

Intelligent Open-Area Sounder VAD



Product Overview

Product	Intelligent Open-Area Sounder VAD Cat. W - Red Body (White Flash) (W-3.1-10)
Part No.	SA5500-550
Product	Intelligent Open-Area Sounder VAD Cat. W - Red Body (Red Flash) (W-3.1-9)
Part No.	SA5500-551
Product	Intelligent Open-Area Sounder VAD Cat. W - White Body (White Flash) (W-3.1-10)
Part No.	SA5501-550
Product	Intelligent Open-Area Sounder VAD Cat. W - White Body (Red Flash) (W-3.1-9)
Part No.	SA5501-551
Digital Communication	CoreProtocol®, Discovery and XP95

Product Information

The Intelligent Open-Area Sounder Visual Alarm Devices (VADs) have been developed as primary or supplementary alarm devices and can be connected to CoreProtocol, Discovery and XP95 systems.

A combined notification device, the Sounder VADs may be used to provide both audible and visual alarm in situations where there's a risk that just one would not suffice. For example, where there is a risk that sounders will not be heard, in areas of high background noise such as in a workshop or machine room.

They may also be required where deaf or hearing-impaired persons may be present. The Intelligent Open-Area Sounder VADs are approved EN 54-23 Cat W. devices in both the High and Low Power settings, and offer 6 EN 54-3 approved volume levels to choose from, as well as one non-approved volume level for specialist applications.

Manufacturer's Specification

All data is supplied subject to change without notice. Specifications are typical at 24V, 25°C and 50% RH unless otherwise stated.

Supply voltage	17V - 35V dc
Digital communication	CoreProtocol, Discovery and XP95
Quiescent current	1.2 mA
Alarm current, Sounder and VAD on	
High Coverage	19 mA
Low Coverage	14.5 mA
Flash Rate	0.5 Hz
Maximum sound output at 90° at 1m	101 dB(A)
Product operating temperature	-10°C to +55°C
Storage temperature	-10°C to +55°C
Humidity	0% to 95% RH (no condensation or icing)
IP Rating	IP21C
Standards	EN 54-23, EN 54-17, EN54-3
Dimensions	113 mm diameter x 65 mm deep
Weight	214 g
Materials	Housing White or red flame-retardant polycarbonate Terminals Tin plated stainless steel

Note: For Isolator data refer to Short-Circuit Isolation data sheet PP2090 available from www.apollo-fire.co.uk

- EN 54-3 Compliant Sounders with 101dB output
- 7 Adjustable volume levels, 15 Tone Pairs
- EN 54-23 Compliant Category W VADs
- Configurable Coverage volume, High and Low setting
- Built-in controllable Isolator (when used with XPERT 8 Base)
- Flash rate 0.5Hz
- Available in Red or White Flash
- Wide angle of visibility
- Easy installation on Apollo XPERT 7 or 8 Base

*Note: Features are panel dependent. Please consult your panel manufacturer to confirm feature availability.

36 Brookside Road, Havant | Tel: +44 (0)23 9249 2412 | Email: enquiries@apollo-fire.com
Hampshire, PO9 1JR, UK. | Fax: +44 (0)23 9249 2754 | Web: www.apollo-fire.co.uk

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Base compatibility

The Intelligent Open-Area VADs are compatible with the mounting bases and accessories (sold separately) that follow:

- Part No. 45681-210 XPERT 7 Base
- Part No. SA5000-200 XPERT 8 Base - White (Apollo Recommended)
- Part No. SA5000-202 XPERT 8 Base - Red (Apollo Recommended)
- Part No. 45681-797 BESA Adaptor Plate (Pack of 5)

Please note to make use of the Short Circuit Isolator (SCI), the VAD must be installed on the SA5000-200/202 XPERT 8 Bases.

The right tone for the installation

The Intelligent Open-Area Sounder VAD offers a choice of 15 evacuation tones, including the standard Apollo evacuation tone. A tone is selected during commissioning in order to suit local regulations or customs. Whichever evacuation tone is selected there is a secondary tone which may be used for alerting or warning of a possible evacuation.

