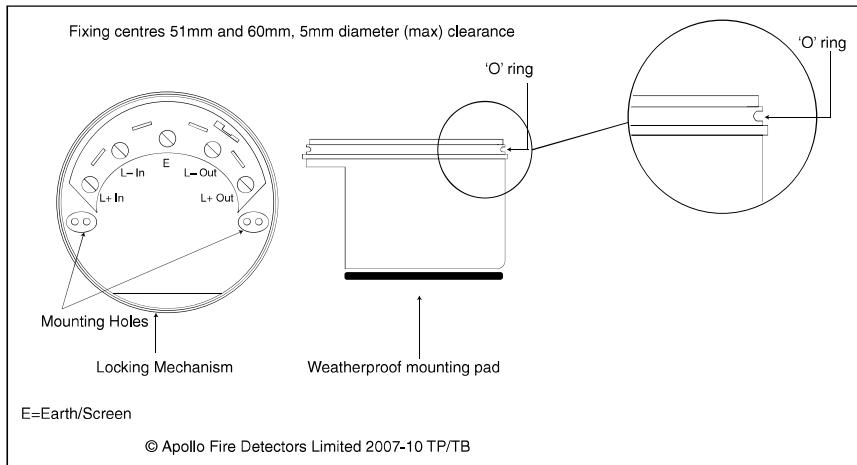


**IP Rating**

To maintain the integrity of the enclosure it is essential that suitable IP rated cable glands be used along with the 'O' ring provided and weatherproof mounting pad.

**CAUTION: To ensure water tight integrity cables must be fed through the bottom of the base in the cable entries provided.**



**Fig. 4** Base diagram

**Troubleshooting**

Before investigating individual units for faults, ensure the system wiring is fault free.

**Fault Finding**

	<b>Problem</b>	<b>Possible Cause</b>
1	Control panel reports zone fault	A. EOL resistor not fitted or incorrect value B. Detector removed C. Incorrect zone wiring D. Incompatible control panel
2	Control panel reports alarm	A. Incorrect EOL resistor B. Detector or call point in alarm state
3	Sounder fails to operate	A. Incorrect wiring B. Sounders disabled at control panel
4	Sounder operates continuously	Incompatible control panel
5	Manual Call Point not activating system	Wiring polarity incorrect



## AlarmSense® Installation Guide

**General**

AlarmSense® is a range of conventional detection and alarm products designed to be connected to the same pair of supply wires. It is not compatible with other ranges of detectors and must be used with AlarmSense compatible control equipment.

The AlarmSense Sounder Base, Sounder Visual Indicator Base and Alarm Relay referred to in this guide incorporate priority/non-priority switching. If this enhanced feature is required, please check with the control equipment manufacturer that the feature is accessible.

The basic functions of all these devices are compatible with all AlarmSense panels and are backwards compatible with all previous AlarmSense devices.

The products are not suitable for outdoor use. Insulation checks on cabling must be conducted prior to connection of AlarmSense devices.

**AlarmSense Sounder Base**

The AlarmSense Sounder Base, Part No. 45681-510, see **Fig. 1a**, is an integrated base and sounder. Each sounder base has a switch to set it to either a priority sounder or a non-priority sounder.

**Technical Data:**

High volume setting  
Low volume setting

maximum volume 79dB (A)  
volume nominally 67dB (A)

**CAUTION: A Remote Indicator cannot be attached to the AlarmSense Sounder Base.**

Note: The Sounder Base is factory set as a priority sounder; high volume (default).

