : Exit

- 4 Press '<4' to exit and return to the Setup menu screen. The selection is saved on exiting.

5.5.5.6 Day Mode 2 Zone Ends Delay

The Day Mode function, Delays to outputs, can be cancelled, through this Day/Night Settings option, by a second zone going into alarm. This is an alternative to a second device in the same zone going into alarm or the activation of an MCP cancelling active delay timers.

To select the Day Mode 2 Zone Ends Delay option:



[S1 Setup] 1: Panel Options
2: Site Details 3: Device Options ↑ : More

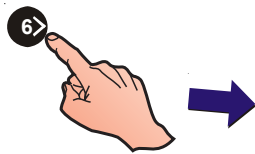
[S1 Setup] 4: Peripheral Options
5: Day / Night Settings ↑ : More

- 1 From the Setup menu screen, press the '5' button on the numeric keypad to enter the Day/Night Settings menu. The Day mode activity screen is displayed first.

[Setup] Day mode activity = DISABLED
> : Change 1 : Disable ↑ : More < : Exit

- 2 Press the '2'/'8' buttons to step through the Day/Night Settings options until the Day Mode 2 Zone Ends Delay screen is displayed.

[Setup] Day Mode 2 Zone Ends Delay = No
> : Change ↑ : More < : Exit



3. Press the '**6>**' button to toggle this function.

[Setup]	Day Mode 2 Zone Ends Delay	= Yes
> : Change	↑ : More	< : Exit

- 4 Press '**<4**' to exit and return to the Setup menu screen. The selection is saved on exiting.

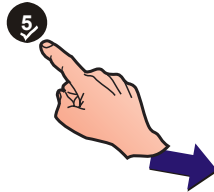
5.5.5.7 Delays Indication

Select whether the DELAYS ACTIVE *and* DISABLEMENTS LEDs are lit or the DELAYS ACTIVE LED only is lit for active delays using this option.

[S1 Setup]	1: Panel Options	
2: Site Details	3: Device Options	↑ : More

[S1 Setup]	4: Peripheral Options	
5: Day / Night Settings		↑ : More

- 1 From the Setup menu screen, press the '**5**' button on the numeric keypad to enter the Day/Night Settings menu. The Day mode activity screen is displayed first.



[Setup]	Day mode activity = DISABLED	
> : Change	1 : Disable	↑ : More < : Exit

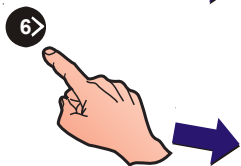
- 2 Press the '**2**'/**8**' buttons to step through the Day/ Night Settings options until the Delays Ind. screen is displayed.

2 or **8**



[Setup]	Delays Ind.	= Active/Disable
> : Change	↑ : More	< : Exit

- 3 Press the '**6>**' button to toggle this function.



[Setup]	Delays Ind.	= Active Only
> : Change	↑ : More	< : Exit

- 4 Press '**<4**' to exit and return to the Setup menu screen. The selection is saved on exiting.

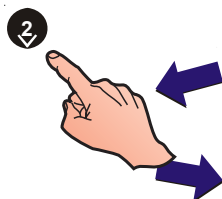
5.6 Circuit Options

The Circuit options menu offers the facility to individually auto-configure, manually learn or view the following circuits:

- Signalling Line Circuit - SLC (loop)
- On-Board Output Circuits - including sounder, control and relay circuits.

To select the Circuit options menu:

- From the Commissioning menu, press the '2' button on the numeric keypad to access the Circuit option menu.



[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↓ : More

- The LCD displays the Circuit options available.

[S1 Circuit] 1 : SLC Loop 2 : On-Board

- Select the number corresponding to the type of circuit that requires changing, i.e. '1' for the SLC Loop, or '2' for On-Board.

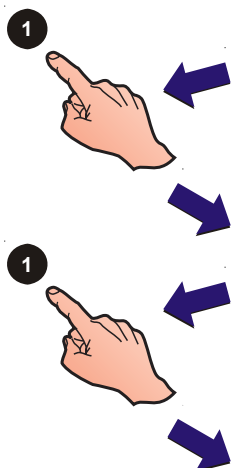
The LCD then displays the appropriate Circuit menu display.

5.6.1 Signalling Line Circuit (SLC) - Devices

This option enables the manual configuration of devices to a pre-configured analogue addressable SLC loop.

To manually learn devices on the SLC loop:

- From the Circuit menu screen, below, using the numeric keypad press '1' to select the SLC loop configuration.



[S1 Circuit] 1 : SLC Loop 2 : On-Board

- The LCD displays the Devices and the Learn options. Using the numeric keypad, press '1' to select the Devices menu.

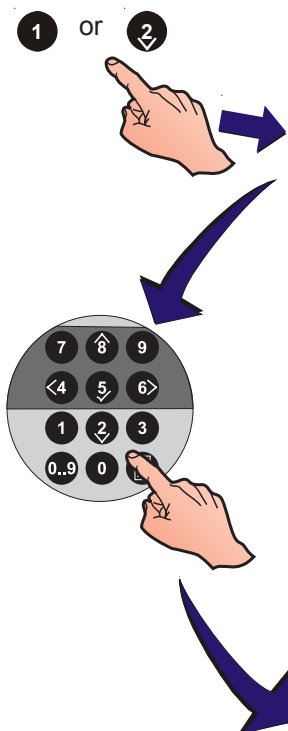
[S1 SLC] 1 : Devices 2 : Learn

- Select a device option by using the numeric keypad and pressing '1' to configure sensors or '2' to configure modules (see **Input Modules** and **Output Modules** overleaf).

[S1 Device] 1 : Sensors 2 : Modules

- At the prompt, using the numeric keypad enter an address number and confirm using the '5' button. When the required device address has been entered, the LCD shows the current settings and the available editing functions.

[Sensor] Enter Address_____



If no device is found at the selected address, the LCD displays one of the messages below:

[Sensor] Snn (xxx) No device learnt

[Module] Mnn (xxx) No device learnt

A specific address can only be configured if:

- A device has previously been auto-learnt at the address, or
- The off-line tool was used to configure the device type present.

Sensors

The following sensor configuration settings are selectable:

- The assigned zone (see **Section 5.6.1.1, Zone Setting**),
- The sensor sensitivity (see **Section 5.6.1.2, Sensor Sensitivity Setting**), and
- The device text string (see **Section 5.8, Zone Texts**).

**[Sensor nn - AAA] 1 : Zone (nn)
3 : Sensitivity 4 : [Blank/Existing Text]**

Input Modules

The following input module configuration settings are selectable:

- The assigned zone (see **Section 5.6.1.1, Zone Setting**),
- The type of input device (MCP, DKM, MON, ZMX, MNS, MRL, IRL; Extinguishing System inputs: AUX - Hold Switch and Abort Switch (see **Section 5.6.1.3, Type Setting**),

Note: The AUX device type CANNOT be changed.

- The device text string (see **Section 5.8, Text Editing**).

**[Module nn - AAA] 1 : Zone (nn) 2 : Type
3 : CBE Rule (nn) 4 : [Blank/Existing Text]**

Output Modules

The following output module configuration settings are selectable:

- The assigned zone (see **Section 5.6.1.1, Zone Setting**),
- The type of output device (SDR, SDH¹, CTL, RLY, EST², ESO², ESM, TxD, ESE², RLE² and CTE²) (see **Section 5.6.1.3, Type Setting**).

¹ Sounders enabled with high-load monitoring function.

² These output device types are subject to extinguishing system disablement if the option to automatically disable transmission and extinguishing system devices is configured (refer to Section 5.5.3.14 TD/ES Disablement at Access Level 2).

- The CBE Rule number. It is NOT possible to change the configuration of the associated CBE Rule.

CAUTION:

 This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.

Extinguishing System Outputs	
ESE	Extinguishing System Trigger (not monitored /not disabled by FWP4)
EST	Extinguishing System Trigger (not monitored)
ESO	Extinguishing System Output (monitored)
RLE	Relay Output Module (not monitored /disabled by FWP4)
CTE	Control Output Module (monitored for open and short circuits /disabled by FWP4)

- d. The device text string (see **Section 5.8, Text Editing**).

[Module nn - AAA] 1 : Zone (nn) 2 : Type
3 : CBE Rule (nn) 4 : [Blank/Existing Text]

5.6.1.1 Zone Setting

This option is used during manual configuration to assign a specific device to a specific zone. The option is accessed from the Commissioning Menu.

A maximum of 32 possible zones can be configured, consisting of 16 Fire alarm zones (1 to 16) and 16 secondary zones (17 to 32). The secondary zones are used for AUX plant alarm and warning inputs. Device types SDR, SDH, CTL, RLY, EST, ESO, ESM, TxD, ESE, RLE and CTE can be in any zone.

To change the zone of a specified sensor or module, selection of either sensors or modules at the Devices menu is first required. If sensors are selected, the display prompts for zone editing, as follows;

- 1 From the menu displaying the device attributes, press the '1' button on the numeric keypad to access the Zone Setting menu:

[Sensor nn - AAA] 1 : Zone (nn)
3 : Sensitivity 4 : [Blank/Existing Text]

- 2 Using the numeric keypad, enter the required zone number between 1 and 16 and confirm using the '5' button.

[Sensor nn - AAA] 1 : Zone (nn)
Enter New Zone = ____ < : Cancel

[Sensor nn - AAA] 1 : Zone (nn)
Enter New Zone = 01 < : Cancel

If the entered number is out of the permissible range, the zone number reverts to that previously allocated.

To enter the zone number or press '<4>' to cancel.

Note: Standard input modules can be assigned to any of the 32 zones. Conventional detector input modules (ZMX) can be assigned to zones 1 to 16 only. When an input module is assigned to a zone in the range 1 to 16, it is given the default type 'MCP' for a Manual Call Point. When an input module is assigned to a zone in the range 17 to 32, it is given the default type 'AUX' for plant alarm input. **Section 5.6.1.3, Type Setting** describes how to select the input type.

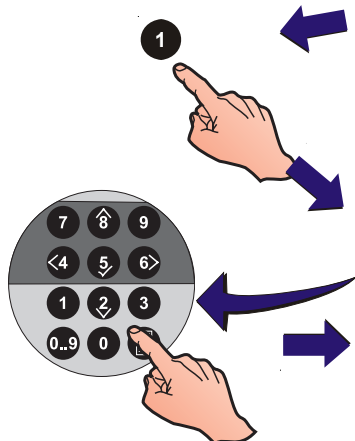
Output modules can be assigned to any of the 32 zones for fault reporting. The operation of the output depends on the CBE Rule to which the module is assigned.



The procedure for changing the zone of a module is the same as for a sensor.



Fire Inputs can only be assigned to Zones 1 to 16.



SMART 4 Devices

The mult-criteria sensor SMART 4 logical device type, depending on loop protocol, is SM4 (CLIP) or SMT4 (OPAL).

5.6.1.2 Sensor Sensitivity Setting

This option allows the sensitivity of sensors to be changed during device configuration. Access is via the Circuit menu. Individual sensor Alarm and/or Day settings can be changed.

VIEW™ Sensors and SMART 4 Multi-Sensors

The ID60 Panel supports VIEW™ and SMART 4. See **Appendix 2, ID60 Single Loop Panel Differences**.

Co-operative Multi-sensing Groups

The ID60 Panel supports co-operative multi-sensing through the **Advance Warning Addressable Combustion Sensing (AWACS™)** software algorithm for the following devices: VIEW™, ION, OPT, MLT, OPX/SM2 (Optiplex Multi-Sensor), SM3, SM4, (SMART 3 and 4 Multi-criteria Sensors). Once included in the AWACS™ algorithm, the sensitivity configuration follows that for VIEW™ device types, i.e. using levels and not a percentage of alarm. During configuration of the sensor sensitivity values, the LCD returns to the previously configured value if any of the following occurs:

- The '<4>' button on the numeric keypad is pressed.
- The panel state is unchanged for 1 minute.
- A value outside the predefined operating limits (80% to 120% or L1 to L6 for OPX/SM2, SM3 or SM4) is entered.

To change the sensor sensitivity settings:

- At the sensor attributes menu, press the '3' button on the numeric keypad to display the Sensor Sensitivity Setting menu:

[Sensor nn - AAA] Sensitivity
1: Alarm (100%) 2: Day (100%) 3: Group (00)

- Using the numeric keypad, press '1' to select the Alarm Sensitivity setting or press '2' to select the Day Mode Sensitivity setting:

[Sensor nn - AAA] Sensitivity
Enter new alarm level : 120 < : Cancel

[Sensor nn - AAA] Sensitivity
Enter day mode alarm : 80 < : Cancel

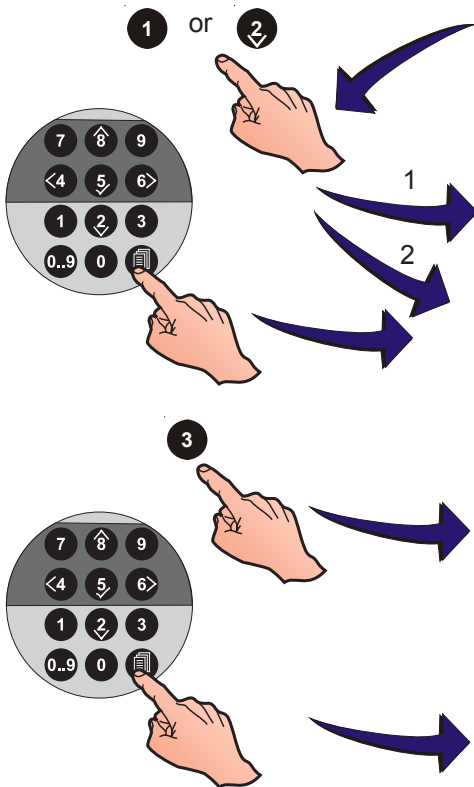
- At the appropriate prompt, use the numeric keypad to enter the desired percentage value. Press '5' to confirm the value entered.

[Sensor nn - AAA] Sensitivity
1: Alarm (120%) 2: Day (80%) 3: Group (00)

- Press '3' to select a new AWACS group, if required. At the appropriate prompt, use the numeric keypad to enter the desired AWACS group:

[Sensor nn - AAA] Sensitivity
Enter new AWACS Group : _ < : Cancel

- Press '5' to confirm the AWACS group entered or press '<4>' to cancel.



Note:

With newly-learned multi-criteria devices the sensitivity setting defaults to level 5.

Optiplex/SM2, SMART 3 and 4 Multi-criteria Sensors

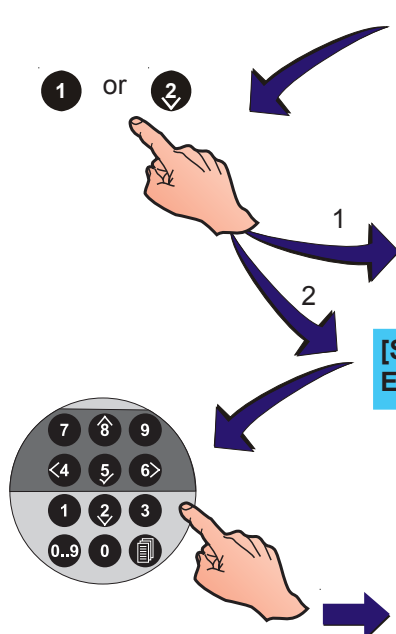
These sensors require smoke pre-alarm and alarm sensitivity to be set as one of a number of available sensitivity levels. For Optiplex/SM2 and SM3, the number of levels is dependent on the panel type (ID50 or ID60) and whether the device is part of a group. For SMART 4 (ID60 only) the number of levels is dependent on whether the device is part of a group. In stand-alone mode five levels are available, L1 to L5, L1 being the most sensitive and L5 being the least sensitive. In a group the range is extended to nine levels, L1 to L9. In addition, a lower sensitivity level, L6¹ (or L9 in a group), which is a heat-sensing function only, is available for use with a configured Day Mode activity. Optiplex (OPX) Multi-Sensors can operate in stand-alone mode or, when used with ID60 panels, form part of a co-operative AWACSTTM group. SMART sensors can also work in stand-alone mode or form part of a co-operative AWACSTTM group.

¹ OPX/SM2 and SM3 sensor level 6 functionality is only possible with panel software version 5.00, or above. SMART 4 sensor level 6 functionality is only possible with panel software version 5.08, or above. OPX/SM2 and SM3 sensors must only be used with LIB software version 9.00, or above. SMART 4 sensors must only be used with LIB software version 11.00, or above.

Note: Refer to **Appendix 2 ID60 Single Loop Panel Differences** for details on setting the sensitivity level of **grouped** OPX/SM2, SM3 and SM4 sensors.

