



NAM-AS3 LOOP POWERED INPUT MODULE INSTALLATION & TECHNICAL MANUAL

No:	NISM/NAMAS3/01	
DATE:	JANUARY 2002	
PAGE:	1 of 9	ISSUE: 01

INPUT MODULE NAM-AS3

INTRODUCTION

DESCRIPTION

The NAM-AS3 forms part of the Nittan (UK)'s **SENSORTEC-ANALOGUE** range of Analogue Addressable Devices.

This module is designed to perform a loop powered, addressable input module function from the detection signalling loop of an analogue-addressable fire detection system.

The NAM-AS3 may be used for a variety of purposes such as monitoring a 'relay contact input' or monitor the operation of a 'sprinkler flow monitoring switch'.

OPERATION

The fire alarm control equipment must be capable of communicating with the NAM-AS3 input module. If in doubt, check with panel manufacturer.

The NAM-AS3 is a loop powered, two-wire signalling device, it is connected onto the detection signalling loop's SIG+ and -S wires, exactly as any other 'AS' sensor or device.

FEATURES

* Monitoring a relay contact input.

* Monitoring the operation of a sprinkler flow switch.

NAM-AS3 Input Module is made up as follows:-

- 1 x Metal enclosure c/w 20mm knockouts
- 1 x NAM-AS3 PCB c/w internal plastic PCB enclosure with hinged lid.
- 1 x Earth point (on lid)
- 1 x Earth point (inside of enclosure)
- 1 x 200mm Earth Strap
- 1 x Label inside lid for product identification and device address identification.

SENSORTEC-ANALOGUE FAMILY:-

SENSORS:-

- ST-I-AS** - Analogue Ionisation Smoke Sensor
- ST-P-AS** - Analogue Photoelectric Smoke Sensor
- ST-H-AS** - Analogue Heat Sensor
- STB-4** - Standard Base for above sensors

DEVICES:-

- ST-NCP-AS** - Addressable Call Point
- BACK BOX** - Back Box for ST-NCP-AS
- MCM-AS4** - Zone Monitor/Control Unit
- SCM-AS4** - Addressable Sounder Control Module
- NAM-AS3** - Addressable Input Module
- OCM-AS3** - Output Control Module
- SCI-5** - Base mounted Short Circuit Isolator
- SCI-6** - Plate mounted Short Circuit Isolator
- 1-Gang Box** - Single gang box for SCI-6

ADDRESSABLE SOUNDERS:-

- VCT-03-AS-NB** - Addressable Wall Sounder c/w Vector Plate/Cap (R = Red, W = White Plate/Cap).
- VCT-03-CP(W)** - Spare Vector Plate/Cap (White)
- VCT-03-CP(R)** - Spare Vector Plate/Cap (Red)
- VCT-03-NT-AS** - Addressable Sounder c/w STB-4 Base pre-wired to the sounder.
- VPR-SA2-NTAS** - Addressable Sounder, IP65 rated, wall mounted.

INPUT MODULE NAM-AS3

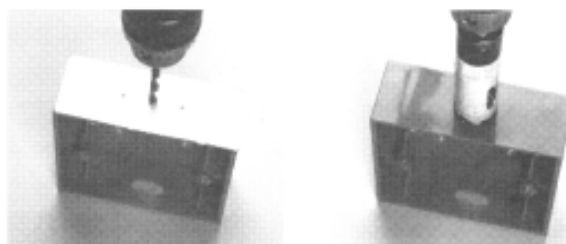
INSTALLATION

1)

- a) Remove the NAM-AS3 boxed unit from its packaging.
- b) Remove the 4 x posi-screws holding the lid to the main enclosure of the NAM-AS3.
- c) Completely remove the single top screw holding the P.C.B. enclosure to the rear of the main enclosure.
- d) Unscrew halfway the two remaining lower screws holding the PCB enclosure to the rear of the main enclosure.
- e) Gently tilt and lift out the P.C.B. enclosure and safely store the PCB enclosure until the wiring stage. (Note: Please take ESD precautions when removing the P.C.B. from the main enclosure.

2)

- a) Using initially a 3-4mm 'pilot' drill and then a special 'knock out' drilling tool, as shown below, drill out the required amount of knockout holes for cable gland entry to the main enclosure of NAM-AS3.



- b) Using the template on page 5 of this manual, mark and drill the main enclosure screw positions in the wall.
- c) Position the NAM-AS3 enclosure to the wall and screw the 4 x fixing screws through the rear of the enclosure.
- d) Terminate all the loop cables and glands as required into the knockouts in the main enclosure.
- e) Insert the PCB enclosure in reverse order as per instructions above.

