VIGILANT

SIGMA 5
FIRE ALARM SYSTEM

OPERATING INSTRUCTIONS

The VIGILANT SIGMA 5 is a 5 zone self-contained conventional fire alarm system. It has been designed specifically to meet NZS 4512:2010, the New Zealand Building Code (Section F7), and the NZ Fire Service requirements for connection to remote receiving stations.

Special features of SIGMA 5 are:
* Flexible programming facilities
* Multiple circuit types
* History log
* Serial Remote Displays (up to 8)
* Automated Self-Test
* Keypad circuit isolation

Software Compatibility - These instructions apply to SIGMA 5 systems with software (SF0301) Version 2.00 or later.

System Restoration Following Alarm – Zone(s) in alarm will be isolated as required by NZS4512:2010 when the Fire Brigade restores the Silence Alarms Keyswitch (see Silence Alarms Switch, page 2). This will generate a defect condititon. To restore the system to normal, the system will need to be isolated from the remote receiving centre and alerting devices etc. The operated circuits can then be checked and physically restored if necessary, individually de-isolated (Function Menu see Page 4), and then reset in the usual way.

Zone Circuits - The 5 zone input circuits can be configured individually as one of the following types:
(All circuit types use a 2k70, 1% End of Line Resistor.)

Legacy and New Circuit Types
The system software (V2.00 and later) supports four new circuit types (compliant with NZS4512:2010) and six 'legacy' circuit types (compliant with NZS4512:1997). Access to the legacy circuit types must be enabled by accessing and setting the Legacy Flag in the System Configuration Options (detailed below).

Disabled: Shuts down a circuit to save current. Fitting an EOL resistor is optional.

Circuit types compliant with NZS4512:2010

Detector: Open circuit is defect. Short circuit is defect. Allows connection of conventional 2-wire smoke detectors, indicating heat detectors and indicating MCPs. Smoke detectors have AVF gating - indicating heat/MCP devices do not.

Residential: Open circuit is defect. Short circuit is defect. A residential circuit will latch a smoke detector activation in alarm for a global programmable period (0-250 seconds, default 30 seconds, 0 = stay latched) before attempting to self-reset. This allows local sounders to operate for the length of the delay per detector activation. Smoke and indicating heat/MCP activation can be mapped separately to ancillaries, brigade and bells.

Flowswitch: Open Circuit is defect. Short circuit is defect. 2V-13V clamp (390 ohm, 1 watt) is normal, 2k7 EOL is alarm. A globally programmable delay (0/5/10/15/20/25 seconds, default is 5 seconds) applies before going into alarm - the circuit must be continuously in alarm for the full period of the delay. A fixed delay of 5 seconds continuously in normal applies before going out of alarm.

Evacuation control: Short circuit is defect. Open circuit is defect. 2V-13V clamp (390 ohm, 1 watt) is alarm. Supervised connection to a sprinkler DBA "bell" output. An Evacuation circuit selected for bell ringing is unaffected by either of the silence alarms switches - the alarm must be silenced at the source.

Circuit types compliant with NZS4512:1997

Legacy Flowswitch: Open Circuit is instant alarm. Short circuit is defect.
A globally programmable delay (0/5/10/15/20/25 seconds, default 5 seconds) applies before going into alarm - the circuit must be continuously in alarm for the full period of the delay. A fixed delay of 5 seconds continuously in normal applies before going out of alarm.

Legacy Thermal: Open Circuit is instant alarm. Short circuit is defect.

Legacy Evacuation Control: Short circuit is instant alarm. Open circuit is defect.
Supervised connection to a sprinkler DBA "bell" output. An Evacuation circuit selected for bell ringing is unaffected by either of the silence alarms switches - the alarm must be silenced at the source.

Legacy Combined: Open circuit is instant alarm. Short circuit is defect.
Allows connection of conventional 2-wire smoke detectors and clean contact devices.

Legacy Smoke: Open circuit is defect. Short circuit is instant alarm if using programmable "MCP" facility. Allows connection of conventional 2-wire smoke detectors and clean contact devices. (N/C contacts require PA0443 contact conversion module)

Legacy Residential: Open circuit is defect. Short circuit is instant alarm if using programmable "MCP" facility. Allows connection of conventional 2-wire smoke detectors and clean contact devices. (N/C contacts require PA0443 contact conversion module)

A residential circuit will latch a smoke detector activation in alarm for a global programmable period (0-250 seconds, default 30 seconds, 0 = stay latched) before attempting to self-reset. This allows local sounders to operate for the length of the delay per detector activation. Smoke and thermal/MCP activations can be mapped separately to ancillaries, brigade and bells. Open circuit MCP alarm is not possible on Residential circuits (combined operation) as once a smoke detector had operated, an open circuit beyond the operated detector cannot be detected. A PA0443 contact conversion module is required for MCPs.

