

### Electrical Specifications

Power Supply Input:	11V to 14V DC
Current Consumption.	30mA. (NOT including current drawn by any input devices or auxiliary devices connected.)

NOTE: Surge protection kit available for additional protection on Inputs & Outputs.

### Module Fault LEDs

RX	TX	EXPLANATION / REMEDY
ON	ON	Module is un-addressed.
OFF	ON	Module type unknown. Firmware upgrade required to Control Module.
Flash	ON	Duplicate Module. This module number is already in use by a module of the same type.
Flash	Flash	Module number selected is too big for Control Module RAM size. Select a lower Module number.
ON	OFF	Too many modules on Network for Control Module RAM size.
Alternating		EEPROM problem. Reset module. If fault persists return for service.

**Designed & manufactured in Australia.**

Due to on-going product development this manual is subject to change without notice.  
Part No: 633086

# Model 3000 / Access 4000

## 8 Zone / 8 Auxiliary Mini Expander Module. P/N: 993086

# INSTALLATION MANUAL

### Overview

The Mini Expander module can be used in the same applications as the Universal Expander Module providing a cost effective solution wherever a smaller number of Zones/Auxiliaries are required. The 8 Relay Expander board (993082E) may be connected to convert the Auxiliary outputs to Relays.

Special additional features are provided such as programmable input de-bounce time and input counting facility. This allows the module to perform any special event or process monitoring functions that may be supported in the Control Module firmware. Refer to the Programming and Reference manuals for more information.

NOTE: This Module is compatible with: Model 3000 V2.00 or later.  
Model ACCESS 4000 V2.00 or later

## Installing the Mini Expander Module.

### Mini Expander Module Parts List

- Mini Expander Module PCB assembly in Plastic box.
- Installation Kit in Plastic bag containing:
  - 4 x self tapping 3/8" mounting screws.
  - 2 x Tamper switches.
  - 4 x 6.3mm Tamper switch connectors.
  - 4 x 2 Way Plug on Screw Terminals.
  - 3 x 8 Way Plug on Screw Terminals.
  - 10 x 2k2 End-of-line resistors. (red-red-black-brown-brown)
  - 10 x 6k8 End-of-line resistors. (blue-grey-black-brown-brown)
- Installation Manual. (This document)

### Mounting the Unit

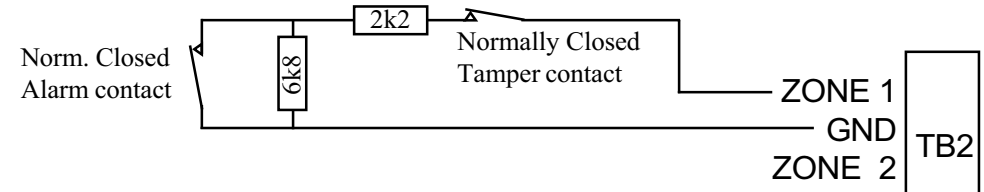
Installation environment should be maintained at a temperature of 0° to 40° Celsius and 15% to 85% Relative humidity (non-condensing)

Enclosure physical dimensions:    Length:    238mm  
    Width:    118mm  
    Depth:    72mm

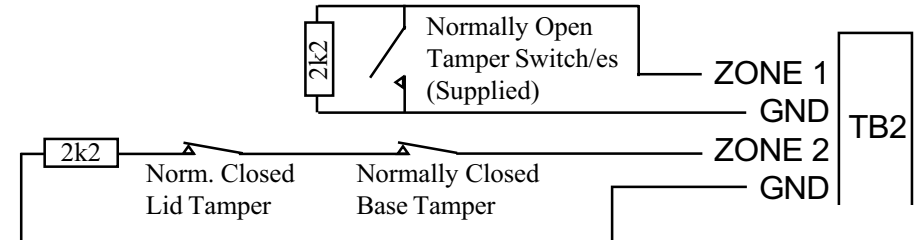
1. The Mini Expander Module is supplied in the plastic utility enclosure which can be mounted in a convenient location using fasteners through the four mounting holes in the base. **NOTE: Alternative enclosure options are available.**
2. The "Normally Closed" Base and Lid tamper switches should be fitted to the enclosure before it is mounted. On the Mini Expander, these tamper switches must be wired in parallel with a 2k2 EOL Resistor and connected into one of the Zone Inputs. No special "TAMPER" input is provided.  
*See wiring diagram on page 7.*  
 (Switch is Open ckt when plunger depressed. i.e. When Lid is on)
3. The Module Number is set using DIPswitches 1 to 7 as required.  
*See table on page 3.*
4. Zone Inputs are wired using the End-of-Line (EOL) Resistors.  
*See wiring diagram on page 7.*