3)

- a) Terminate all the loop cables and any IP/OP auxiliary switching cables where required into the terminals on the PCB, please see page 8 of this manual for connection details.
- b) Please note there is an earthing stud on the lid and on the rear of the main enclosure box if an earth is required on the fire system devices. An earthing cable/strap is provided with the NAM-AS3.
- c) When all the necessary commissioning has successfully been carried out, replace the lid onto the enclosure, replace the 4 x lid fixing posi-screws.



Electro-static Sensitive Devices.

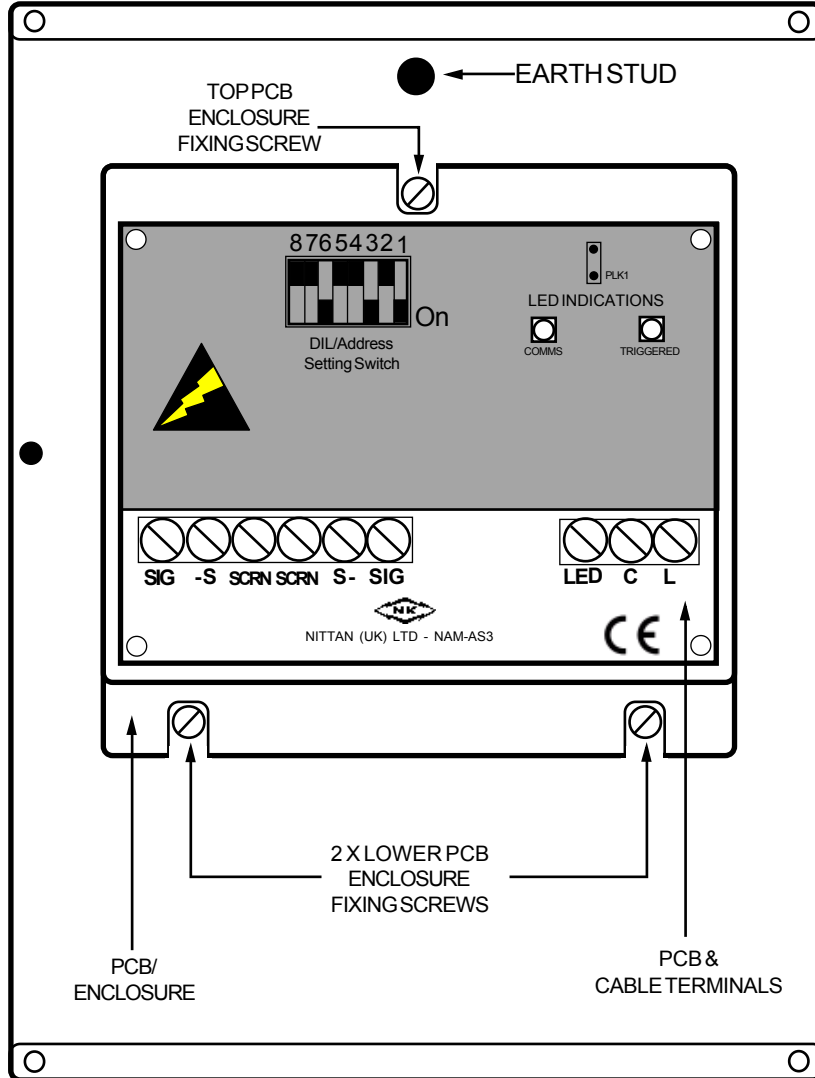
Take suitable ESD precautions when removing or installing printed circuit boards.