Detector Compatibility – Refer to listings published elsewhere for detector compatibility.

7-Segment Displays - There are two 7-segment displays. See "Display Codes" later.

Zone Index LEDs - Single flash = thermal/manual alarm. Double flash = smoke alarm. The Normal LED has a power-save cadence when mains is off.

Buzzer - The buzzer generally indicates the presence of abnormal conditions when the door is closed, and the presence of defects when not remotely connected.

Evacuation Switch - The Evacuation key switch allows manual activation of the alerting devices (without calling the Brigade). It may also be programmed to activate ancillary outputs.

Silence Alarms Switch - Operation of the Silence Alarms switches (external or internal) prevents the alerting devices sounding when an alarm is present. The external keyswitch generates a defect. On restoration of the external Silence Alarms switch to normal all activated zones (except Evacuation Control or Flowswitch types) are automatically isolated. Zones which are not activated and are programmed to other than disable, continue as un-isolated.
Note: This will not silence the bells for an Evacuation Control circuit alarm.

Services Restore Switch - The Services Restore switch is not fitted as standard, but is available as a field upgrade. Order the switch (SW0117), cut out the centre hole in label, fit the switch and solder the two white wires to the left hand contacts as per the other switches.
This switch is intended to allow the Brigade to restore ancillary services even when an alarm is present. The effect of this switch on ancillary outputs is individually programmable. If programmed it forces the ancillary back to normal (e.g, returns lift or air conditioning to normal operation) when operated.

Mains Switch - 230V Mains isolation is provided by a pullout fuse holder on the mains termination block.

Main Board Removal (to change index from inside cabinet) - Do **not** remove the plastic stand-offs marked with a cross. Unscrew the four mounting screws and release the two plastic stand-offs marked with a circle.
The board will "hinge" on the internal looms if you leave these connected.

Brigade Interface - Fit a 2W/4W General Purpose SGD (PA0862), or a General Purpose Brigade Relay Interface (PA0861). These boards mount on stand-offs and plug into the "Brigade Signalling Interface" Connector (J11).
If an interface is not fitted, select "Local" mode (Lo) in programming.

RZDU Interface - Up to 8 RZDU protocol remote display devices can be connected to the main panel.
Wiring is a 3 or 4-core star-spur arrangement. Refer to the Technical Manual for further details.

Control Buttons (internal) - Four pushbuttons give access to current and latched display information, operator functions and to the programming facility (described later).
"Current Defects" shows all defects currently present.
"Latched Defects" shows all defects since last Panel Reset, including those currently present.
"System Status" shows current status conditions (including groups and switches)
"Function" gives access to the Function menu commands (see "Function Menu" and descriptions below of each function).

Panel Reset - To clear latched conditions, modes, and indications, select Panel Reset (Pr) on the Function Menu and press "Select".

Self-Test - Self-Test (St) is selectable on the Function menu. Press "Select" to commence test.
Self-Test automatically performs internal RAM and EEPROM checksum tests, and also exercises all zone circuits. Order of Zone circuit testing (indication in brackets): (St), All Zones Alarm (A), All Normal (n), All open-circuit (o), All Normal (n), then each enabled zone circuit individually short-circuit and back to normal (1), (2), (3), (4), (5). (St) flashes until all RZDUs complete their test.

Self-Test failure results in a pulsing buzzer and failure code display (see "Self/Auto Test Failure Codes")

Self-Test will not run (long beep) if there is a Fire or Defect indication (latched or current), or if a brigade connected panel is not Brigade Isolated or in Brigade Test. Non-brigade calling circuits in off-normal conditions are omitted from the test, but do not prevent it from running.

Automatic Test - An automatic version of the Self-Test runs at the beginning of every daily charger inhibit period.
This can be initiated manually by selecting "Ci" on the Function menu.

Lamp Test - To initiate a lamp test select (Lt) on the Function menu. Press any button to cancel.

Non-Latching Test (NLT) Mode - NLT (walk test) mode (nL) is selectable through the Function menu. A double beep every thirty seconds and an "nL" displayed, indicates entry into this mode. All enabled circuits are temporarily set to indicating, non-latching, bell-ringing, non-brigade calling, with no delays or gating regardless of their programmed selection.

In NLT mode, when any circuit is placed into alarm, its zone indication is latched on with the most recent type of alarm, and the evacuation output is activated for 2 seconds. Groups and ancillaries do not operate.