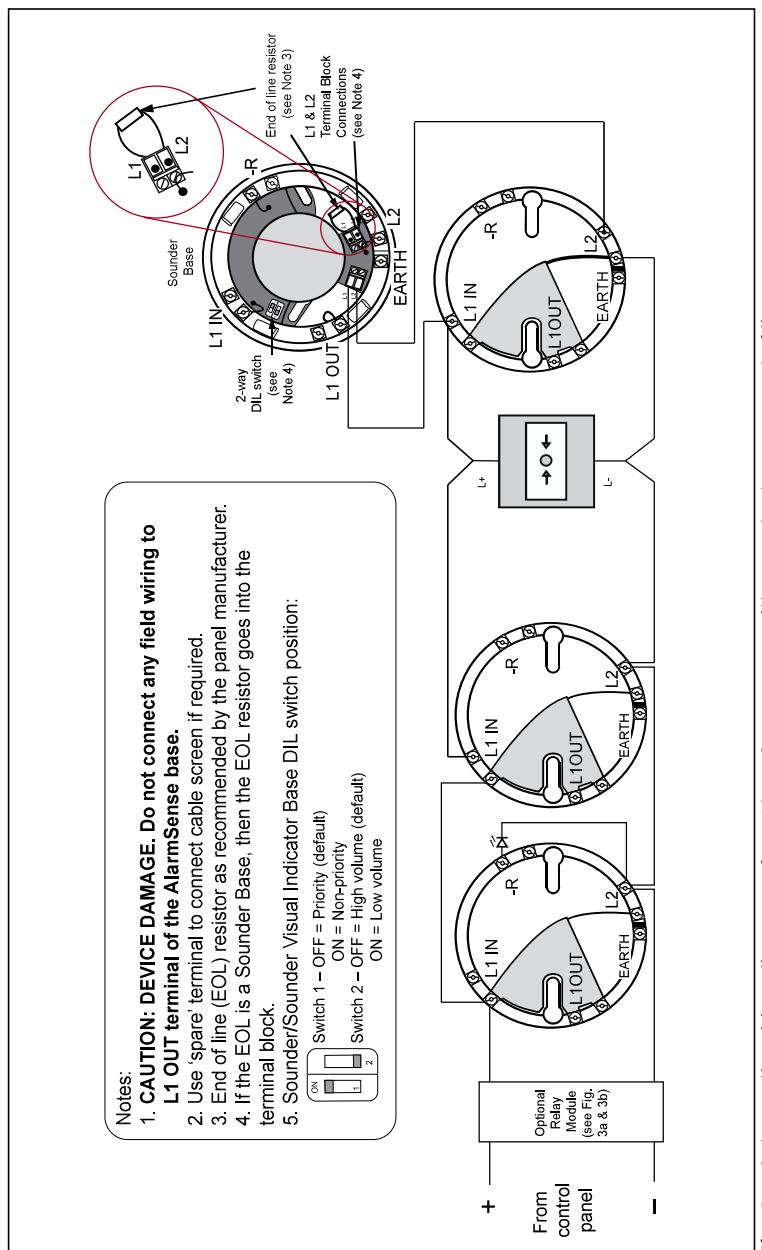


Fig. 1a Schematic wiring diagram of an AlarmSense zone with sounder base as end of line

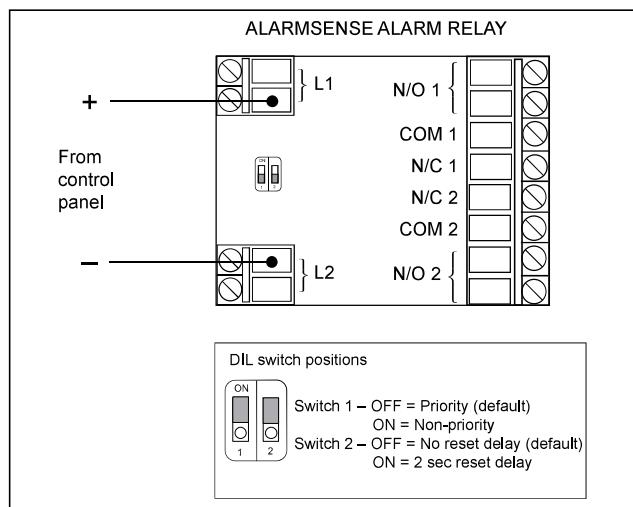


Fig. 3b AlarmSense Alarm Relay wiring - for volt free contacts

**AlarmSense Open Area Alarm Devices**

The AlarmSense Open Area Alarm Devices are available in the following options

Part No.	Description
55000-017	AlarmSense Open Area Sounder Visual Indicator
55000-018	AlarmSense Open Area Sounder
55000-035	AlarmSense Open Area Visual Indicator

The tone frequency incorporated in these products is the Apollo evacuate tone: 840Hz for 0.5s and 558Hz for 0.5s. The flash rate of the visual indicator where incorporated is 1Hz.

**Technical Data**

Quiescent Current at 12V	<100µA
Maximum Surge Current	200µA
Head Removal Load	47Ω for 10ms every 4s
Polarity	Polarity insensitive
Sound Output (Head)	up to 99dB(A) at 1m
IP Rating	65 (No condensation or icing)
<b>In Alarm Current (Nominal) @ 24V</b>	
Sounder	17.5mA
Visual Indicator	8mA
Sounder Visual Indicator	19mA

**Installation**

1. Drill out the cable entries and mounting holes as required on the base (using a 20mm hole cutter for the cable entries), taking care not to damage the electronics. Do not attempt to knock these out as the base will be damaged.
2. Secure the base to the mounting surface with pan-head screws. If IP integrity is required, fit the weatherproof mounting pad between the base and the mounting surface. Fit the 'O' ring to the base (Fig. 4). Attach head to base using a lubricant such as silicone grease if required.
3. To lock the sounder in the base, snip the break-out on the base rim (location shown in Fig. 4). Fit the sounder to the base, using the above steps if IP integrity is required.