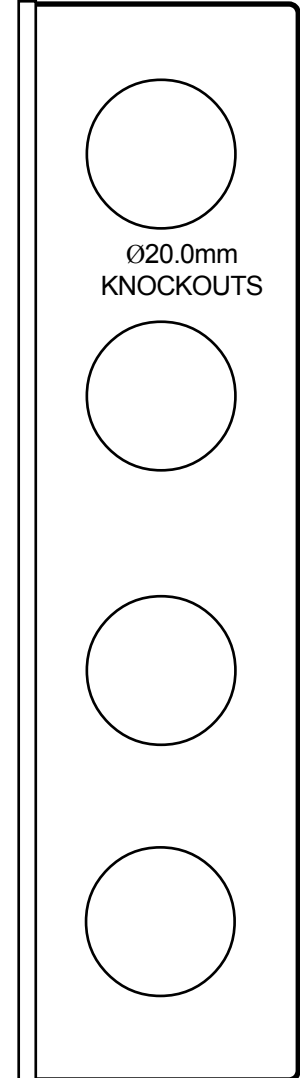
NAM-AS3 LOOP POWERED INPUT MODULE INSTALLATION & TECHNICAL MANUAL

No: NISM/NAMAS3/01	
DATE: JANUARY 2002	
PAGE: 3 of 9	ISSUE: 01

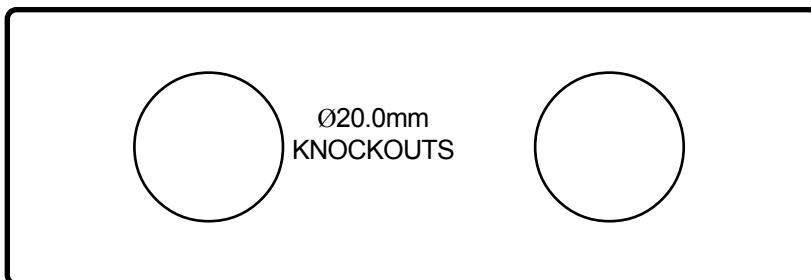