To set the sensitivity of OPX/SM2 and SM3 sensors for the ID50 panel (the procedure for setting the sensitivity of SM4 sensors on the ID60 is the same):

- 1 At the sensor attributes menu, press the '3' button on the numeric keypad to display the Sensor Sensitivity Setting menu:



[Sensor nn - OPX] Sensitivity
1 : Alarm(Lvl5) 2 : Day(Lvl5) 3 : Group (00)

- 2 Using the numeric keypad, press '1' to select the Alarm Sensitivity setting or press '2' to select the Day Mode Sensitivity setting.

[Sensor nn - OPX] Sensitivity
Enter new alarm level : < : Cancel

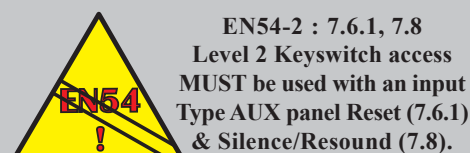
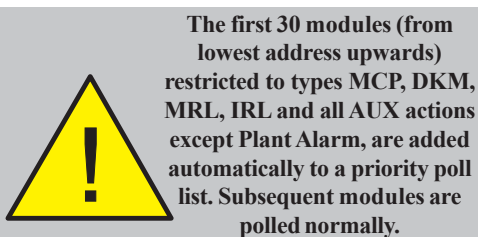
[Sensor nn - OPX] Sensitivity
Enter day mode alarm : < : Cancel

- 3 At the appropriate prompt, use the numeric keypad to enter the desired sensitivity level.
- 4 Press '5' to confirm the level entered or press '4' to cancel.

[Sensor nn - OPX] Sensitivity
1 : Alarm(Lvl) 2 : Day(Lvl5) 3 : Group (00)

Note: In either case you will be prompted to select the pre-alarm sensitivity level. Select a new level, if required, and press '5' to confirm.

5.6.1.3 Type Setting



Standard input modules in zones 1 to 16 can be assigned to various types as shown below. A Manual Call Point (MCP) input has the action of a zone fire alarm 'Manual Call Point' with prioritized polling. A Fire Alarm Monitor (MON) input has the action of a zone fire alarm with non-prioritized polling. An input module assigned to a zone in the range 17 to 32 is automatically given the type AUX, for a plant alarm input.

Input devices of type AUX can be programmed for plant alarm, reset panel, silence sounders, mute buzzer, class change, (only used when Class Change input has been configured for Day Mode start), abort switch, hold switch, Extinguishing System released and Extinguishing System fault (the last four cases are functions associated with the configuration of Extinguishing System inputs).

The device type is configured during the learn process. Sensor types and Plant Warning inputs (AUX) cannot be changed. The 'Type' menu option is not shown on the display for these devices.

Monitored output modules can be assigned to various types as shown below.

To change the module type as displayed on the LCD:

- Using the numeric keypad press '2' (Type option) from the menu displaying the module attributes:

[Module nn - MCP] 1 : Zone (nn) 2 : Type
4 : [Blank/Existing Text]

[Module nn - SDR] 1 : Zone (nn) 2 : Type
3 : CBE Rule (nn) 4 : [Blank/Existing Text]

- Selecting the Type option displays one of the following:

[Module nn - MCP] Select Type :
>MCP< DKM MON MNS MRL IRL <: Cancel

[Module nn - ZMX] Select Type :
>ZMX< FRM <: Cancel

[Module nn - SDR] Select Type :
>SDR< CTL RLY EST ESO ESM TxD ESE RLE CTE S

Note: On-Board circuits 1, 2, 3 and 4 support SDR, SDH, RLY¹, CTL, TxD², RLE¹, CTE, EST¹, ESO and ESE¹ Output Circuits. On-Board circuits 5 and 6 are fixed as Unmonitored -VE Output circuits.

- Select the module type using the press the '2'/'8' buttons to cycle through the list of modules and select the new type. The LCD then displays the new module attributes menu. A typical menu is shown below:

[Module nn - MCP] 1 : Zone (nn) 2 : Type
3 : CBE Rule (nn) 4 : [Blank/Existing Text]

¹ Non-monitored outputs

² If 'TxD' is selected refer to the **Operating Manual, Section 4.12.7 Voltages - User Option** to set the transmission circuit reference impedance to enable correct fault monitoring.

5.6.1.4 AUX Action



The first 30 modules (from lowest address upwards) restricted to types MCP, DKM, ZMX, MRL, IRL and all AUX actions except Plant Alarm, are added automatically to a priority poll list. Subsequent modules are polled normally.

**CAUTION:**

This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.

An input device assigned to zones 17 to 32 is treated as a Plant alarm input and given the default type of AUX. The auxiliary action specifies which of the following actions takes place with the operation of an AUX input:

- i Plant Alarm - non-latching
- ii Panel Reset
- iii Silence Sounders
- iv Mute Buzzer
- v Class Change
- vi Abort Switch - latching
- vii Hold switch - non-latching
- viii Fire Brigade Called
- ix Extinguishing System Released
- x Extinguishing System Fault
- xi Fault Routing Transmission Fault

To ensure recognition by the panel, the input device must be active for at least 5 seconds (longer if not priority-pollled).

To select the required auxiliary action:

- Using the numeric keypad, press '3' at the module edit screen to select the auxiliary 'Action' option (the default action is PLANT).

[Module nn - AUX] 1: Zone (17)
3: Action (PLANT) 4: [Blank/Existing Text]

- The screen displays action options as follows:

[Module nn - Action] 1: Plant Alarm
2: Reset Panel 3: Silence Sounders ↑: More

Press the '2'/'8' buttons to display other AUX action options, as appropriate.

[Module nn - Action] 4: Mute Buzzer
5: Class Change 6: Abort Switch ↑: More

[Module nn - Action] 7: Hold Switch
8: Fire Brigade Called ↑: More

[Module nn - Action] 9: Ext. System Released ↑: More

[Module nn - Action] 10: Ext. System Fault ↑: More

[Module nn - Action] 11: Fault Routing Fault ↑: More

- Press the appropriate numeric pushbutton to select the required action, e.g. Abort Switch. The display confirms the selection and returns to the module edit screen:

[Module nn - AUX] 1: Zone (17)
3: Action (ABORT) 4: [Blank/Existing Text]

Press the '4' button to exit the module edit screen.

AUX Actions	Description
Action (PLANT)	Plant Alarm
Action (RESET)	Reset action
Action (SIL.)	Silence outputs
Action (MUTE)	Mute action
Action (CLASS)	Class Change
Action (ABORT)	Abort switch
Action (HOLD)	Hold switch
Action (FBCLD)	Fire Brigade Called
Action (ESREL)	Extinguishing System Released*
Action (ESFLT)	Extinguishing System Fault*
Action (FRFLT)	Fault Routing Transmission Fault**

* Monitored for short-circuit faults.

** The indication of a fault routing transmission fault is dependent upon the third-party fault routing equipment being configured to provide an appropriate input.

5.6.1.5 CBE Rules

The CBE Rules option is used during the SLC Loop configuration. It is accessed through the Commissioning Menu. The panel can be configured with up to 64 CBE rules. This option enables modules to be assigned to a CBE Rule.

CLIP Loop Booster Support

The Loop Booster provides the additional power needed by high-current-draw loop devices, such as loop sounders, when the panel goes into alarm. When performing an SLC Learn operation, all sounder modules are automatically allocated for loop booster support. A '+' symbol, displayed adjacent to the allocated CBE rule number, indicates that the module will receive loop booster support (see below).

Note: if a device type is changed to one that may be loop powered (i.e. SDR) to one that cannot (i.e. RLY), either through manual type change or auto-learn method, the loop-powered allocation is cleared.

Base Rule and Rule Range

Devices may be activated by any of up to 24 contiguously-numbered CBE rules. When assigning modules to CBE rules a Base Rule number has to be specified with an associated rule range (up to 24 rules starting at the base rule) and the auxiliary action. The Base Rule number and rule range apply to AUX - Hold Switch, AUX - Abort Switch, SDR, SDH, CTL, RLY, EST, MRL, IRL, ESO, ESE, RLE and CTE.

For input devices the range specifies which CBE rules are affected by the input. The action taken by the CBE rule depends on the type of input.

For outputs, the range specifies which CBE rules will affect the output. The output takes the highest priority status from a combination of all the CBE rules.

The Base Rule number has a valid range of 1-41 with a default of 1. The Rule Range will default to having the first CBE rule set only. To select or change the Rule number to which a module is assigned:



[Module nn - SDR] 1 : Zone (nn) 2 : Type
3 : CBE Rule (nn+) 4 : [Blank/Existing Text]

1 With the module CBE Rules attributes screen displayed, use the numeric keypad and press the '3' button to select the CBE Rules option screen:

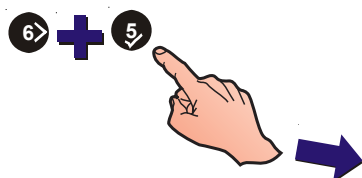
[Mnn] CBE Rules 01..... 24
1: Base [01 +: No] NNNNNNNNNNNNNNNNNNNNNNNNNNN

Note: Press the numeric 2 to toggle the Loop Booster support '+' on or off.

2 Using the numeric keypad, press the 1 button to change the CBE Base Rule:

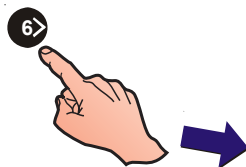
[Mnn] CBE Rules 01..... 24
Enter CBE Rule: - < : Cancel

3 Using the numeric keypad enter the desired Base Rule, for example Rule 6, and press '5' to confirm. The



CBE Rule range on line 1 changes, now starting at '6'. The CBE Rule number in the square brackets on line 2 also reflects the changed selection:

[Mnn] CBE Rules 06..... 29
1: Base [06 +: No] NNNNNNNNNNNNNNNNNNNNNNNNNNN



- 4 Press the **6** button to move the cursor to the right - the selected rule number is inverted and is changed in the square brackets on line 2.

[Mnn] CBE Rules 06..... 29
1: Base [13: No] NNNNNNNNNNNNNNNNNNNNNNNNNNN



- 5 At the selected CBE Rule number, press the **2/8** buttons to toggle its status between **Y(es)** and **N(o)** - the change of status is confirmed in the square brackets on line 2 as follows:

[Mnn] CBE Rules 06..... 29
1: Base [13: Yes] NNNNNNNYNNNNNNNNNNNNNNNNNN

Continue with other CBE Rules in the same way.

Note: After changing the base rule number, the CBE Rules attributes screen displays the first associated rule and NOT the selected base rule number. In the case illustrated above, the number displayed is '13' and not the base rule number '6'. If no rule has been assigned, no CBE rule number is displayed.

- 6 Press **5** to confirm or **4** to cancel the new CBE Rule selection.

Other module types are selected and CBE Rules associated in the same way as illustrated above. Return to the 'Modules' selection screen as described in **Section 5.6.1 Signalling Line Circuit (SLC) - Devices**.

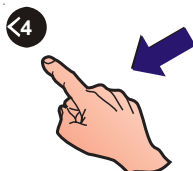
Refer to the configuration menu option for information on how to define the pattern (CBE Rule). The pattern defines whether the output will respond to zonal alarms. It also determines whether the output is silenceable and whether any delay is interruptable.

5.6.1.6 Device Text Setting

The Device Text Setting option allows the device description to be changed. To select the Device Text option from the displayed menu:

- 1 Using the numeric keypad, press the **4** button to select the current associated device text. The following is displayed:

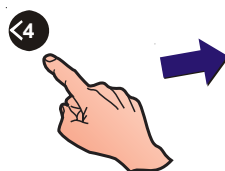
[Sensor nn - AAA] 1 : Zone (nn)
3 : Sensitivity 4 : [Blank/Existing Text]



- 2 The upper line of the display shows the 20-characters of text currently assigned to the device. The character that can be changed flashes.



Text Editing is always Option 4 when device description text can be edited.

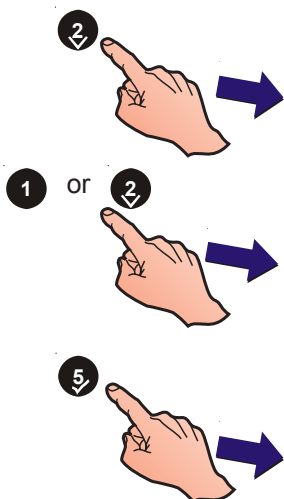


[Blank/Existing Text]] ↑ : Char ✓ : Done
> : Next < : Previous u1:Delete u3:Insert

Note: For further information on changing text, refer to **Section 5.8, Zone Texts.**

5.6.2 Signalling Line Circuit (SLC) - Learn

This option provides automatic recognition of the devices connected to the SLC loop. The panel searches and learns all the devices on the loop. The panel prompts for selection of the loop polling protocol, CLIP only or to Enable OPAL protocol, before starting a learn operation. To perform the Learn procedure:



[S1 SLC] 1 : Devices 2 : Learn

- Using the numeric keypad, press the '2' button to select the Learn option.

[S1 LEARN] 1 : All CLIP protocol 2 : Enable OPAL protocol ↑ : More

- Select the appropriate loop polling option. Using the numeric keypad press either the '1' or the '2' button.

[SLC] Learn Devices?

- The LCD prompts for confirmation. Press the '5' key to start the Learn process.
- One of the following is then displayed on the LCD. Press the '5' to Accept (confirm) a single device, '6' to Skip (ignore) the device and move to the next changed device or using the numeric keypad press '8' to Accept all (confirm) changed devices. Press the '<4' to Cancel and return to the learn devices prompt.
 - If learning sensors or modules that have been added to the loop, the LCD displays the first new device.

[LEARN] New device added : Snn ION
✓ : Accept > : Skip 8 : Accept all < : Cancel

- If learning any removed sensors or modules, the LCD displays the first removed device.

[LEARN] Device removed : Snn ION
✓ : Accept > : Skip 8 : Accept all < : Cancel

- If Learning a new loop or there is no change on the loop, the LCD displays a progress bar.

[Learn] Learn in progress



OPAL devices are programmed (initialised) by the panel as part of a learn operation. Therefore, when auto-configuring OPAL devices, there is a short delay before the progress bar is displayed.



The (S)ensor is replaced with (M)odule when learning modules and the device types change appropriately.



Optiplex (OPX/SM2), SMART 3 and SMART 4 (ID60 only) sensors are learnt as type MLT. Manually change to type OPX/SM2, SM3 or SM4, respectively.



Device Missing Fault

Removing an OPAL device will generate a 'Device Missing' fault indication.

With a replacement device installed the device will autoconfigure and continue to operate normally.

General Notes

Replacing a device with the same or different protocol will generate a 'Device Missing' fault message. This must be cleared using the RESET pushbutton.

A loop can be converted from one protocol to the other. Before a loop protocol is converted, the panel **MUST** be reset to clear any latched faults.



Replacing Devices

Replacing OPAL with CLIP - 'Incorrect device protocol' fault is generated.

This device is not polled thereby reducing fire cover. If CLIP devices on loop are 10 or less, access level 3 will permit a device re-learn and enable the panel to return to full operational status.

If the total number of CLIP devices exceeds 10 the device will not operate and must be replaced with a device of the same protocol or, alternatively, at access level 3 perform a loop re-learn as CLIP protocol.

Replacing a CLIP device with an OPAL device - the device communicates immediately and continues to operate normally as a replacement CLIP device. However, this device may be re-learnt as an OPAL device at access level 3.

- 5 When completed, the LCD displays the number of sensors or modules of each type and the total number.

- a. CLIP only - the display typically shows the following for sensors:

[LEARN] Total 021 (060 + 000) ↑ : More < : Exit
CLIP: ION 03, OPT 06, TMP 10, MLT 2

- b. CLIP only - To view the other learnt CLIP devices use the '2'/'8' buttons to scroll down or up:

[LEARN] Total 039 (060 + 000) ↑ : More < : Exit
CLIP: MCP 30, MON 02, SDR 05, CTL 02

- c. If the option 'Enable OPAL protocol' was selected the total of all OPAL and any CLIP devices learnt is displayed; the numeric value before the brackets is the total of all loop devices, by sensor or module, for the indicated protocol, whilst the numbers in brackets are totals for: first the CLIP devices and then OPAL devices.

[LEARN] Total 010 (003 + 007) ↑ : More < : Exit
OPAL: OPT 03, SM2 02, SM3 01, M701 01

To view the other learnt devices use the '2'/'8' buttons to scroll down or up.

Note: Selecting menu option 3 Display Totals, shows the current summary display.

- 6 If a duplicate device address is detected the following screen is displayed:

[LEARN] Multiple address detected : Snn
✓ : Continue < : cancel

Press '5' to confirm or '4' to cancel.