The right level of sound

The sounder is set during commissioning to one of seven levels of sound, the highest level being nominally 101 db(A) at 1m. At less than 60 db(A) the lowest level falls outside the scope of the EN 54 standard. It has been included to provide a very local warning for the use of personnel in particular environments, such as nurse stations in hospitals - as outlined in Healthcare Technical Memorandum, (HTM 05-01 & HTM 05-02).

Addressing

The Open-Area Alarm Devices respond to their own individual address which is set via the appropriate XPERT address card.

Group address on CoreProtocol systems are set using the fire control panel. Soft addressing is only available where supported by the fire control panel, in this instance, no XPERT card should be fitted to the XPERT Base. Note - Hard addressing (using XPERT card) always takes priority over soft addressing.

Sounder, Visual Alarm or both

The Intelligent Open-Area Sounder VAD normally switches both sounder and visual alarm on to provide an alert or evacuation signal. In situations where a flash or a sounder is not permitted/required, it is a simple choice as to whether to switch both sounder and visual alarm together or to switch either as necessary via the control panel.

The VAD coverage setting can be selected within the panel config. If being used in XP95 mode, follow the DIL switch assignment guidance in the Installation Guide for VAD coverage settings, Volume and Tone selection, and Group Addressing.

Location-specific volume setting

Detectors and sounder indicators are installed in many different types of environment. When configuring the Intelligent Open-Area Sounder VAD devices the adjustment of the volume can be done at the point of installation. The commissioning engineer simply sets the control panel to 'Set-up'* and then walks from one device to the next to set the required volume, using a magnetic wand. When all devices have been set the engineer simply presses a button on the control panel which then registers all the individual volume settings.

Current Draw

Volume Setting		
Part No	SA5500-550 ~ SA5501-550 ~ SA5500-551 ~ SA5501-551	
Volume Setting	Combined Sounder and Visual Alarm Current ± 0.5mA	
	Low Power VAD	High Power VAD
1**	10.2	14.3
2	10.9	15.0
3	11.6	15.7
4	12.3	16.4
5	13.0	17.1
6	13.7	17.8
7	14.4	18.5

**NOT EN 54 Approved

Device LED	Sounder VAD Coverage	
	High Current: 19mA	Low Current: 14.5mA
White Light Flash - SA5500-550 SA5501-550	(W-3.1-10): Coverage cuboid volume of 3.1m x 10m x 10m = 310m ³	(W-2.4-7.5): Coverage cuboid volume of 2.4m x 7.5m x 7.5m = 135m ³
Red Light Flash - SA5500-551 SA5501-551	(W-3.1-9): Coverage cuboid volume of 3.1m x 9m x 9m = 251.1m ³	(W-2.4-7.5) coverage cuboid volume of 2.4m x 7.5m x 7.5m = 135m ³

Application

The base must be positioned on the wall, with the XPERT card pointing downwards for correct orientation and coverage, as per Figure 1.