### Zone Input Wiring

#### DETECTORS, ETC.

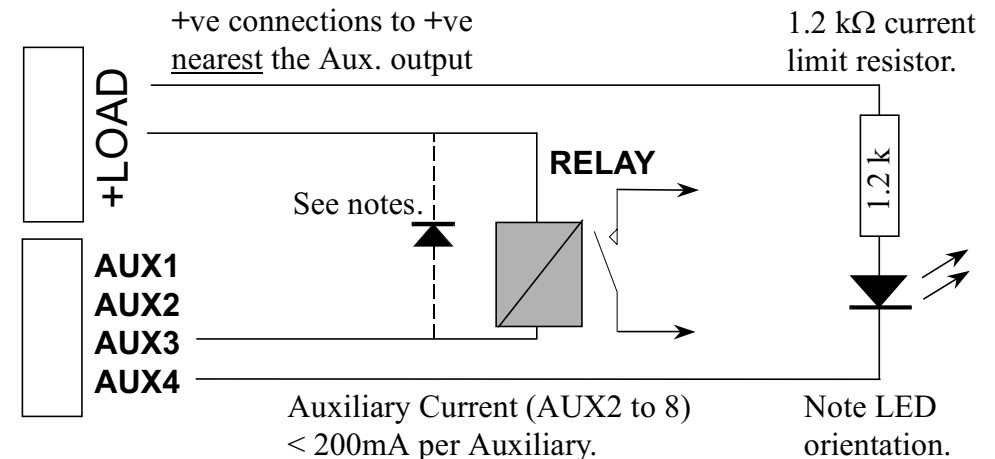


#### TAMPER SWITCH OPTIONS.



### Auxiliary Output Wiring

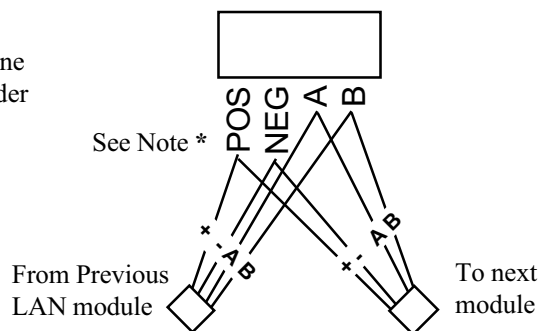
- The module should be powered by an external Power Supply if current required by Auxiliary Devices and/or Detectors exceeds available LAN current.
- When an external power supply is used to power auxiliary devices, a good common Negative connection MUST exist between the power supply and the module.
- Clamp diode should be fitted across inductive loads. Kathode (bar) to +ve.
- AUX1 can be used to switch loads up to 500mA.



## LAN and Power Supply Wiring

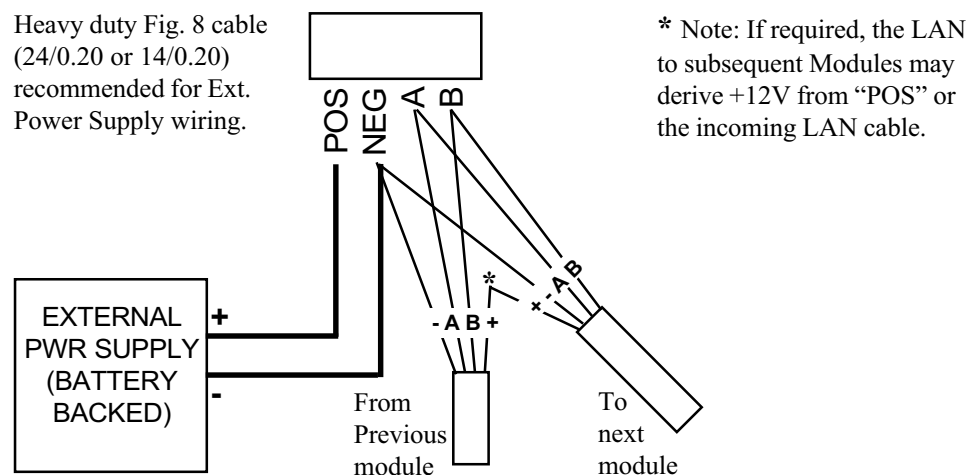
### MODULE POWERED FROM THE LAN

\* Note: If both “LAN +VE” wires provide a Power supply source, the one that is not required to power the Reader Module must NOT be connected.



### MODULE POWERED FROM EXTERNAL SUPPLY

Heavy duty Fig. 8 cable (24/0.20 or 14/0.20) recommended for Ext. Power Supply wiring.



## Module Numbering

The Mini Expander Module number is set using DIPswitches 1 to 7. The Module number equals  $n + 1$ , where  $n$  is the binary number set on DIPswitches 1 to 7.