- 7 If the loop protocol is changed, from OPAL to CLIP or *vice versa*, or a replaced device has been installed followed by a learn operation, the following message is displayed:

[LEARN] Protocol Changed : Snn SM3
✓ : Accept > : Skip 8 : Accept all < : Cancel

Press '5' to re-configure the device or using the numeric keypad press '8' to re-configure all devices or press '4' to leave cancel action and leave as CLIP protocol mode.

- 8 When the Learn procedure has been completed, press the '4' button to return to the Learn Devices menu.

OPAL protocol loop devices need programming, or initialising, before the panel can perform a learn operation and permit device polling. Device initialisation is normally performed as part of a learn operation. However, initialisation can be carried out independently of a learn operation, for example after the replacement of a loop device, as described below.

2 or 8



Illustration of a hand pointing to the number 2, with arrows indicating the stroke direction. Illustration of a hand pointing to the number 4, with arrows indicating the stroke direction. Illustration of a hand pointing to the number 5, with arrows indicating the stroke direction.

- [S1 LEARN] 3 : Display Totals**
4 : Initialise OPAL ↑↓ : More

- [LEARN] Confirm OPAL Device Initialise**
✓ : Continue <: Cancel

- ## [Learn] Initialising OPAL Devices

- [S1 LEARN] 3 : Display Totals**
4 : Initialise OPAL ↑↓ : More

```
[LEARN]  No OPAL Devices Configuration
                                                <: Exit
```

-

[LEARN] Total 010 (003 + 007) ↑: More <: Exit
OPAL: OPT 03, SM2 02, SM3 01, M701 01

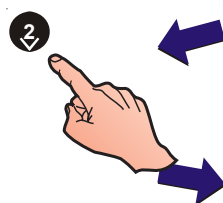
5.6.3 On-Board Circuits

This option permits configuration of the On-Board Output Circuits. There are six output circuits as defined in the following table:

Output No.	Type	Description
1 (B01)	Fixed Monitored Output Circuit (A)	Monitored Sounder (SDR or SDH) or Monitored Control Module (CTL) or Transmission Device (TxD) can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. <i>Factory Default = Fire Alarm - All Zones.</i>
2 (B02)	Fixed Monitored Output Circuit (B)	Monitored Sounder (SDR or SDH) or Monitored Control Module (CTL) can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. <i>Factory Default = Fire Alarm - All Zones.</i>
3 (B03)	Hardware Configurable CFG Output Circuit (C)	Can be configured for operation as a Monitored Output (Sounder Circuit or Relay Circuit) or as an Unmonitored Output (voltage-free style relay Circuit). Can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. <i>Factory Default = Unmonitored Relay.</i>
4 (B04)	Hardware Configurable CFG Output Circuit (D)	Can be configured for operation as a Monitored Output (Sounder Circuit or Relay Circuit) or as an Unmonitored Output (dry-contact style relay Circuit). Can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. <i>Factory Default = Unmonitored Relay.</i>
5 (B05)	-VE Output Circuit (1)	Unmonitored Output Circuit. Can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. This output is normally used to drive an external relay. <i>Factory Default = General Pre-Alarm</i>
6 (B06)	-VE Output Circuit (2)	Unmonitored Output Circuit. Can be programmed for Fire Alarm, Fault, Pre-Alarm, Plant Warning or Extinguishing System CBE Rules. This output is normally used to drive an external relay. <i>Factory Default = Plant Warning</i>

To change the On-Board Output CBE rule:

- Press '2' on the numeric keypad, select the On-Board menu from the Circuit Menu below.



[S1 Circuit] 1 : SLC Loop 2 : On-Board

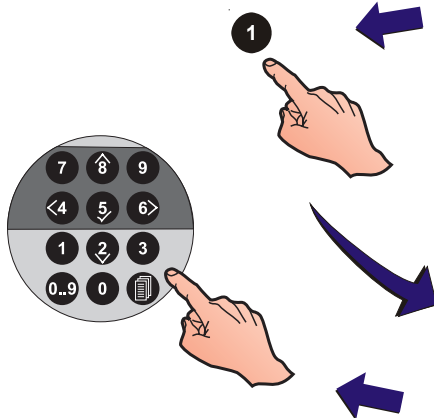
- The display then shows the following menu. Select the appropriate action:

[ON-BOARD] B01 (SDR) 3: Mon. : RES.
1 : Type 2 : CBE Rule (01) ↑ : Change < : Exit

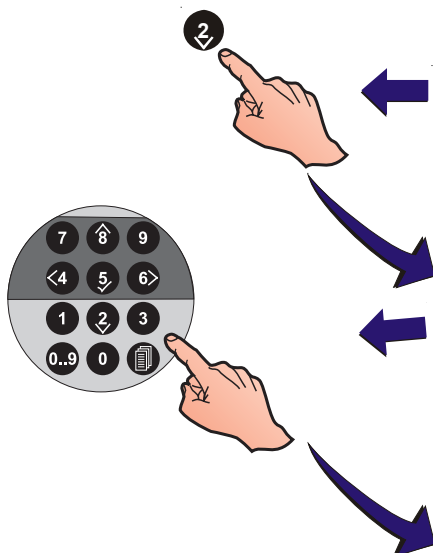
- Using the numeric keypad press '1' to change the Type of output, or
- Press '2' on the numeric keypad to change the CBE Rule with which the On-board output is associated.
- Use the '2/8' to change the On-board output number and its associated CBE Rule.
- Press the '3' on the numeric keypad to toggle the monitoring end-of-line device type: resistor (default setting) or diode.
- Press the '<4' to Cancel and return to the Circuit menu.



EN54-2 : 7.8
Always configure one output as a monitored sounder circuit to ensure EN54 compliance



Use the '2'/'8' buttons to change the output circuit being configured or to change the output type.



5.6.3.1 Output Type Setting

This option allows the configuration of the panel's on-board output circuits. To change the configuration:

- 1 Press the '1' button on the numeric keypad. The LCD prompts for the selection of an output type:

[ON-BOARD] B01 (SDR) 3: Mon. : RES.
1 : Type 2 : CBE Rule (01) ↑ : Change < : Exit

Note: The options are Monitored Output Circuit Sounder (SDR - default setting), High-load Monitored Output Circuit Sounder (SDH), Transmission Device (TxD), Monitored Output Circuit Relay (CTL), Monitored Output Circuit Relay¹ (CTE), Unmonitored Output Circuit (RLY), Unmonitored Output Circuit¹ (RLE) and extinguishing system output types (EST, ESO, ESE).

- 2 To select the sounder circuit press the '2' or '8' buttons. Press the '2' or '8' buttons also to change the output type.

[ON-BOARD] B01 (SDR)
>SDR<RLY CTL TxD RLE CTE EST ESO ESE S

Note: Only those types valid for the chosen output are available. The panel's -VE Outputs (B05/B06) are unmonitored and are thus fixed as type 'RLY'.

5.6.3.2 CBE Rule Setting

This option allows each of the panel's on-board output circuits to be assigned to a CBE Rule range. Refer to Section 5.6.1.5 CBE Rules for more details on range setting. To change the CBE Base Rule, proceed as follows:

[ON-BOARD] B0n (AAA) 3: Mon. : RES.
1 : Type 2 : CBE Rule (nn) ↑ : Change < : Exit

- 1 Using the numeric keypad press the '2' button to select the CBE Rule option:

[BOn] CBE Rules 01-----16
1 : Base [01 : No] YYYYYYYYYYYYYYYYYY

- 2 You are now prompted to enter a new CBE Base Rule. Use the numeric keypad to enter the CBE Rule required for the output circuit and use the '5' button to confirm the selection.

[BOn] CBE Rules 01-----24
Enter CBE Rule : _ <: Cancel

Refer to **Section 5.7, Control-by-Event Output Rules** for information concerning the CBE Rules. The rule defines whether the output will respond to zonal alarms and/or the END DELAYS / EVACUATE pushbutton. It also determines whether the output is silenceable and whether any delays are interruptable.

5.7 Control-By-Event Output Rules

This menu allows the configuration and viewing of the 64 Control-By-Event (CBE) Output Rules available to the commissioning engineer. CBE Rules 1 to 7 are pre-defined (see below for further information).

Each rule (including those that are pre-defined) can be modified and applied to On-Board Outputs and loop Output Modules (e.g. SDR, RLY, CTL, TxD). Each output is referred to as an assigned output. All relevant CBE rule information is shown on one display, as follows:

CBE 01 [FIRE] [[ANY] 1-----16
1 : Change [EvSIIn] YYYYNYYNDNNCCNN

- a. A Fire rule. This CBE rule type activates assigned outputs in response to fire alarms in specified zones. Individual zones can be modified to determine the output response.

CBE 02 [PRE-ALARM] [[ANY]
1 : Change [SI]

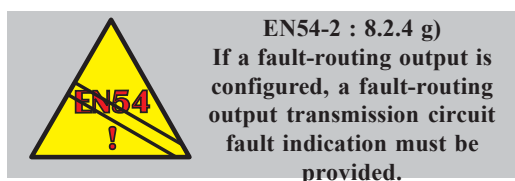
- b. A Pre-Alarm rule. This CBE rule type activates assigned outputs in response to a general pre-alarm condition at the panel.

CBE 03 [PLANT] 17-----32
1 : Change [] YYYYNYYNDNNCCNN

- c. A Plant Warning rule. This CBE rule type activates assigned outputs in response to plant alarms in specified zones. Individual zones can be modified to determine the output response.

CBE 04 [FAULT] [[ANY]
1 : Change

- d. A Fault rule. This CBE Rule type activates assigned outputs in response to a general fault condition at the panel.



Note: The FAULT OUTPUT: FAULT/DISABLE LED, if configured (non-default), can be programmed to indicate a fault routing equipment fault using a loop-based output module.

CBE 05 [FTR]
1 : Change

- e. A Fire Output/Transfer rule. This CBE Rule type activates assigned outputs in response to the operation of the Fire Output/Transfer relay.

CBE 06 [DISABLE]
1 : Change

- f. Disable rule. This CBE Rule type activates assigned outputs in response to a general disablement.

CBE 07 [RESET]
1 : Change

- g. A Reset rule. This CBE Rule type activates assigned outputs for 5 secs in response to a panel reset.

The following rules are not pre-defined and are only selectable via the 'Change' option.

CBE nn [INPUTS] Dv1 Dv2 Dv3
1 : Change [EvSI] S01 --- M05

- a. A Device Input rule. Determines the output response to up to three (3) specified input devices (modules or sensors). An input from any of the specified devices will turn on the assigned outputs. Refer to **Section 5.7.9, CBE Rules: Device Inputs**.

CBE nn [DAY MODE]
1 : Change

- b. A Day Mode rule. This CBE Rule type activates assigned outputs when the panel is operating in Day Mode.

CBE nn [EXTSYSTEM] SkTmr 1-----16
1 : Change [Smoke/Heat] YYYYNYYNDNNNN

- c. An Extinguishing System rule. This CBE Rule type activates extinguishing release system(s) in response to fire alarm inputs in specified zones.

CBE nn [THERMAL][ANY] 1-----16
1 : Change [EvSIIn] YYYYNYYYYYYNYNN

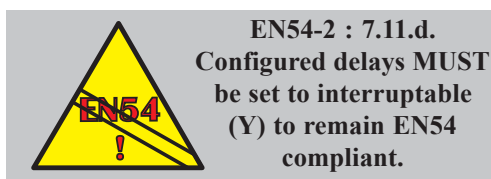
CBE nn [ES SYSFLT]
1 : Change

d. Thermal Mode rule (ID60 only). This CBE rule activates assigned outputs when the thermal element of multi-criteria devices (OPX/SM2, SM3 and SM4) goes into alarm.

e. Extinguishing System - System Fault. This CBE rule lights the Extinguishing System Fault LED, if provided, when a PLANT Alarm zone, with AUX action EXT. SYSTEM FAULT, has been activated.

Each of the CBE Output Rules has various configurable states available, dependent on the rule type. These states are described below:

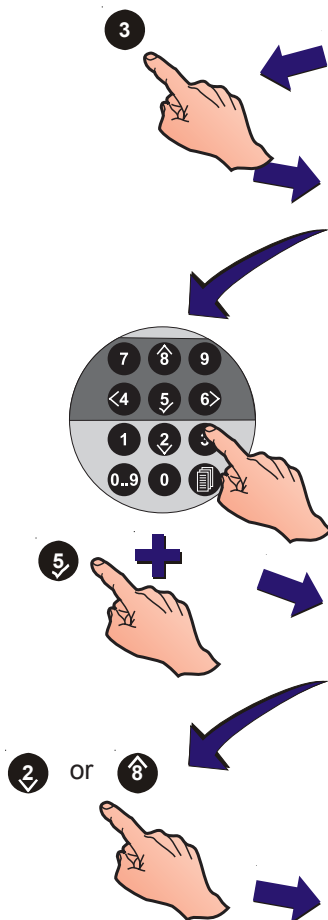
- a. **Filter-by-type** - options are ANY (all types), OTI (Optical, Thermal, Ionisation, MULTI /OPX/SM2, SM3 or SM4 [ID60 only] sensor), AVS (ID60 only - see **Appendix 2**), MCP (manual call point), MON (monitor module). Extinguishing System options are Smoke/Heat, Sensor/MCP, VIEW/Sensor, Any Two Zones, Any Two Sensors, Any Single Sensor and Any Single Module. Output will only operate if the input is received from a device of the selected type.
- b. **Evacuate (EV)** - has two options Yes (Y) or No (N). If set to Y(es) assigned outputs activate when the END DELAYS/EVACUATE pushbutton is operated. Outputs will not operate when this option is set to N(o).
- c. **Silenceable (SL)** - has two options Yes (Y) or No (N). If set to Y(es) assigned outputs will silence when the SILENCE / RESOUND pushbutton is operated. If set to N(o) the outputs will only silence after being activated when the RESET pushbutton is operated.
- d. **Interruptable (IN)** - has two options Yes (Y) or No (N). If set to Y(es) operating the END DELAYS/EVACUATE pushbutton cancels currently operating delays and assigned outputs activate. If set to N(o), delays are NOT interruptable. The delays can only be cancelled by another qualifying alarm condition. This configuration does not comply with EN54 regulations.
- e. **Class Change (CI)** - has two options, Yes (Y) or No (N). If digital input 1 is set to Class Change (see Section 5.5.3.4) and the CBE Class Change option is set to Y(es), then the assigned outputs operate when digital input 1 is made. If set to N(o), digital input 1 (set to Class Change) does not operate the assigned outputs.
- f. **Two Zone (Tz)** - has two options Yes (Y) and No (N). If set to Y(es), at least two zones must be active before the CBE rule is triggered.
- g. **Zones** - determines the output response to fire or plant alarms on a zone by zone basis using two options: Zones 01 to 16 and Zones 17 to 32.
- i. Zones 01 to 16 - addresses the Fire rule silence options. Each zone can be configured as:
 - N(o) - the zone is NOT included in the CBE Rule, outputs will NOT be activated.
 - Y(es) - the zone is included in the CBE Rule. An alarm in this zone activates the outputs immediately.



**CAUTION:**

This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.



- (D)elay - the zone is included in the CBE Rule. An alarm in this zone will activate outputs after a delay. Not available for Fire rules if Two Zone is selected. Extinguishing System rules default to Delay.
 - (C)oincidence - the zone is included in the CBE Rule. Two alarms in this zone will activate outputs.
 - (P)ulsed - the zone is included in the CBE Rule. An alarm in this zone will activate outputs immediately in pulsed mode. This mode is overridden if an alarm occurs in any zone that is included in this rule and for which Pulse Mode is not selected, also if a device is assigned to multiple CBE rules and a rule for which Pulse Mode is not selected becomes active.
- ii Zones 17 to 32 - addresses the plant warning rule silence options. These zones can be configured in the same manner as described for zones 01 to 16.
- h. **Soak Timer (Sk Tmr)** - has two options Yes (Y) or No (N). If set to Y(es) the associated extinguishing output is active only for the time specified in the System Soak Timer Setup menu.

To select the CBE Rule menu, proceed as follows:

- 1 With the Commissioning menu displayed, press the '3' button on the numeric keypad.

[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More

- 2 The LCD prompts you to enter a CBE Rule number as shown below:

[CBE Rule] Select Rule No ____

Enter the required CBE Rule number using the numeric keypad and confirm by pressing the '5' button.

- 3 The LCD then displays the selected CBE Rule's current configuration and a menu option to allow changes to the rule. The displayed configurable options depend upon the rule type. To change the rule configuration press the '1' button on the numeric keypad.

CBE 01[FIRE][ANY] 1-----16
1 : Change [EvSIIn] YYYNNYYNDDNCCNN

Note: You can use the '2'/'8' buttons to step through each of the 64 CBE Rules.