A long beep indicates NLT mode cannot be entered - this could be a Fire or Defect condition (latched or current), or if a brigade-connected panel is not Brigade Isolated or in Brigade Test. Panel Reset clears NLT mode.

Zone Isolation - Individual zone isolation/de-isolation (toggle function) is available in the Function menu. This is also an automatic function of the external Silence Alarms switch (see above).
Isolated zones are indicated on the display. Power failure will clear.

History Recall - History Recall is an interrogation feature available in the Function menu.
The most recent 15 significant events are stored in chronological order in RAM and will be lost if power fails.
There is no time/date "stamping". (See "Display Codes" for details of operation).

Charger Inhibit - Starts a 40 minute charger inhibit period (reduced voltage). Also initiates an automatic self test (if permitted).
Panel Reset will terminate period.

Bells Output - For supervision, all alerting devices must have a series diode (eg,1N4004), and End of Line resistors must be fitted as follows: 1 Branch: 9k1 1% EOL, 2 Branches: 2 x 18k 1% EOLs, or 3 Branches: 3 x 27k 1% EOLs.
Maximum total load is 5A (subject to battery / charger capacity limitations). Supervision can be disabled in programming.
Three links (R15 - R17) can be cut out to convert to 5 Amp clean contact (supervision must be disabled).
Note: there is a 2-second delay on alarm before the Bells output is turned on for a Brigade-connected system.

Mini-Gen Tone Generator - A PA1025 12V Mini-Gen may be mounted on the bottom left side of the cabinet. Push it onto the plastic standoffs and secure with the M3 screw in the bottom front corner.
Refer to the Mini-Gen Installation Instructions (LT0363) for wiring details.

Ancillary Relay (Ar) - The ancillary relay is a 30V, 5A max (Resistive) single pole changeover relay.
Ar defaults to "Common Fire or Lamp Test" but is programmable for other uses.

On-Board Ancillary Outputs (A0, A1) - Two on-board open collector pull-down outputs (A0, A1) default to "Common Defect or Lamp Test" and "Common Normal or Lamp Test" respectively, but are programmable for other uses.

Additional Relay/Ancillary Outputs - Access to all ancillary outputs is via a 26 Way FRC (J10) and a 16 Way I/O Termination Board (PA0483). All Outputs are 30V, 200mA open collector drivers (except Ar- also drives the internal Ancillary relay and LAMP- also drives the internal lamp if present). Max load of 1A total for A2 - A9 combined.
All ancillaries are programmable, but defaults are suitable for a hard-wired mimic.
(See "Ancillary Output Defaults" for default functions and Output Number on the I/O Termination Board).

Defect Buzzer Cancel Input - A momentary closure to 0V silences the local mode defect buzzer.

External Defect Input - Pull this input to 0V to generate a defect.

Battery Charger - The internal battery charger is constant voltage and current-limited (13.65V, 450mA nominal), temperature compensated to suit an internal 12V 6.5Ah or 10.5Ah (ordering code PSH-12100) sealed lead-acid battery.
Connection leads for both common sizes of battery terminal are provided.
For standby capacity and battery charger combinations, refer to the Technical Manual for calculation methods.

Programming Mode - To enter programming mode, press and hold the three "Program" buttons (Select, Mode, and Change) for 3 short beeps and 1 long beep.
Insert the "Program Enable" link if any changes are to be saved.
Refer to "Programming options and Codes" and the "Programming Flowchart" for options available.

Program Exit Options - If an "exit with save" is attempted with the "Program Enable" link not installed, you will get a series of beeps and the system will remain in programming mode.
Simply insert the link and try saving again, or press Function to bail out without saving any changes.
Programming mode times out after 4 minutes of inactivity, or by closing the door.

Programming Groups - A programming Group becomes active only when **all** zones mapped to the group are in alarm and not isolated. Groups can optionally be latching (until panel reset) and can be mapped to outputs.
(For residential circuit types, any alarm type mapped to a group is sufficient).

Ancillary Override (System configuration option) - If Ancillary Override is enabled, "Door Open" is treated the same as operating the Services Restore switch, (programmably) forcing ancillary outputs back to normal - see Services Restore Switch on page 2.