ENCLOSURE DESCRIPTION



TOP VIEW WITH LID REMOVED



SIDE VIEW 1



SIDE VIEW 2



**NAM-AS3 LOOP POWERED
INPUT MODULE
INSTALLATION & TECHNICAL
MANUAL**

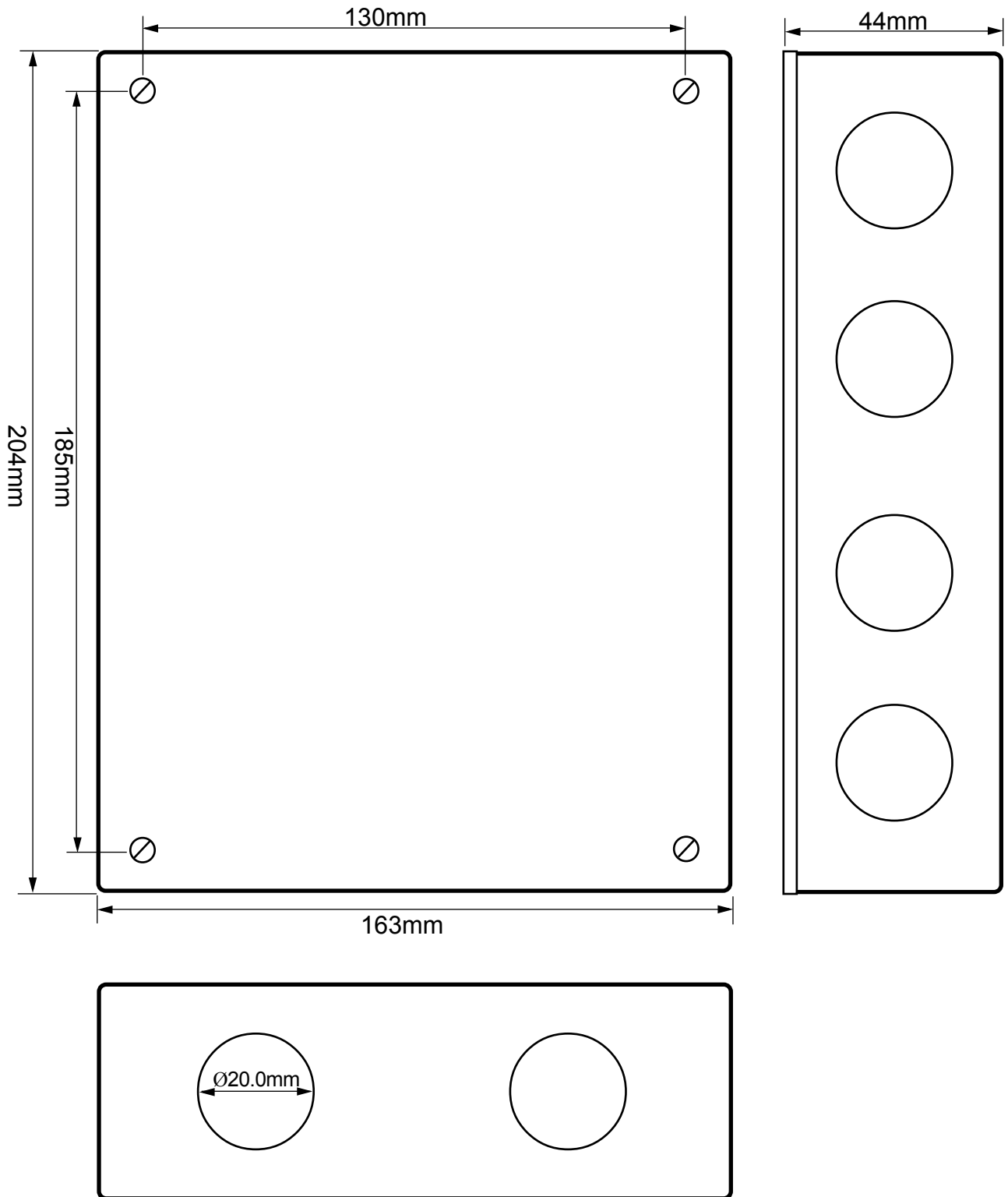
No: NISM/NAMAS3/01