- 4 At the menu below, use the numeric keypad to select the option that requires changing.

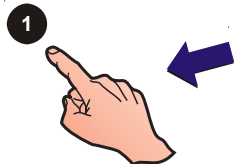
CBE Rule:01 1:Type 2:Filter 3:Evac
4:Silence 5:Interrupt ↑ : More

CBE Rule:01 6:Class Change 7:Two Zone
9:Zones ↑ : More

Note: Selectable options are dependent upon the type of the current CBE Rule.



CAUTION:
This product is not compliant
with EN 12094-1.
Fire extinguishing installations in
Europe are required to be certified as
compliant to this standard.



5.7.1 Output Type

Twelve (12) CBE Output Rule types are available. This menu allows the type to be selected. The current attributes of the selected Rule are displayed and can be edited. To change the Rule type, from the CBE Output Rules menu proceed as follows:

- 1 Press the '1' button on the numeric keypad to select the Type option from the menu. The LCD displays the Type menu:

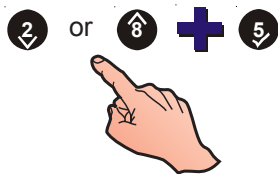
CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt	↑ : More	
CBE Rule:01	6:Class Change	7:Two Zone	
9:Zones	↑ : More		

- 2 Using the '2/8' buttons, step through the CBE Output Rule types until the required type is displayed on the upper line, i.e. FIRE, INPUTS, FAULT, PRE-ALARM, PLANT, FTR (Fire Transmission Relay), RESET, DAY MODE, EXT SYSTEM, DISABLE, THERMAL, ES SYSFLT (ES System Fault).

Note: If a fault-routing output is configured, a fault-routing output indication must be configured - refer to Section 5.5.1.5 LED 2C Mode.



EN54-2 : 8.2.4 g)
If a fault-routing output is
configured, a fault-routing
output transmission circuit
fault indication must be
provided.



CBE Rule:01	Current Type = [FIRE]
↑ : Change Rule Type ✓ : Accept < : Cancel	

- 3 Press the '5' button to confirm selection. The LCD displays only the appropriate editable settings for the selected rule, for example:

CBE 01	[FIRE]	][ANY]	1-----16
1 : Change	[EvSiln]	]YYYYNNYYNDDNCCNN	

To change any of the settings on the CBE Output Rules refer to **Sections 5.7.2 Filter-by-type, 5.7.3 Evacuation, 5.7.4 Silence, 5.7.5 Interrupt Delay, 5.7.6 Class Change, 5.7.7 Two Zone, 5.7.8 Zones, 5.7.9 Device Inputs and 5.7.10 Soak Timer.**

5.7.2 Filter-by-Type

This option is available with the Fire, Fault, Pre-alarm and the Extinguishing System rules. The Filter-by-type option has five selections with Fire and Fault categories: ANY, OTI, AVS, MCP and MON and three with Pre-alarm: ANY, OTI and AVS. The Filter-by-type option, when used with the Extinguishing System category has seven selections: Smoke/Heat, Sensor and MCP/ZMX, VIEW/Sensor, Any Two Zones, Any Two Sensors, Any Single Sensor and Any Single Module. Refer to **Section 5.7, Control-by-Event Output Rules** for further information.

To select the type filter for Fire, Fault or Pre-alarm:

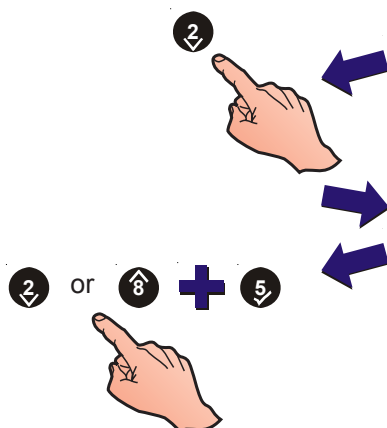
- 1 Press the '2' button (using the numeric keypad) to select the Filter option from the menu below.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

- 2 Press the '2'/'8' buttons to select the required filter.

CBE Rule:01	Current Filter Type =[ANY]
✓ : Accept	↑ : Change Filter Type < : Cancel

- 3 Confirm the selection by pressing the '5' button. To cancel the selection, press '<4' button.



CAUTION:

 This product is not compliant with EN 12094-1.

Fire extinguishing installations in Europe are required to be certified as compliant to this standard.

Extinguishing System

To select the type filter for Extinguishing System:

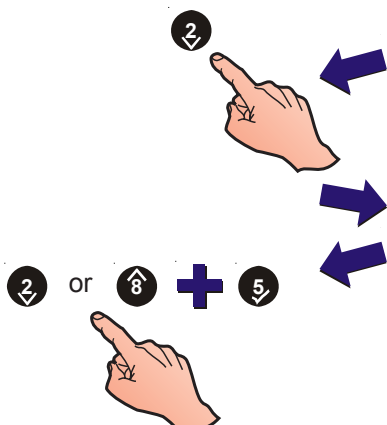
- 1 Press the '2' button (using the numeric keypad) to select the Filter option from the menu below.

CBE Rule: 01	1:Type	2:Filter
	8:Soak Timer	9:Zones

- 2 Press the '2'/'8' buttons to select the required filter.

CBE Rule:nn	Ext. System Filter = [One sensor]
✓ : Accept	↑ : Change Filter Type < : Cancel

- 3 Confirm the selection by pressing the '5' button. To cancel the selection, press '<4' button.



5.7.3 Evacuation

The Evacuation option has two states, Yes (Y) and No (N). This option is available with the Fire, Pre-Alarm and Device Inputs rules. To change the Evacuation setting:

- 1 Press the '**3**' button (using the numeric keypad) to select the Evacuation option from the menu below.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

- 2 Press the '**6**' button to select the required setting. Refer to **Section 5.7, Control-By-Event Output Rules** for further information.

CBE Rule:01	Evacuate = [Y]
>:Change ✓ :Accept	< : Cancel

CBE Rule:01	Evacuate = [N]
>:Change ✓ :Accept	< : Cancel

- 3 Confirm the selection by pressing the '**5**' button. To cancel the selection, press '**<4**' button. In either case the menu below is re-displayed.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

5.7.4 Silence

The Silence option has two states, Yes (Y) and No (N). This option is available with the Fire, Pre-Alarm and Device Inputs rules. To change the Silence setting from the CBE Output Rules menu:

- 1 Using the numeric keypad, press '**<4**' to select the Silence option from the menu below.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

- 2 Press the '**6**' button to select the required setting. Refer to **Section 5.7, Control-By-Event Output Rules** for further information.

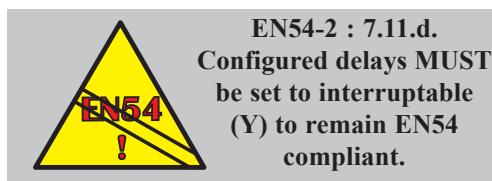
CBE Rule:01	Silence = [N]
>:Change ✓ :Accept	< : Cancel

CBE Rule:01	Silence = [Y]
>:Change ✓ :Accept	< : Cancel

- 3 Confirm the selection by pressing '**5**'. To cancel the selection, press '**<4**' button. In either case the menu below is re-displayed.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

5.7.5 Interrupt Delay



The Interrupt Delay option has two settings, Yes (Y) or No (N). This option is only available with the Fire rule.

Caution: Selecting 'No' contravenes the requirements of EN54.

To change the Interrupt setting from the CBE Output Rules menu:

- 1 Press the '5' button using the numeric keypad to select the Interrupt option.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

- 2 Press the '6' button to select the required setting. Refer to **Section 5.7, Control-by-Event Output Rules** for further information.

CBE Rule:01	Interrupt = [N]
>:Change	✓:Accept
	<:Cancel

CBE Rule:01	Interrupt = [Y]
>:Change	✓:Accept
	<:Cancel

- 3 Confirm the selection by pressing the '5' button. To cancel the selection, press '4'. In either case the menu below is re-displayed.

CBE Rule:01	1:Type	2:Filter	3:Evac
4:Silence	5:Interrupt		↑ : More

5.7.6 Class Change

This control parameter has two options, Yes (Y) and No (N). These indicate whether or not the selected CBE Rule's assigned outputs activate when Digital Input 1 is configured as Class Change and then operated. To configure Class Change, from the CBE Output Rules menu:

- 1 Press the '6' button using the numeric keypad to select the Class Change option.

CBE Rule:01	6:Class Change	7:Two Zone
	9:Zones	↑ : More

- 2 Press the '6' button to select the required setting. Refer to **Section 5.7, Control-by-Event Output Rules** for further information.

CBE Rule:01	Class Change = [N]
>:Change	✓:Accept
	<:Cancel

CBE Rule:01	Class Change = [Y]
>:Change	✓:Accept
	<:Cancel

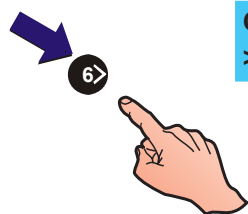
- 3 Confirm the selection by pressing the '5' button. To cancel the selection, press '4'. In either case the menu below is re-displayed.

CBE Rule:01	6:Class Change	7:Two Zone
	9:Zones	↑ : More

The Two Zone option has two states, Yes (Y) and No (N). This option is available with the Fire, Pre-Alarm and Plant Warning rules. To change the Two Zone rule setting:

- | | | |
|-------------|----------------|------------|
| CBE Rule:01 | 6:Class Change | 7:Two Zone |
| | 9:Zones | ↑↓ : More |

- CBE Rule:01** Two Zone = [N]
 >:Change ✓ :Accept < : Cancel



CBE Rule:01 Two Zone = [Y]
 >:Change ✓ :Accept < : Cancel

- 3** Confirm the selection by pressing the **5** button. To cancel the selection, press **4**. In either case the menu below is re-displayed.

CBE Rule:01	6:Class Change	7:Two Zone
	9:Zones	↑↓ : More

5.7.8 Zones

The Zones option determines the output response when a zone detects an alarm. Each zone can be configured as Yes (Y), No (N), Pulse (P), Coincidence (C) or Delay (D) - see **Section 5.7** for definitions of these parameters.

If Day Mode is enabled (**Section 5.5.5.1, Day Mode Activity**) delays do NOT occur unless manually activated. Manual activation can occur at any time of day - it does not have to be during the set Day Mode period. Delays are automatically de-activated with the end of the day mode period.

To change the CBE Rules: Zone Setting from the CBE Rules: Output menu, follow the described procedure below:

- 1 From the menu options below, press the '9' button to select the Zones option.

CBE Rule:01 6:Class Change 7:Two Zone
9:Zones ↑ : More

- 2 The LCD displays the pattern number and zone range (either 1 to 16 for fire alarms or 17 to 32 for plant alarms) on line 1. Line 2 of the LCD displays the selected zone's number, the full description of its current status and the zone's flashing editable status.

To select a zone, press the '6>' button until the appropriate zone number appears on line 2 in the left-hand corner. The display cycles from 16 to 1 and 32 to 17.

CBE Rule 01 Zones 1-----16
[Zone 01] [Yes] YYYYNYYNDNCCNN

CBE Rule 01 Zones 1-----16
[Zone 06] [No] YYYYNYYNDNCCNN

- 3 To change a zone's status, press the '2/' and '8' buttons until the required state is displayed.

CBE Rule 01 Zones 1-----16
[Zone 06] [Yes] YYYYNYYNDNCCNN

CBE Rule 01 Zones 1-----16
[Zone 06] [No] YYYYNYYNDNCCNN

CBE Rule 01 Zones 1-----16
[Zone 06] [Pulse] YYYYNYYNDNCCNN

- 4 Confirm the changes by pressing the '5↓' button. Press '4' to cancel any changes.

5.7.9 Device Inputs

The Device Inputs option is only available if the Device Inputs CBE Rule is selected. This option determines the output response to up to three (3) specified input devices (modules or sensors). An input from any of the specified devices will turn on the associated outputs.

To select the input devices:

- 1 Follow the procedures in **Section 5.7.1, CBE Rules: Output Type** to change the CBE Rule type to Inputs. The LCD displays the following menu:

CBE nn	[INPUTS]	Dv1	Dv2	Dv3
1	: Change [EvSI]	---	---	---

- 2 Using the numeric keypad press the '1' button to display the following menu:

CBE Rule: nn	1:Type	2:Evac	4:Silence
	6:Class Change	10:Devices	

- 3 At the numeric keypad press the '0' button to select the 'Devices' option. The LCD then prompts for a device type selection (sensor or module) or the removal of a device that has already been entered. Alternatively press the '<4' button to exit this menu.

CBE Rule nn	Device 1: ---
1:Sensor	2:Module
	3:Remove
	<: Exit

- 4 Use the '<2/<8' buttons to select one of the 3 Device Inputs to be edited.

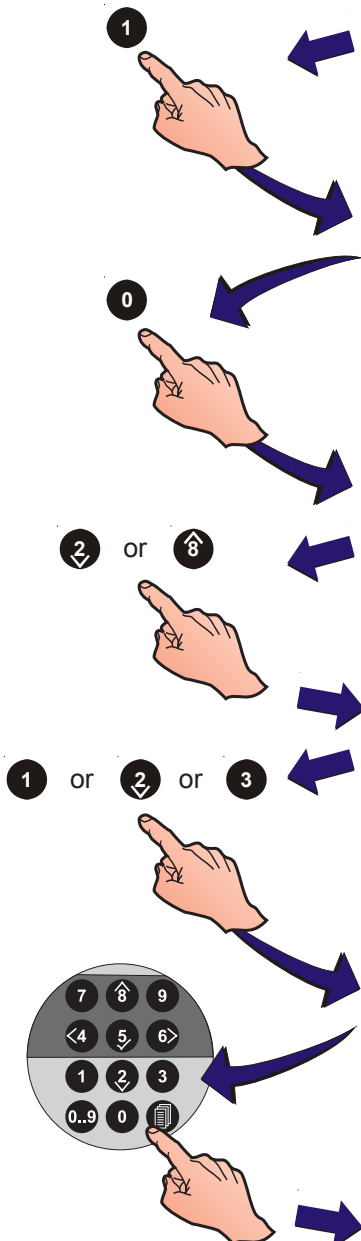
CBE Rule nn	Device n: Snn
1:Sensor	2:Module
	3:Remove
	<: Exit

- 5 Select either '1' (sensor) or '<2' (module) to select device address entry, or '3' to remove the currently selected device. If a device is to be entered, the following (example is for a sensor) is displayed:

CBE Rule nn	Device n: ---
Enter sensor address	
	<: Cancel

- 6 At the numeric keypad, enter the device address and press the '5' button to confirm. Alternatively press '<4' repeatedly to cancel the address entry.

CBE Rule nn	Device n: Snn
1:Sensor	2:Module
	3:Remove
	<: Exit





CAUTION:
This product is not compliant
with EN 12094-1.
Fire extinguishing installations in
Europe are required to be certified as
compliant to this standard.

5.7.10 Soak Timer

The Soak Timer allows the extinguishing output to be activated for a specified time. If enabled, the extinguishing output is activated for the period specified by the Ext. System Soak Timer panel Setup option (see **Section 5.5.3.2 Extinguishing System Soak**); if disabled, the CBE rule activates associated outputs until the panel is reset.

This option also affects the operation of device type MRL. If enabled, associated MRL inputs will start the CBE Rule extinguishing system delay (**Section 5.5.3.1**); if disabled, the MRL inputs will start the CBE Rule immediately (for Fire rules, will start the day mode delay, if active).

To enable/disable the Soak Timer:

**CBE Rule: nn 1:Type 2:Filter
8:Soak Timer 9:Zones**

- 1 Press the '8' button (using the numeric keypad) to select the Soak Timer option from the menu below.

**CBE Rule:nn Soak Timer Enable = [N]
> : Change ✓ : Accept < : Cancel**

- 2 Press the '2'/'8' buttons to select Y(es) or N(o) for Soak Timer Enable.

**CBE Rule:nn Soak Timer Enable = [Y]
> : Change ✓ : Accept < : Cancel**

- 3 Confirm the selection by pressing the '5' button. To cancel the selection, press '4' button.

5.8 Zone Texts

The Zone Texts menu enables the editing or viewing of text associated to a selected zone. To view or edit any zone text descriptions, proceed as follows:

- 1 At the main Commissioning menu, using the numeric keypad press the '4' button.

**[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More**

- 2 The Zone Text menu is displayed. Enter the zone number required using the numeric keypad, then press the '5' button to select the zone.

[Zone Text] Select Zone No _

- 3 The LCD then displays the existing 20-characters of text assigned to the zone on the upper line.

**[<blank/existing text >] ↑ : Char ✓ : Done
>:Next <:Previous u1:Delete u3:Insert**





A position on the LCD with a flashing underline indicates that a Space text character has been entered.