## AlarmSense Alarm Relay

Part No. 55000-835 is a relay used to switch and monitor conventional sounders and visual indicators on an AlarmSense zone. The relay can be set to priority or non-priority by means of a DIL switch.

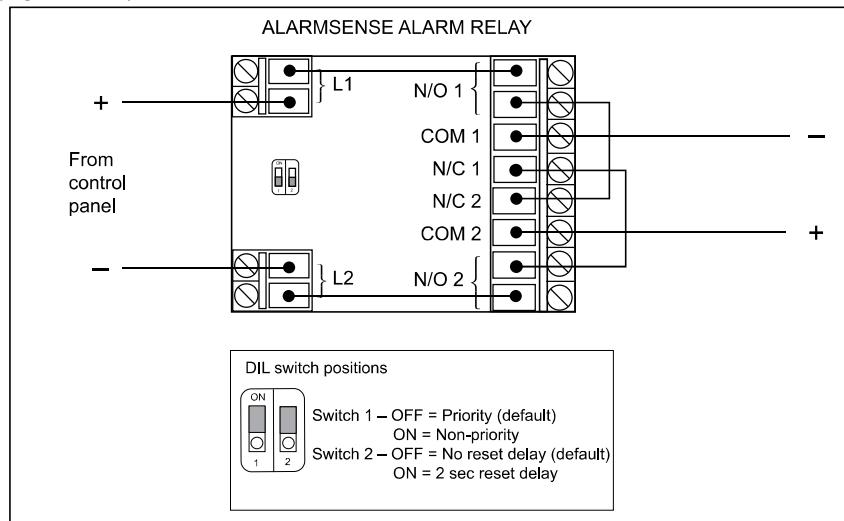
Note: The Alarm Relay is factory set as a priority alarm relay; no reset delay (default).

### Technical Data

Operating Voltage	9-33Vdc
Relay Operation Voltage	>18Vdc
Relay Rest Voltage	>15Vdc
Quiescent current at 12V	<20µA
Surge current at relay set Voltage	15mA for 20mA
Relay set current at 12V	<120µA
Relay contact ratings	1A @ 30Vdc

### Installation of Conventional Sounders and Visual Indicators

If connecting conventional sounders and visual indicators to an AlarmSense zone, the alarm relay (**Fig. 3a & 3b**) has to be placed first in the zone.



**Fig. 3a** AlarmSense Alarm Relay wiring - when used for sounders

Note: The Alarm Relay has to be mounted in a suitable enclosure rated at IP20.

