

OPERATING INSTRUCTIONS FOR THE SERIES 7000ASP SPRINKLER ALARM SYSTEM MONITORING PANEL



Complies with BS EN 12845: 2015 (+A1: 2019)
And for use on Domestic / Residential occupancies to BS 9251: 2021

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*Note : The details in this manual are for a standard panel. Any Special inputs/outputs
Will be detailed within the actual panel*

INTRODUCTION

The Series 7000ASP range of Analogue Addressable panels have been designed for the monitoring the “state of Alarm or Fault contacts required by BS EN 12845:2015 (A1: 2019) and can be use on systems to BS 9251 2021 for Sprinkler systems including sprinkler pumps and other associated equipment. Available in from 16 to 254 device indications in multiplies of 16. Each panel can be fitted from 1 to 4 loops with 125 devices per loop. Each panel has an internal power supply and standby Sealed Lead Battery.

The fascia is equipped with high intensity Status LED’s, System control push switches and Back-Lit graphical LCD display. Concise user Operation Instructions are screen printed onto the fascia. Each control panel can be surface or flush (via bezel) wall mounted. Relay outputs are provided for Common Alarm, Common Valve Alarm, Common Fire Alarm and Common Plant Alarm together with Common Fault (failsafe).

Door Legend labels are provided for each panel and are removable if modifications are required

The panel will be supplied fully programmed prior to dispatch.

CONSTRUCTION

The cabinet enclosure and front fascia are constructed from sheet steel and finished in Grey White (Standard). The main motherboards and the power supply are mounted at the rear of the enclosure. The front panel fascia Display and Device Status PCB’s are connected to the main motherboards by pluggable IDT connection cables. All external connections are by means of screw terminals fitted to the main motherboards capable of accepting Cables up to 2.5mm². Knockout cable entries are provided at the top of the panel.

METHOD OF OPERATION

USER WARNING

The equipment operates from 230v AC Mains.

Only authorised and qualified personnel should have access to the internals of the panel.

PANEL OPERATION

NOTE – All panel push button controls are normally inoperative. Enter Access Code to enable System controls to access Menu functions. Lamp test & Status Display Lamp test does not require Access code entry

Normal Access code: ENT – 1-3-1-3-1 ENT

NORMAL CONDITION

The Control panel will normally be in its quiescent mode with the Green “System On” LED illuminated.

Any Sprinkler Valve Status Channel will also have the Green LED illuminated to show that the Valve(s) are in Their normal position. The LCD display will show the Date & time information together with the company details And Panel site software number

ALARM CONDITION

In the event of any Device Alarm operation the following functions will occur –

- a) The appropriate Status LED’s will Flash (for Valves the Green & Yellow LED’s will alternately flash)
- b) The Common Alarm (Red), Buzzer Silence (Yellow) & Alarm Accept (Red) LED’s will be illuminated
- c) The internal buzzer will sound continuously
- d) The monitored external alarm will operate
- e) The Common Alarm relay together with the appropriate Common Type relay will operate
- f) The LCD screen will show details of the Device that is in Alarm

BUZZER SILENCE

The Internal buzzer can be silenced by operating the “Buzzer Silence” button momentary.

The Buzzer Silence LED will extinguish. Should a second Device go into Alarm condition whilst the panel is its buzzer silenced mode the buzzer will automatically resound.

ALARM ACCEPT

The Alarm can be “accepted” by operating the “Alarm Accept” button momentary.

The “Alarm Accepted” LED will extinguish and the external alarms will silence. The Device Status LED’s Will go steady (For Valve status the Green LED will extinguish and the Yellow LED will be steady)

Should a second channel go into Alarm condition whilst the panel is its silenced mode the external alarms and Alarm buzzer will resound. Both Buzzer & Alarm Accept LED’s will re- illuminate.

MULTI-ALARMS (QUEUE REVIEW)

With Multi alarm inputs the “Alarm Queue “ LED will flash . Pressing the Alarm Review button will -

- a) Show the 2nd Alarm in the LCD
- b) New Alarm Status LED’s to illuminate steady
- c) Alarm Queue LED to go steady

RESET

Once the cause of the alarm has been identified and the condition removed, the panel can be restored to its normal mode by operating the “Reset “button momentary. ***The Alarm must have been Accepted (Alarm accepted LED not illuminated) before the panel can be Reset***

FAULT CONDITION

In the event of a fault occurring within the Sprinkler monitoring system the following functions will occur -

- a) The appropriate Front Display Fault Yellow LED will illuminate (or flash depending upon fault)
- b) The Internal Buzzer will pulse Sound and the Buzzer Silence LED will illuminate.
- c) The LCD will show indicate what type of fault.
- d) An internal LED may illuminate depending upon the type of fault.
- e) The Common Fault Volt free contact will change state.