DATE: JANUARY 2002

PAGE: 4 of 9

ISSUE: 01

ENCLOSURE OUTER DIMENSIONS



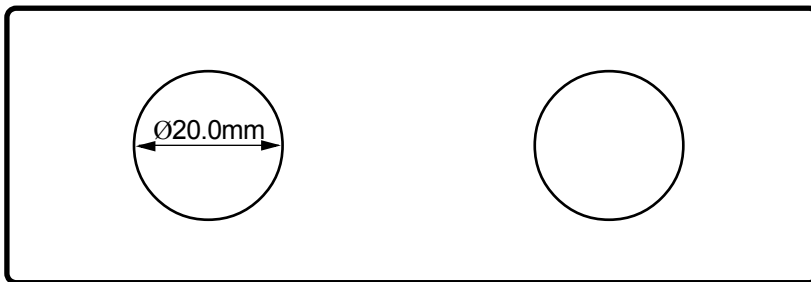
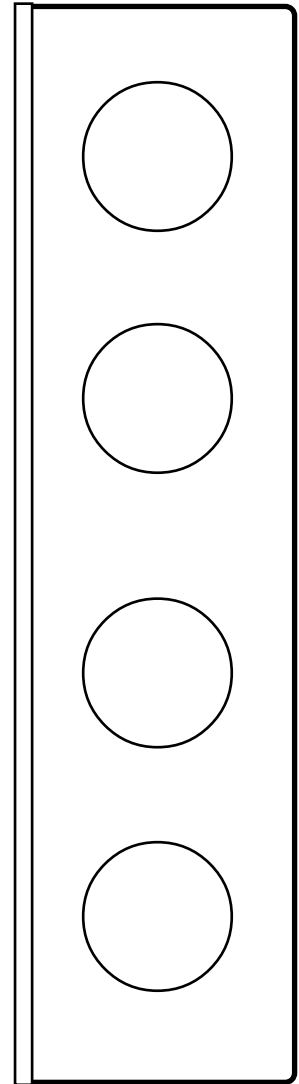
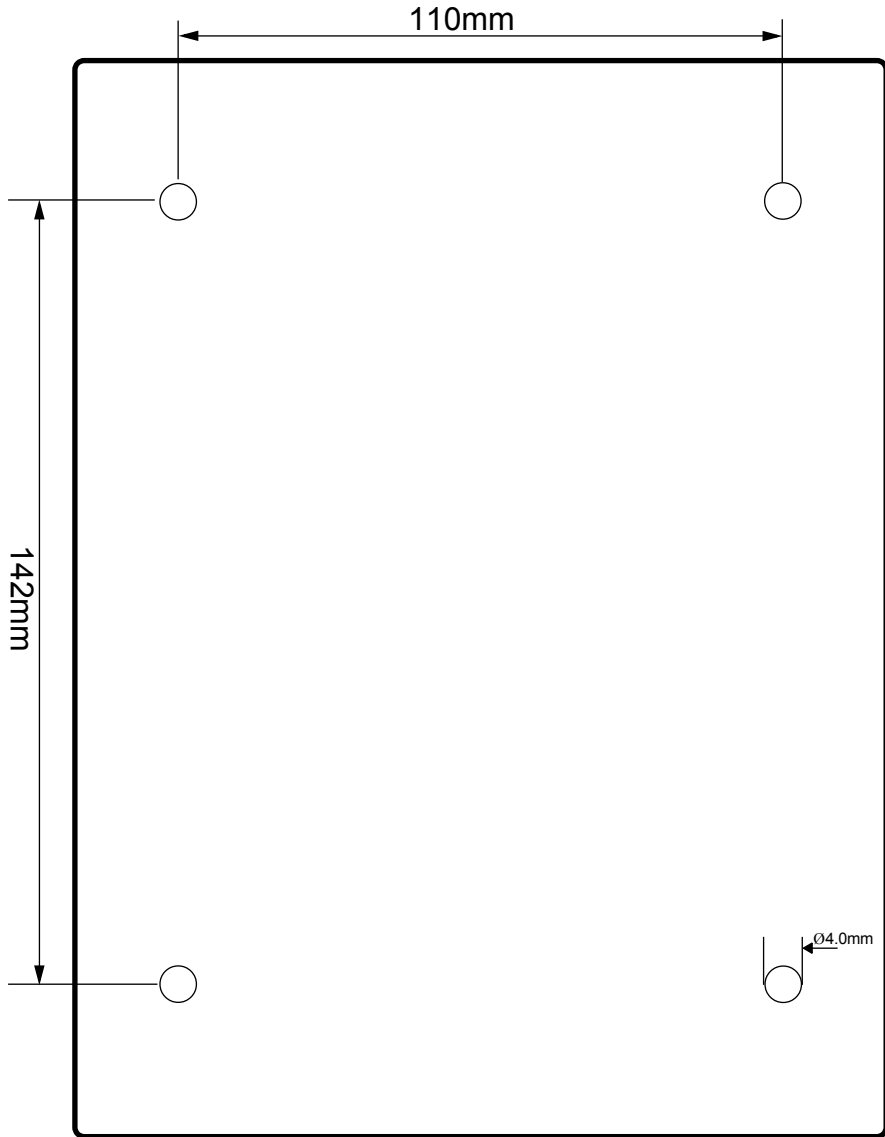
NOT TO SCALE