Text Editing

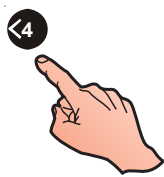
Note: The following also applies when editing device and system text.

The upper line of the LCD editable text menu displays an area of twenty (20) characters. A flashing cursor on the LCD indicates the currently-editable position. To enter or edit existing text, proceed as follows.

- 1 To move the cursor within the editable area, press the '6>' pushbutton to move it to the right or press the '<4' pushbutton to move it to the left.



[blank/existing text	]	↑ : Char	✓ : Done
>:Next	<:Previous	u1:Delete	u3:Insert



[blank/existing text	]	↑ : Char	✓ : Done
>:Next	<:Previous	u1:Delete	u3:Insert

[blank/existing text_	]	↑ : Char	✓ : Done
>:Next	<:Previous	u1:Delete	u3:Insert

a.

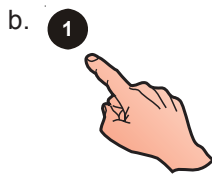


_ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz0123456789
“`‘, . ! ? ; ; % = + - * / # \$ & @ ^ _ () < > [] { }

- 2 With the flashing character selected/cursor placed in the desired position, press the appropriate buttons to perform one of the following actions:

a. Use the '2/8' buttons to scroll through the alphabet in the order indicated at left.

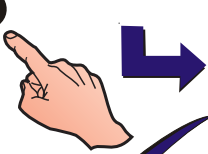
- b. Using the numeric keypad, press '1' to delete the flashing character. All text to the right of the deleted character will move one space left and a blank character will be inserted at the end of the line.



[blank/existing text	]	↑ : Char	✓ : Done
>:Next	<:Previous	u1:Delete	u3:Insert

3

[blank/xisting text	]	↑ : Char	✓ : Done
>:Next	<:Previous	u1:Delete	u3:Insert



- c. Using the numeric keypad, press '3' to add a space at the current position. All text to the right of the inserted space will move one position right. If the text string now exceeds 20 characters, the last character will be deleted.

c. 5



- 3 When the text editing is completed, press the '5' button to confirm. The LCD returns to the Zone Text menu.

Note: The LCD will **only** register a maximum of 20 characters.

[Zone Text]	Select Zone No _
-------------	------------------

- 4 Select another zone for text editing or press the '<4' or '5' button to return to the main Commissioning menu.

5.9 Access Options

The Access options menu allows the configuration of the following access passcodes:

- Up to ten (10) User passcodes.
- One Commissioning engineer passcode.

The Access option is available from the Commissioning menu. To configure access passcodes:

- At the Commissioning menu, using the numeric keypad press the '5' button to display the Access options menu.

[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More

- Use the numeric keypad to select the appropriate option:

- Press the '1' button to select the User option.
- Press the '2' button to select the Engineer option.

[S1 Access] 1 : User 2 : Engineer

- Selecting the User option ('1' on the numeric keypad) displays the following menu:

[S1 Access] Passcode 0 = nnnn
>:Change 1:Delete ↑ : More <:Cancel

- Use the '2'/'8' buttons to select a user access code number (range 0 to 9).

[S1 Access] Passcode 3 = nnnn
>:Change 1:Delete ↑ : More <:Cancel

- Press '1' on the numeric keypad to delete the currently displayed access code and disable that user.

[S1 Access] Passcode 3 = _____
>:Change 1:Delete ↑ : More <:Cancel

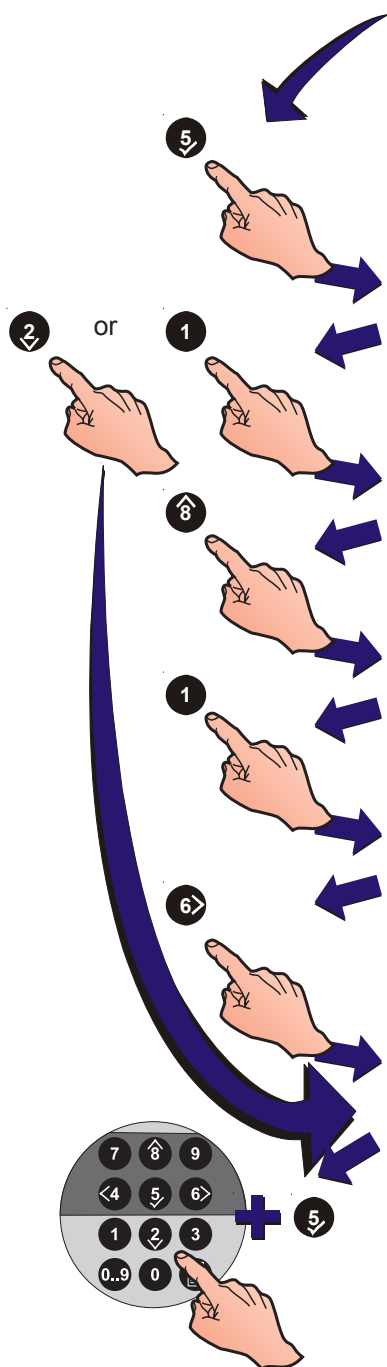
- Press the '6' to display the change menu, see below.

- The change menu prompts for entry of a new access code:

[Setup] Passcode 0 = nnnn
Enter new value ____ ✓ : Confirm <:Cancel

Note: If the Engineer option is selected the access code number is replaced by (ENG).

- Using the numeric keypad, enter a new four (4) digit passcode and press '5' to confirm. After editing a 'User' passcode the display automatically returns to the User passcode selection menu. The 'Engineer' passcode returns to the Access menu.



5.10 System Options

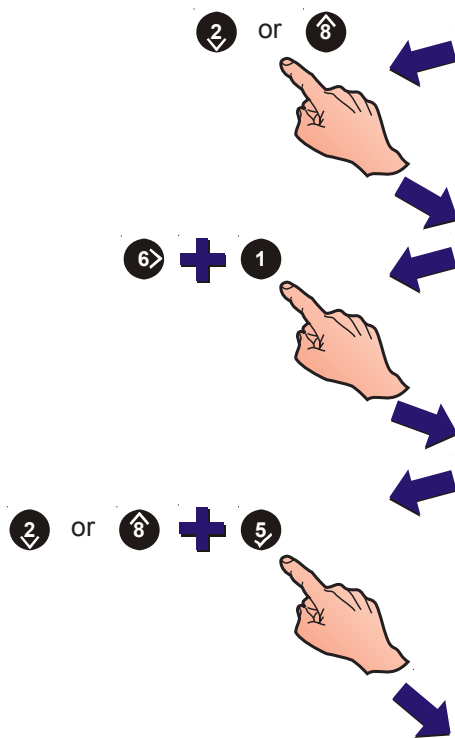
The System menu allows:

- The crystal frequency to be set.
- The existing panel configuration to be cleared.

5.10.1 Crystal Frequency

To adjust the Crystal Frequency:

- Press the '2/8' keys to display additional options (6 : System, 7 : Normal and ↑ : More) from the main Commissioning menu.



[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More

- On the numeric keypad, press the '6>' button to display the System menu.

[S1 COMM] 6 : System 7 : Normal
↑ : More

- At the System menu select the required option. Using the numeric keypad, press the '1' button to select the Crystal option.

[S1 SYSTEM] 1 : Crystal 2 : Wipe Memory

- Using the '2/8' buttons, scroll through the Crystal Frequency options until the displayed value matches that written on the PCB. Press the '5' button to update/confirm the selection and return to the System menu.

Crystal Frequency = nn.nnnnn MHz
✓ : Update ↑ : Change < : Cancel

5.10.2 Wipe Memory

CAUTION: USE THIS OPTION WITH CARE! ALL CONFIGURATION PARAMETERS WILL BE DELETED

To wipe the panel's memory, display the System menu and proceed as follows:

- 1 Using the numeric keypad, press the '2' button to select the Wipe Memory option.

[S1 SYSTEM] 1 : Crystal 2 : Wipe Memory

- 2 Press the '5' button to confirm the wipe memory procedure. The LCD displays the following message.

Wipe ALL configuration memory
Press ✓ to confirm

< : Cancel

Wiping configuration memory
Please wait . . .

When the configuration has been wiped the LCD re-displays the System menu.

5.11 Normal

The Normal function returns the display to the Level 2 Configuration menu in a normal supervisory mode.

To return to the Level 2 Configuration menu and retain Level 3 access (Engineer):

- 1 Press the '2/8' buttons to display additional options (6 : System, 7 : Normal and ↑ : More) from the Commissioning menu.

[S1 COMM] 1 : Setup 2 : Circuit
3 : CBE Rules 4 : Zones 5 : Access ↑ : More

- 2 Using the numeric keypad, press '7'. The panel will reset and return to normal supervisory mode at the User Menu.

[S1 COMM] 6 : System 7 : Normal
↑ : More

When ALL configuration procedures have been completed, remember to fit the Configuration Lock jumper Link (J9).

[S1] 1:Test 2:Disable/Enable 3:Clock
4:View Mode 5:Commission

Appendix 1 - Specification

ID50 Series Panel

General:

This fire control panel is designed to comply with the requirements of EN 54 Part 2/4. See Section 1.4 CE Marking for further details. In addition to the basic requirements of EN 54-2, the panel may be configured to conform with optional requirements as described in Section 1.5 EN 54 Functions.

Mechanical:

Construction:	Sheet steel enclosure carries all displays and controls under a steel sheet cover.
Dimensions (mm):	365(h) x 380(w) x 110(d)
Approx Weight	
Back Box:	6kg (no batteries)

Environmental:

Climatic classification:	3K5, (IEC 721-2-3)
Operating temperature:	-5°C to +45°C, (recommended +5°C to 35°C)
Humidity:	5% to 95% R.H.
Height above sea level:	Maximum, 2000m
Panel sealing:	IP 30, (EN 60529)
Vibration:	EN 60068-2-6, 10-150Hz at 0.981ms ⁻² (Meets the requirements of EN 54-2/4)
EMC:	Emissions: EN 61000-6-3 Immunity: EN 50130-4
Safety:	EN 60950

Displays and Indications:

Alphanumeric display:	2 line x 40 character, backlit LCD.
LED Status Indicators:	FIRE, DISABLEMENT, TEST, FAULT, DELAYS ACTIVE, FIRE OUTPUT: FAULT/DISABLED, FIRE OUTPUT ACTIVE, PLANT ALARM, POWER, FAULT, POWER SUPPLY FAULT, EARTH FAULT, SYSTEM FAULT, SOUNDER: FAULT/DISABLED, PRE-ALARM, FIRE CONTROL O/P: FAULT/DISABLED.
Zone Indicators:	Individual FIRE and Fault/Disable/ Test indicators for 16 zones.

Controls:

Dedicated flush pushbuttons are provided for the following functions: MUTE BUZZER, EXTEND DELAY, END DELAY/EVACUATE, SILENCE/RESOUND, RESET,

Additional pushbuttons for configuration and selection of software functions:

    KEYS

 KEY

 KEY

 KEY

10 BUTTON NUMERIC KEYPAD

System Capacity:

Number of loops:	1
Number of zones:	32 (16 Fire + 16 Plant Alarm)
Devices per loop:	CLIP or OPAL* protocol: 99 sensors + 99 modules or 99 sensors + combination of up to 99 modules/sounders within strict limits.

* Loops can be configured to poll CLIP devices or, when OPAL protocol is enabled, a mixture of OPAL and CLIP devices, providing no more than 10 CLIP devices are configured.

External Connections:

Cable entry:	16 x 20mm knock-outs in top of cabinet.
Terminals:	All external connections made through screw terminals, each of which will accept cable sizes between 0.5mm ² and 2.5mm ² .

Electrical:

Classification:	Installation Class 1, (panel must be earthed).
-----------------	--

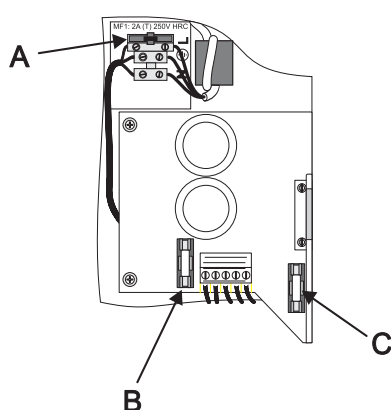
Power Supply and Charger

Operating Voltage:	230V 50Hz AC
Voltage Tolerance:	+10% -15%
Base card input:	18V AC from integral mains transformer.
Battery Charger output:	27.1V nom. @ 20°C (temperature compensated and current limited).
AUX DC Output Voltage:	Maximum output voltage = 29V ¹ Minimum output voltage = 17.1V ² .
EN54 Battery Wiring Test Impedance:	0.4 Ohm
EN54-4 PSU Loadings:	

$$I_{\max(a)} = 350\text{mA @}26.0\text{Vdc}$$

$$I_{\max(b)} = 2.1\text{A @}26.0\text{Vdc}$$

1 At maximum AC mains voltage (230V +10%)
2 At $V_{\text{IN}} = 196\text{ VAC}$ and with panel fully loaded.



Fuses:

The location of the panel fuses is given here, together with their ratings and their type.

- | | | | |
|----|-----|-----------------------|----------------|
| a. | MF1 | Mains Supply | T 2A H 250V |
| b. | FT1 | Transformer secondary | T 5A H 250V |
| c. | FC1 | Battery | T 3.15A H 250V |

T = time delay (i.e. anti-surge), H = high break capacity, as defined by EN 60127.

Note: Fuses FT1 and FC1 refer to main PCB version 8, or later, or P/N: 124-390. These were previously labelled FS1 and FS2, respectively.

Panel Quiescent Current ³ :	110mA
Panel Alarm Current ⁴ :	140mA
Battery Charging Current ⁵ :	0.63A (max.)
	0.47A (min.)
	0.50A (nom.)
AUX DC Output ⁶ :	0.25A
PSU Output Rating (continuous):	2.5A
Ripple Voltage (p/p.):	1.5V @ 1.5A load
Standby Batteries:	12Ah (max.)

Outputs:

- Two dedicated Monitored Sounder Outputs.
- Two Sounder or Volt-free Contact (VFC) - selectable outputs.
- Two Switched -VE Outputs (RLY) - unselectable outputs.
- One loop output.
- One DC auxiliary output.

Sounder Output Rating

Type:	Voltage reversal.
Output voltage:	16.6 to 30V (when active)
Maximum load:	1A Total (max. 700mA per output).
Fuse rating:	Electronic over-current protection.
Monitoring:	Open- and short-circuit with resistor EOL device. Partial-open-and - short circuit with diode EOL device fitted.

3 Back light off

4 Back light on, fire relay and two sounder relays on.

5 Battery charger output is disconnected in alarm.

6 Total AUX DC power available - split across both AUX and FBF output (VdS only).

Volt-free Contact (VFC) Output Rating

Type:	Single-pole change-over
Maximum load:	Contacts rated 30V 1A
Fuse rating:	Not applicable

Switched -VE Output Rating

Output voltage:	16 to 30V
Maximum load:	83mA (total for both outputs)

Loop Output

Output voltage:	22.5 to 26.4V.
Maximum load ¹ :	0.5A peak current*
Max. loop impedance ^{**} :	20 ohms (-ve cable only, with duplicate address detection) or 40 ohms (-ve cable only, without duplicate address detection).
Max. loop capacitance:	0.5μF

* Total system load is limited by the transformer output ¹. The Notifier Loop and Battery Calculator Support Tool, should be used to ensure that the system is NOT overloaded.

** Use the following loop driver source impedance values for panel calculation purposes: 3.8R at 22.5Vdc

- ¹ The panel (software version 5.04, or later) is compatible with the Loop Booster Module (LBM). The LBM provides additional power to the loop for output modules during panel alarm conditions. Refer to the instructions (997-509-000-X) provided with the LBM for a complete technical specification.

Up to 198 loop devices (up to 99 sensors and 99 modules) may be fitted to the analogue loop.

The communication with devices on the loop can use either the Notifier 'CLIP' or OPAL polling protocol. Refer to **Hardware Recommendations** for a list of compatible devices and loading limitations.

DC Auxiliary Rating

Output voltage range:	17.1 to 30V
Maximum load:	250mA
Quiescent:	150mA*
Alarm:	0.25A* Cables should be capable of carrying a minimum 1A.
Fuse rating:	Not applicable

Note: It is recommended that the auxiliary output should not be used in the quiescent state other than to provide a supply to drive ancillary devices' power indicators.

RS485 Serial Port (Optional)

Isolation:	Functional at 30V.
Baud rate:	1200 Baud.
Connector:	Terminal block on RS485 Interface Module PCB.
Maximum cable length:	1200metres (minimum of 1.5mm ² screened cable recommended)

Configuring

Configuration methods: Front panel keypad.