Ancillary Output Programming - Ancillary outputs follow a logical OR of the options selected, except for overrides required by standards (eg. Evacuation overrides Silence Alarms)

Display Codes

Alarms

F_1 = Common Fire

⬚ = Zone n Alarm (1 - 5)

r_n = Residential Alarm on Zone n (r1 - r5)

Isolates

i_n = Zone n Isolated (i1 - i5)

$\overline{i_n}$ = Zone n Isolated by SA restore to normal

Defects

n = Zone n Defect (1 - 5)

r_n = Defect at RZDU n (r1 - r8)

$=n$ = RZDU n Scan Fail or Foreign (=1 - =8)

bL = Battery Low

bc = Battery Connection Fault

$S.A$ = Ext Sil Alarms Defect (decimal on = at RZDU) (both on = SA Isolates)

Ed = External Defect

EF = Evacuation Fault

Sd = SGD Defect

CF = Charger Fail

HF = Hardware Fault

PF = Program Fail

Ec = EPROM Corrupt

Pc = Program Corrupt

rc = RAM Corrupt

dr = Watchdog Reset

AE = Auto Test Fail (then failure code)

System States

nl = Normal

dF = Common Defect

Ci = Charger Inhibited

Lo = Local Mode

bi = Brigade Isolated

bt = Brigade Test

PE = Program Enable Link Fitted

EE = (Trial) Evacuation on (decimal on = at RZDU)

nL = Non Latching Test

dS = Local Defect Silenced

Sr = Services Restore On (decimal on = at RZDU)

SA = Internal Silence Alarm

Pr = Panel Reset Active

Gn = Group n Activated (G1 - G4)

⬚. = Latched Defect Present press Latched Status to view

.⬚ = System States Present press System Status to view

History Events

Press SELECT to step backwards through history (last 15 events)
To exit History Mode, press any other button or close Door
(History Mode will time out after 8 seconds)

An = Zone n Alarm (MCP if Residential)

rn = Zone n Residential Smoke Alarm

dn = Zone n Defect

in = Zone n Isolated

$\overline{in}$ = Zone n Isolated by SA restore to normal

nn = Zone n Normal

AE = Auto Test Fail

Pu = System Power up

dr = Watchdog Reset

$\_\_$ = Last Event Displayed

Pr = Panel Reset Performed Immediately after Pr, all zone abnormals logged to history

Self / Auto Test Failure Codes

nA = Zone n failed to go into Alarm

nn = Zone n failed to go back to normal

no = Zone n failed to go open circuit

nd = Zone n failed to go short circuit

nc = Zone n failed to stay normal while another zone was being tested

See page 2 for more detail

Function Menu

(F) = FUNCTION button   (S) = SELECT button

Repeat Zones 1 - 5

<Base> → (F) → Panel Reset Pr → (F) → Self Test St → (F) → Lamp Test Lt → (F) → Non-Latching Test Mode nL → (F) → History Display Hi → (F) → Zone n Isolate Status in → (F) → Charger Inhibit Ci → (F)

Panel Resets ← (back to Base)

(S) Panel Resets

(S) Flashes St followed by test codes if Self Test is running — Self Test running if permitted. Long Beep and return to <Base> if not permitted.

(S) Buzzer will sound for 3 sec. LEDs stay on until cancelled or zone event. 88

(S) Non-Latching Test Mode if permitted. Long Beep and return to <Base> if not permitted. (Pr to clear mode)

(S) Enters History Events Menu

(S) Toggles Zone Isolate Status RH decimal point on = Isolated

(S) Inhibits Charger for 40 minutes (Pr to clear)

Notes:
Function Menu will time out to <Base> if no key pressed for 8 seconds
To exit Function Menu, press MODE or CHANGE or close Door.

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Programming Flowchart

Enter programming mode
Fit "Program Enable" link to allow changes to be saved.

* Residential Circuits Only

Press (S) to step thru all Zones 1 - 5

n → (M) → (C) Circuit Type: di LF Lt LE LC LS Lr / rE Ec dE FL (S)

(C) toggles Call Point nC → (M) → C (S)

(C) toggles Gate nG → (M) → G (S)

(C) toggles Latch nL → (M) → L (S)

(C) steps *Cb nb → (M) → b (S) — Brigade

(C) steps *Cr nr → (M) → r (S) — Ring Bells

th, FL and Ec ONLY

(C) toggles Thermal Mode LP → (M) → HP (S)

(C) toggles Resid. LED * nS → (M) → S (S)

(M) steps thru Ar, A0 - A9 — (C) steps An / *An / *An → (M) → Ancil An (S)

(M) steps thru G1 - G4 — (C) steps Gn / *Gn / *Gn → (M) → Group Gn (S) → (M)

Press (S) to step thru all Groups G1 - G4

Gn → (M) → (C) toggles Latch nL / L (S) → (M) → (C) toggles Brigade nb / b (S) → (M) → (C) toggles Ring Bells nr / r (S) → (M) → (C) steps Ancil An / An (S)

