Extinguishant Control

Sigma ZXT SI

Product Manual

Kentec Electronics Ltd

Man-1453 Rev.01

Safety

Suppliers of articles for use at work are required under section 6 of the Health and Safety at Work act 1974 to ensure as reasonably as is practical that the article will be safe and without risk to health when properly used.
An article is not regarded as properly used if it is used 'without regard to any relevant information or advice' relating to its use made available by the supplier.

This product should be installed, commissioned and maintained by trained service personnel in accordance with the following:

- EE regulations for electrical equipment in buildings
- Codes of practice
- Statutory requirements
- Any instructions specifically advised by The Manufacturer

According to the provisions of the Act you are therefore requested to take such steps as are necessary to ensure that you make any appropriate information about this product available to anyone concerned with its use.

Failure to ensure that all conductive accessible parts of this equipment are adequately bonded to the protective earth will render the equipment unsafe.

Disclaimer

In no event shall The Manufacturer be liable for any damages or injury of any nature or kind, no matter how caused, that arise from the use of the equipment referred to in this manual.
Strict compliance with the safety procedures set out and referred to in this manual, and extreme care in the handling or use of the equipment, are essential to avoid or minimise the chance of personal injury or damage to the equipment.

The information, figures, illustrations, tables, specifications, and schematics contained in this manual are believed to be correct and accurate as at the date of publication or revision. However, no representation or warranty with respect to such correctness or accuracy is given or implied and The Manufacturer will not, under any circumstances, be liable to any person or corporation for any loss or damages incurred in connection with the use of this manual. The information, figures, illustrations, tables, specifications, and schematics contained in this manual are subject to change without notice.

Unauthorised modifications to the fire detection system or its installation are not permitted, as these may give rise to unacceptable health and safety hazards.

Any software forming part of this equipment should be used only for the purposes for which The Company supplied it. The user shall undertake no changes, modifications, conversions, translations into another computer language, or copies (except for a necessary backup copy).In no event shall The Manufacturer be liable for any equipment malfunction or damages whatsoever, including (without limitation) incidental, direct, indirect, special, and consequential damages, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss, resulting from any violation of the above prohibitions.

Section 1
Introduction

The Sigma-SI Status Units are designed in accordance with European standard EN12094-1 Fixed fire-fighting systems - Components for gas extinguishing systems - Part 1: Requirements and test methods for electrical automatic control and delay devices.

The Sigma ZXT SI Status Units are designed to extend the indications and some controls of Sigma ZXT extinguishant control panels to other locations within the fire protection system. They can be introduced to make operation of the system more practical, within areas that have multiple access points (or doors). A maximum of seven status units may be connected to each control panel extinguishant area.

All units connect to a two wire data communications bus and are powered by the Auxiliary 24V DC output of compatible, extinguishant Control Panels.

The Sigma ZXT SI range consists of:

Item	Product Code	Description
1.	K921000M8	6 Lamp Status Unit
2.	K921010M8	6 Lamp Status Unit with Manual Release
3.	K921100M8	6 Lamp Status Unit with Mode Select
4.	K921110M8	6 Lamp Status Unit with Mode Select & Manual Release
5.	K921113M8	10 Lamp Status Unit with Buzzer, Mode Select & Manual Release
6.	W921000W8	Weatherproof 6 Lamp Status Unit
7.	W921100W8	Weatherproof 6 Lamp Status Unit with Mode Select
8.	W921110W8	Weatherproof 6 Lamp Status Unit with Mode Select & Manual Release
9.	W921113W8	Weatherproof 10 Lamp Status Unit with Buzzer, Mode Select & Manual Release

Supporting Documentation

In conjunction with this manual, it is strongly advised that Sigma ZXT Product Manual is read and understood.

Sigma ZXT Installation Manual

Using the a smart phone or device, the Manual can be accessed by working with the QR code below:

Installation Manual

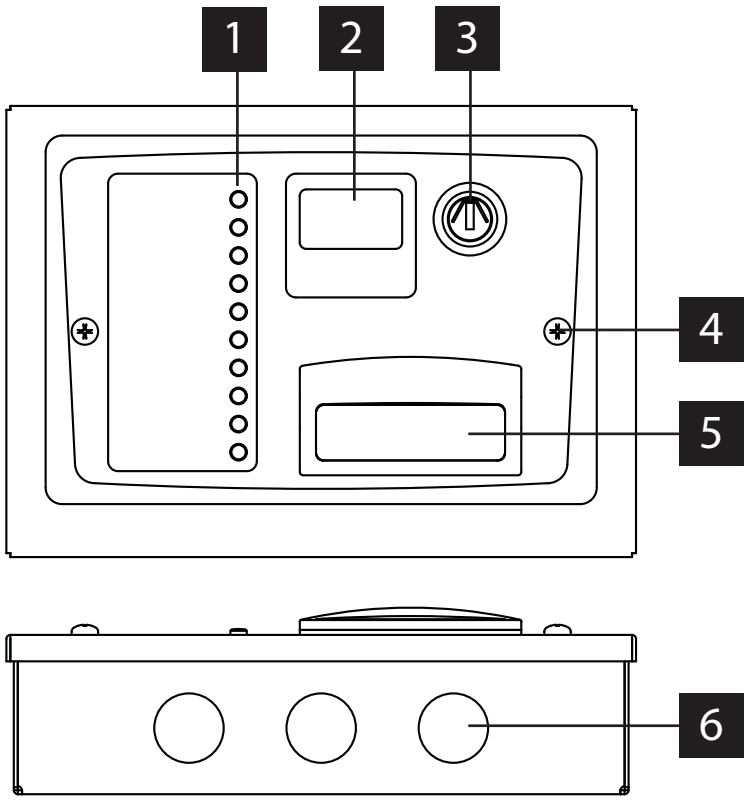
Should you be unable to work with QR codes the Manual can be obtained by visiting the following website pages:

Manual Variant	Website
Installation Manual	http://www.kentec.co.uk/manuals/man-1451EN.pdf

Section 2
Overview

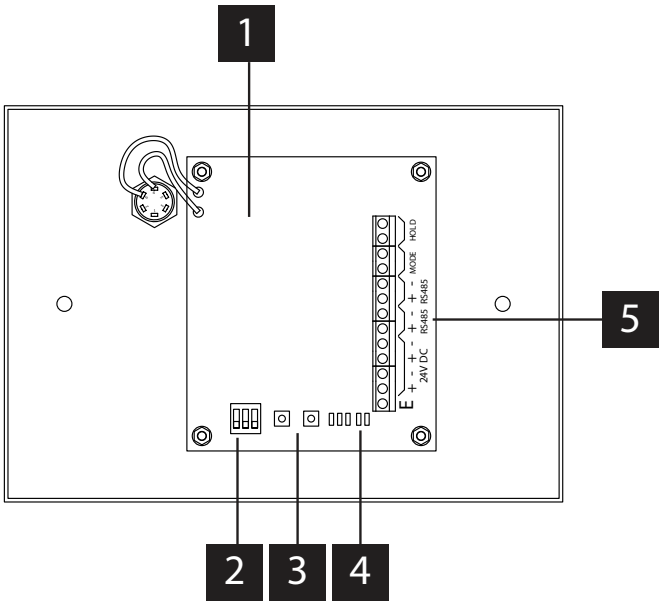
The following diagrams provide an overview of panel features.

Figure 2-1
Status Unit Indicator Features



ID	Feature	Function	Item
1	Status indicators	Manual Only	1 - 9
		Auto/Manual	1 - 9
		Hold Activated	1 - 9
		Disabled	1 - 9
		Imminent	1 - 9
		Released	1 - 9
		Fire Zone 1	5 & 9
		Fire Zone 2	5 & 9
		Fire Zone 3	5 & 9
		Fault	5 & 9
2	Numeric countdown	Seconds Until Discharge	All items
3	Key switch	Mode Select	3, 4, 5, 7 & 8
4	Enclosure lid retaining screw (x2)	N/a	All items
5	Extinguishant release push-button (beneath anti-tamper cover)	Manual Release (Extinguishant)	2, 4, 5, 8, 9
6	Enclosure knock-outs	Cable entry points	All items

Figure 2-2
Internal Layout (Rear of Enclosure Lid)



ID	Feature	Function	Items
1	Printed Circuit Board		All items
2	DIP switch	Binary address setting	All items
3	Push-buttons	Processor and Watchdog Reset	All items
4	Status Indicators	COM, HOLD, MOD, CPU, FUSE	All items
5	Input Terminals	E, 24V DC, RS485, MODE, HOLD	All items

Section 3
Installation and Configuration

This section describes the installation process.

Before You Begin

Before you begin the installation, take time to review the installation information, gather the required items and complete the tasks listed below.

CAUTION!

The installation must be performed by qualified personnel familiar with electronic components. Electronic components within the Control Panel are vulnerable to damage from electronic discharge. Ground straps must be worn by installers before handling circuit boards to prevent damage from electronic discharge.

- Create a plan and checklist before starting the installation process.
- Select an environment that is suitable for operating the unit. The site chosen for mounting the unit should be clean, dry, flat and not subject to excessive shock, vibration or heat. Ensure after the installation the enclosure is free from any debris.
- Verify the following items are present:

Item	Quantity	Description
Enclosure back box	1	Mild steel enclosure comprising of lid, back-box, hinge pins, label plates, Panel lock.
Enclosure lid	1	Control Panel assembly (fascia plate) complete with printed circuit board (PCB).

Installation checklist

- ❒ Create an installation plan and checklist.
- ❒ Remove the unit from its packaging and check the contents.
- ❒ Remove the enclosure lid assembly.
- ❒ Mount the enclosure to the premises wall using appropriate fixings.
- ❒ Thread external cabling into the enclosure and make connections to unit input terminals (to rear of enclosure lid).
- ❒ Re-fit enclosure lid.
- ❒ Apply power.
- ❒ Configure.
- ❒ Test installation.

Mounting the Unit

The unit should be mounted on a dry, flat surface at eye height to the display in a level position such that the enclosure is not distorted.

Screws or bolts 5mm diameter, minimum 40mm in length with corresponding wall plugs as appropriate.

The unit should be positioned in an accessible place as agreed with the end user. Suitable fixings should be used at all fixing points such that the unit is securely mounted and is not liable to move once fixed. The unit should not be mounted in another enclosure or near sources of excessive heat. Cables should be connected through suitable cable glands fitted to the knock-outs (20mm dia.) provided.

It is advised to use the cable entry knock-outs provided. Drilling of additional holes is not recommended as this can cause damage to the enclosure and internal components.

Figure 3-1
Enclosure Back-Box Dimensions (mm). Not to scale.