**NAM-AS3 LOOP POWERED
INPUT MODULE
INSTALLATION & TECHNICAL
MANUAL**

No: NISM/NAMAS3/01	
DATE: JANUARY 2002	
PAGE: 5 of 9	ISSUE: 01

ENCLOSURE DIMENSIONS (INTERNAL MOUNTING HOLES)





**NAM-AS3 LOOP POWERED
INPUT MODULE
INSTALLATION & TECHNICAL
MANUAL**

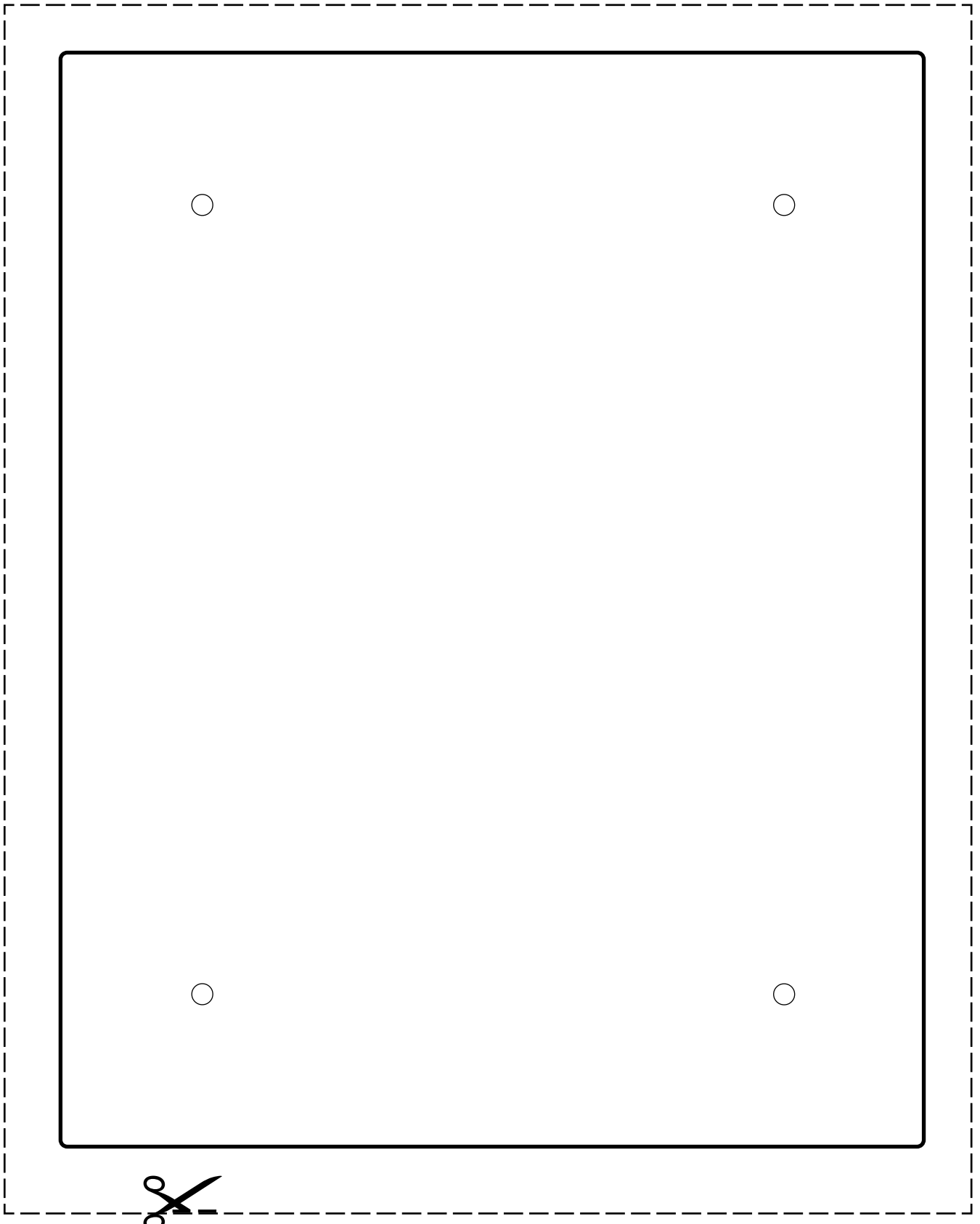
No: NISM/NAMAS3/01