BUZZER MUTE

The internal buzzer can be muted by operating the "Buzzer Silence" button momentary. The buzzer will Silence and the LED will extinguish. Should a Second fault occur the buzzer will resound & the LED will re-illuminate

RESET

Once the cause of the fault has been identified and the condition removed, the panel can be restored to its normal mode by operating the "Reset" button momentary.

NOTE – Faults signals are Latching and panel needs to be Reset before returning to its normal mode

FRONT FASCIA INDICATIONS

The following front fascia indicators are provided to give the following functions:

DEVICE STATUS ALARM LED'S

This indicates which Device is in Alarm by either a Red or Yellow LED's

For Valve status Inputs the Green LED will extinguish and the Yellow LED will illuminate when the Valve has been moved to its incorrect position.

PANEL SYSTEM STATUS

Alarm – Red Led illuminated on any Device Alarm

Fault - Yellow Led illuminated on any fault

Test Mode – Red Led illuminated if panel is in Test mode (Not used on Sprinkler Systems)

Device Isolated – Yellow Led illuminated on any device isolation (See LCD for details)

System ON – Green Led flashes for Installation mode, Steady for active mode.

Alarm Fault – Yellow Led illuminates on monitored external alarm fault (See LCD for details)

Supply Fault – Yellow Led illuminates on any supply fault (See LCD for details)

System Fault- Yellow Led illuminates on a communication with the central microprocessor

DISABLEMENTS

Auxiliary Isolate – Yellow LED illuminates when Auxiliary relay outputs are isolated including Loop Device outputs (See LCD for details)

Selective Device Isolate - Yellow Led illuminates when the Devices which have been selected have been Isolated (See LCD for details)

LCD DISPLAY – QUEUE REVIEW (no code entry required)

Alarm – Red LED flashes when more than one Alarm has been received. Once all Alarms have been reviewed the LED will be constantly ON. Any subsequent Alarms will be added to the end of the queue and the LED will start to flash again. After each button press the information will be displayed for 20 seconds, and after that time the display will revert back to the first Alarm

Fault - Yellow LED flashes when more than one Fault. Once all the reported faults have been reviewed the LED will be constantly ON. Any subsequent faults will be added to the end of the queue and the LED will flash again. After each button press the information will be displayed for 20 seconds and after that time the display will revert back to the first fault

Test - Yellow LED on when a Test mode has been selected vis the programming menus.

This is not normally use for sprinkler systems

Isolate – Yellow LED on indicates at least one Isolation. Pressing the button will display the isolation.

Pressing the button again will show the next set of isolations (if any). The information will be Displayed for 15 seconds before reverting back to the first isolation.

Typical isolation can be Auxiliary relays/loops/devices

FRONT PANEL CONTROLS

The following front fascia controls are provided to give the following functions:

KEYPAD CONTROLS

ESC – Used to abort changes and exit

ENT - Used to select items and store changes

1 (^) - Used to browse through items

2 (>) – Often used to change fields (move the cursor). It will also be used when required to scroll through loops

3 (v) – Used to browse through items

The cursor is often shown to highlight the item being changed.

BUZZER SILENCE

Operating this push button will silence internal Alarm/ Fault buzzer. The occurrence on any new Alarm or Fault will initiate the buzzer again.

SYSTEM RESET

Operating this push button will soft Reset the panel. However, if any Alarm has occurred then the Alarm must be accepted before the System Reset button will operate.

If a Master Reset is required then Power to the Panel must be removed (AC & Battery supplies)

LAMP TEST (No code entry required)

Momentary operating this push switch will test all overlay LED's and the LCD Display plus will change The state of the Alarm Status LED's

ALARM ACCEPT/ SILENCE

Operating this push button will accept the Alarm and silence the external Sounder outputs.

Any extra alarms will need to be accepted before a System Reset

ALARM STATUS INDICATIONS LAMP TEST (No code entry required)

Momentary operating this push switch will test all Status LED's.