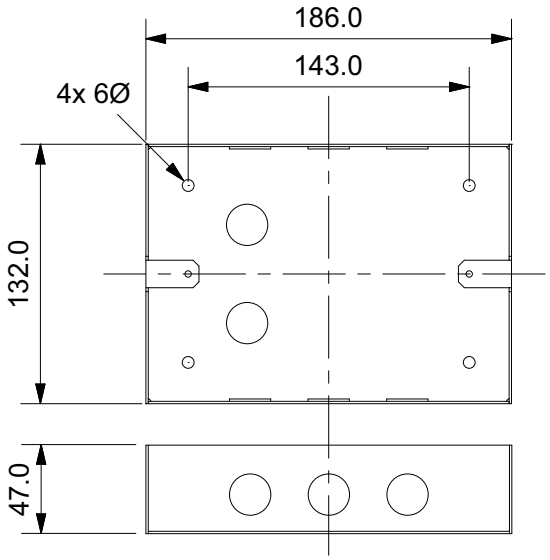
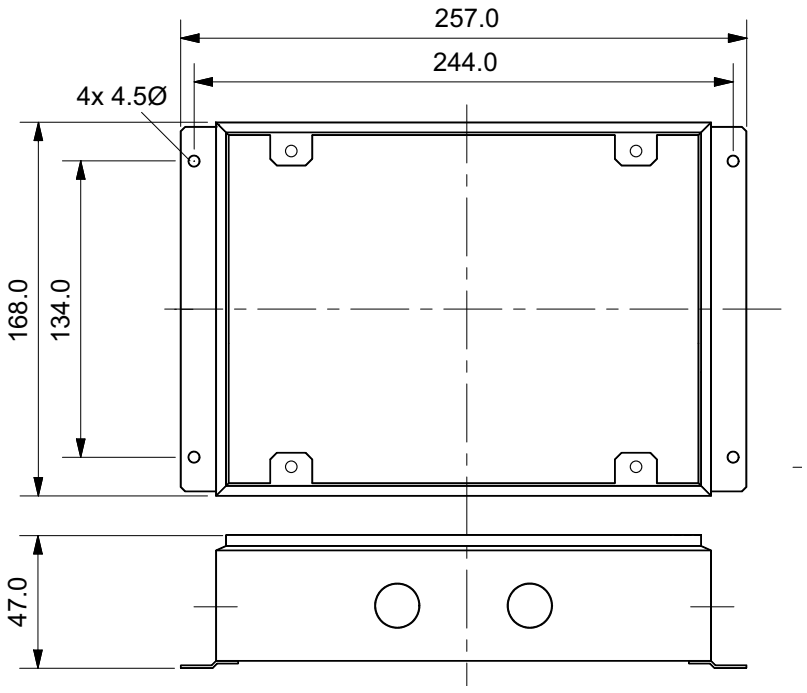


Figure 3-2
Weather Proof Enclosure Back-Box Dimensions (mm). Not to scale.



Addressing Status Units

To enable the Control Panel to know whether any Status Units that should be connected have been disconnected (and indicate a fault condition), each status unit must be allocated an address. The address switch should never be set with all switches off.

This is achieved by setting a binary number from 1 to 7 on the 3 way, DIL switch located at the bottom of the Status Unit PCB.

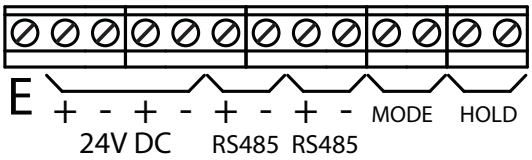
The order of the addresses is not important but each status unit must be allocated a different address. The switch settings for each of the addresses are shown below.

Figure 3-3
DIL Switch Address Numbering

Electrical Connections

All connections for wiring are to a single row of screw terminals along the right-hand edge of the printed circuit board to the rear of the enclosure lid.

Figure 3-4
Screw Terminals



The table below shows terminal designations.

Terminal	Function
E	Cable shield, earth terminal.
24V (+/-),(+/-)	Power input, typically from control panel. Secondary set of common terminals for powering other status units.
RS485 (+/-),(+/-)	RS485 data input from control panel/network. Secondary set of common terminals for connecting other status units.
MODE	Input terminals for a Mode Select ancillary.
HOLD	Input terminals for a Hold Off ancillary.

Connecting to the Circuit Board

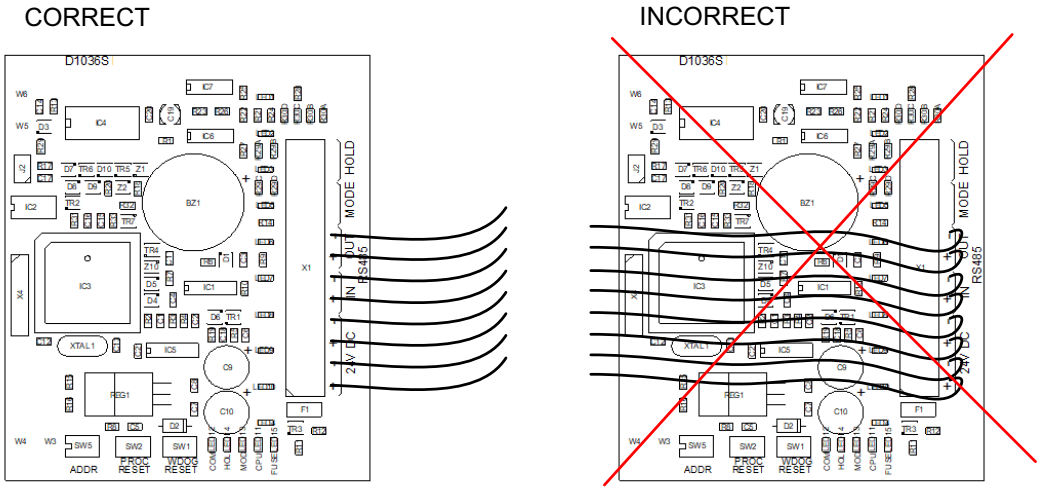
All connections for field wiring are to a single row of terminals along the side of the circuit board. Shielded fire alarm cable such as FP200 and metal cable glands must be used for all connections to the status unit. The resistance of any core of any cable must not exceed 25 ohms. The shield of the cable must be bonded securely to the enclosure via the metal gland.