(M) cycles thru Ar, A0 - A9 → (M)

Right Hand decimal on = yes

(S) = SELECT pushbutton
(M) = MODE pushbutton
(C) = CHANGE pushbutton

Press (S) to step thru all Ancils Ar then A0 - A9

An → (M) → (C) toggles Latch nL / L (S) → (M) → (C) toggles ON by Evacuation Switch? EE (S) → (M) → (C) toggles OFF by Silence Alarms? SA (S) → (M) → (C) toggles OFF by Services Restore? Sr (S) → (M) → (C) toggles ON by Lamp Test? Lt (S) → (M) → (C) toggles Follow Evacuation (Bells) Relay? Er (S) → (M) → (C) toggles Follow Common Fire? Fi (S) → (M) → (C) toggles Follow Common Defect? dF (S) → (M) → (C) toggles Follow Common Normal? nl (S) → (M) → (C) toggles Follow Charger Inhibit? Ci (S) → (M) → (C) toggles Follow Panel Reset? Pr (S) → (M)

Right Hand decimal on = yes

SC → (M) → (C) toggles Brigade Connected or Local only bc / Lo (S) → (M) → (C) toggles Evacuation Supervision enable/disable EE / Ed (S) → (M) → (C) toggles Ancillary Override enable/disable AE / Ad (S) → (M) → (C) toggles Legacy Circuit Options enable/disable LE / Ld (S) → (M) → (C) steps Flowswitch Delay 0. 5. 10. / 25. 20. 15. (S) → (M) → (C) steps Battery Low Voltage Adj. PS → $P0$ / -7 ← -1 (S) → (M) → (C) steps Residential Delay 0 / 25 (S) → (M) → (C) steps Number of RZDUs $d0$ / $d8$ (S) → (M)

x 10 seconds — 0 = latch

No. of RZDUs = 1- 8 — 0 = disabled

Press (S) to step thru all ...

$\_\_$ (S) ← (M) Save values & exit. → (M) → Reload defaults (C) → rd (S)

See Pages 1-3 for more details of some options

Programming Options and Codes

Zone Programming

⌷n	= Zone Number (1 - 5)
LF	Circuit Type = Legacy Flowswitch
Lt	Circuit Type = Legacy Thermal
LE	Circuit Type = Legacy DBA / Evacuation
LC	Circuit Type = Legacy Combined
LS	Circuit Type = Legacy Smoke
Lr	Circuit Type = Legacy Residential
FL	Circuit Type = Flowswitch
dE	Circuit Type = Detectors
Ec	Circuit Type = DBA / Evacuation
rE	Circuit Type = Residential
d i	Circuit Type = Disabled

Zone Options

C	nC	= Callpoint or none (S, rE only. Enables MCP band)
G	nG	= Gated or not (S, Co, rE only)
L	nL	= Latching or not

nb	Cb	b	nb = nothing calls brigade Cb = Non res only calls brig b = All alarms call brigade
nr	Cr	r	nr = nothing rings bells Cr = Non res only rings bells r = All alarms ring bells

S	nS	S = res smoke alarm on Zone LED nS = res smoke alarm Not on LED
LP	HP	= Low / High Power (FL, th, Ec only)

An = Zone maps to Ancillary (Ar, A0-A9) * (Right hand decimal on = yes)

Gn = Zone maps to Group n (1-4) * (Right hand decimal on = yes)

* for rE zones: Ar, An, Gn decimal as follows:
Left hand decimal on = yes for Smoke
Right hand decimal on = yes for MCP

Ancillary Output Programming

An	= Ancillaries (Ar, A0 - A9)
A.n	= Ancillary (Ar, A0-A9) is mapped from a zone (Left hand decimal on = yes)
An.	= Ancillary (Ar, A0-A9) has programmable options selected (Right hand decimal on = yes)

Ancillary Output Options

L	nL	= Latching or not
EE		= Forced on by External Evacuation Switch? (Right hand decimal point on = yes)
SA		= Forced off by Silence Alarms Switch? (Right hand decimal point on = yes)
Sr		= Forced off by Services Restore? (Right hand decimal point on = yes)
Lt		= Forced on by Lamp Test? (Right hand decimal point on = yes)
Er		= Follow Evacuation (bells) Relay? (Right hand decimal point on = yes)
F i		= Follow common Fire? (Right hand decimal point on = yes)
dF		= Follow common Defect? (Right hand decimal point on = yes)
n i		= Follow Normal? (Right hand decimal point on = yes)
C i		= Follow Charger Inhibit (long only)? (Right hand decimal point on = yes)
Pr		= Follow Panel Reset? (Right hand decimal point on = yes)