All Status LED' s should illuminate.

LCD DISPLAY – QUEUE REVIEW CONTROLS (no code entry required)

Alarm – Used to scroll through LCD display to view multi-alarms

Fault – Used to scroll through LCD display to view multi-faults

Test – Used to scroll through LCD display when in Test Mode

Isolate – Used to scroll through LCD display to view Isolations

AUXILIARY ISOLATE

Momentary operating this push switch will isolate all auxiliary outputs. Auxiliary isolated LED will illuminate. Depressing the Auxiliary isolate push switch will return the Auxiliary outputs to there Normal operation. The Auxiliary Isolated LED will extinguish

NOTE : If Auxiliary Outputs need to be isolate they must be isolated before any Alarm is received

SELECTIVE DEVICE ISOLATE

Momentary operating this push switch will isolate any Device which a has been selected. Selective Device LED will illuminate. Depressing the push button again will restore Devices back to normal mode

LEGEND LABEL REMOVABLE

The Legend label is removable after first opening the Control panel door. The label is affixed to the front door via 1 x M3 nuts. Once removed the Legend label can be replaced and re fixed.

FUNCTION LIST USED FOR SPRINKLER PANELS

The list below shows only the functions that are used for sprinkler systems. Other functions will/can be shown But are not required.

1.Review Historic Log
1-1 Display Historic Log
1-5 Read/Clear Auto start Count

3-3 Assign I/O Groups to Zones
3-4 Assign Zone to Device

5.Input/Output – Disable & Assign
5.1 Configure I/O Groups

6.Device Set-up
6-1-1 Disable loops
6-1-2 Device Disable
6-1-3 Set Selective Disablements

7.Monitor Device Counts & Test
7.1 Device Count, Type & Value

8.General
8.1 Time/Date & Timers
8-1-1 Set Date & Time

8-3. Memory
8-3-1 Checksums
8-3-2 Clear Non-Volatile RAM
8-3-3 Calculate Customer Flash Checksum
8-3-4 Calculate Program Flash Checksum
8-4 Other Features
8-4-1 Active/Installation Mode

8-5 Network Configuration
8-5-2 Known Panels (only used on network systems)
8-5-3 Installation Status (only used on network s stems)
8-5-4 Broadcast Configuration (used on network systems)
8-5-5 Communication Channels (used on network systems)

8-9 Version Information

NOTE : To Change or add Device and Zone Text messages the use of the a PC based Software (Chameleon)

Is essential. To enter programming mode you need to “Log In” with the Installer Access Code before Downloading the new config details to the Panel.

NOTE : To access function Enter Access Code :- Press ENT - CODE – ENT

PROGRAMMING FUNCTIONS DESCRIPTION

1-1 Display Historic Log :

The panel logs all events in the internal log. It can store a rolling 10000 entries. When full, the latest entry is added and the oldest entry discarded. Use **^ (1)** and **v (3)** keypad keys to view Last or Latest event.

1-2 Clear Historic Log :

Clears the Historic Log . Requires to be logged in with the Master Access Code

1-5 Read/Clear Autostart Count

Every time the power to the panel is removed the Autostart count is incremented. System Resets from the Panel front button does not increment the Autostart count

3-3 Assign I/O Group to Zones

I/O Groups can be assigned to Zones. Up to 4 I/O Groups can be assign to each Zone.

The details of the activation are set up using the I/O programming functions.

3-4 Assign Zone to Device

Allows for a Zone to be selected on a Device Alarm. Both Device & Zone Text (When defined) will be Displayed. Zone numbers from 001 to 384 can be assigned.

5-1 Configure I/O Groups

Allows an I/O group to be defined. Up to 512 can be established.

First select the group number – then assign the Loop and address

Each I/O can have up to 32 I/O Loop/Address.

6-1-1 Disable Loops

Allows a specific loop to be disabled or enabled. The default is enabled

All devices on the disabled loop will cease to operate.

If the loop is disabled it will be indicated when the programming mode is exited.it can be reviewed using

The ISOLATE (Queue Review) button.

6-1-2 Disable Device

Allows a specific device to be disabled or enabled. The default is enabled

For the device both inputs & outputs are disabled.

Any devices disabled it will be indicated when the programming mode is exited. They can be reviewed

Using the ISOLATE (Queue Review) button.

6-1-3 Set Selective Device Disablement

Allows a specific device (s) to be set up for selective disablement.