Wiring should enter the enclosure at the top, bottom or back of the unit using the knock-outs provided and be formed tidily to the appropriate terminals. Terminals are capable of accepting wires of up to 2.5mm^2.

Wiring must not go across the front of the circuit board. If cable entries need to be in positions

other than at the knock-outs provided, wiring must be fed well away from the surface of the circuit board.

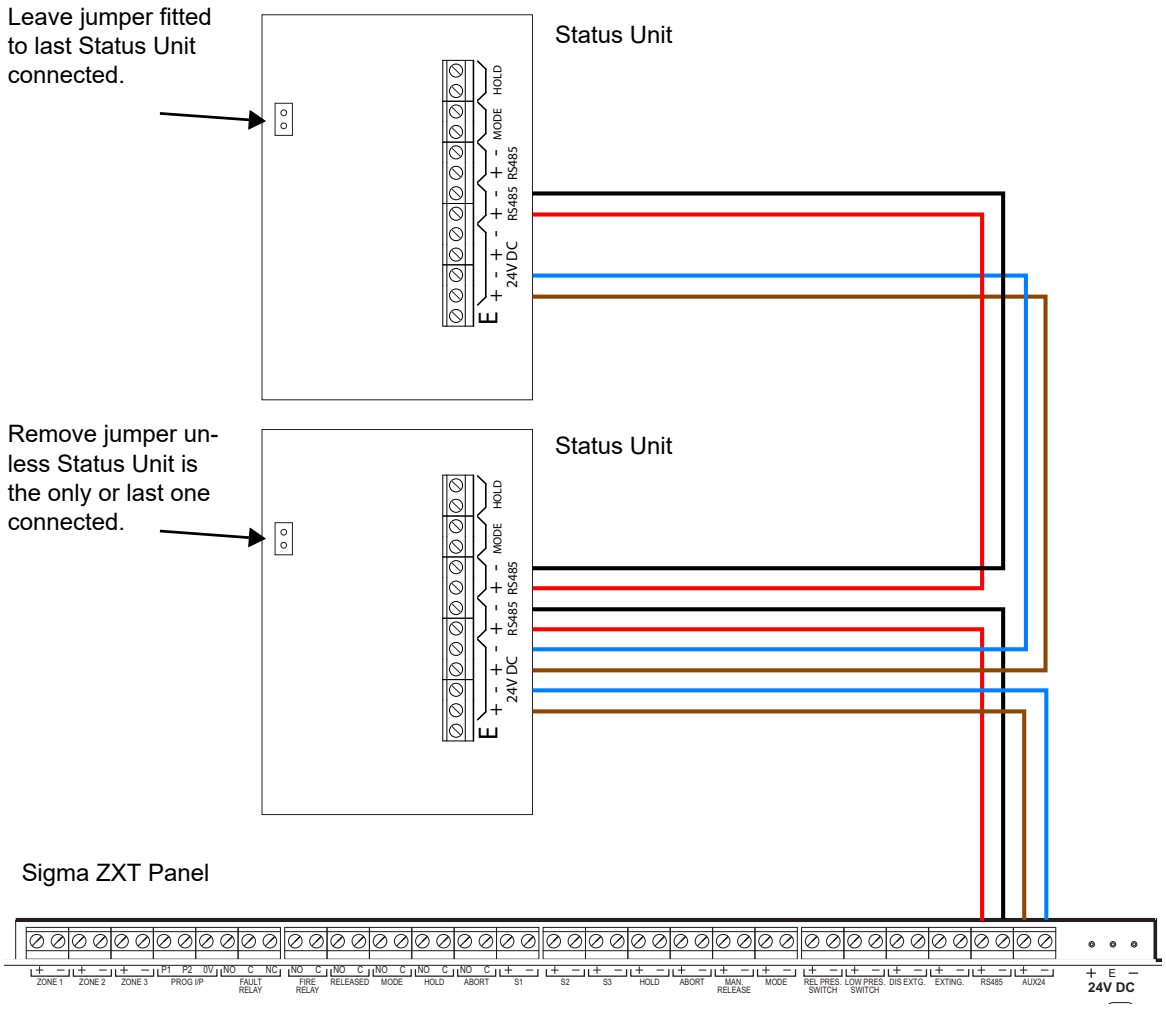
Figure 3-5
Wiring Convention



Power and Data Connections

Each status unit requires two cores for power and two cores for data transmission to and from the control panel. A four core cable may be used for these connections. All of these connections are polarity conscious and care should be taken to match the polarity with the corresponding terminals at the control panel.

Figure 3-6
Example Connection



Data Termination

Up to seven status units can be connected to an extinguishant control panel. In and out terminals for data and 24V DC are provided on each unit.

All status units are supplied with a push on jumper fitted at position J2 on the left hand side of the PCB. This jumper connects a terminating resistor which needs to be in place at the last status unit on the data line. If more than one status unit is to be fitted then the jumpers must be removed from all status units except the last one.

If there is only one status unit fitted then the jumper should be left in place.