DATE: JANUARY 2002

PAGE:
6 of 9

ISSUE:
01

ENCLOSURE MOUNTING TEMPLATE

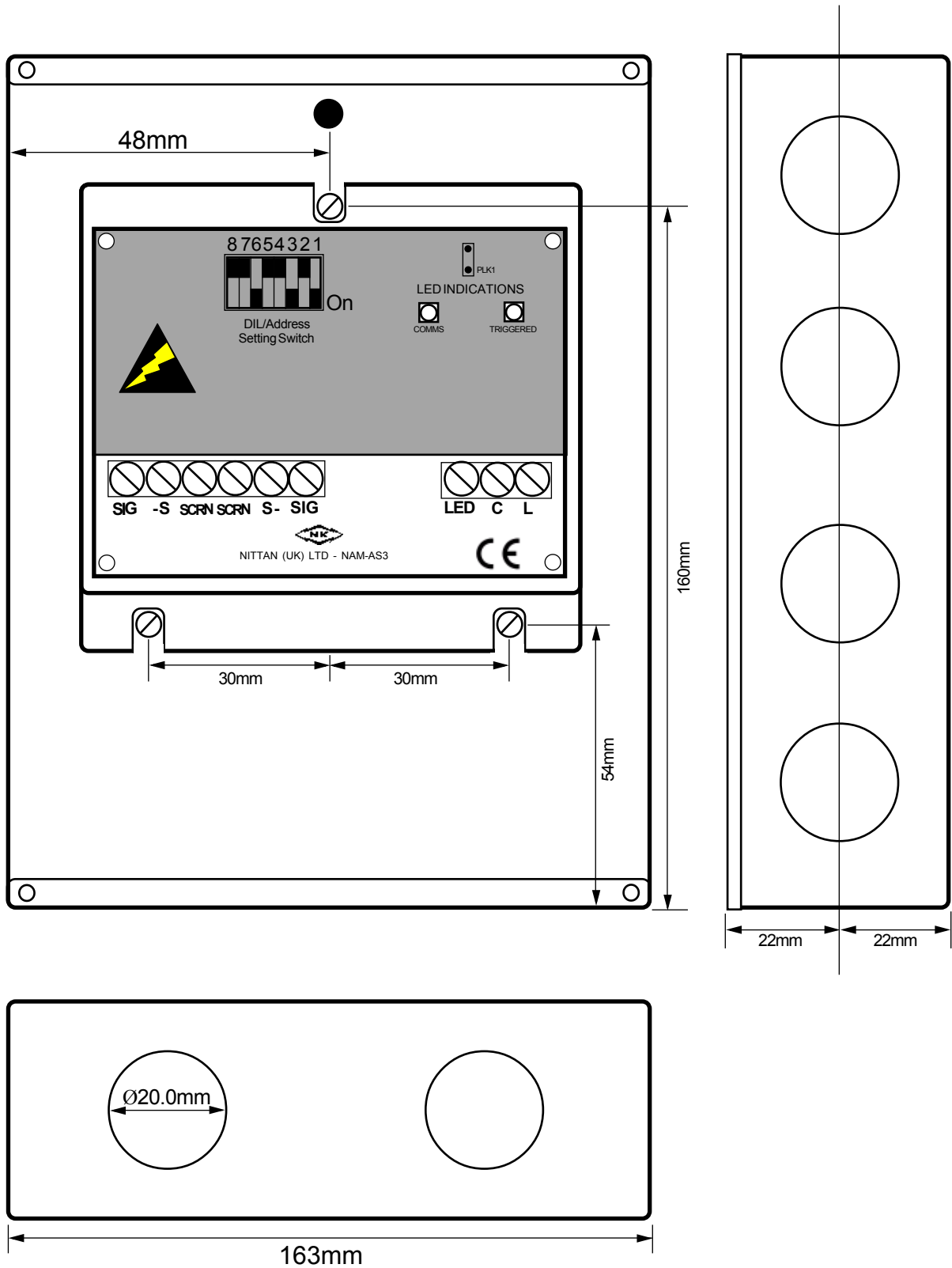




NAM-AS3 LOOP POWERED INPUT MODULE INSTALLATION & TECHNICAL MANUAL

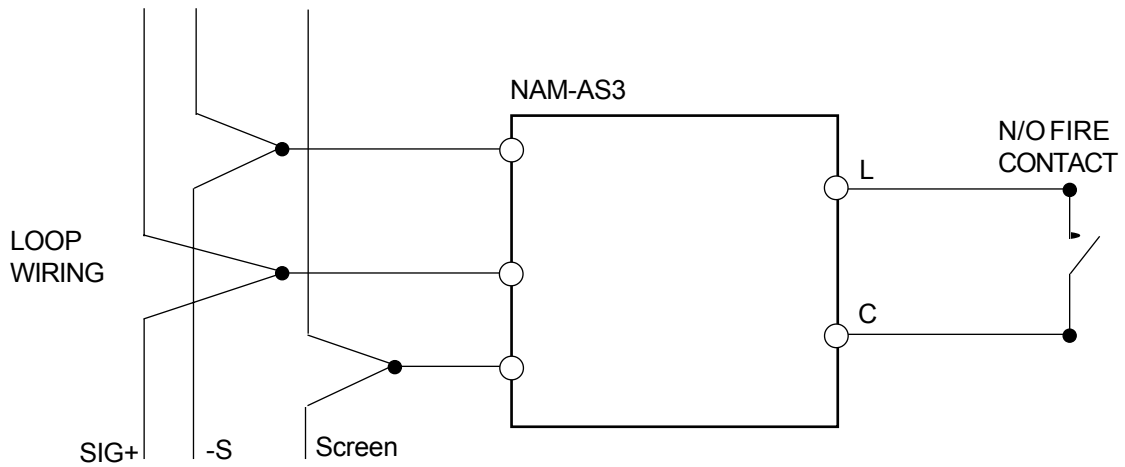
No: NISM/NAMAS3/01	
DATE: JANUARY 2002	
PAGE: 7 of 9	ISSUE: 01

ENCLOSURE (INTERNAL ASSEMBLY DIMENSIONS)