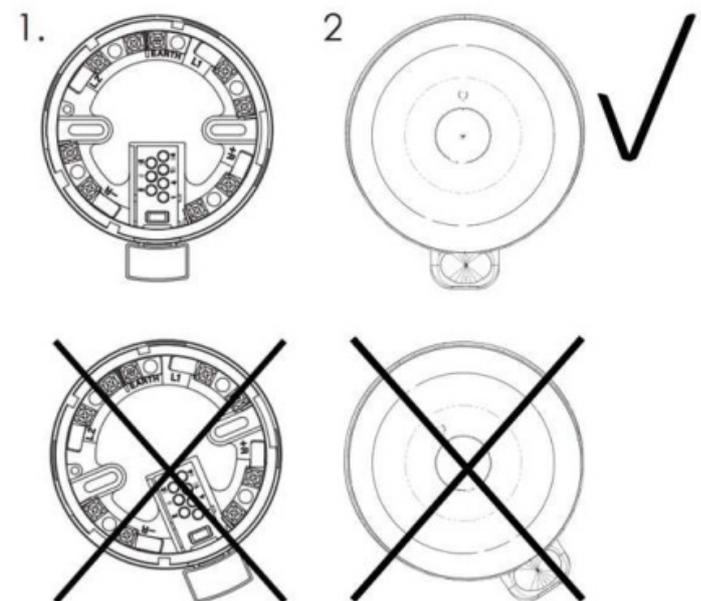


Figure 1

Accessory part 45681-797 can be used when mounting with BESA Boxes to ensure correct alignment.

Figure 2 shows the coverage volume for the wall category VAD with an example calculation.

H - The maximum height of the device on the wall in meters with a maximum value of 3.1 m.

W - The width in metres of the square volume covered when the device is mounted to the wall at required height.

Example - Part No. SA5501-550 (W-3.1-10) - coverage cuboid volume of $3.1 \times 10 \times 10 = 310 \text{ m}^3$

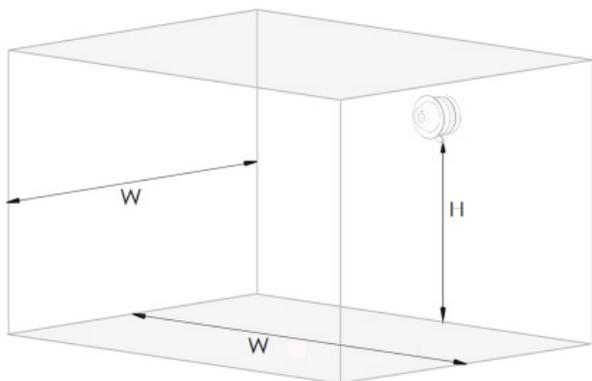


Figure 2

EMC Directive 2014/30/EU

The Intelligent Open-Area Sounder VAD complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this data sheet.

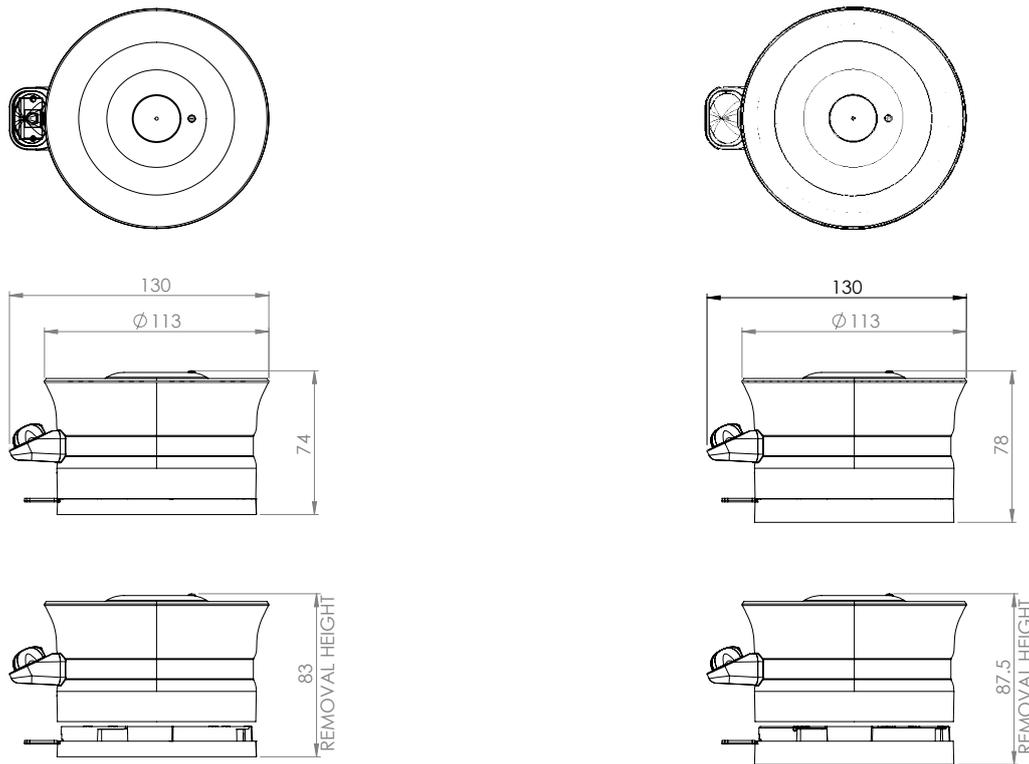
A copy of the Declaration of Conformity is available from the Apollo website: www.apollo-fire.co.uk