Connection to Hold and Mode Inputs

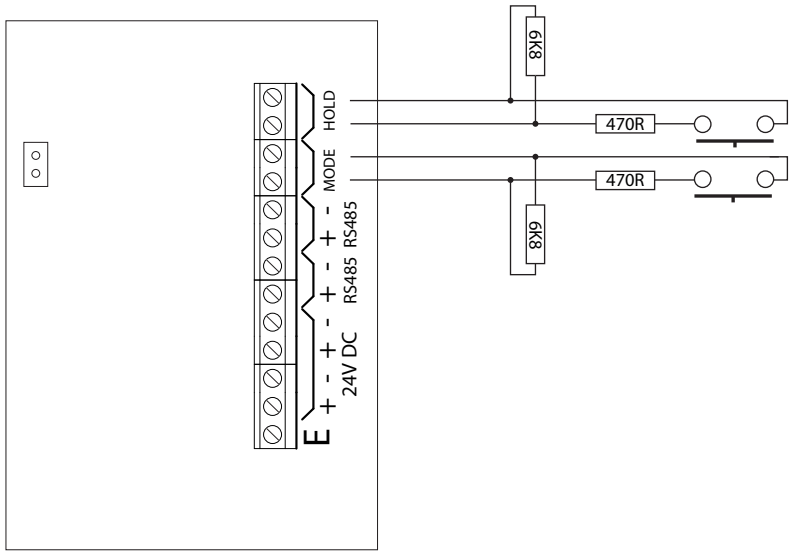
Status units have monitored inputs to which remote Hold or Mode select switches can be connected.

These inputs are monitored for open and short circuit faults and therefore need to have a 470R (1W) trigger resistor connected in series with the activating, normally open switches and 6K8 (0.5W) end of line monitoring resistors connected across the end of the cables.

The 6K8 end of line monitoring resistors are supplied fitted to the Hold and Mode input terminals and the 470R trigger resistors are supplied in the accessory bag with the status unit.

If either of these inputs are not being used then the end of line monitoring resistors should be left in the Hold and/or Mode terminals.

Figure 3-7
Example Connection



Mode Input

The mode input is provided to allow connection of remote Mode Select keys-witches or to connect to door interlock contacts. The system is designed such that any ‘Manual Only’ mode input on the system that is active (input operated by 470R trigger resistor) will put the system into ‘Manual Only’ mode regardless of the status of any other Mode inputs. Therefore, for the system to be in ‘Automatic and Manual Mode’, all Mode inputs must be inactive.

Indication of the Mode is given on the front of the status unit by the Manual only or Automatic and manual LEDs.

Hold Input

When active (input operated by a 470R trigger resistor) the Hold input allows the extinguishant release countdown timer to be reset to its maximum time. When the input is de-activated the countdown to extinguishant release will restart at the maximum time that is configured at the panel (0 to 60 seconds).

IMPORTANT NOTE: When there is a fault on the HOLD input then the HOLD function is invoked which means that the extinguishant release will not operate until this condition is cleared.

Modes Select Key-Switch

Some models of the Status Units have a ‘Mode Select’ key-switch. The key can be removed in either position. The operation of the Mode Select key-switch is as per the Mode input above.

Manual Release

Some models of the status units are fitted with a ‘Manual Release’ push-button. This replicates the action of the manual release control at the main Control Panel and once activated will start the extinguishant release sequence.

A plastic seal is provided in the accessory pack and should be fitted to the manual release flap with a piece of thin wire to provide an indication if the Manual Release has been tampered with.

Processor and Watchdog Reset Switches

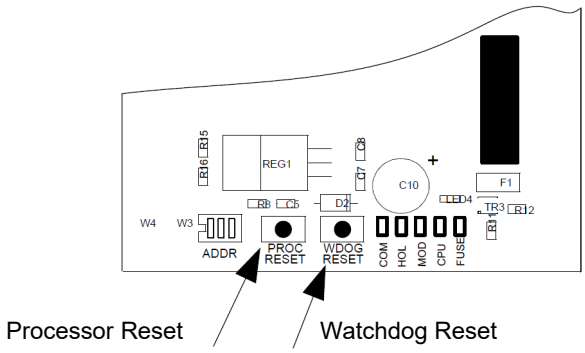
The status unit is controlled by a microprocessor, which will re-start itself and continue to run if it stops.

To ensure that the unit is not being subjected to continual, undue interference which may effect its proper operation, a CPU fault indicator is latched on and a fault condition signalled to the Control Panel.

If a processor re-start has occurred, this latched fault condition will need to de reset by pressing the WDOG RESET button on the bottom of the PCB.

A switch is also provided to manually re-start the processor PROC RESET. This switch can be used while connected to the system to ensure that unit starts and establishes communication with the Panel in a controlled and expected manner.

Figure 3-8
Processor and Watchdog Reset Switches



Section 4
Status Indicator LED Indications

Sigma ZXT Status Indicators are provided with either 6 or 10 status LED's dependent on the model number. These LED indications are to supplement the Extinguishing Control Panel. Further information relating to the LED indications and their purpose are as follows:

Manual Only
An amber LED which indicates that the extinguishing system has been placed in manual mode.

In "Manual" mode the Extinguishing Release can only be triggered through manual intervention i.e. operation of a Manual Release Push-button on the Panel/Status Indicator or operation of a Manual Release Call Point. Automatic detection zone alarms will not activate the extinguishing release system when in Manual Mode.

Auto/Manual
An amber LED which indicates that the extinguishing system is in Auto/Manual Mode.

In Auto/Manual mode activation of the extinguishing release can be triggered by a combination of the automatic detection zones or by operation of the Manual Release Push-button or Manual Release Call Point.

Hold Activated
An amber LED which Illuminates when the Hold circuit has been activated.

Activation of the hold circuit during the gas release countdown will temporary "HOLD" the release countdown timer, the release countdown timer will continue counting down once the hold input has deactivated.

Disabled
An amber LED which Indicates that either the Extinguishant Release system or the Manual Release function has been disabled, the LED will illuminate the LED constantly or will flash the LED dependent on the disablement status:

Extinguishing Disabled
LED will illuminate constantly - Extinguishing disablement prevents a gas release occurring while active.

Manual Release Disabled
LED will flash - This prevents the panel from being activated by a Manual Release Push-button on the Control Panel or Status Indicator, also prevents activation from a manual release input.Extinguishant release can still be activated through the use of automatic detection devices.