The device is only disabled when the “ Selective Device Isolate “ button on the front panel is activated.

Can be used when during commissioning certain Devices are in an Alarm (IE Valves in Tamper)

Outside programming mode, any devices that are currently disabled can be reviewed using the

ISOLATE (Queue Review) button

7-1 Device Count, Type & Value :

Use this function to check that all loop devices are present . Use **>** to select Panel 01 : Use ENT to select L01 (or **^ (1)** to increase loop number) : Use **^ (1)** to select Device number

The Top Line RHS will show the Loop Device Count and the bottom line (L to R)

Address – Module Type – Value

For switch monitors or I-O the Values are detailed below –

16 = Normal Mode

4 = Fault (O/C or S/C between interface & Device)

64 = Device in Alarm

17 = Double Address

8-1-1 Set Date & Time

The date & time will be displayed on the LCD whist the system is not in Alarm or Fault.

Use **^ (1)** to change day then **ENT** : Use **^ (1)** to change date then **ENT** : Use **^ (1)** to change Month

then **ENT** : Use **^ (1)** to change Year then **ENT** : Use **^ (1)** to change hour then **ENT** : Use **^ (1)** to change Minutes then **ENT** : Press **ESC** until LCD shows Main display and Time

NOTE : Removing panel power will erase date &time and will require date /time to be re-entered

8-3-1 Checksums

This function displays the current calculated checksum between the processor and Non -Volatile Ram

8-3-2 Clear Non-Volatile RAM

Clearing the NVRAM clears all the installation settings (but not the Site program) and the system Is automatically placed into installation mode.

On the Panel this will result in

- All Loops /Devices & Zones being enabled
- The Event Log will be cleared

- The Auto Reset count will be cleared
- Information on fitted devices and their types will be cleared
- All checksums will be cleared and recalculated

After a NVRAM clear a Master Reset should be performed

8-3-3 Calculate Customer Flash Check

Calculates and stores the checksums for all the data in the customer flash memory
The stored checksum is regularly (approximately every 2 minutes) compared with a freshly Calculated checksum, to check for memory corruption

8-3-4 Calculate Program Flash Check

Calculates and stores the checksum for Program flash memory
The stored checksum is regularly (approximately every 1 minute) compared with a freshly Calculated checksum, to check for memory corruption

8-4-1 Active/Installation Mode

The system should always be left in ACTIVE mode after commissioning. When in Install mode the Green System ON led will flash. Use $\wedge(1)$ to set mode to Active then press ENT. Press ESC until LCD show the Main Display.

When in Active Mode the Green System ON Led will be continuously illuminated.

8-5-2 Known Panels

This function shows how many panels are being recognized on a network system and all the Addresses detected. It will also show its own address on the network.

8-5-2 Installation Status

This function will show the status of the network and error messages

8-5-4 Broadcast Configuration

This function will send the local configuration to all the panels in the system

NOTE – Before running the function ensure that all panels on the network, (run function 8-5-2 for each panel), all panels have the same Firmware and there are No network issues.

