PP2371/2009/Issue 2

OPEN-AREA ALARM DEVICES

FUNCTION

The Open-area Alarm Devices are loop-powered, wall mounted devices which are connected to any XP95® or Discovery® system.

The range comprises sounders, beacons and sounder beacons, all designed to fit to a common mounting base. Details are shown in Table 1 overleaf.

Open-area Alarm Devices

FEATURES

The alarm devices offer:

- three tones on standard devices; Apollo, Slow Whoop and DIN – all of which comply with EN54–3:2001
- two volume settings 92dB(A) and 100dB(A)
- synchronisation of tones and flashes
- individual & group addressing
- built-in isolator (EN54 versions only)
- wire-to-base for simple interchange of device
- device locking facility

A nominal sound output of 100dB(A) is achieved at a current consumption of 5mA in the case of the sounder and 8mA for the sounder beacon.

Many control panels will be able to drive up to 20 sounders and up to 15 sounder beacons per loop on average. The maximum number of devices that may be connected to a particular loop should, however, be determined by a loop loading calculation using the Apollo Loop Calculator. This is available via the Apollo website www.apollo-fire.co.uk.

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Device type & Part no	Colour	Tone	Flash
Sounder 55000-001	red	Apollo Slow whoop DIN	
Sounder 55000-002	white	Apollo Slow whoop DIN	
Sounder 55000-003	red	Apollo Australia New Zealand	
Sounder 55000-004	white	Apollo Australia New Zealand	
Sounder beacon 55000-005	red	Apollo Slow whoop DIN	Apollo
Sounder beacon 55000-006	white	Apollo Slow whoop DIN	Apollo
Sounder beacon 55000-007	red	Apollo Australia New Zealand	Apollo Australia New Zealand
Sounder beacon 55000-008	white	Apollo Australia New Zealand	Apollo Australia New Zealand
Beacon 55000-009	red		Apollo
Beacon 55000-010	white		Apollo
Beacon 55000-011	red		Australia New Zealand
Beacon 55000-012	white		Australia New Zealand

Table 1 *Open-area Alarm Devices*

Since the alarm devices are intended for use in open areas, it is possible for more than one device to be audible at any given point in a building. For this reason, the operation of all may be synchronised by the control panel.

All the alarm devices can be assigned group addresses as well as individual addresses, so that the functional options of the sounder are identical with those of the Sounder Control Unit part no 55000-182.

ELECTRICAL CONSIDERATIONS
All devices are powered directly from the loop and need no external power supply. They operate at 17–28V DC and are polarity sensitive.

TONE FREQUENCY AND VOLUME CONTROL
The alarm devices are supplied with three selectable tones and flashes *either*—Apollo, Slow Whoop and DIN (see table 2) *or* Apollo, Australia and New Zealand.

The Apollo tone version produces a pulsed alert tone of 984Hz, 1 second off and 1 second on, and a continuous evacuation tone of 644Hz for 0.5 seconds followed by 984Hz for 0.5 seconds.

The volume control can be used to adjust the sound from 100dB(A) to 92dB ±3dB(A) if required.

SYNCHRONISATION
The sounder also offers synchronisation of continuous and pulsed tones. This ensures the integrity of the alert signals – tones from different sounders do not merge into one signal that could be mistaken for an 'evacuate' tone.

ADDRESSING
The open-area alarm devices respond to their own individual address set with a DIL switch.

They can also respond to a 'Group Address' which allows multiple sounders to be controlled simultaneously. A group address may be any spare address between 112 and 126 and is selected by means of a 4 segment DIL switch. A device under group address control must have an individual address between 1 and 111 otherwise a fault value of 4 is transmitted. Devices not using the group address facility may be addressed at any address (1–126).

PROTOCOL COMPATIBILITY
The alarm devices will operate only with control equipment using the Apollo XP95 or Discovery protocol. The features of the Open-area alarm devices are available only when the device is connected to a control panel with the appropriate software.

MECHANICAL CONSTRUCTION
The alarm devices have a base which is fitted to the mounting surface and wired as a 'first fix'.

Dimensions and weight of Sounder Beacon :

All models:		104 x 97.5mm
Weight,	sounder	225g
	sounder beacon	260g
	beacon	205g

DIL Switch Setting		Tone	Output Bit 1 set to logic 1	Output Bit 0 set to logic 1	Output Bit 0 & 1 set to logic 1
5	6				
0	0	Apollo Standard	Apollo alert & Beacon	Apollo Evacuate & Beacon	Apollo Evacuate & Beacon
1	0	Slow Whoop	Constant tone & Beacon	Dutch NEN2575 & Beacon	Dutch NEN2575 & Beacon
0	1	DIN Tone	Constant tone & Beacon	German DIN33404 & Beacon	German DIN33404 & Beacon
1	1	Apollo Standard	Apollo alert & Beacon	Apollo Evacuate & Beacon	Apollo Evacuate & Beacon

Table 2 *Tone selection*

TECHNICAL DATA

Operating voltage (polarity sensitive)	17–28V DC
Maximum Loop Current consumption at 24V	
switch-on surge,	1.2mA for <1 sec
quiescent	333µA
alarm, sounder 92/100dB(A)	5mA
alarm, sounder beacon	8mA
alarm, beacon	3.1mA
Maximum sound output (See PP2203 for full details)	100dB(A)
IP rating (standard version)	65
Opeating temperature	–10°C to +55°C

For sound pressure levels measured to EN54-3 see document PP2203 and for isolator operation information see document PP2090, both available upon request.

Note: All dB(A) figures are to within ±3dB(A)