Offline using PC Offline Support Tool program.

Configuration access: Keypad access is passcode-protected (user-definable) for all configuration.

Refer to **Sections 4 & 5** of this manual, and to **997-264-000-X ID50 Series Panel Operating Manual, Section 4** for further information.

Default Configuration Passcodes:

Level 2 Passcode 2 2 2 2

Level 3 Passcode 3 3 3 3

Repeaters/Mimics

Refer to **997-411-000-X, IDR-2A, 2P & 6A Repeaters User Manual** and **997-412-000-X, IDR Mimic Installation and Commissioning Manual** for the specification.

Recommended Cables

All cables connected to the fire alarm control panel must be fire resistant cables. Shielded cable must be used for signalling loops and sounder circuits. The drain earth wire should be connected to a suitable earth bonding point at both ends of the cable. Keep the earth connections as short as possible.

In the UK, the British Standard BS5839 Part 1 : 2002 Code of Practice for system design, installation, commissioning and maintenance states the requirements for standard and fire resisting cables in Clause 26.2 section d and e:

'd) Standard fire resisting cables should meet PH30 classification when tested in accordance with EN50200 and maintain circuit integrity if exposed to the following test:

- A sample of the cable is simultaneously exposed to flame at a temperature of 830°C – 0+40°C and mechanical shock for 15 minutes, followed by simultaneous exposure to water spray and mechanical shock for a further 15 minutes.

e) Enhanced fire resisting cables should meet the PH120 classification when tested in accordance with EN50200 and maintain circuit integrity if exposed to the following test:

- A sample of the cable is simultaneously exposed to flame at a temperature of 930°C – 0+40°C and mechanical shock for 60 minutes, followed by simultaneous exposure to water spray and mechanical shock for a further 60 minutes.'

Loop cable

A loop cable carries data therefore its selection is important. Note the following:

- In countries where the European EMC directive is in force, only EMC Compliant cables are to be used.
- The loop cable usage must not exceed 2 km. This includes the cable used on main loop and spur circuits.
- Single pair cables must be used. It is NOT permissible to run mixed loops or outgoing and return pairs in a multi-core cable due to inadequate separation and possible electrical interference problems.
- Each core of the loop cable must be a minimum 1.5mm² cross sectional area.
- The cable screen must be capable of being earthed at each system device – only one end of each cable screen must be earthed.
- Red is the preferred cover sheath for fire applications
- The specified loop circuit cables are also suitable for wiring alarm, auxiliary relay and input/output lines.

Mains supply cable

The mains supply cable must be a standard fire resisting type and should meet PH30 classification, such as any of the standard and enhanced cables listed below. Examples of enhanced and standard cables are:

Enhanced:

- Mineral insulated cable (MICC) to BS6207: Part 1
- Draka FIRETUF Plus Enhanced FTPLUS2EHL5RD.

Standard:

- Prysmian FP200 FLEX
- Prysmian FP200 GOLD

Refer to your supplier for details of other available industry standard fire resisting cables.

Listed below are fire rated cables for signalling loops and sounder circuits that met the requirements of previous approval standards:

1. AEI type Firetec Multicore Ref. F1C1 (1mm²) to F1C2.5 (2.5mm²) in 2 core.
2. AEI type Firetec Armoured Ref. F2C1 (1.5mm²) to F2C2.5 (2.5mm²) in 2 core.
3. AEI type Mineral Insulated Cable (all types up to 2.5mm²).
4. BICC types Mineral Insulated twin twisted conductor cables, Ref. CCM2T1RG and CCM2T1.5RG.
5. BICC type Mineral Insulated Pyrotenax (all types up to 2.5mm²)
6. CALFLEX type Calflam CWZ 2 core type up to 2.5mm² maximum
7. Prysmian (formerly PIRELLI) type FP200 Gold 2 core type from 1mm² to 2.5mm²
8. Draka FIRETUF (OHLS) FTZ up to 2.5mm²
9. Signal Cables for RS485 Communications Links (twisted pair)
10. 12 AWG Signal 88202 Belden 9583 WPW999
11. 14 AWG Signal 88402 Belden 9581 WPW995
12. 16 AWG Signal 88602 Belden 9575 WPW991
13. 18 AWG Signal 88802 Belden 9574 WPW975
14. FIRETUF FDZ1000 by Draka 2 core.
15. Prysmian (formerly PIRELLI) type FP200 Gold 2 core.

Compatible CLIP Protocol SLC Devices:**Sensors**

CPX-551E	Standard Ionisation Sensor
CPX-751E	Low Profile Ionisation Sensor
FSL-751E	VIEW laser-based smoke sensor
LPX-751	VIEW laser-based smoke sensor (low profile)
SDX-751TEM	OptiPlex Multi-Sensor
SDX-551E	Standard Optical Sensor
SDX-751XXXX	Low Profile Optical Sensor
FDX-551XXX	- Grade 2 Thermal Sensor; - High Temperature Thermal Sensor; - Grade 1 Rate of Rise Thermal Sensor
HPX-751E	HARSH Optical Sensor
IRX-751CTEM	SMART 4 Multi-Criteria Sensor
IRX-751TEM	SMART 3 Multi-Criteria Sensor
LPB-500	Loop Powered Beam Detector (TX/RX pair)
LBP-620	Loop Powered Beam Detector
LPB-700/-700T	Loop Powered Beam Detector (<70m) /+ test
IDX-751 ¹	HAZARD Intrinsically-safe smoke sensor
B524RE	Voltage-free Relay Base
B524FTXE	HARSH Sensor Base
B524IXX-	Sensor Base With Standard Isolator; - Sensor Base With FET Isolator; - Sensor Base With Relay Output;
B501	Standard Sensor Base
DH500	Duct Detector Housing (indication only)
DH500AC/DC	Duct Detector Assy for 500 Series detectors
DH500ACDC-E	Duct Detector Housing 24V (c/w relays)

Modules

M500KACGB	Manual Call Point
M500KACW	Weatherproof Manual Call Point
M500KACEU	EU-style Manual Call Point
M700KAC-FG	Manual Call Point - non-isolated
M700KACI-FG	Manual Call Point - with isolator
M700X	Isolator module
M701	Single output module
M701-240	Output Module 240VAC
M701-240-DIN	Output Module 240VAC (DIN mounting)
M710	Single Input Module
M720	Dual Input Module
M721	Dual Input, Single Output Module
MCX-55	5-way Relay Card/ 5 inputs
MMX-1E	Monitor Module
MMX-101E	Mini Monitor Module
MMX-102E	Micro Monitor Module
MMX-10M	10 Way Monitor Module
M710-CZ	Conventional Zone Monitor Module
ZMX-1	Conventional Zone Monitor Module
CMX-2E	Control Module (Monitored or Relay)
PS2-701	Control Module With PSU and 2 Bell Circuits
CMX-10RM	10 Way Relay Module
ISO-X	Standard Isolator Module
ISO524-1	Mini Isolator Module
MRM-1	Mains Relay Modules
MRM-1DIN	Mains Relay Modules - DIN Rail version
ANS4 ²	Addressable Loop-powered Sounder
ANSE4 ²	Addressable Externally-powered Sounder
ABS4 ²	Addressable Loop-powered Sounder Base
ABSE4 ²	Addressable Externally-powered Sounder Base
IBS3	Addressable Loop-powered Base Sounder with Built-in Sensor Base
AWS3 ²	Addressable Loop-powered Wall Sounder
AWS32	Addressable Loop-powered Wall Sounder
AWS32-I ²	Addressable Loop-powered Wall Sounder with isolator.

¹ Requires the Y72221 Isolation Unit² Colour options available

Some devices may be under development, Contact NOTIFIER regarding device availability

Compatible OPAL Protocol SLC Devices:**Sensors**

NFX-OPT	Standard Optical Sensor
NFXI-OPT	Standard Optical Sensor - with isolator
NFX-SMT2	OptiPlex Multi-Sensor
NFXI-SMT2	OptiPlex Multi-Sensor - with isolator
NFX-TDIFF	Thermal Sensor Type A1R
NFXI-TDIFF	Thermal Sensor Type A1R - with isolator
NFX-TFIX58	Thermal Sensor 58°C
NFXI-TFIX58	Thermal Sensor 58°C - with isolator
NFX-TFIX78	Thermal Sensor 78°C
NFXI-TFIX78	Thermal Sensor 78°C - with isolator
NFXI-SMT3	SMART 3 Multi-Criteria Sensor
IRX-751CTEM	SMART 4 Multi-Criteria Sensor ³

Modules

M500KACW	Weatherproof Manual Call Point
M700KAC-FG	Manual Call Point
M700KACI-FG	Manual Call Point - with isolator
M700X	Isolator module
M701	Single output module - with isolator
M701-CZ	Zone monitor module - with isolator
M701-240	Output Module 240VAC - with isolator
M710	Single Input Module - with isolator
M720	Dual Input Module - with isolator
M721	Dual Input, Single Output Module - with isol.
AWS32/x	Addressable Loop-powered Sounder
AWS32/x-I	Addressable Loop-powered Sounder - with isol.
AWSB32/x/R	Sounder/strobe
AWSB32/x/R-I	Sounder/strobe - with isolator
ABS32/x	Sounder base
ABS32/x-I	Sounder base - with isolator
AWB/R-I	Strobe - with isolator
ABSB32/x/C-I	Sounder/Strobe - with isolator
AWB/R	Strobe

³ SMART 4 has a limited implementation: no version is available with internal isolator installed; there is no green LED indication for walk testing.

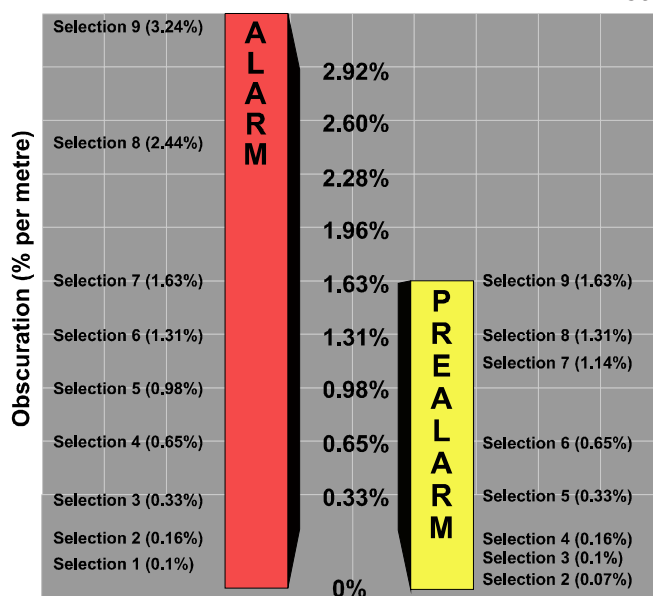
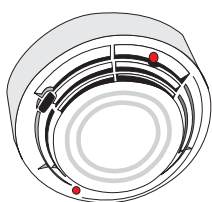
Appendix 2 - ID60 Single Loop Panel Differences

The **ID60 Panel** differs from the **ID50 Panel** in that it supports Very Intelligent Early Warning (VIEW™) sensors and also supports co-operative multisensing for the following device types: ION, OPT, MLT, OPX/SM2, SM3 and SM4. This appendix describes the configuration requirements of these sensors when used with the **ID60 Panel**. The addition of these sensors does NOT affect the panel installation or commissioning.

VIEW™ Sensor Sensitivity

When VIEW™ sensors are configured some additional menu options become available.

VIEW™ sensors are able to detect very small amounts of smoke resulting from an incipient fire, such as smouldering wiring insulation. Because VIEW™ sensors have an enhanced sensitivity and the ability to discriminate between airborne smoke and dust particles, a representatively narrower percentage band, expressed as a 'percentage per metre obscuration', is used to set their sensitivity than is used on other types of sensors.



Note: The term 'percentage per metre obscuration' describes the smoke saturation level per unit volume of air. Normal sensors typically detect a fire condition between 3%/m and 5%/m obscuration.

VIEW™ sensors can be configured, either by the Offline Configuration program or at the Panel, using nine sensitivity thresholds for pre-alarm and alarm. Level 1 (L1) is the most sensitive and level 9 (L9) the least sensitive. Pre-alarm can be disabled by selecting level 0 (L0).

The diagram at left shows smoke obscuration for each of the nine level selections. The standard sensitivity is set at 2.44%/m (L8) or less, high or enhanced sensitivity is between 2.44%/m (L8) and 0.98%/m (L5) and very high sensitivity is 0.98%/m (L5) or lower %/m.

Note: For more information about VIEW™ sensors refer to VIEW™ Application Guide (ref. 997-198).

CAUTION!

Use care when including sensors to AWACS groups as this may conflict with other configured operations, such as coincidence.

Non-VIEW™ Sensor Sensitivity

The ID60 panel supports co-operative multi-sensing for sensor types other than VIEW™. When configuring ION, OPT, MLT, OPX/SM2, SM3 or SM4 sensors a third menu option, Group, is displayed with the default group number displayed in the brackets. A sensor may be assigned to one of up to 50 groups and mixed with other sensor types. Allocation to a non-zero group enables a sensor's inclusion in the AWACS™ algorithm. However, allocation of a sensor to Group 0 excludes it from the AWACS™ algorithm and the existing alarm detection algorithm is used instead (the sensor will operate as a stand-alone device).

Note: When transferring a configuration from an earlier version panel, the group number is defaulted to '1'. This must be changed to '0' for all devices not being monitored by the AWACS™ algorithm. Non-VIEW™ devices learnt using software version 5.00, or above, will default the group to '0'.

Alarm and pre-alarm sensitivity levels can be set in addition to selecting a multi-sensing group.

- 1 To change the group, press the '3' button on the numeric keypad.

[Sensor nn - AAA] Sensitivity
1 : Alarm (L5,5) 2 : Day (L5,5) 3 : Group (0)

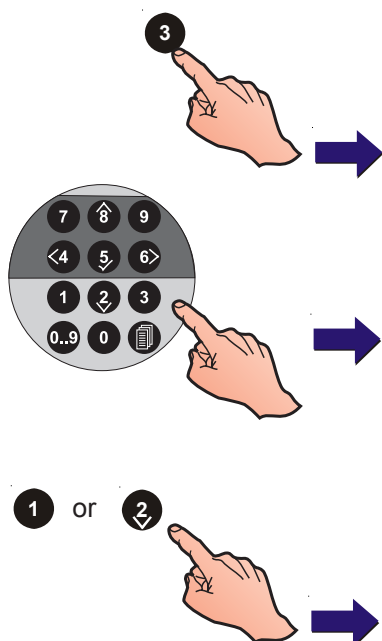
- 2 Enter a new group number, e.g. 2, and press '5' to confirm.

[Sensor nn - AAA] Sensitivity
Enter new AWACS Group : < : Cancel

- 3 Using the numeric keypad, to change the alarm and/or pre-alarm sensitivity levels press the '1' pushbutton or to change the Day Mode sensitivity setting, press the '2' pushbutton.

[Sensor nn - AAA] Sensitivity
1 : Alarm (L5,5) 2 : Day (L5,5) 3 : Group (2)

- 4 At the appropriate prompt enter the desired sensitivity setting.



VIEW™ Co-operative Multi-sensing

Co-operative sensing is carried out automatically between VIEW™ sensors in the same group and across sensor type. Grouped sensors co-operate within the group providing greater levels of sensitivity with a reduced risk of false alarms. When first installed, VIEW™ sensors are all allocated to group 1 but they can be configured in up to 50 groups. Sensors allocated to group '0' operate independently. An example of VIEW™ sensor co-operative grouping is given below:

Address	Type	Zone	Group
03	AVS	1	01
04	AVS	1	02
05	AVS	1	02
09	AVR	1	01
10	AVS	1	02
11	AVS	1	00
15	AVS	2	01
16	AVS	2	01
17	AVS	2	02
27	AVS	2	01

Each group can have one or more VIEW™ sensors configured as reference sensors (AVR). Sensors placed such that external smoke influences (eg. bonfires and exhaust fumes) can be detected early should be configured as AVRs. When these influences are detected by the AVR the group can then be temporarily desensitised.

VIEW™ Sensor Sensitivity

Most local codes of practice require very low levels of alarm sensitivity selection be tested on-site before implementation. Alarm sensitivity level 6 (L6) and below generally require a 90-day test to ensure the sensor environment is suitable for a higher sensitivity setting. This is not required for high levels of pre-alarm sensitivity selection.

Dynamic Intelligent Grouping (DIG) Operation

The Dynamic Intelligent Grouping (DIG) Operation only performs calculations on up to five sensors with the highest value. This is an advantage in a group of many sensors, as any condition will quickly be recognised by the panel.