NOT TO SCALE

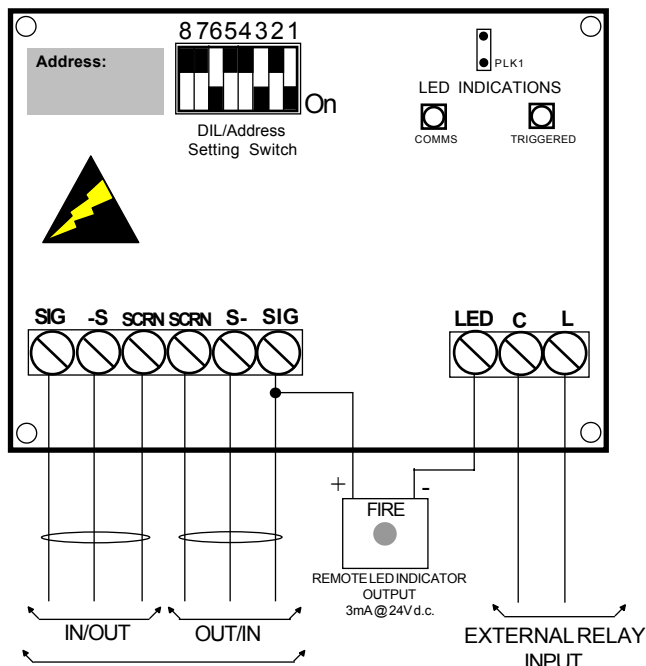
CONNECTION WIRING DETAILS



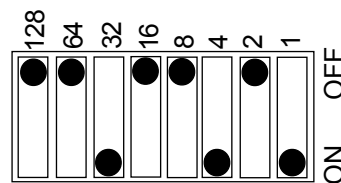
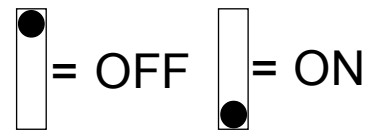
When using a monitored connection, the NAM-AS3 may be used to detect a fault signal in addition to the fire signal, by the provision of a normally closed volt-free relay. This should be connected so as to keep the end-of-line resistor in circuit during normal conditions, and to disconnect the end-of-line resistor during a fault condition. Note that the fault relay contacts should be connected such that operation of the fault relay should not prevent the operation of the fire relay.

CONNECTION DETAILS (PCB) AND ADDRESS SETTING

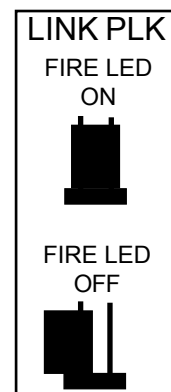
CONNECTIONS TO NAM-AS3 PCB



ADDRESS SETTING



Example address switch is set to 37 Decimal .



Electro-static Sensitive Devices.

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No: NISM/NAMAS3/01	
DATE: JANUARY 2002	
PAGE: 9 of 9	ISSUE: 01

NAM-AS3 - TECHNICAL SPECIFICATION

Part Numbers:-

Model Number	-	-	-	NAM-AS3.
Description	-	-	-	Addressable Input Module (Boxed).
Computer Reference Number	-	-	-	F16N85110

Protocol:-

Communication Protocol	-	-	-	NISM/WFM/02 (Nittan AS Protocol).
Address Setting	-	-	-	8 Bit, DIL Switch
Type Identification Data	-	-	-	2 Bits Fixed.

Ratings:-

Current Consumption*	-	-	-	200 μ A (Quiescent) c/w conventional detector zone.
(*From loop @24v)	-	-	-	4mA (Max.)

Power Supply Requirements	-	-	-	Loop Powered, No external PSU required.
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LED Indications:-

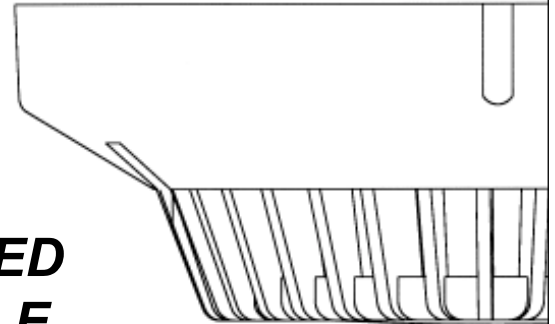
On Board LED Indication	a)	-	-	Red ' COMMS. ' LED:- ('Pulses' when polled).
	b)	-	-	Red ' TRIGGERED ' LED:- ('Pulses' when NAM-AS3 Operate's. Note: 'COMMS' & 'TRIGGERED' LEDs both 'Pulse' simultaneously when the NAM-AS3 operates).

General Specifications:-

Mass	-	-	-	50g (PCB only).
	-	-	-	1.1Kg complete (Boxed).
20mm Knockouts	-	-	-	12 nos.
Operating Temperature	-	-	-	-10 Deg. C. to +50 Deg. C.
I.P. Rating	-	-	-	I.P.43. (Boxed).
Transistor switch 'LED Repeat'	-	-	-	3mA @ 24V d.c. (For remote LED operation).
Earth Strap	-	-	-	200mm length, 24/0.2 \emptyset Green/yellow c/w 2 x 4.5-5mm ring crimp ends.

From world leaders in **SENSOR TECHNOLOGY**
comes **SENORTEC.....**

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NITTAN (UK) LTD



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