Imminent
A red LED which Indicates that 2nd stage activation has been triggered and release of the extinguishant is imminent.

Released
A red LED Indicates that extinguishant has been released into the protected area.

<u>10 LED status indicators provide the following additional indicators:</u>

Fire Zone 'n'
Three red LED's which when illuminated indicate a fire on the associated detection zone 1, 2 or 3.

Fault
An amber LED Indicates an active fault condition on the system, extinguishing control panel will provide specific details on the fault type.

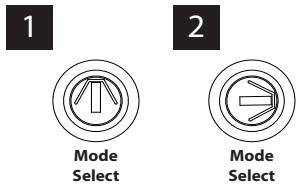
Section 5
Controls & Internal Indications

Modes Select Key-Switch

Some models of the Status Units have a ‘Mode Select’ key-switch. In the vertical position ‘Manual & Auto’ mode is selected. Turning the key a quarter-turn clockwise, the ‘Manual Only’ mode is selected. The key can be removed in either position.

The electrical operation of the Mode Select key-switch is as per the Mode input described in the previous Section.

Figure 5-1
Mode Select Key Switch



1. Auto & Manual Mode
2. Manual Only Mode

Manual Release

Some models of the status units are fitted with a ‘Manual Release’ push-button. This replicates the action of the manual release control at the main Control Panel and once activated will start the extinguishant release sequence.

A plastic seal is provided in the accessory pack and should be fitted to the manual release flap with a piece of thin wire to provide an indication if the Manual Release has been tampered with.

Figure 5-2
Manual Release Push-Button

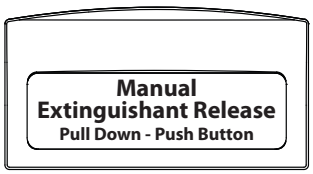


Figure 5-3
Manually Activating Extinguishant Release Process

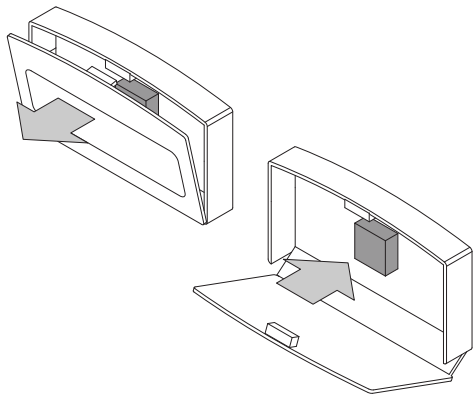


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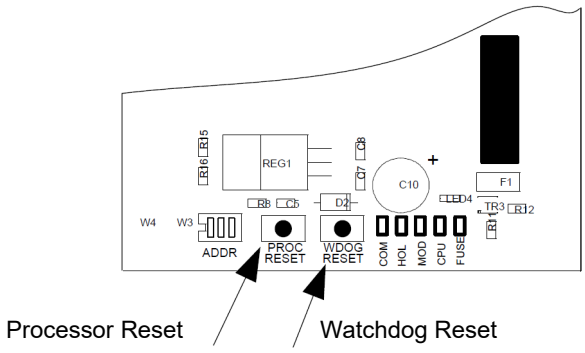
Figure 5-4
Processor and Watchdog Reset Switches



Internal LED Indicators

An extinguishant fault indication at the Control Panel may mean that there are faults at one or more status units. The status unit fault indications are located along the bottom of the PCB and are as follows:

COM
This LED indicates that the data communications connection to the control panel is not present. This may be because the data lines are connected with reverse polarity or are not connected. Check RS485 IN and OUT connections.

HOL
This LED indicates that the HOLD input is open or short circuit. Check that the correct end of line resistor is connected to the HOLD terminals or at the end of the wires connected to the HOLD input and that the HOLD input is not short circuited.
IMPORTANT NOTE: When there is a fault on the HOLD input then the HOLD function is invoked which means that the extinguishant release will not operate until this condition is cleared.

MOD
This LED indicates that the MODE input is open or short circuit. Check that the correct end of line resistor is connected to the MODE terminals or at the end of the wires connected to the MODE input and that the MODE input is not short circuited.

FUSE
This LED indicates that the electronic fuse has operated. Under this condition, the status unit is not operational. This may be due to incorrect polarity of the power connection or a failure on the unit itself.

Section 6

Adding/Removing Status Indicators & Ancillary Boards

Sigma ZXT/XT Status Indicators and Ancillary Boards can be connected to ZXT Extinguishing Control Panels to expand the performance and functionality of the system.

A single Sigma ZXT Panel can support up to 7x Status Indicators and 7x Ancillary Boards, connected to the RS485 data bus.

Man-1453 will provide more details on installation of Status Indicators, Man-1095 will provide further details on installation of Ancillary Boards.

This section of the Manual details how to register Status Indicators and Ancillary Boards onto a ZXT Extinguishing Panel and assumes are all necessary wiring, link and switches are completed as detailed in the relevant installation Manuals Man-1453 and Man-1095.

Adding a Status Unit to a ZXT

Sigma ZXT & Sigma XT Status Indicators are supported and these instructions apply for both variants:

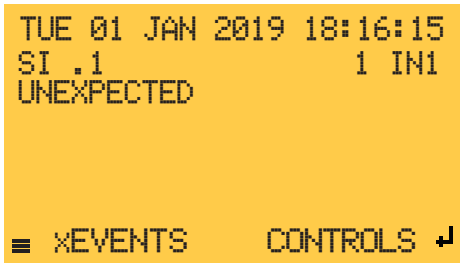
1. Check wiring and address switch settings on each unit connected to the ZXT.