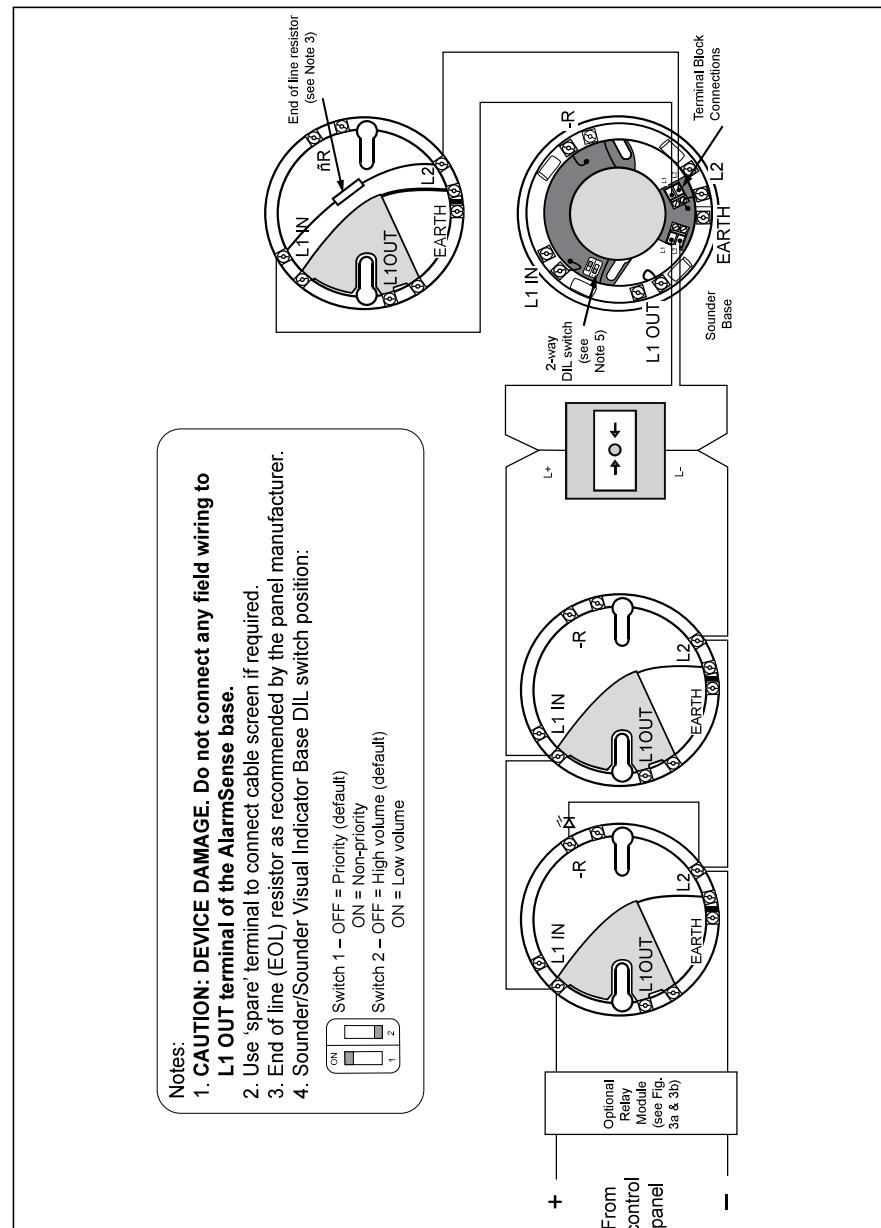
1. Connect negative to L2 and the 12/24V connection to L1.
2. Connect between L1 and N/O1.
3. Connect L2 to N/O2.
4. Connect N/C1 to N/O2.
5. Connect N/O1 to N/C2.
6. Positive zone wiring connects to COM 2 and the negative to COM 1.
7. Connect end-of-line resistor supplied by the panel manufacturer between COM 1 and COM 2 (See **Fig. 3a & 3b**).
8. Set the priority/non-priority feature using the DIL switch.

Note: The Alarm Relay will reset on a 'silence alarms' signal from the control panel.

## AlarmSense Base

Wiring connections to the AlarmSense base, Part No. 45681-244, are shown in **Fig. 1b**. The incoming and outgoing cables are connected to the same terminals, L1 IN (+ve Line) and L2 (-ve Line). A remote indicator can be connected to each base, -R (Remote LED +ve) and L2 (Remote LED -ve).

Note: Installations must use less than 3m of cable when wiring a remote connection (L2/R-).



**Fig. 1b** Schematic wiring diagram of an AlarmSense zone

### AlarmSense Sounder Visual Indicator Base

The AlarmSense Sounder Visual Indicator Base (**Fig 2a**), Part No. 45681-509, combines a sounder with a visual indicator and a detector base in one unit. The visual indicator is activated whenever the sounder is active and cannot be controlled separately.

### Installation

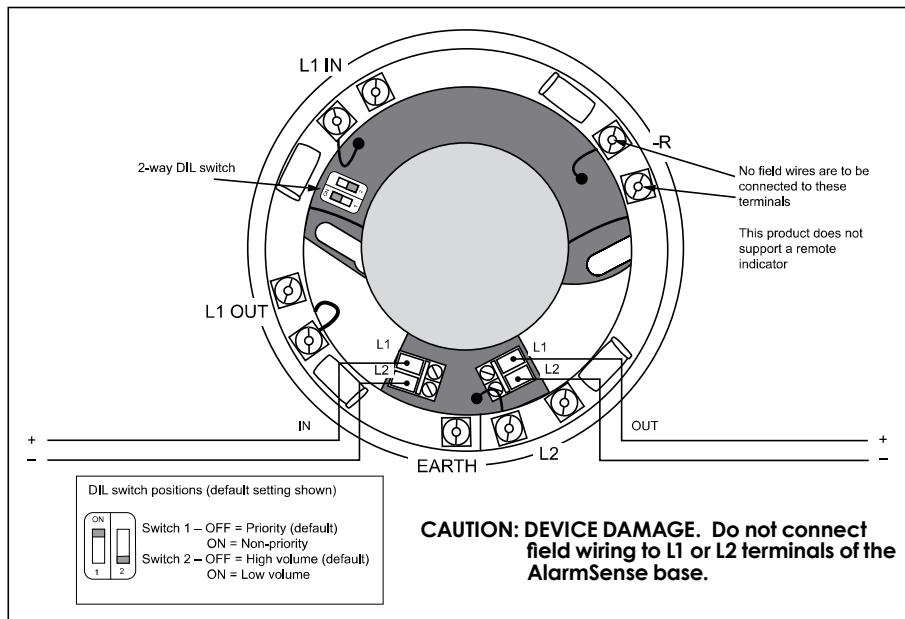
Note: The Sounder Visual Indicator Base is factory set as a priority sounder visual indicator; high volume (default).

