

AFP-2800
MANUAL
NZ SUPPLEMENT

5-May-14

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DOC-01-006

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- Manual part number and revision (found on the front cover)
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Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. Control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until manuals are read and understood.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% voltage drop from the specified device voltage.

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning induced transients. Although no system is completely immune from lightning transients and interference, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Services Department if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, or printed circuit board location.

Do not over tighten screw terminals. Over tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation.

This equipment must be correctly programmed and installed to suit the specific application. Please ensure correct operational parameters are set prior to commissioning. If further details on programming options are required, please consult the programming manual or contact our helpful technical support personnel.

EMC WARNING:

This equipment may radiate radio frequency energy. It may also be affected by radio frequency energy and, if not installed and operated in accordance with the manufacturers instructions, may cause interference to radio communications. It has been tested and found to comply with the Class A radiated and conducted EMI requirements of AS/NZ 3548:1995 (including Amendments 1 & 2) as well as the EMI susceptibility requirements of Clause C3.5 in AS4428.0:1997.

Radio communication devices should not be used in the vicinity of fire panels or associated ancillary devices and systems.

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1 NEW ZEALAND OPERATION (NZS4512)

This section describes the panel configuration required to comply with NZ standards (NZS4512) when the NZ operation mode is selected.

Note: NZ mode should only be used in conjunction with V5.06 and above firmware.

1.1. NEW ZEALAND KEYPAD

The NZ keypad is designed specifically to meet NZS4512 requirements.

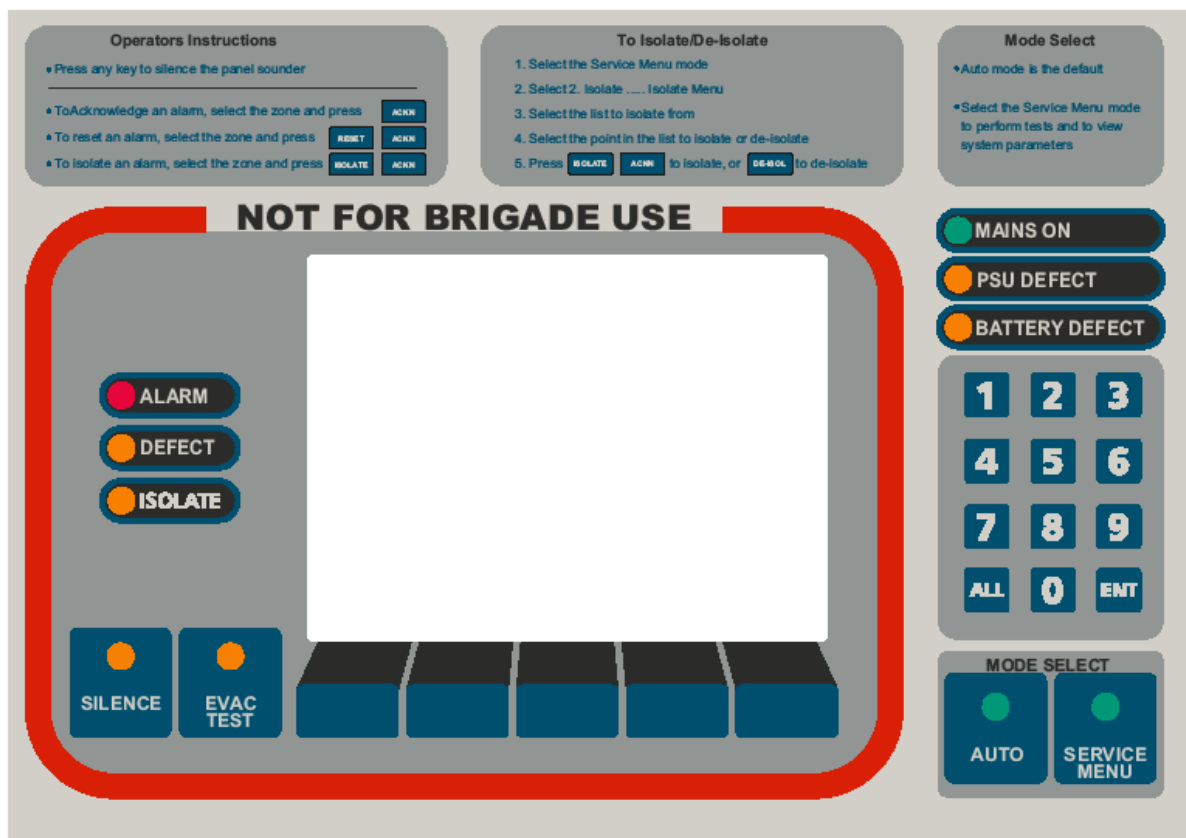


Figure 1

a. SILENCE BUTTON

Pressing the silence button will de-activate the bell and warning output relays on the termination board and set the Bell Isolated (BI) operator to true for script processing.

b. EVAC TEST BUTTON

Pressing the EVAC TEST button will activate the warning system output relay on the termination board and set the Warning Initiated (WI) operator to true for script processing.