8-5-5 Communication Channels

This function shows which channels are receiving information from the network

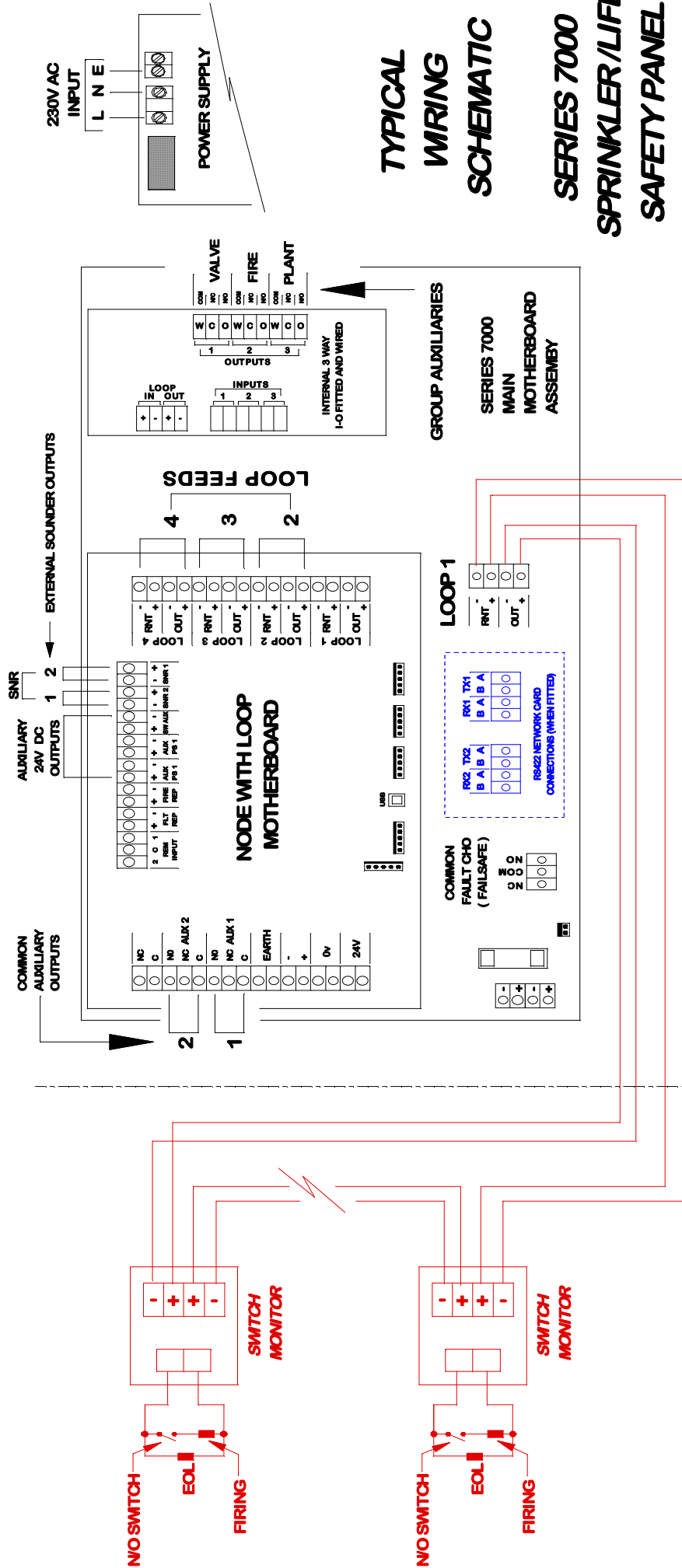
8.9 Version Information

This function allows the installer to check which software version is running on the current Panel.

TECHNICAL SPECIFICATION

The following information applies only to a standard control panel

Mains Input	-----	230v AC 50/60 HZ
Nominal Panel Voltage	-----	24v DC
Supply rating/Type	-----	1.25 or 3amp SMPS Constant voltage with current limit/thermal shutdown
Auxiliary 24v DC output	-----	2 off monitored outputs with maximum limit 300mA
Standby Current (Less Status LED's)	-----	110mA (1 loop)
Alarm Current (Less status LED's)	-----	140mA (1 alarm: 1 loop)
Status Standby Current (per 16 way)	-----	50mA (50% Valve status indications)
Alarm Standby Current (per 16 way)	-----	55mA (1 Alarm)
Maximum Loop Current	-----	150mA
Maximum number Loop Devices	-----	125 individually addressed
External Sounder Outputs	-----	2 off reversed polarity type – monitored – EOL 10k ¼ W , rated @ 500mA each
Auxiliary – Common Alarm	-----	2 sets CHO rated at 1 Amp 50v DC
Auxiliary – Common Valve	-----	1 set CHO rated at 1 Amp 50v DC
Auxiliary – Common Fire	-----	1 set CHO rated at 1 Amp 50v DC
Auxiliary – Common Plant	-----	1 set CHO rated at 1 Amp 50v DC
Auxiliary – Common Fault	-----	1 set CHO rated at 1 Amp 50v DC (normally energised – fail safe)
Data loop Output	-----	Multi-panel network by RS485 network card (4 core)
Enclosure Construction	-----	18 Gauge sheet steel, power coated semi-gloss Grey White to RAL 9020 With hinged lockable door and blue screen printing lettering
Cable Entry	-----	Top entry with 20mm diameter knockouts
Standby Battery Space	-----	Accepts up to 2 off 12v 12 Amp/hr or 18 Amp/hr depending upon Enclosure size



**TYPICAL
WIRING
SCHEMATIC**

**SERIES 7000
SPRINKLER/LIFE
SAFETY PANEL**

