

A1536 8 Way Alarm Board for Nexus 1-8 Loop Analogue Addressable Control Panels

Application, Installation and Commissioning Manual

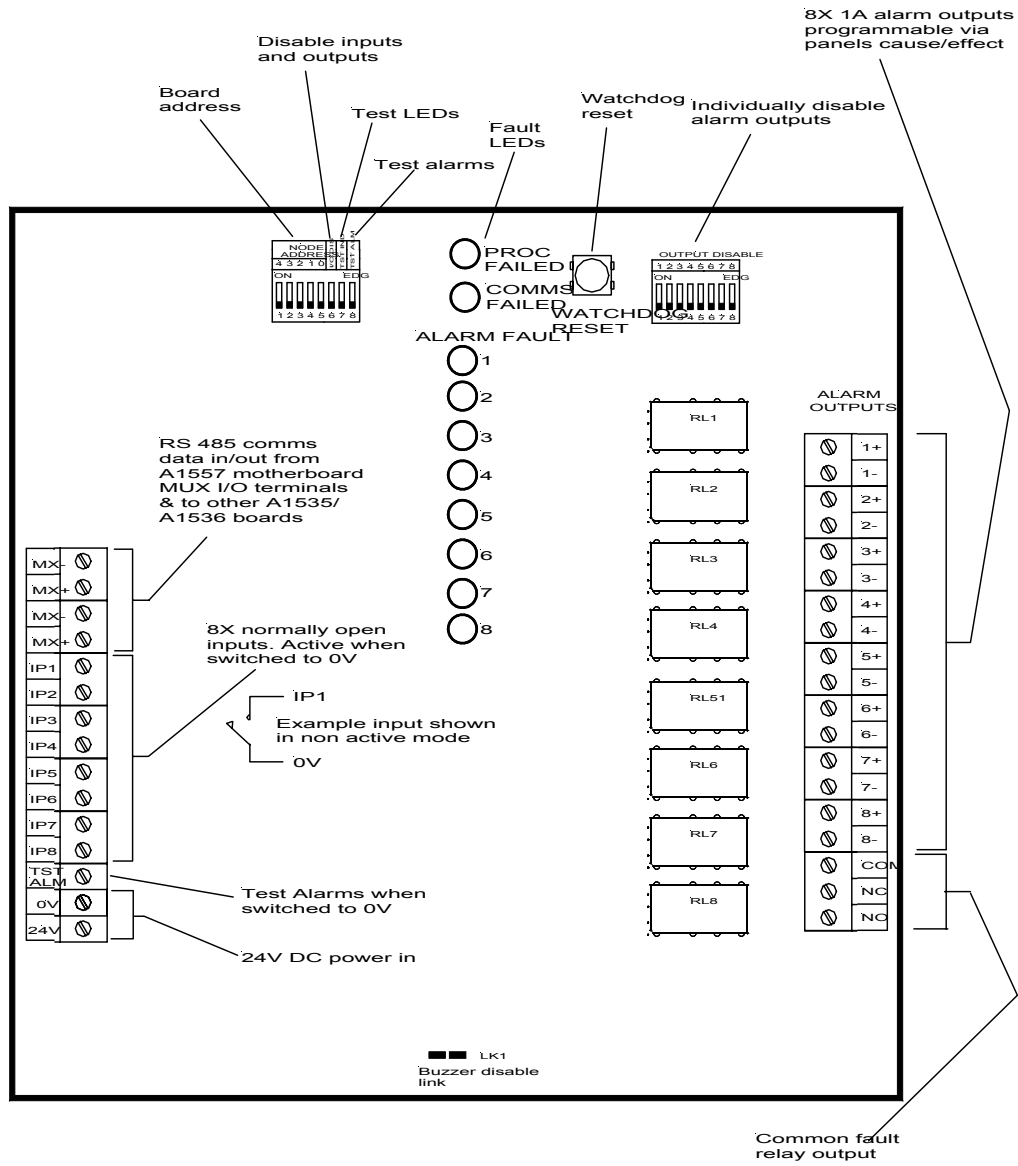
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1.0 Introduction

Up to 31 A1536 (alarm) [and/or A1535 relay] programmable expansion boards may be connected to the Nexus 1-8 loop panel. Two boards may be housed internally within the double-doored Nexus cabinet, the remainder require other enclosures. The A1536 board provides 8 programmable inputs (0V switched) and 8 programmable alarm circuit outputs.