Ancillary Output Defaults

Note: Lamp Test mapped by default for Ar and A0-A6.
Ancil Relay (Ar) on for Common Fire or Lamp Test (I/O 1)
Ancil 0 (A0) on for Common Defect or Lamp Test (I/O 2)
Ancil 1 (A1) on for Normal or Lamp Test (I/O 3)
Ancil 2 (A2) on for Zone 1 or Lamp Test (I/O 4)
Ancil 3 (A3) on for Zone 2 or Lamp Test (I/O 5)
Ancil 4 (A4) on for Zone 3 or Lamp Test (I/O 6)
Ancil 5 (A5) on for Zone 4 or Lamp Test (I/O 7)
Ancil 6 (A6) on for Zone 5 or Lamp Test (I/O 8)
Ancil 7 (A7) has no default mapping (I/O 9)
Ancil 8 (A8) has no default mapping (I/O 10)
Ancil 9 (A9) has no default mapping (I/O 11)
LAMP- (I/O 13)

Group Programming

Gn	= Group Number (G1 - G4)
G.n	= Group is mapped from a zone (Left hand decimal on = yes)
Gn.	= Group is mapped to an output (Right hand decimal on = yes)

Group Options

L	nL	= Latching or not
nb	b	nb = Does not call brigade b = Calls brigade
nr	r	nr = Does not ring bells r = Rings bells
An		= Group maps to Ancillary (Ar, A0-A9) (Right hand decimal on = yes)

System Configuration

SC		System Configuration Menu
bc	Lo	Brigade connected or Local mode
EE	Ed	Evac Monitor enabled / disabled
AE	Ad	Ancil Override enabled / disabled
LE	Ld	Legacy Circuit Options enabled / disabled
0.	25	Flowswitch Delay (global) (note decimal point) 0./.5./10./15./20./25. sec
P1	- 1	Adjust Batt Low Volts (0.1V steps) P3 = 12.2V + 0.3V -2 = 12.2V - 0.2V
0	25	Residential Delay (global) 0 - 25 (x 10) sec 0 = latch
d0	d8	Number of RZDUs (d0 = none, d1 - d8 are valid)
- -		Exit Programming Mode
rd		Reload Defaults