**CAUTION: DEVICE DAMAGE. Do not connect field wiring to L1 OUT terminal of the AlarmSense base.**

1. Bring incoming and outgoing cable tails through the aperture in the sounder. Screw the sounder to a mounting box or directly to the mounting surface as required.
2. Connect the incoming two cables to +L1 and -L2 and outgoing cables to -L2 and +L1.
3. The priority/non-priority feature and volume are set by means of the DIL switch, see **Fig 2a & 2b**.

Note: This feature is not available on all AlarmSense control panels. Please check with the control panel manufacturer.

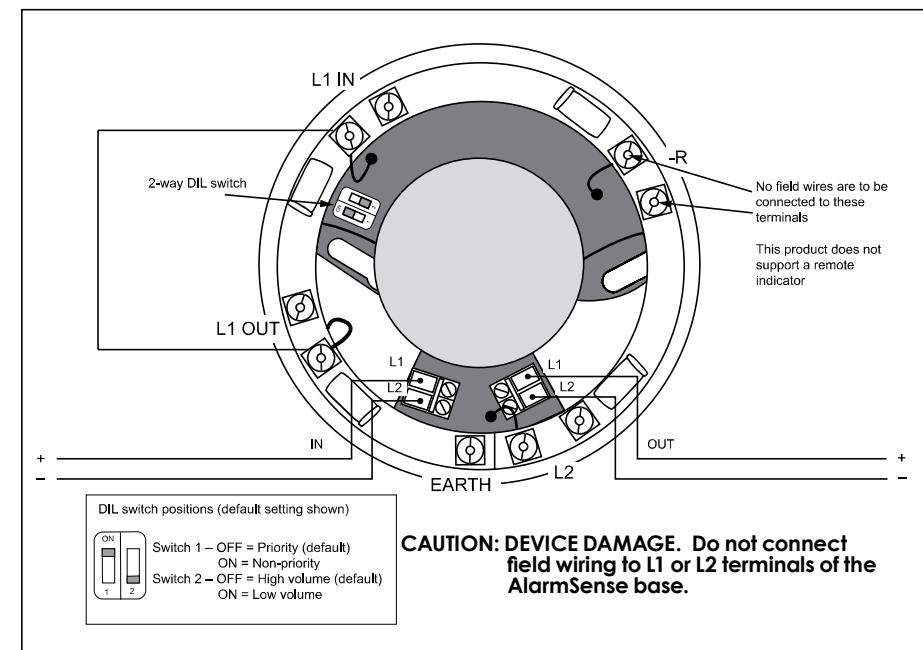
**Apollo recommends that when a heat detector is attached to a sounder base/sounder visual indicator base that the sounder is set as a 'priority' sounder.**



**Fig 2a** Combined Sounder/Sounder Visual Indicator Base

With reference to **Fig 2b**, for stand-alone sounders or sounder visual indicators, fitted with either a white cap, Part No. 45681-294 or red cap, Part No. 45681-295, carry out the following:

1. Follow the installation steps 1–3 on page 4.
2. A wire link (not supplied) is required between L1 IN and L1 OUT on the outer ring terminals to disable the head removal signal, as shown in **Fig 2b**.
3. When using the sounder base or sounder visual indicator base in stand-alone mode, the non-priority feature is not available.



**Fig. 2b** Stand-alone Sounder/Sounder Visual Indicator Base

### Technical Data: AlarmSense System

Detectors	9-33V
Sounders (off)	9-15V
Sounders (on)	18-33V

Sound Pressure Level polar plot data is available in document PP2203 which is available on request.