Note: The above is the default operation for the warning system output in NZ mode if a user defined script has not been associated to the output. Any script entered by the user for this output will over-ride the above functionality which is equivalent to the following script: (CA OR WI) AND !BI AND T3;

1.2. RESETTING THE PANEL

Resetting the NZ AFP-2800 can be done in two ways, depending on how the alarms have been silenced.

1. Alarms Silenced **WITHOUT** use of the Silence Alarms Bulgin Key. (Panel will display Fire Only)
 - Select event
 - Press **ACKN** to silence internal buzzer
 - Press **RESET** then **ACKN** to reset panel
2. Alarms Silenced **WITH** use of the Silence Alarms Bulgin Key. (Panel will display Fire, Defect & Isolate)
 - Select event
 - Press **ACKN** to silence internal buzzer
 - Press **RESET** then **ACKN** to reset fire condition
 - Go to **Service Menu**. Press **1** then **3**
 - **De-Isolate** affected detectors
 - Return to **Auto** mode
 - Press **RESET**
 - Press **ACKN** to clear defect

1.3. DIP SWITCH & LINK SETTINGS FOR NZ MODE

Both the CPU and Power Supply have DIP switches for use in NZ mode.

These must be set as listed.

CPU _____ DIP switch **4** must be **ON**, all others off.

Power Supply _____ DIP switch **1** must be **ON**, all others off.

Termination Board ____ Link "Dis-Bat" (at very bottom of board in line with RH edge of the 40 way ribbon cable connecting to the LIM or NIM). This link must be in or you will get a permanent Batt Fault.

1.4. SHORT CIRCUITS ON CONVENTIONAL AZFs

Short circuits on all AZFs will be treated as **defects** and not **alarms**. If a contact is used to activate an AZF for purposes other than conventional detection a 680 ohm resistor should be used instead of a short to simulate a conventional circuit in alarm.

2 NZ PROGRAMMING



NOTE: NZ Panels must use v5.06 or above firmware

2.1. ENABLING NZ MODE

New Zealand mode must be enabled in the following ways;

From the panel:

1. enter SERVICE MENU >> GLOBAL
2. scroll down to NZ Mode (Nzs4512)
3. press toggle to enable and press yes to accept change
4. the menu should now read NZ Mode (Nzs4512) is ENABLED

From the PCI:

1. click GLOBALS in tree view
2. click check box NZ Mode (Nzs4512) is Enabled
3. enter scripts for inputs
4. the menu should now read NZ Mode (Nzs4512) is ENABLED
5. download configuration to panel.

2.2. ALARM, BELL AND WARNING SYSTEM OUTPUTS

Bell and WS outputs will activate 3 seconds after a common alarm to comply with NZS4512: 204.13. The intent of this clause is to ensure that an alarm is sent to the fire brigade before switching on any heavy loads, just in case the battery is faulty and fails when the heavy loads are switched on. All outputs that switch heavy loads using the FIP power supply should also have an activation delay greater than 2 seconds. This delay can be achieved using a timer in the output script. E.g. CA AND T3;

PR1 – Bell Output (Common alarm with 3 second delay)

PR2 – Warning System Output (Common alarm with 3 second delay or EVAC TEST button)

PR3 & PR4 – General Purpose

Note: The above is the default operation for the warning system output in NZ mode if a user defined script has not been associated to the output. Any script entered by the user for this output will over-ride the above functionality which is equivalent to the following script:

(CA OR WI) AND !BI AND T3;