A2.1 Calibrating VIEW™ Sensors

Each VIEW™ sensor is automatically calibrated on first operation with the panel. This calibration is completed at one of the following times:

- Approximately 90 secs after the panel is powered on.
- 60 secs after the sensor is installed on a panel which is already operating normally.

During this initial period (which is required to allow the VIEW™ sensor to stabilise) the sensor must not be exposed to smoke or other abnormal conditions, otherwise the panel may report a sensor fault.

If a VIEW™ sensor is removed from the operational loop, or communication with the panel is broken for a minimum of 30 secs, recalibration will take place automatically.

Note: If a VIEW™ sensor is removed and cleaned, or replaced with a new one, wait at least 30 secs after removal before replacing it.



VIEW™ sensors remain inoperable for 60 seconds after being replaced while calibrating

A2.2 Learning Individual VIEW™ Sensors

When installed on a loop from the **ID60 Panel**, each VIEW™ sensor is assigned the Advanced VIEW™ Sensor (AVS) type by default. This may then be configured as Advanced VIEW™ Reference (AVR) type.

A VIEW™ sensor may be learnt in the same manner as any sensor but has an additional 'Type' configuration option. The procedure to configure the sensor type is as follows:

- 1 Using the numeric keypad, press '1' to select the sensors configuration option.

[S1 Device] 1 : Sensors 2 : Modules

- 2 At the prompt, using the numeric keypad enter the address of the VIEW™ sensor to be edited and confirm using '5'.

[Sensor] Enter Address ____

- 3 The LCD then shows current settings and editable parameters. Using the numeric keypad, press '2' to select the 'Type' option.

Note: Use '2'/'8' to select the next/previous address respectively.

[Sensor nn - AVS] 1 : Zone (nn) 2 : Type
3 : Sensitivity 4 : [Blank/Existing Text]

- 4 The LCD then displays the VIEW™ device type selection menu. Using the numeric keypad, press '1' or '2' to select the 'AVS' or 'AVR' type respectively.

[Sensor nn - AVS] Select Type :
1 : AVS 2 : AVR < : Cancel

The display automatically returns to the previous menu, as shown below:

[Sensor nn - AVR] 1 : Zone (nn) 2 : Type
3 : Sensitivity 4 : [Blank/Existing Text]

A2.3 Changing VIEW™ Sensor Sensitivity

The following procedure describes how to configure the sensitivity levels for alarm (alarm and pre-alarm), day (alarm and pre-alarm) and sensor grouping for a VIEW™ sensor.

- 1 Follow the procedure in **Section A2.2, Learning Individual VIEW™ Sensors** to access the sensor configuration menu. The LCD shows current settings and editable parameters. Using the numeric keypad, press '3' to select the 'Sensitivity' option.

Note: Use the '2/8' buttons to select the previous/next address respectively.

[Sensor nn - AVS] 1 : Zone (nn) 2 : Type
3 : Sensitivity 4 : [Blank/Existing Text]

- 2 The LCD then displays the VIEW™ sensor Sensitivity menu. The sensitivity is displayed as two values in brackets. The first signifies the alarm level (default L5), and the second the pre-alarm level (default 5).

[Sensor nn - AVS] Sensitivity
1 : Alarm(L5,5) 2 : Day(L5,5) 3 : AVSGroup(01)

- 3 To change the 'Alarm'; 'Day' or 'AVSGroup' options, using the numeric keypad press '1', '2' or '3' respectively. If '1' (Alarm) is pressed the LCD prompts for a new 'alarm' level as follows:

[Sensor nn - AVS] Sensitivity
Enter new alarm level : ____ < : Cancel

- 4 Using the numeric keypad enter the required 'alarm' value 1 to 9, and press '5' to confirm. The LCD then automatically prompts for the 'pre-alarm' value as follows:

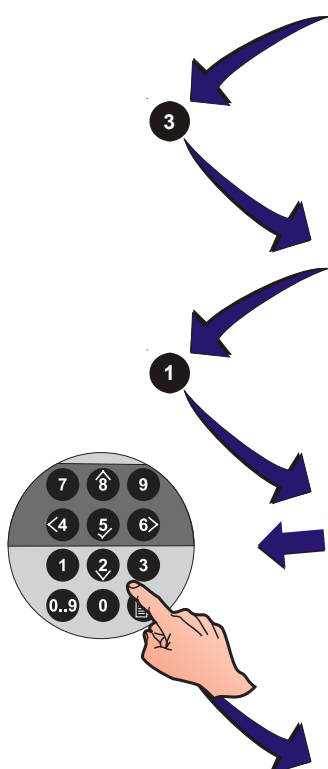
[Sensor nn - AVS] Sensitivity
Enter new prealarm level : ____ < : Cancel

- 5 Enter the required 'prealarm' value 0 to 9, and press '5' to confirm. The LCD then automatically returns to the VIEW™ sensor Sensitivity menu.

Day Mode Levels

The 'Day' option alarm levels are changed in the same manner as the 'Alarm' option.

Using the numeric keypad, press '2' to access the Day option, then follow the procedure above.



AVS Group

The AVSGroup option is used to associate a number of either AVS or AVR sensors in up to a maximum of 50 groups, see **Section 'Co-operative Multi-Sensing'**. The operation of VIEW™ sensors assigned to a group is as follows:

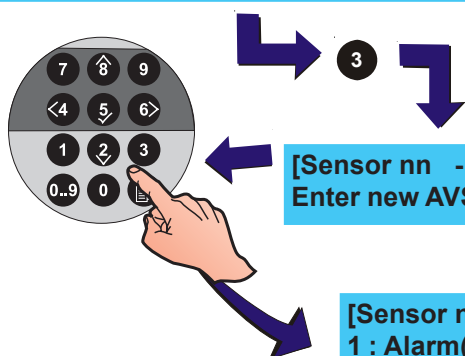
- VIEW™ sensors operate independently if the sensor is assigned to group 0.
- In a group containing both types, the AVS's desensitise if AVR's detect a sudden rise in contaminated air.
- In a group containing AVS type sensors, all sensors operate as standard VIEW™ sensors.

Note: One or more AVR's may be configured in a group.

To assign a sensor to a group:

- From the VIEW™ sensor Sensitivity menu, using the numeric keypad press '3' to access the AVSGroup option.

[Sensor nn - AVS] Sensitivity
1 : Alarm(L5,5) 2 : Day(L5,5) 3 : AVSGroup(01)



- The LCD prompts for a new AVS Group number. Use the numeric keypad to enter the required group number and press '5' to confirm.

[Sensor nn - AVS] Sensitivity
Enter new AVS Group : ____ < : Cancel

- The LCD then returns to the previous display.

[Sensor nn - AVS] Sensitivity
1 : Alarm(L5,5) 2 : Day(L5,5) 3 : AVSGroup(01)

A2.4 Automatically Learning VIEW™ Sensors

When automatically learning an SLC Loop including VIEW™ sensors, each sensor is configured as an AVS type. The LCD shows the total number of these sensors, as in the example below:

[Learn]	TOTAL	ION	OPT	TMP	MLT	AVS
	68	10	20	25	05	08

Any sensors that need to be configured to an AVR type must be changed individually, see **Section A2.2, Learning Individual VIEW™ Sensors**.

A2.5 MULTI, Optiplex and SMART Multi-Sensors

In addition to MULTI and Optiplex/SM2 Multi-sensors the ID60 panel now supports SMART 3 (SM3) and SMART 4 (SM4) Multi-criteria sensors. All multi-criteria sensors feature photo, thermal and infra-red (IR) sensing capabilities. The SMART 4 sensors feature CO gas detection in addition to photo, thermal and infra-red (IR) sensing capabilities.

As with ION, OPT, MLT and OPX/SM2 device types SM3 and SM4 sensors can be assigned to multi-sensing groups, as described earlier in this appendix under **Non-VIEW™ Sensor Sensitivity**.

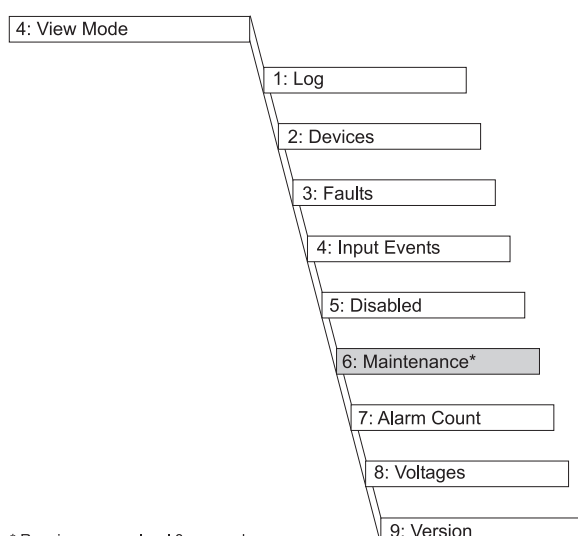
To change the alarm and pre-alarm sensitivity thresholds of these sensors, refer to the procedure described earlier in this appendix under **Non-VIEW™ Sensor Sensitivity**.

SMART 4 CO Element - Warning of Life Expiry

When the CO detection element of the SMART 4 sensor approaches the end of its useful life (approximately 6 calendar months before sensor replacement is needed) a maintenance notification for that sensor is created in the Maintenance log. This maintenance log entry is intended as a service engineer advisory that one or more sensors will need replacing some time in the near future. However, during this period the SMART 4 sensor will still perform as it did before it entered the maintenance 'advisory' state.

Maintenance Event Log Access

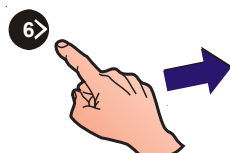
This maintenance notification event log (access level 3 is required) can be accessed via the View Mode menu (see the Operating Manual, Section 4.12) as described below.



* Requires access level 3 passcode



Any sensor logging more than 100 days in a maintenance condition is 'promoted' to a maintenance fault. The panel indicates a general fault condition.



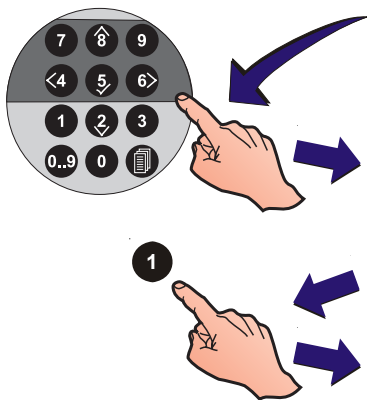
[U0 View] 1: Log 2: Devices 3: Faults
4: Input Events 5: Disabled ↑: More

[U0 View] 6: Maint. 7: Alarm Count
8: Voltages 9: Version

- Using the numeric keypad press the '6>' button to select the Maintenance option. You will be prompted for an Access Level 3 passcode as below:

COMMISSION MODE ACCESS
Enter Level 3 passcode _ <: BackSp

Note: This screen reverts to the View Mode menu after 2 mins if no key has been pressed.



- 2 Using the numeric keypad enter the Access Level 3 passcode. The Sensor Maintenance screen is displayed:

[Sn Maint] 1: Display 2: Clear
 3: Service

- 3 Press the '1' pushbutton on the numeric keypad to display VIEW™, MULTI, Optiplex/SM2, SM3 and SM4 sensor maintenance data:

[Sn Maint] Snn AAA dd/mm/yy mm/hh Active
<----- Zone Text ----->

The device reference and type is given along with the date and time the sensor entered the maintenance state. The current maintenance state of the VIEW™, MULTI, Optiplex/SM2, SM3 and SM4 sensors are also given, i.e. Active. The status will remain Active after the 100-day advisory period has elapsed.

Note: Where maintenance data is listed in the log (listed in address order) for more than one sensor, use the '2/8' buttons to review the other log entries.

Sensor Replacement

When a VIEW™, MULTI, Optiplex/SM2, SM3 or SM4 sensor has been replaced, the maintenance log entry for that device is retained but the maintenance status is changed to 'Inactive' and will remain in the log until it is manually deleted.

[Sn Maint] Snn AAA dd/mm/yy mm/hh Inactive
<----- Zone Text ----->

Deleting Maintenance Log Data

Sensor data 'demoted' to **Inactive** status can be removed from the maintenance log; all **Active** status data will be retained. To delete all **inactive** data:

- 5 Using the numeric keypad press '2' to select the 'Clear' option.

Clear inactive maintenance entries?
Press ✓ to Confirm <: Cancel

- 6 Press the '5' button to confirm. The Maintenance menu screen is re-displayed.

When all inactive log entries have been deleted and with no active log entries present, the following message is displayed:

**** No Devices in Maintenance ****

- 7 Press the '<4' button to return to the View Mode menu.

- 8 Using the numeric keypad press '3' to select the Service option. If configured, the next system service date is displayed:

SYSTEM SERVICE DUE day nn/nn/nnnn

< : Exit

- 9 Press the '<4' button to return to the Maintenance menu.

A2.6 Service Due Date

The Site Details Setup option enables a next service date to be configured. This option is disabled by default.

- 1 Using the numeric keypad enter the Access Level 3 passcode. From the Site Details menu press the '2/8' buttons to the Service Due option appears.

[Setup] Service Due = DISABLED
> : Change 1: Disable ↑ : More < : Exit

- 2 To configure the service due date press the '6>' button. The displays now prompts for the date entry:

[Setup] Service Due = DISABLED
Enter Date : - - / - - / - - < : Cancel

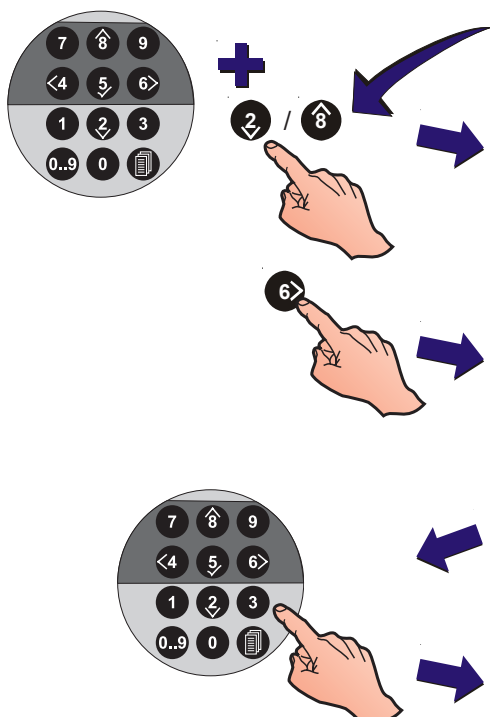
- 3 Using the numeric keypad enter the date of the next service. Entry requires two digits to be entered each time to move the flashing cursor to the next entry field. Use the '<4' button to backspace at any time. Press the '5' button to confirm. The year is displayed using 4 digits.

[Setup] Service Due = 02/06/2010
> : Change 1: Disable ↑ : More < : Exit

- 4 If an invalid date is entered the following warning is displayed:

Invalid Value Entered !

- 5 To clear a configured service date use the numeric keypad and press the '1' pushbutton.



Appendix 3

Fault Messages - Possible Causes & Remedies

Loop Wiring Installation

LOOP OPEN CIRCUIT - the loop wiring has a disconnection. Action: Check the loop wiring connections at the panel. If these are good and the problem persists, disconnect the loop wiring and short out the outgoing and incoming (+ve to +ve and -ve to -ve) connectors. If the fault clears this indicates the on-board loop circuitry is OK. Check wiring connection of all loop devices.

LOOP SHORT CIRCUIT - a short circuit has occurred between the panel and isolator (if fitted). If isolators are fitted, the system shows NO REPLY FROM DEVICE for all devices between isolation points. Action: Disconnect the affected section of the loop and use a meter to locate the fault.

LOOP PARTIAL SHORT CIRCUIT - the loop fault monitoring has detected a wiring impedance value outside the acceptable impedance range to maintain correct loop operation. Action: Disconnect the loop wiring at the panel and use a meter to check sections of loop wiring.

LOOP DRIVER BAD REPLY - A fault internal to the loop driver circuit has been detected. Action: Replace the base board.

NO REPLY FROM DEVICE - A loop device at a specific address is not responding, possibly missing or incorrect panel configuration. Action: Refit missing device or re-learn devices on loop.

DOUBLE ADDRESS - Two loop addresses are responding to the same address. Action: Change one of the two devices to a different address.

DEVICE TYPE CHANGED - A device learnt at a specific loop address has been changed for an alternative type without re-learning the loop devices. Action: Replace device with correct type, perform a Learn operation or re-configure the panel using the off-line configuration tool.

BAD REPLY FROM DEVICE - Corrupted communication has been detected between the panel and a loop device. Action: Replace loop device. If problems persist the base board will need to be replaced.