83mm

Mini-Gen Drilling Template

57mm
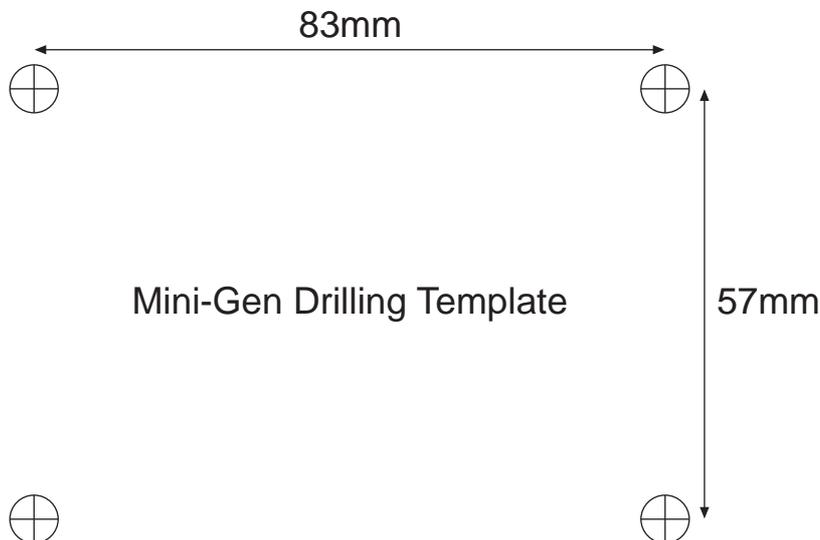
SUMMARY OF AVAILABLE CIRCUIT ATTRIBUTES AND PROGRAMMING DEFAULTS

CIRCUIT TYPE	ATTRIBUTE					
	Call Point	Gating	Latching	Brigade Signal	Bell Ringing	Power
Disabled	n/a	n/a	n/a	n/a	n/a	n/a
Detector	n/a	yes*/no	yes*/no	all*/none	all*/none	n/a
Residential	n/a	yes*/no	yes*/no	all/MCP*/none	all/MCP*/none	n/a
Flowswitch	n/a	n/a	n/a	all/none*	all/none*	low*/high
Evacuation Control	n/a	n/a	yes*/no*	all/none*	all*/none	low*/high
Smoke (Legacy)	yes/no*	yes*/no	yes*/no	all*/none	all*/none	n/a
Thermal (Legacy)	n/a	n/a	yes*/no	all*/none	all*/none	low*/high
Residential (Legacy)	yes/no*	yes*/no	yes*/no	all/MCP*/none	all/MCP*/none	n/a
Combined (Legacy)	n/a	yes*/no	yes*/no	all*/none	all*/none	n/a
Flowswitch (Legacy)	n/a	n/a	n/a	all/none*	all/none*	low*/high
Evacuation Control (Legacy)	n/a	n/a	yes*/no*	all/none*	all*/none	low*/high

* = default

none = nothing calls brigade

n/a = option not available

Ordering Information - Panels and Accessories

FP0759	SIGMA 5 Fire Alarm, Window Mount	LT0231	SIGMA 5 Technical Manual
FP0760	SIGMA 5 Fire Alarm, Wall Mount	RR0753	Circuit EOL Resistor (2k70 1%)
PA0862	General Purpose SGD	FA2070	Spare Index (Wall Mounting)
PA0861	General Purpose Brigade Relay Interface	FA2073	Spare Index (Window Mounting)
SW0117	"Services Restore" Bulgin Keyswitch	HW0036	Spare Door Key
PA0483	16 Way I/O Termination Board	HW0213	Spare Keyswitch Key
PA1025	12V Mini-Gen Mk2	RR1001	390E 1W Resistor
LM0049	I/O Board FRC Loom (0.25m)		

Zone Number	Zone Name	Cct Type	MCP (C/nC)	Gate (G/nG)	Latch (L/nL)	Brigade (nb/Cb/b)	Bells (nr/Cr/r)	Power (LP/HP)	Resid LED (S/nS)	Ar (Ar/Ar./A.r/A.r.)	A0 (A0/A0./A.0/A.0.)	A1 (A1/A1./A.1/A.1.)	A2 (A2/A2./A.2/A.2.)	A3 (A3/A3./A.3/A.3.)	A4 (A4/A4./A.4/A.4.)	A5 (A5/A5./A.5/A.5.)	A6 (A6/A6./A.6/A.6.)	A7 (A7/A7./A.7/A.7.)	A8 (A8/A8./A.8/A.8.)	A9 (A9/A9./A.9/A.9.)	G1 (G1/G1./G.1/G.1.)	G2 (G2/G2./G.2/G.2.)	G3 (G3/G3./G.3/G.3.)	G4 (G4/G4./G.4/G.4.)
1																								
2																								
3																								
4																								
5																								

Group Number	Group Name	Latch (L/nL)	Brigade (nb/b)	Bells (nr/r)	Ar (Ar/Ar.)	A0 (A0/A0.)	A1 (A1/A1.)	A2 (A2/A2.)	A3 (A3/A3.)	A4 (A4/A4.)	A5 (A5/A5.)	A6 (A6/A6.)	A7 (A7/A7.)	A8 (A8/A8.)	A9 (A9/A9.)
1															
2															
3															
4															

Ancil Number	Ancil Name	Latch (L/nL)	ON by Evac Switch?	OFF by Sil Alarms?	OFF by Serv Restore?	ON by Lamp Test?	Follow Bells Relay?	Follow Com Fire?	Follow Com Defect?	Follow Com Normal?	Follow Chgr Inhibit?	Follow Panel Reset?
r												
0												
1												
2												
3												
4												
5												
6												
7												
8												
9												

System Configuration

Brigade Connection: Brigade Connected / Local Only   Evacuation Supervision: enable / disable
Ancillary Override: enable / disable   Legacy Circuit Options: enable / disable
Flowswitch Delay: 0. / 5. / 10. / 15. / 20. / 25.
Battery Low Voltage Adjust: 12.2V +0.5V / +0.4V / +0.3V / +0.2V / +0.1V / -0.1V / -0.2V / -0.3V / -0.4V / -0.5V / -0.6V / -0.7
Residential Delay: seconds (0 = latch)
Number of RZDUs: (d0 = none)

SIGMA 5 Zone Wiring
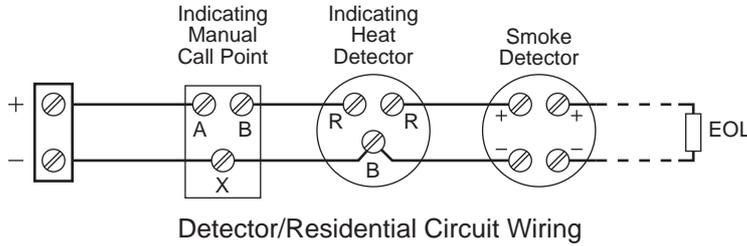
Detector/Residential Circuit Wiring