3 INSTALLING ADDITIONAL EQUIPMENT

3.1. PANEL SIZES GUIDE

a. MAIN OR SUB FIRE INDICATOR PANELS

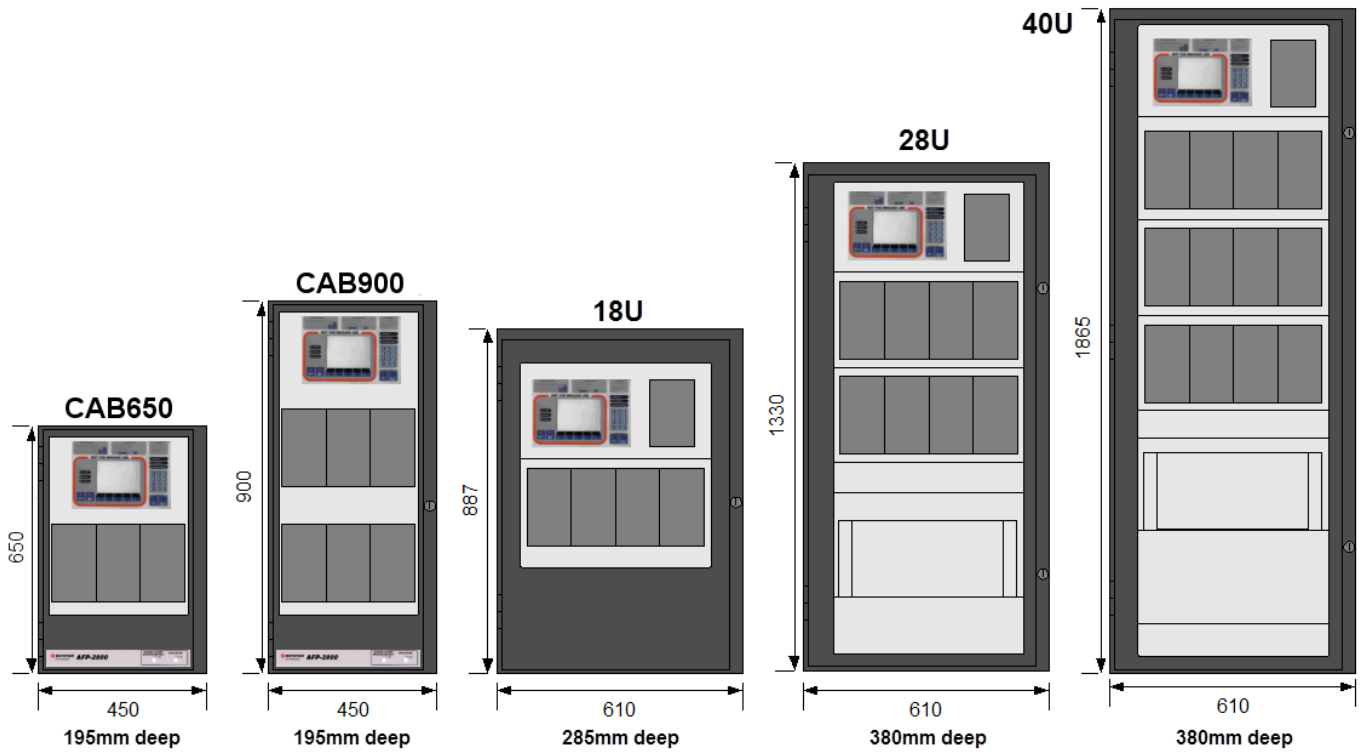


Figure 2: Cabinet Sizes

b. MIMIC PANELS

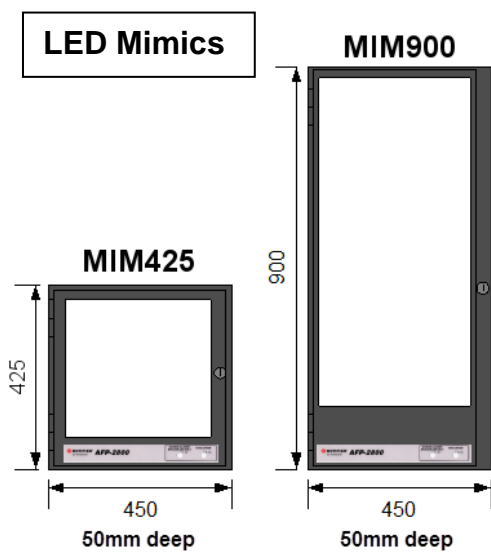


Figure 3: Mimic Sizes

LCD Mimics	
	<p>Back Box 252mm H x 117mm W x 63.5mm D Front Door 272mm H x 152mm W x 19mm D</p> <p>Flush Mount with Door</p>
	<p>Back Box 252mm H x 117mm W x 63.5mm D Front Trim 279mm H x 159 W x 1.6mm D</p> <p>Flush Mount without Door</p>
	<p>Back Box 252mm H x 117mm W x 63.5mm D Cover 269mm H x 122mm W x 64mm D</p> <p>Surface Mount</p>

3.2. CONNECTING A VITECH SGD

a. INSTALLATION

1. Connect the SGD bracket to a CHS chassis using two $\frac{3}{4}$ " #4-40 standoffs and two $\frac{1}{4}$ " #4-40 screws as per Figure 4.
2. Mount the SGD onto the plate by using four 20mm male to female M3 standoffs and four M3 x 8mm screws as per Figure 4.