DEVICE LEVEL FAULT - a specific loop device, when polled, is returning a very low analogue value. Action: Check the device for contamination. Replace if necessary.

DEVICE FAILED AUTO HIGH TEST - During automatic testing of loop devices a specific device did not respond as expected. Action: Change device.

SENSOR AT ADDRESS ZERO - A sensor has been installed without setting a valid address, i.e. left at factory default of '00'. Action: Change to valid address.

MODULE AT ADDRESS ZERO - A module has been installed without setting a valid address, i.e. left at factory default of '00'. Action: Change to valid address.

SENSOR AT ADDRESS OUT-OF-RANGE - a sensor has its address set to greater than 99 (new OPAL protocol devices only). Action: Change to valid address.

MODULE AT ADDRESS OUT-OF-RANGE - a module has its address set to greater than 99 (new OPAL protocol devices only). Action: Change to valid address.

SIGNAL DEGRADED - Data returned from a device is being corrupted. Action: Check the continuity of the loop screen and that the screen is only earthed at one point.

ISOLATOR OPEN - loop isolator is open circuit either by command from the panel or because of a loop fault. Action: Check if device is faulty. If so, replace device.

LOOP SUPERVISION FAULT - there is a problem with a loop device that has a fault monitored circuit such as a conventional detection zone. Action: Check the zone wiring for open- or short-circuit faults.

INCORRECT DEVICE PROTOCOL - an OPAL protocol device has been replaced with a CLIP. Action: Either fit the correct protocol device type or re-learn the device at that address as a CLIP - providing the total of 10 CLIP devices on the loop is not exceeded.

Power Supply Faults

PSU BOOSTER OVERVOLTAGE - The boosted output voltage from the PSU is too high. Action: Replace base board.

NO MAINS SUPPLY - The mains input supply has failed or been removed or the mains input fuse has blown. Action: Check mains supply. If fuse has blown check internal mains wiring before replacing fuse.

BATTERY CHARGER FAILURE - The integral battery charger has failed and the batteries are no longer being charged. Action - replace base board.

BATTERY LOW - The battery voltage is unusually low. Action - Check the batteries and, if necessary, replace them with new batteries.

BATTERY MISSING - the presence of the batteries cannot be detected. Action: Check battery connections.

BATTERY DISCHARGED - the output voltage of the batteries has fallen below the minimum required for correct panel operation. Action: check the condition of the batteries.

BATTERY WIRING FAULT - the impedance of the battery wiring is too high. Action: Check the battery wiring connections.

Processor Faults

CPU RESTART - The control panel has been reset either by a complete removal of power to the panel, pressing the reset button on the base board or automatically by the on-board watchdog program. Action: If the latter case keeps occurring replace the base board.

SOFTWARE CHECKSUM FAILURE - Continual internal checking of the program memory has found some corruption. Action: The base board should be re-programmed. If this does not clear the fault, replace the base board.

Other Hardware Faults

INPUT OPEN CIRCUIT - Open-circuit wiring fault detected on the loop or on-board monitored input circuit. Action: Check wiring. Check correct EOL device is fitted to input device.

INPUT SHORT CIRCUIT - Short-circuit wiring fault detected on the loop or on-board monitored input circuit. Action: Check wiring. Check correct EOL device is fitted to input device.

OUTPUT OPEN CIRCUIT - Open-circuit wiring fault detected on an on-board sounder or monitored loop output device. Action: Check wiring. Check correct EOL device is fitted to output device.

OUTPUT SHORT CIRCUIT - Short-circuit wiring fault detected on an on-board sounder or monitored loop output device. Action: Check wiring. Check correct EOL device is fitted to output device.

LOW CHAMBER - Optical chamber fault in a smoke sensor has occurred. Action: Replace sensor.

IR LIGHT SATURATION - The Infra-red (IR) cell in a SMART 3 or SMART 4 multi-criteria sensor is 'flooded' with IR radiation. Action: Replace sensor.

MAINTENANCE ALERT - The optical smoke chamber of a multi-criteria device has reached 80% drift compensation. Action: Requires cleaning.

MAINTENANCE URGENT - The optical smoke chamber of a multi-criteria device has reached 100% drift compensation. Action: Urgent requirement for cleaning.

CO LIFE EXPIRED - The Carbon Monoxide (CO) cell in a SMART 4 multi-criteria sensor has reached the end of its operational life. Action: Replace sensor.

CO SELF TEST FAILURE - The Carbon Monoxide (CO) cell in a SMART 4 multi-criteria sensor has failed an internal test. Action: Replace sensor.

IR SELF TEST FAILURE - The Infra-red (IR) cell in a SMART 3 or SMART 4 multi-criteria sensor has failed an internal test. Action: Replace sensor.

THERMISTOR TROUBLE - The temperature sensor in a heat or multi-criteria sensor has a fault. Action: Replace sensor.

6 MONTHS TO CELL LIFE EXPIRY - The Carbon Monoxide (CO) cell of a SMART 4 multi-criteria sensor has 6 months to end of life. Action: Record in site log book.

DEVICE INTERNAL FAULT - loop device has failed a self check. Action: Replace sensor.

Other Faults

CONFIGURATION CHECKSUM FAILURE - Some form of corruption has been detected within the configuration settings. This can occur following a software upgrade if the memory is not 'wiped'. Action: Try 'wiping' the memory or re-configuring from the configuration tool to clear the fault, followed by pressing the Reset button. If this does not clear the fault, replace the base board.

SOUNDER LOAD VOLTAGE FAULT - The sounder circuit has failed the sounder load test and, therefore, cannot support the number of devices installed. Action: Reduce the number of sounder devices on the circuit.

EARTH FAULT - A wiring fault has been detected to earth. Action: The fault can be narrowed down by systematically disconnecting field wiring sequentially and monitor the earth fault reading, voltage between battery negative and earth.

AUXILIARY SUPPLY FAULT - A fault with the auxiliary supply has been detected. Action: Check the auxiliary voltage and any associated wiring.

DEVICE MAINTENANCE [ID60 only] - One or more multi-criteria sensors has entered a maintenance fault state after having been in a maintenance alert state (not displayed on the LCD) for more than 100 days. Action: Replace the faulty device(s) and reset panel.

LOOP BOOSTER MODULE FAULT - A fault with the loop booster has been detected. Action: Replace loop booster module.

E.S. SYSTEM FAULT - A fault with the extinguishing system has been detected. Action: Check wiring to extinguishing system.

TERMINAL LINK FAULT - This indicates a fault in the equipment connected to the third-party protocol RS232 port has been detected. Action: Check the cable connections. If nothing obvious is found, change the third-party equipment with a device that is known to work. If this clears the fault, replace unit. If not, replace base board.

Appendix 4

EN54-2- Options with Requirements

In addition to satisfying the requirements of EN54-2 Options with Requirements, the table below defines whether the CIE is configurable in accordance with the mandatory or optional requirements of VdS 2540.

EN54-2 Option	Description	VdS 2540 Option	C.I.E. Configurable?
7.10.4	INDICATIONS		
7.13	Fault signal from fire protection equipment	Required	Yes
8.3	Alarm counter	Required	Yes
8.4	Fault signals from points	Optional	Yes
	Total loss of power supply	Optional	No
7.11.1	CONTROLS		
7.11.2	Delays to outputs	Optional	Yes
7.12.1	Manual or automatic switching of delays to outputs	Optional	Yes
7.12.2	Dependency on more than one alarm signal: Type A	Optional	No
7.12.3	Dependency on more than one alarm signal: Type B	Required	Yes
9.5	Dependency on more than one alarm signal: Type C	Prohibited	No
10	Disablement of each address point	Optional	Yes
	Test condition	Required	Yes
7.8	OUTPUTS		
7.9.1	Fire alarm device(s)	Required	Yes
7.9.2	Fire alarm routing equipment	Required	Yes
7.10.1	Fire alarm routing equipment with alarm confirmation	Required	Yes
7.10.2	Automatic fire protection equipment: Type A	Optional	Yes
7.10.3	Automatic fire protection equipment: Type B	Optional	No
8.9	Automatic fire protection equipment: Type C	Required	Yes
11	Fault warning routing equipment	Required	Yes
	Standardized I/O interface ¹	Required	Yes

¹ Interface meets VdS 2540 which requires DIN 14675 & 4662, but not full EN54-2, 11.

A1 Fault Signal From CIE

This is a VdS 2540 requirement. The CIE provides for this EN54-2 option.

The CIE comprises a volt-free contact relay configured as a dedicated fault output. Refer to **Section 4.4.5 Configuration Outputs C and D** and **Section 5.6.3 On-board Circuits** for more details.

A2 Alarm Counter

This is a VdS 2540 requirement. The CIE can record a maximum number of 9,999 alarm events. If this limit is reached the alarm counter will automatically reset to zero. It is not possible to reset the counter through the CIE, except at access level 4.

A3 Fault Signals from Points

This is an optional VdS 2540 requirement. The CIE will display fault signals from individual sensors and devices.

A4 Total Loss of Power Supply

This is an optional VdS 2540 requirement. The CIE does not allow this EN54-2 option to be configured.

A5 Delays to Outputs

This is an optional VdS 2540 requirement. The CIE allows this EN54-2 option to be configured. Refer to **Section 5.5.5 Day/Night Settings** for more details

If an input module is used to provide a return signal from the external system, the module must be configured as a type MON to prevent this input overriding Day/Night Mode switched delays.

A6 Manual or Automatic Switching of Delays to Outputs

This is an optional VdS 2540 requirement. The CIE does not allow this EN 54-2 option to be configured.

A7 Dependency on More Than One Alarm Signal: Type A

This is an optional VdS 2540 requirement. The CIE does not allow this EN 54-2 option to be configured.

A8 Dependency on More Than One Alarm Signal: Type B

This is also a VdS 2540 requirement. For further details, refer to **Section 5.7 Control-By-Event Output Rules** for more details on how to set up Dependencies (known as Coincidences in the rest of this manual)

A9 Dependency on More Than One Alarm Signal: Type C

This requirement is prohibited under VdS 2540.

The CIE does not allow this EN54-2 option to be configured.

A10 Disablement of Each Address Point

This is an optional VdS 2540 requirement. The CIE complies with this EN54-2 option requirement.

Refer to **Section 4.10 DISABLE / ENABLE - User Option** of the ID50 Operating Manual for more details.

A11 Test Condition

This is also a VdS 2540 requirement. The CIE complies, using an access level 2 passcode, with this EN54-2 option requirement. Refer to **Section 4.9 TEST - User Option** of the ID50 Operating Manual for more details.

A12 Fire Alarm Device(s)

This is also a VdS 2540 requirement. To satisfy the requirements of EN54-2 7.8 the CIE is provided with the required access level 2 controls. Refer to **Section 4.5 SILENCE / RESOUND Pushbutton** of the ID50 Operating Manual for more details.

A13 Fire Alarm Routing Equipment (7.9.1)

This is also a VdS 2540 requirement. The CIE allows this EN54-2 option to be configured.

A dedicated fire output (transfer) relay is provided by the CIE. In addition, the internal sounder/relay circuits are configurable as remote fire outputs. The CIE provides an LED to indicate when the fire relay or any configured remote fire outputs are active. Refer to **Section 4.4.5 Configuration Outputs C and D** and **Section 5.6.3 On-board Circuits** for more details.

A14 Fire Alarm Routing Equipment with Alarm Confirmation (7.9.2)

This is also a VdS 2540 requirement. The CIE allows this EN54-2 option to be configured.

The CIE allows a remote fire output (transfer) to be configured. In addition, a fire output active condition, using a return signal from the remote fire signal routing equipment, can be configured using one of the provided digital input circuits. With the panel function set to VdS mode activation of a fire alarm routing equipment return signal drives this indicator.

Refer to **Section 4.4.5 Configuration Outputs C and D** and **Section 5.6.3 On-board Circuits** for more details on setting up the fire routing output. The feedback signal is connected to the on-board digital input 2.

A15 Automatic Fire Protection: Type A

This is an optional VdS 2540 requirement. The CIE allows the configuration of an output to fire protection equipment using an output module. Refer to **Section 5.6.1 Signalling Line Circuit (SLC) - Devices** for more details.

A16 Automatic Fire Protection: Type B

This is an optional VdS 2540 requirement. The CIE does not allow this option to be configured.

A17 Automatic Fire Protection: Type C

This is an optional VdS 2540 requirement. The CIE allows the configuration of an output to fire protection equipment, together with associated feedback signals, using a M221-SI loop module, located internally. An Extinguishing System (SST) display unit is also required. More details can be found in documents 997-581-000-1 (Installing the M221-SI Module) and 997-580-000-1 (Installing the NF-SST Display Box).

A18 Fault Warning Routing Equipment

This is also a VdS 2540 requirement. The CIE allows this EN54-2 option to be configured.

The CIE may be configured to provide a fault signal to external equipment, such as a fault transmission router, using a M710-CZ module. Refer to the end of this appendix for more details.

A19 Standardized I/O Interface

This is also a VdS 2540 requirement. The CIE does not fully support the requirements of EN54 Section 11. However, it does meet the requirements of VdS 2540 which requires the ability to connect to an FBF (fire brigade panel). More details can be found in the appropriate, translated product manuals.

Appendix 5

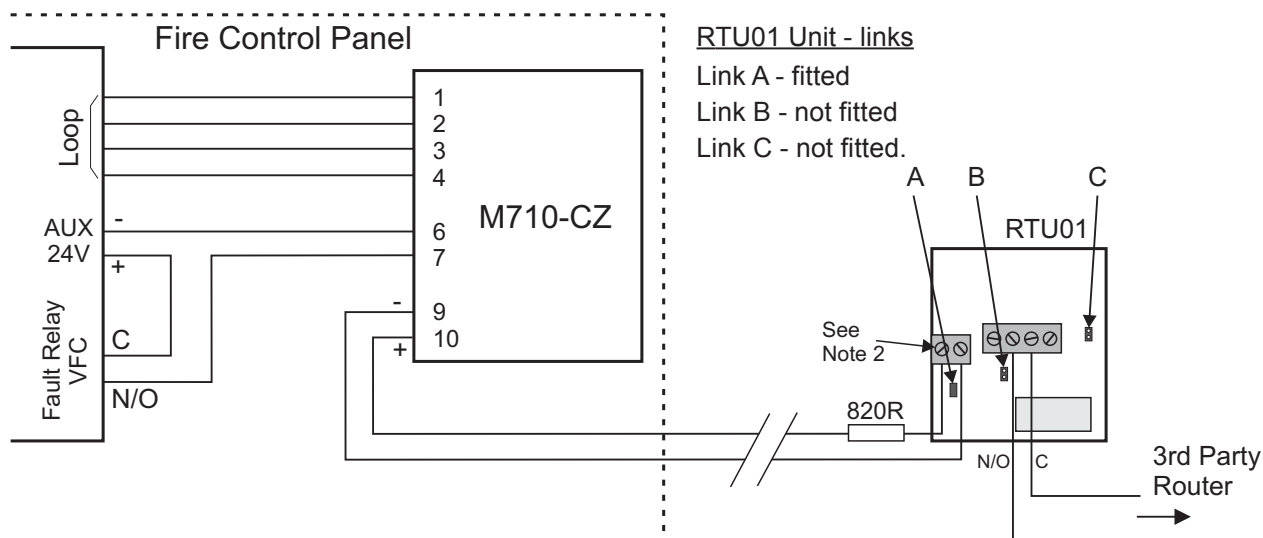
Configuration of Fault Routing Output Using a Zone Module

A monitored fault routing output can be set up using a sounder output configured as a fault relay output, an input module (M710-CZ) and an RTU01 Routing Termination Unit. The connection between the input module and the third-party fault routing equipment is monitored by the RTU01 which is located at the fault routing equipment end of the monitored circuit.

The control panel back box has provision for mounting the module internally; threaded fixing points allow the module to be fitted in either of two positions at the bottom of the box (either side of the standby batteries). The M710-CZ module uses an address on the loop and can be configured (using the panel menus or off-line configuration tool) to provide a fault indication should a comms fault occur between the zone monitor module and the RTU01.

Configuring the Fault Routing Output

If the M710-CZ module is configured using the learn operation it is displayed in the panel menus as a ZMX device type. To change the operation of the module to a fault-routing fault monitor navigate to the module editing screen: **5:Commission/2:Circuit/1:SLC loop/1:Devices/2: Modules** and then change the module type to 'FRM' (Fault Routing Module). The module type change is saved when exiting this menu.



Notes:

- 1 To avoid a fault condition, the 820R resistor must be in line with the connection to the + terminal of the RTU01 PCB 2-way connector.
- 2 If the module reports open-circuit faults for the FRM, fit the end-of-line capacitor supplied with the M710-CZ module across the + and - terminals of the RTU01.



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