Indicating Manual Call Point
Indicating Heat Detector
Smoke Detector

A B
X
R R
B
+ +
− −
EOL

DBA/Evacuation Circuit Wiring

+
−
N/O
390E 1W
EOL
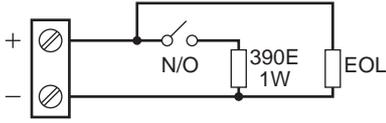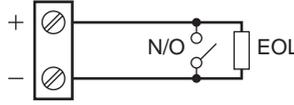
Legacy DBA/Evacuation Circuit Wiring

+
−
N/O
EOL
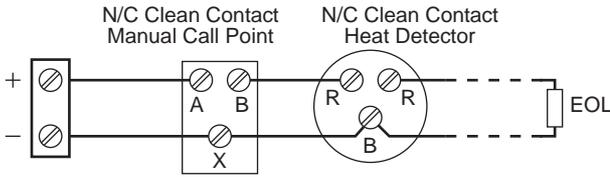
Legacy Thermal / Combined Circuit Wiring

N/C Clean Contact Manual Call Point
N/C Clean Contact Heat Detector

A B
X
R R
B
+
−
EOL
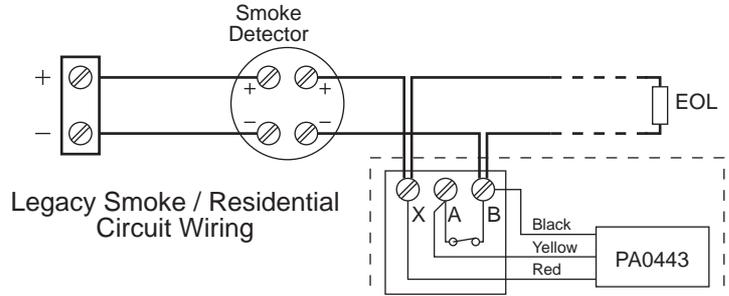
Legacy Smoke / Residential Circuit Wiring

Smoke Detector

+ +
− −
+
−
EOL

Manual Call Point with PA0443

X A B
Black
Yellow
Red
PA0443

Flowswitch Circuit Wiring

+
−
N/C
390E 1W
EOL
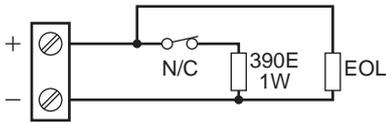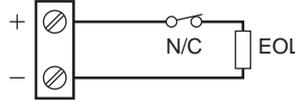
Legacy Flowswitch Circuit Wiring

+
−
N/C
EOL

SIGMA 5 to RZDU Wiring

+ANC
0V
TX
RX

+ANC
0V
TX
RX

Set Address (1-8)

SIGMA 5

RZDU Device (other RZDUs star/spur)
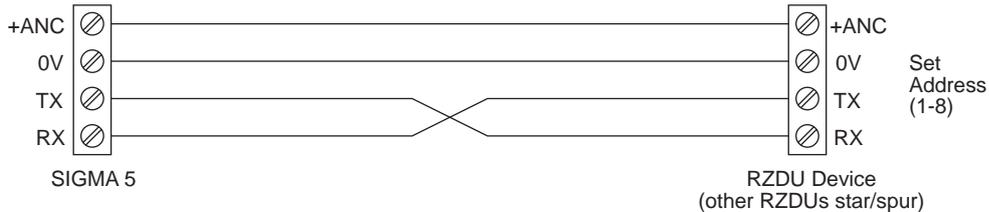
- WARNINGS -

NZS4512 and the NZ Building Code contain important requirements for the installation, commissioning, and testing of fire alarm systems. You must comply with the requirements of these documents, and any other statutory or regulatory requirements, in addition to the information contained in these instructions.

MAINS SUPPLY

The mains supply to this SIGMA 5 must be from a separate, suitably-rated circuit breaker that is unique to this Fire Alarm System and connected as per AS/NZS 3000 wiring rules.

The SIGMA 5 Fire alarm panel contains static sensitive components. Always observe appropriate ESD precautions when handling any Printed Circuit Boards.

The heatsink of the Battery Charger Regulator (U13) can get very hot when under high load or charging a flat battery.

CAUTION
HOT
SURFACE

▼ VIGILANT