Conformity of the Intelligent Open-Area Sounder VAD with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to them.

Construction Products Regulation (EU) 305/2011

The Intelligent Open-Area Sounder VAD complies with the essential requirements of the Construction Products Regulation (EU) 305/2011.

A copy of the Declaration of Performance is available from the Apollo website: www.apollo-fire.co.uk.



FITTED TO 45681-210 XP95 BASE

FITTED TO SA5000-200 SOTERIA BASE

Figure 3

Intelligent Open-Area Sounder Visual Indicator Tone Table

Byte value	Primary tone	Frequency	Tone No.	EN 54-3 Approved	Secondary tone	Frequency	Tone No.	EN 54-3 Approved
1	Apollo evacuate tone	522 Hz for 0.5 s, 707 Hz for 0.5 s	T21	Y	Apollo alert tone	1 s off, 707 Hz for 1 s	T22	Y
2	Alternating (Hochiki and Fulleon)	925 Hz for 0.25 s, 626 Hz for 0.25 s	T12	Y	Continuous (Hochiki and Fulleon)	925 Hz	T11	Y
3	Medium sweep	800 - 970 Hz at 1 Hz	T14	Y	Continuous	970 Hz	T13	Y
4	Fast sweep	2500 Hz - 2850 Hz at 9 Hz	T16	N	Continuous	2850 Hz	T15	N
5	Dutch slow whoop (sweep)	500 Hz - 1200 Hz for 3.5 s, 0.5 s off	T3	Y	Continuous	825 Hz	T2	Y
6	DIN tone (sweep)	1200 - 500 Hz for 1 s	T4	Y	Continuous	825 Hz	T2	Y
7	Swedish fire tone	660 Hz, 150 ms On, 150 ms off	T18	Y	Swedish all clear signal - continuous	660 Hz	T17	Y
8	Australian (fast rise sweep)	3 x (500 Hz - 1200 Hz for 0.5 s off), 1s off	T6	N	Australian alert tone	420 Hz, 0.625 s, 0.625 s off	T5	N
9	New Zealand (slow rise sweep)	500 - 1200 Hz for 3.75 s, 0.25 s off	T7	N	New Zealand alert tone	420 Hz, 0.625 s, 0.625 s off	T5	N
10	US temporal LF (ISO 8201)	3 x (970 Hz, 0.5 s on, 0.5 s off), 1 s off	T19	N	Continuous	970 Hz	T13	Y
11	US temporal HF (ISO 8201)	3 x (2850 Hz, 0.5 s on, 0.5 s off), 1 s off	T20	N	Continuous	2850 Hz	T15	N
12	Simulated bell - continuous	3000 Hz and 2250 Hz	T8	N	Simulated bell - intermittent	1 s off, 1 s on	T9	N
13	Emergency warning siren	600 - 1200 Hz sweep	T10	N	Emergency warning siren - all clear	1200 Hz continuous	T10	N
14	Continuous	970 Hz	T13	Y	Alert tone	970 Hz pulsed at 1s off, 1s on	T19	N
15	Apollo evacuate tone	522 Hz for 0.5 s, 707 Hz for 0.5 s	T21	Y	Apollo alert tone	1 s off, 707 Hz for 1 s	T22	Y