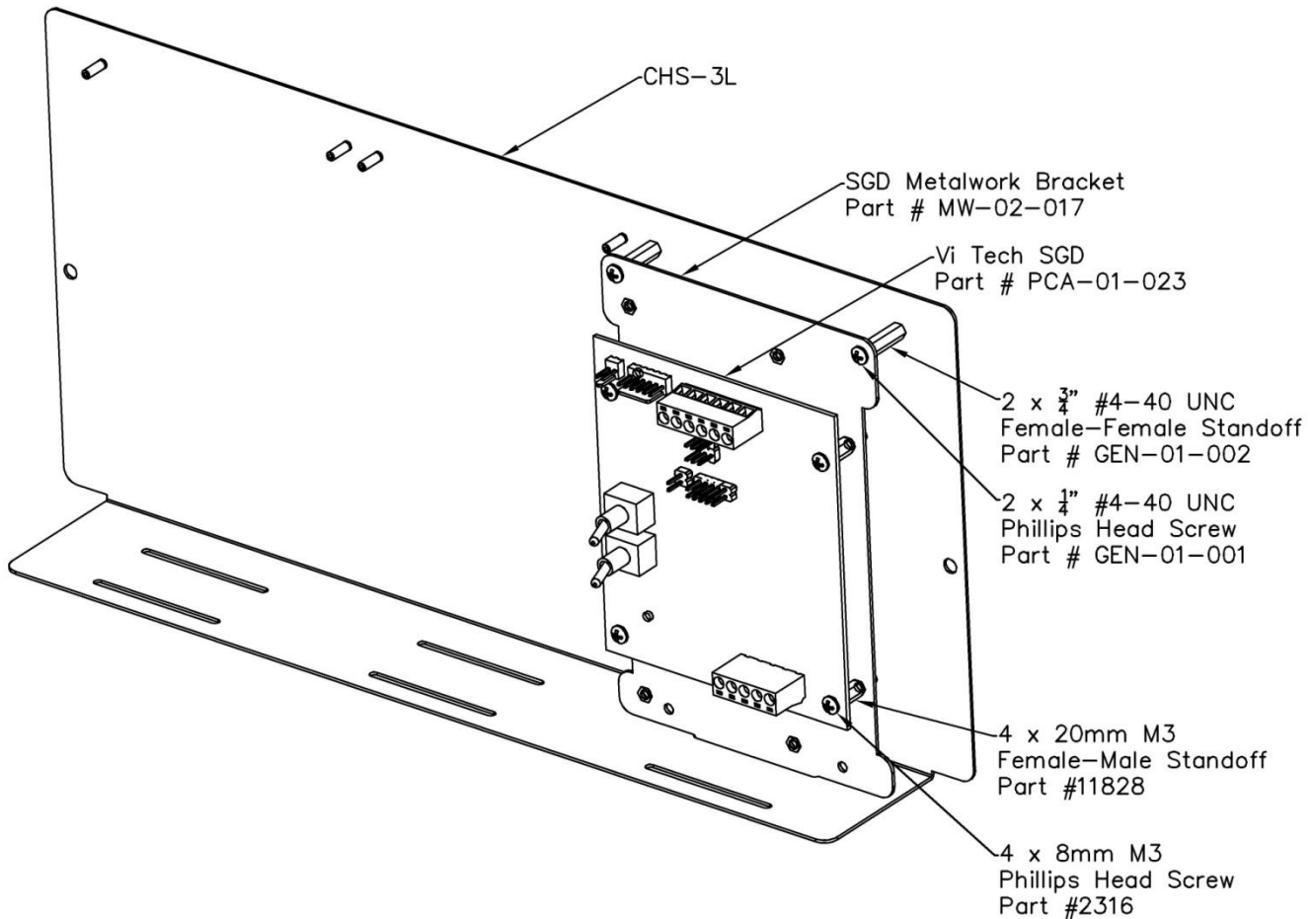


Figure 4: Mounting SGD on CHS-3L

3. Connect 24V power to the SGD as per Figure 5.
4. Connect the remote monitoring communications line as per SGD documentation and NZ standards.
5. To interface the SGD to the system either:
 - a. Connect a 6 way cable (same type as serial chain) from J6 on the Zone Index Master (ZIM) to K2 on the Vi Tech SGD (See Figure 5).

OR

 - b. Wire in the connections on the 6 way header to the panel. The pin connections are shown in Figure 5. Be sure to connect the fire alarm and fault inputs as well as monitor the door interlock terminals.