1.1 A Guided Tour

1.1.1 A1536 8 Way Programmable Input/Output Alarm Board



2.0 Node Addressing Details

Set the required board address on switches SW1, according to the table below:

Node Address	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	I/O Circuits
1	Off	Off	Off	Off	On	1 to 8
2	Off	Off	Off	On	Off	9 to 16
3	Off	Off	Off	On	On	17 to 24
4	Off	Off	On	Off	Off	25 to 32
5	Off	Off	On	Off	On	33 to 40
6	Off	Off	On	On	Off	41 to 48
7	Off	Off	On	On	On	49 to 56
8	Off	On	Off	Off	Off	57 to 64
9	Off	On	Off	Off	On	65 to 72
10	Off	On	Off	On	Off	73 to 80
11	Off	On	Off	On	On	81 to 88
12	Off	On	On	Off	Off	89 to 96
13	Off	On	On	Off	On	97 to 104
14	Off	On	On	On	Off	105 to 112
15	Off	On	On	On	On	113 to 120
16	On	Off	Off	Off	Off	121 to 128
17	On	Off	Off	Off	On	129 to 136
18	On	Off	Off	On	Off	137 to 144
19	On	Off	Off	On	On	145 to 152
20	On	Off	On	Off	Off	153 to 160
21	On	Off	On	Off	On	161 to 168
22	On	Off	On	On	Off	169 to 176
23	On	Off	On	On	On	177 to 184
24	On	On	Off	Off	Off	185 to 192
25	On	On	Off	Off	On	193 to 200
26	On	On	Off	On	Off	201 to 208
27	On	On	Off	On	On	209 to 216
28	On	On	On	Off	Off	217 to 224
29	On	On	On	Off	On	225 to 232
30	On	On	On	On	Off	233 to 240
31	On	On	On	On	On	241 to 248

3.0 Installation Instructions

- 3.1 Connect MX+ and MX- from the A1536 alarm board to the control panel motherboard (terminals MUX I/O) observing correct polarity at both ends.
- 3.2 Connect 24V and 0V supplies from the A1536 alarm board to the power supply unit. This can either be an auxiliary power supply or the control panel's power supply.

NOTE: *If an auxiliary power supply is used, then the open collector fault output on the power supply should be connected to the power supply fault monitor input terminals on the panel motherboard.*

WARNING: *Do not apply power at this stage.*

- 3.3 Connect the alarm circuit field wiring, observing alarm polarity, and ensuring that

each output is terminated with a 3K9 resistor across the last sounder's terminals. This resistor is used in the monitoring of open and short circuit conditions. Reverse polarity monitoring is used, therefore all devices should be polarised and suppressed. The alarm circuit terminals are marked with "Alarm Polarity".

NOTE: If any alarm output remains unused, it is necessary that it is terminated with a 3K9 resistor.

3.4 Connect the field wiring for all required inputs to the A1536 board.

NOTE: The inputs on this board are active when switched to 0V.

4.0 Commissioning

4.1 Ensure that the Test Alarms DIL switch option is switched off and that the remote Test Alarms input is non-active.

4.2 Disconnect MX+ at the A1536 alarm board and then apply power to the board. Any short or open circuit problems with the alarm circuits will be displayed as an alarm output fault on the eight alarm fault LEDs. These problems should be traced and corrected before reconnection to the panel. The COMMS. FAILED LED will light during this testing; this should be ignored.

4.3 The next task is to programme the panel to accept the A1536 alarm board. This is done in the EDIT C/E Data option on the Nexus panel (Option 9 in the extended menu). See Nexus 1-8 loop Installation & Commissioning Manual. The two valid board types for the A1536 are:

Type 1: ALARM (N-MON) Inputs
8 non-latching, non-monitored indication only (ie non fire or fault reporting) inputs which can be used within the panel's cause/effect facility.

Outputs

8 alarm circuits, programmable with the panel's cause/effect facility.

Type 5: ALARM (FIRE) Inputs
8 latching, non-monitored fire indicating inputs which can be used within the panel's cause/effect facility.

NOTE: Not suitable for connection to detectors.

Outputs

8 alarm circuits, programmable with the panel's cause/effect facility.

4.4 The next step is to programme the desired cause and effect for the inputs and outputs on the A1536 board. The outputs are programmed using the PANEL OUTPUTS option in the EDIT C/E DATA extended menu option. See Nexus 1-8 loop Installation & Commissioning Manual. The inputs are allocated to zones in the ZONE ALLOCATION option. See Nexus 1-8 loop Installation & Commissioning Manual. Cause and effect programming can then be written using these zones.

Appendices

i Technical Specifications

Device	A1536 Alarm Board
Addressing	1 to 31 using DIL switches
Communications protocol	RS485
Supply voltage	24V DC
Quiescent current	100mA
Alarm mode current	100mA + 25mA per active alarm output + alarm current (when operational)
Maximum supply current	9A
Alarm circuit current	8 x fully loaded alarm outputs, each at 1A

ii Other Relevant Documentation

Sales Literature for Nexus 1-8 Loop panel
Application Guide for Nexus 1-8 Loop panel
Installation & Commissioning Manual for Nexus 1-8 Loop panel
Wiring Recommendations
After-Sales Technical Support Booklet