Important! Double addressing of Status Indicators can cause performance issues therefore it is important to check unit addresses before powering the system.

2. Power-up the Panel and Status Indicators. The ZXT will automatically identify any Status Indicators, their addresses and will indicate them as UNEXPECTD on the ZXT LCD as shown in the screen-shot below.

Note. An unexpected device is one detected by the Panel which has not been registered onto the configuration. Uninstalled Status Indicators will show all LED's illuminated and will sound any buzzers until install is complete.

Figure 6-1
Unexpected Status Indicator



3. To install the Status Indicators enter the Engineering Menu (Access Level 3) on the LCD and select the CONNECTED DEVICES menu option.

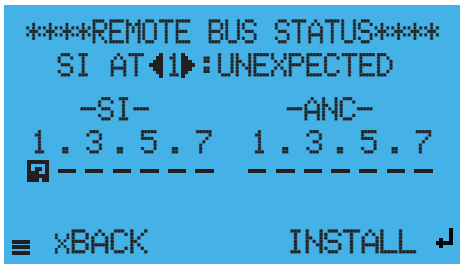
Figure 6-2
Connected Devices

4. In the CONNECTED DEVICES screen, select the REMOTE BUS option to open the REMOTE BUS STATUS screen.

Figure 6-3
Remote Bus

5. The REMOTE BUS STATUS screen provides a synopsis of what devices are connected and whether they have been installed on the panel.

Figure 6-4
Remote Bus Status



6. Below the screen header is a line showing the status of individual devices, the **left and right** arrow buttons can be used to scroll through the addresses and see the status of each address.

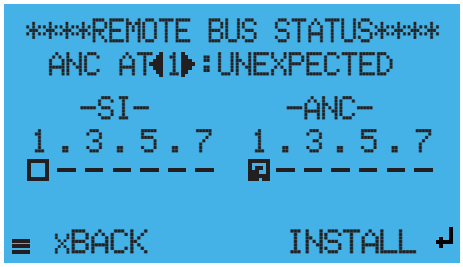
   The addresses 1-7 are shown for each group of Status Indicator/s Units and Ancillary Boards/s (ANC). Status will be shown as OPERATIONAL, NONE, UNEXPECTED or MISSING. A symbol will be displayed for each device beneath its corresponding address number.

   The table below provides an overview of Remote Bus Status indications:

Symbol	Status	Description
☐	OPERATIONAL	Indicates the device with this address is registered onto the panel and is working correctly.
–	NONE	Indicates there is currently no device associated with this address.
▣	UNEXPECTED	Indicates a new device has been added to the ZXT panel SI Bus which has not yet been registered on the panel. Unexpected devices will be indicated as ageneral fault on the ZXT panel.
⬚	MISSING	Indicates a device has been removed or is no longer communicating with the system.

The following screen-shot shows an **example** of a system with OPERATIONAL, NONE and UNEXPECTED devices.

Figure 6-5
Example Remote Bus Status



7. To add a device use the **left and right** arrows to select the unexpected device to add in the device status line and press the enter key (INSTALL). This will log the device onto the panel and the unexpected device fault will clear.

   The status will change to OPERATIONAL in the status line and the graphic symbol for this address will change to □. The status LEDs should display their normal state and any buzzers will stop sounding. Complete this for all unexpected devices until all devices are logged on to the panel.

Removing a Status Indicator

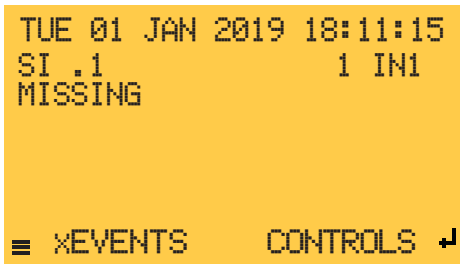
The following instructions detail how to remove a Status Unit from a ZXT system, this process is the same for both Sigma ZXT and Sigma XT Status Indicators.

Important! For safety reasons power must be removed from the ZXT control panel before carrying out any modifications to an extinguishing control system.

1. With the system powered down disconnect the device from the circuit and make the circuit good.

2. Power-up the Control Panel and the LCD should show a missing device fault with details of the device and device address that is missing, see screen-shot below. A missing Status Indicator will also activate a hold operated status this is due to the monitored hold input on the removed Status Indicator not being present.

Figure 6-6
Missing Status Indicator



3. Enter the Engineering Menu (Access Level 3) and select the DEVICES CONNECTED option and then select the REMOTE BUS option to open the REMOTE BUS STATUS screen.

4. The REMOTE BUS STATUS indicates the missing Status Indicator with the following symbol ⬚ Using the **left and right** arrow buttons scroll to display the address of the missing device on the status line.

5. To remove the device from the ZXT configuration press the enter button (UNINSTALL) the status line for this address will show none and the graphical status icon will show —

6. The Panel will still indicate a hold operated state as this is a latching condition. Complete the removal of the Status Unit by pressing the ‘Reset’ button on the fascia to clear the hold operated event.

Note: Status Indicators can be un-installed from the configuration while being left as part of the physical circuit, however this will cause the Status Unit to flash all LED’s and sound its local buzzer (if fitted) to indicate a ‘comms’ fault.

Adding an Ancillary Board to a ZXT

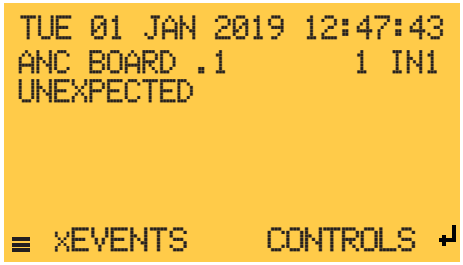
1. Check wiring and address switch settings on each unit connected to the ZXT.