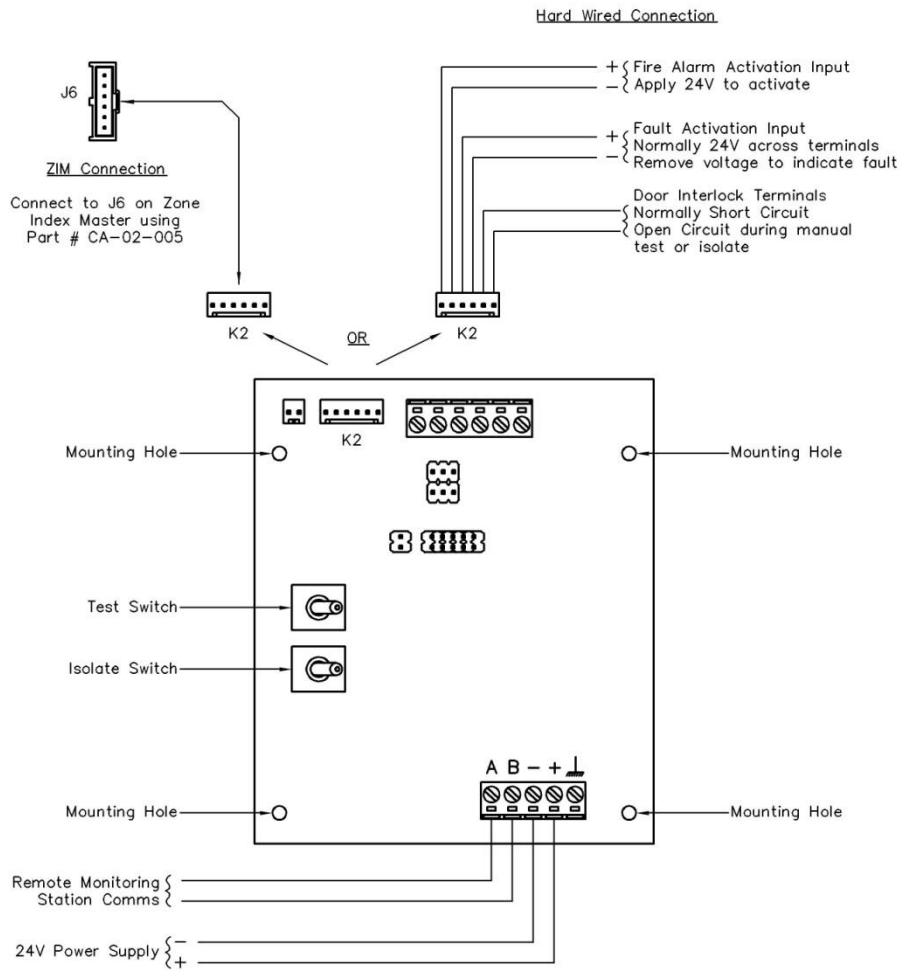
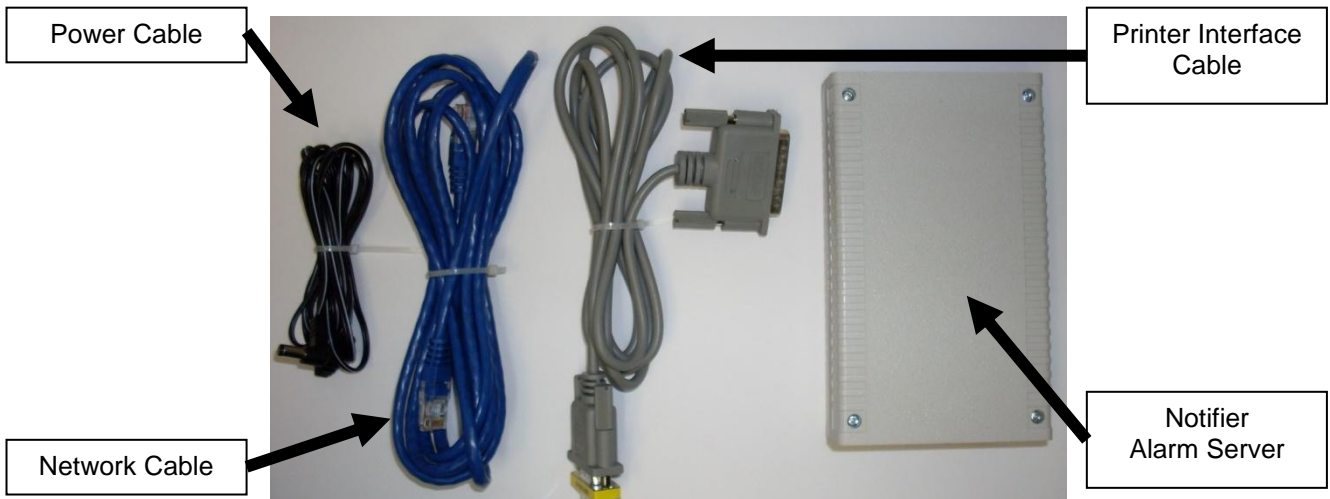


Figure 5: SGD connections

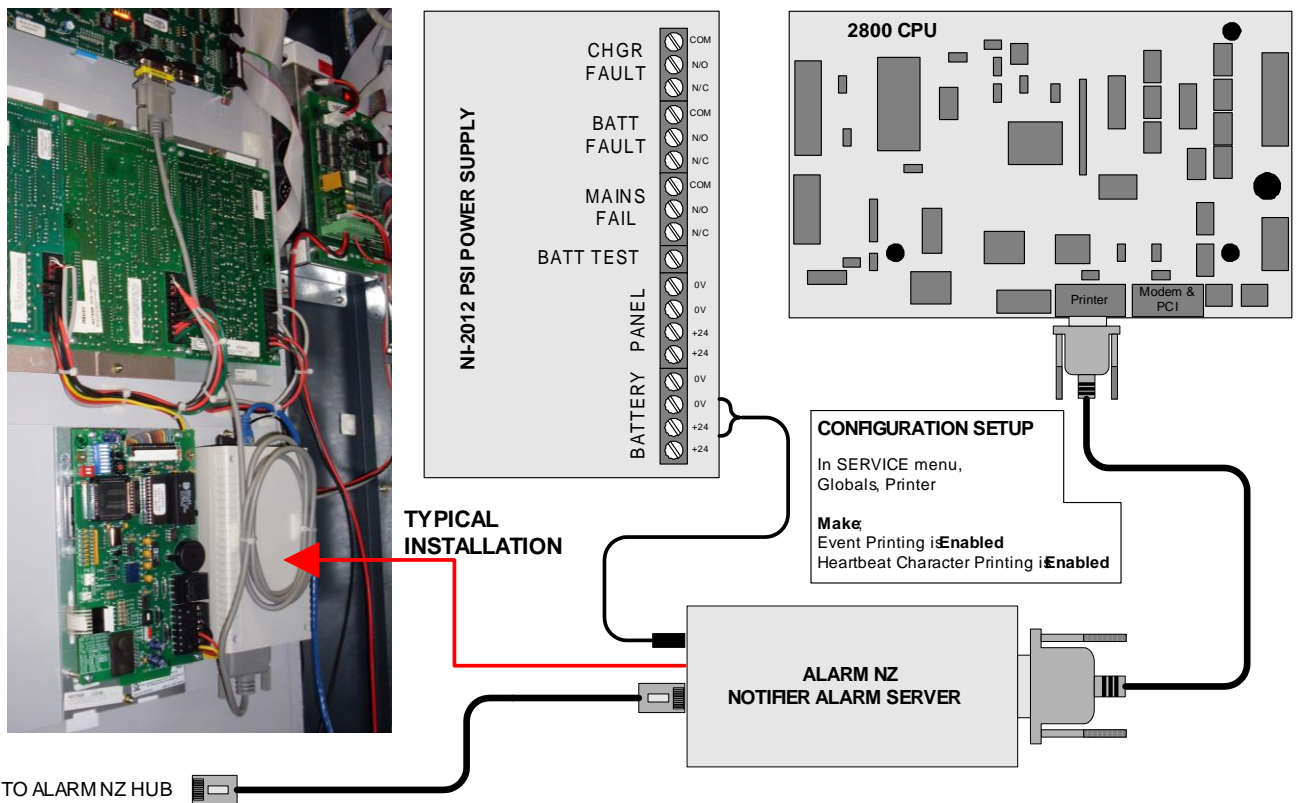
3.3. CONNECTING AN ALARM NZ SERIAL SERVER