Module No:	DIPswitch: 1	2	3	4	5	6	7
	Binary value: 1	2	4	8	16	32	64
1	off	off	off	off	off	off	off
2	ON	off	off	off	off	off	off
3	off	ON	off	off	off	off	off
4	ON	ON	off	off	off	off	off
5	off	off	ON	off	off	off	off
6	ON	off	ON	off	off	off	off
7	off	ON	ON	off	off	off	off
8	ON	ON	ON	off	off	off	off
9	off	off	off	ON	off	off	off
through to							
99	off	ON	off	off	off	ON	ON

## Installation Details

### Links:

JP1 LAN Termination. The LAN is only terminated on two modules in the system unless LAN Isolators are used.  
*See the Control Module Installation manual for more details.*

### Connectors:

TB1 LAN and +12V Power input connections.  
 TB2,3 Zone Inputs.  
 TB4 Auxiliary outputs.  
 TB5 Positive 12V Power output for Detectors & Auxiliary Devices.  
 X1 8 Relay Expansion board connection. (To JP2 on Relay board, 993082E)  
 X2 Inner Range 2A Power Supply connection.  
 X3 Auxiliary LAN connector.

### DIPSwitches:

SW1 Module Number

### LEDs:

LED1 RX and FAULT INDICATION. *See table on page 8.*  
 LED2 TX and FAULT INDICATION. *See table on page 8.*

**Module ID:** Mnn:xxx Where nn = module number xxx = Zone / Aux ID

## THE MINI EXPANDER PCB

**X3** Auxiliary LAN connector.

**JP1** LAN Termination.

The LAN is only terminated on two modules in the system unless LAN Isolators are used. *See the Control Module Installation manual or the "LAN Installation & Troubleshooting" guide for more details.*

**TB1. LAN & External Power Connections.**

**POS** Connect LAN +ve IF Module powered from the LAN, OR +12V from External Power Supply. \*

**NEG** Connect LAN Negative.

**A** Connect Negative from Ext. Power Supply if used.

**B** LAN Data A connection.

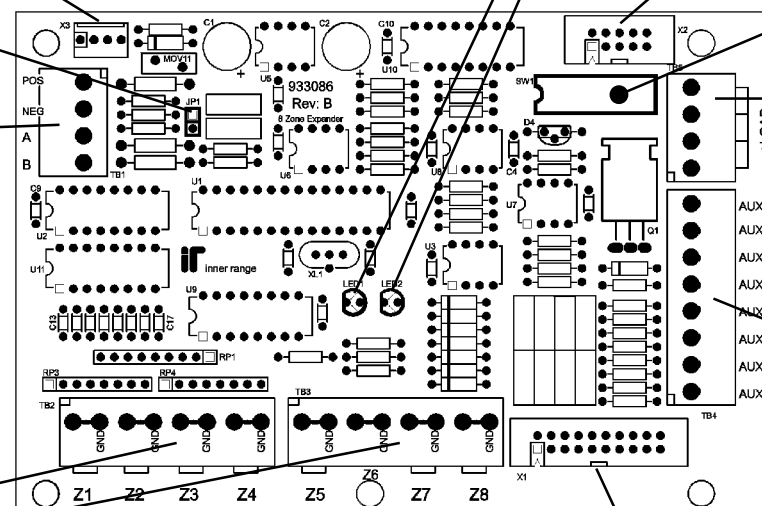
**B** LAN Data B connection.

\*NOTE: +VE connections from two different power supply sources must never be connected together. *See "LAN & Power Supply Wiring" on page 6.*

**TB2 & TB3. Zone Input connections.**

**Z1 to Z8** Zone Input connections.  
OR Optional Button I/P for Area ON control.

**GND** Ground return for Input connections.  
(End-of-line (EOL) Resistors required on Zone Input Wiring.  
See diagram on page 7)



**LED 1 (Rx).**  
**LED 2 (Tx).**

LAN Data Receive & FAULT DIAGNOSIS  
LAN Data Transmit & FAULT DIAGNOSIS  
(See table on p 8)

**X2** Connection to Inner Range  
2A Power Supply. (If required)  
(Optional enclosures can house the Mini Expander and Power supply together.)

**DIPswitches:**

**Switch 1-7.** Module number  
(See table on page 3)

**TB5.**

**+12V Supply for Detectors and Auxiliary Devices.**

NOTE: The module should be powered by an external Power Supply if current required by Auxiliary Devices and/or Detectors exceeds available LAN current.

**TB4. Auxiliary Output connections.**

AUX1 to 8 Open Collector outputs.

AUX1 <500mA max.  
AUX2 to 8 <200mA max per output.

*See wiring details on page 7.*

**X1** 8 Relay Expander board connection.  
P/N: 993082E  
Connects to **JP1** on Relay board.

(The connector labelled "From C3 Bus Latch")

**NOTE:** Mini Expander module should be powered by an external Power Supply if the 8 Relay Expander board is connected.