Important! Double addressing of Status Indicators can cause performance issues therefore it is important to check unit addresses before powering the system.

2. Power-up the Panel and Ancillary Boards. The ZXT will automatically identify any Ancillary Boards, their addresses and will indicate them as UNEXPECTED on the ZXT LCD, as shown in the screen-shot below.

Note. An unexpected device is one detected by the Panel which has not been registered onto the configuration.

Figure 6-7
Unexpected Ancillary Board



3. To install Ancillary boards enter the Engineering Menu (Access Level 3) on the LCD and select the CONNECTED DEVICES menu option.

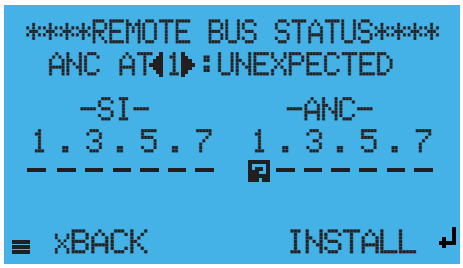
Figure 6-8
Connected Devices

4. In the CONNECTED DEVICES screen, select the REMOTE BUS option to open the REMOTE BUS STATUS screen.

Figure 6-9
Remote Bus

5. The REMOTE BUS STATUS screen provides a synopsis of what devices are connected and whether they have been installed on the Panel.

Figure 6-10
Remote Bus Status



6. Below the screen header is a line showing the status of individual devices, the **left and right** arrow buttons can be used to scroll through the addresses and see the status of each address.

   The addresses 1-7 are shown for each group of Status Indicator/s (SI) and Ancillary Board/s (ANC). Status will be shown as OPERATIONAL, NONE, UNEXPECTED or MISSING. A corresponding symbol will be displayed for each device beneath its address number.

   The table below provides an overview of Remote Bus Status indications:

Symbol	Status	Reason
□	OPERATIONAL	Indicates the device with this address is registered onto the panel and is working correctly.
–	NONE	Indicates there is currently no device associated with this address.
?	UNEXPECTED	Indicates a new device has been added to the ZXT panel SI Bus which has not yet been registered on the panel. Unexpected devices will be indicated as ageneral fault on the ZXT panel.
⬚	MISSING	Indicates a device has been removed or is no longer communicating with the system.

7. To add a device use the **left and right** arrows to select the unexpected device to add in the device status line and press the enter key (INSTALL). This will log the device onto the Panel and the unexpected device fault will clear. The status will change to OPERATIONAL in the status line and the graphic symbol for this address will **change to** □. Complete this for all unexpected devices until all devices are logged on to the panel.

Removing an Ancillary Board

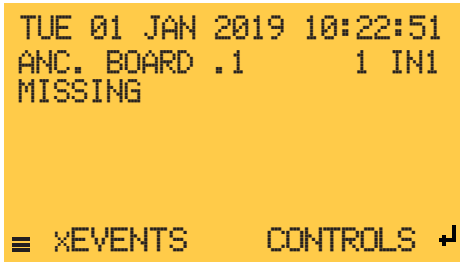
The following instructions detail how to remove an Ancillary Board from a ZXT system.

Important! For safety reasons power must be removed from the ZXT control panel before carrying out any modifications to an extinguishing control system.

1. With the system powered down disconnect the device from the circuit and make the circuit good.

   Power-up the Control Panel and the LCD should show a missing device fault with details of the device and device address that is missing, see screen-shot below.

Figure 6-11
Missing Ancillary Board



2. Enter the Engineering Menu (Access Level 3) and select the DEVICES CONNECTED option and then select the REMOTE BUS option to open the REMOTE BUS STATUS screen.

3. The REMOTE BUS STATUS indicates the missing device on the graphic with the following symbol ⬚
   Using the **left and right** arrow buttons scroll to display the address of the missing device on the status line.

4. To remove the device from the ZXT configuration press the enter button (UNINSTALL) the status line for this address will show none and the graphical status icon ▁ will show.

5. The device has now been removed from the system and any associated faults will have cleared.

Section 7
Panel Maintenance

No specific maintenance of the Status Indicator is required.

Keeping the status indicator clean is a function that periodically should be carried out to ensure the product is free from dust and dirt. By product group, the following information provides details on how to clean the Control Panel and what materials to use.

Product Code	Method
K921000M8	Gently clean using a soft dry cloth to remove dust and dirt. If the enclosure is heavily contaminated, moisten the cloth and gently clean using a light detergent. **Important!** Avoid getting detergent on any status Indicator controls.
K921010M8	
K921100M8	
K921110M8	
K921113M8	
W921000W8	Gently clean using a soft dry cloth to remove dust and dirt. If the enclosure is heavily contaminated, moisten the cloth and gently clean using a light detergent. **Important!** Avoid getting detergent on any status Indicator controls.
W921100W8	
W921110W8	
W921113W8	

Appendix A
Specifications

Power Supply	21 to 30V DC	
Maximum current consumption	70mA	
Quiescent consumption	33mA	
Monitored inputs, end of line resistor	6K8 (0.5W)	Fitted to terminals
Monitored inputs, normal threshold	8KΩ to 1KΩ	
Monitored inputs, trigger threshold	700Ω to 100Ω	
Monitored input short circuit threshold	99Ω to 0Ω	
Data connection	Two wire, RS485	Maximum 1200m
Maximum number of Status Units	7	
Maximum number of Ancillary Boards	8	
Product dimensions		
Product weight		
Operating temperature range		
Ingress Protection (IP Rating)	IP30	Standard versions
Ingress Protection (IP Rating)	IP60	Weatherproof versions