The Alarm NZ Server allows extended text to be sent from the Printer Port on the CPU, to a Hub which can then transmit the information via Broadband or 3G cellular networks to pagers, cell phones or computers. The output consists of Zone, Point, Status, 25 characters of descriptor and site.

a. COMPONENTS



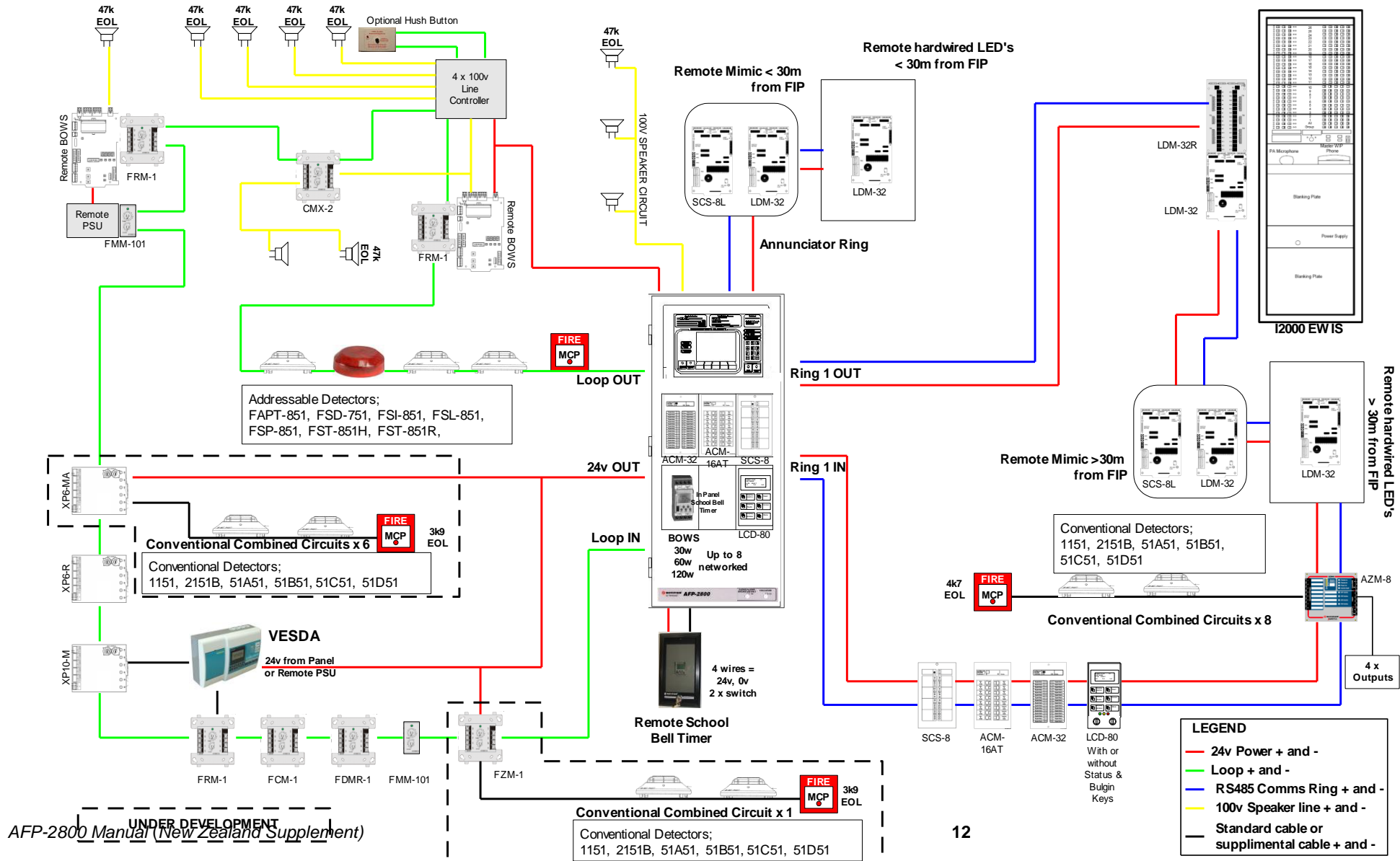
b. CONNECTIONS



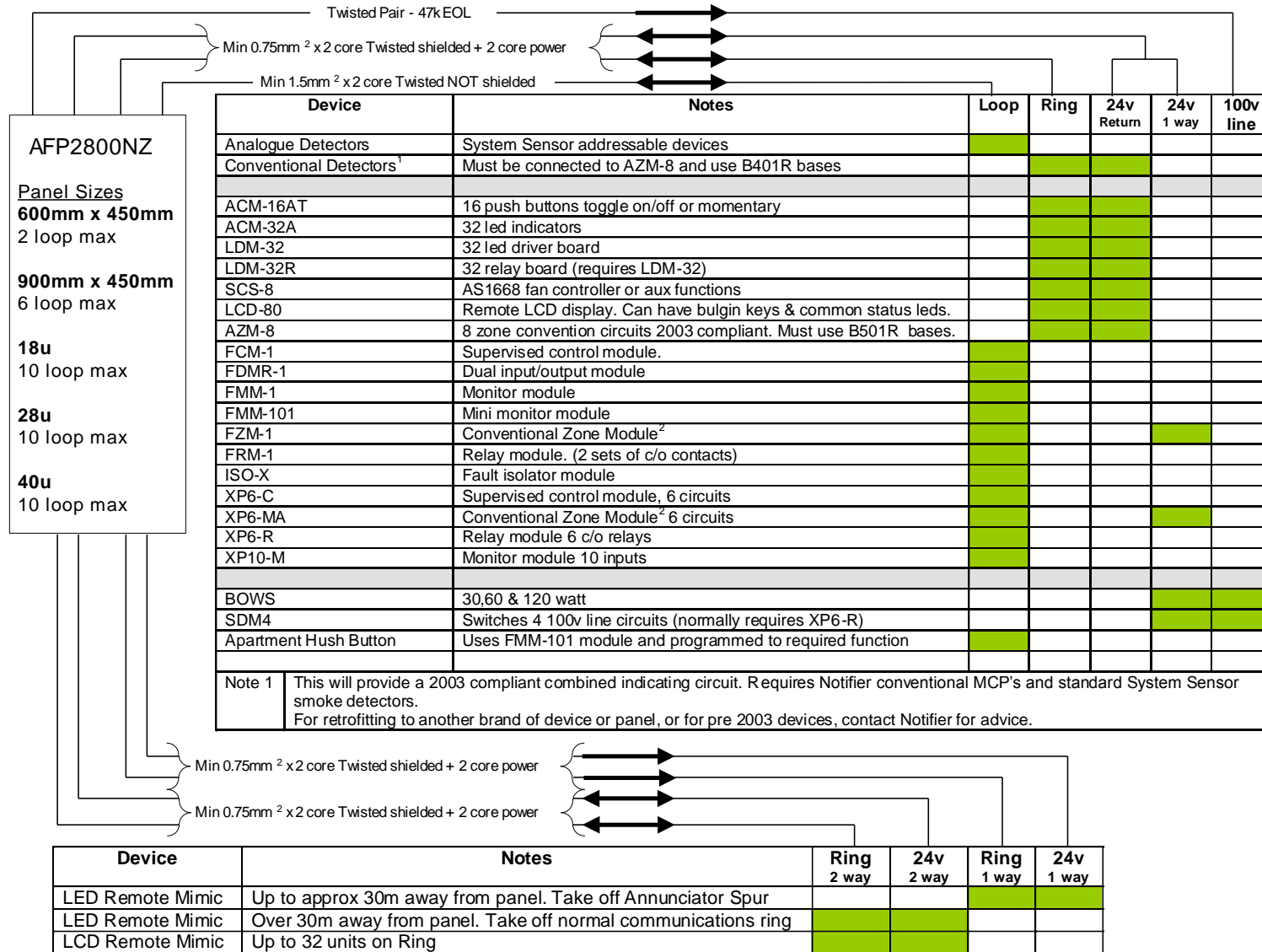
Fit Alarm Server with heavy duty double sided tape to back of blank Annunciator plate, or on side of cabinet for Front Service panels.

4 EQUIPMENT DESIGN GUIDE

a. PICTORIAL DEVICE GUIDE



b. CABLE GUIDE



4.2. INPUT MODULE SELECTION GUIDE

Because of the NZ requirements for NC as opposed to NO contacts on devices, not all modules available will work in all situations. The guides below will assist in the selection of the correct input module for new installations, retrofitting series wired circuits, and retrofitting parallel wired circuits.

In the tables below, DType 10 Mode is achieved by switching an input module to Dtype 10 in the configuration. This allows the panel to be switched between seeing a device as active when it would normally be in fault. An example would be when a flow switch is a NC device and you want a module to see the device as active when the contacts open.

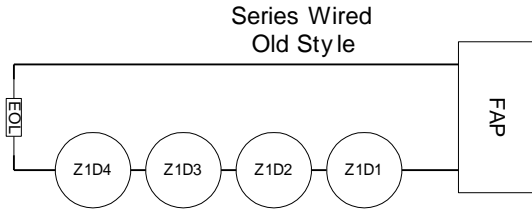


Figure 9

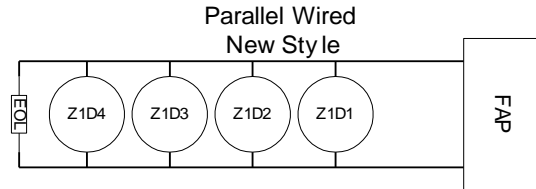


Figure 10

a. NEW INSTALLATIONS

Item	Changeability	Mode	Circuit Notes	Applications
XP10-M	Switchable in PCI	Dtype 10	Devices can be connected directly to module with 47k EOL.	Use for picking up clean contact inputs where activation is open circuit.
		Normal	Devices can be connected directly to module with 47k EOL.	Use for picking up clean contact inputs where activation is closed circuit.
FMM-101	Switchable in PCI	Dtype 10	Devices can be connected directly to module with 47k EOL. Has NO LED indication.	Use for picking up clean contact inputs where activation is open circuit. Can only be used where device indication is not required.
		Normal	Devices can be connected directly to module with 47k EOL. Has NO LED indication.	Use for picking up clean contact inputs where activation is closed circuit. Can only be used where device indication is not required.
FDMR-1				
FMM-1	Switchable in PCI	Dtype 10	Will Not Work	Will Not Work
		Normal	Devices can be connected directly to module with 47k EOL.	Use for picking up clean contact inputs where activation is closed circuit.
MMX-102e	Switchable in PCI	Dtype 10	Devices can be connected directly to module with 47k EOL. Has LED indication.	Use for picking up clean contact inputs where activation is open circuit. Used in MCP's Bi-metallic Detectors & Contact Conversion Modules.
		Normal	Devices can be connected directly to module with 47k EOL. Has LED indication. Requires Contact Conversion in device when circuit is required to comply.	Use for picking up clean contact inputs where activation is closed circuit. Used in MCP's Bi-metallic Detectors & Contact Conversion Modules.

b. RETROFITS WITH INDICATING DETECTORS

Item	Changeability	Mode	Series Wired Circuits Notes	Parallel Wired Circuits Notes
XP10-M	Switchable in PCI	Dtype 10	Can be connected directly to module with 47k EOL. Indicates Zone Only	Will Not Work
		Normal	Works, but does not comply.	Will Not Work
FMM-101	Switchable in PCI	Dtype 10	Works, but does not comply.	Works, but does not comply.
		Normal	Works, but does not comply.	Works, but does not comply.
FDMR-1				
FMM-1	Switchable in PCI	Dtype 10	Will Not Work	Will Not Work
		Normal	Works, but does not comply.	Will Not Work
MMX-102e	Switchable in PCI	Dtype 10	Can be connected directly to module with 47k EOL. Has LED indication.	Can be connected directly to loop only if fitted to each device. Does not require Contact Conversion. Has LED indication at device.
		Normal	Works, but does not comply.	Can be connected directly to loop only if part of Contact Conversion Modules fitted to each device. Has LED indication at device.

C. RETROFITS WITH NON-INDICATING DETECTORS

Item	Changeability	Mode	Series Wired Circuits Notes	Parallel Wired Circuits Notes
XP10-M	Switchable in PCI	Dtype 10	Can be connected directly to module with 47k EOL. Indicates Zone Only	Will Not Work
		Normal	Works, but does not comply.	Will Not Work
FMM-101	Switchable in PCI	Dtype 10	Can be connected directly to module with 47k EOL. Has NO LED indication.	Can be connected directly to loop only if fitted to each device. Does not require Contact Conversion. Has NO LED indication.
		Normal	Works, but does not comply.	Can be connected directly to loop only if part of Contact Conversion Modules fitted to each device Has NO LED indication.
FDMR-1				
FMM-1	Switchable in PCI	Dtype 10	Will Not Work	Will Not Work
		Normal	Works, but does not comply.	Will Not Work
MMX-102e	Switchable in PCI	Dtype 10	Can be connected directly to module with 47k EOL. Has LED indication.	Can be connected directly to loop only if fitted to each device. Does not require Contact Conversion. Has LED indication at device.
		Normal	Works, but does not comply.	Can be connected directly to loop only if part of Contact Conversion Modules fitted to each device Has LED indication at device.

4.3. BATTERY SIZE CALCULATION

To comply with NZS4512:2010 Clause 503(e), the rated capacity of a battery shall be greater than the minimum, calculated as follows:

For a remotely-connected system: $Ah = (I_Q \times 24) + I_A$

For a non-remotely-connected system: $Ah = (I_Q \times 72) + I_A$

Where:

Ah = the minimum rated battery capacity, in ampere hours, at the 10 h rate

I_Q = the non-alarm current from that battery (charger off) in amps

I_A = the alarm current drawn from that battery (charger off) in amps

Notes

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