

# Discovery

## Sounder Visual Alarm Device Base



### Product overview

Product	Sounder VAD Base
Part No.	45681-700
Digital communication	Discovery, (XP95 and CoreProtocol® compatible)

### Compliance



### Product information

The Discovery Sounder Visual Alarm Device (VAD) Base is a multifunctional device made up of a mounting base for Discovery fire detectors, a sounder, a VAD and a short-circuit isolator.

The Discovery Sounder VAD Base is used to provide audible and visual warning of fire and is controlled by the appropriate fire control panel by means of the full Discovery protocol, the particular features of which should be requested from the panel manufacturer.

The Discovery Sounder VAD Base can be used either with a detector fitted or with a cap fitted for operation as a stand-alone device.

- 15 evacuation tones and 15 secondary or alert tones
- EN 54-3 compliant sounder
- EN 54-23 compliant Category 0 VAD
- Seven volume levels
- Software defined group addressing
- Alarm switching by individual device, group or all devices on a loop
- Compliance with NEN 2575, DIN 0833 and DIN 33404
- Built-in isolator with status information

### Technical data

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

Operating voltage	17 - 28 V dc polarity sensitive
Digital communication	Discovery (XP95 and CoreProtocol compatible)
<b>Current consumption at 28 V dc</b>	
Quiescent current	500 µA
Power-up surge current	1.2 mA
Device operated at maximum volume	14 mA
Maximum sound output at 90°	90 ± 3 dB(A)
VAD frequency	0.5 Hz
Operating temperature	-20 °C to + 60 °C
Humidity (no condensation or icing)	0% to 95% RH
IP Rating	IP21C
Standards and approvals	EN 54-3, EN 54-23, CPR, LPCB, VdS, FG, CCMG
Dimensions	115 mm diameter x 38 mm height
Weight	168 g
Materials	Housing: White flame-retardant polycarbonate Terminals: Nickel plated stainless steel

### Sounder operation at ± 3dB(A) at 28 V

	Sounder only	Sounder and VAD
Level 1 (60 dB(A))*	1 mA	9.5 mA
Level 2 (70 dB(A))	1.3 mA	9.7 mA
Level 3 (74 dB(A))	1.6 mA	10 mA
Level 4 (78 dB(A))	2.1 mA	10.4 mA
Level 5 (82 dB(A))	2.8 mA	11 mA
Level 6 (86 dB(A))	4 mA	13 mA
Level 7 (90 dB(A))	5.5 mA	14 mA
* not EN 54-3 compliant		
VAD only operated	9 mA	

### The right sound for your installation

The Discovery Sounder VAD Base offers a choice of 15 evacuation tones, including the standard Apollo evacuation tone. One of these tones is selected during commissioning in order to suit local regulations or customs. The tones include those required by Dutch, Swedish, German, Australian, New Zealand and North American standards as well as the United Kingdom.

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 being 90 dB(A).

At 60 dB(A) the lowest level is outside of the standard EN 54-3. It has been included to provide a very local warning for the use of personnel in particular environments, such as nurse stations in hospitals.

## Flexibility of group addressing

In many installations a fire alarm must be raised by switching more than one sounder VAD to alert or alarm simultaneously. This is achieved with Discovery Sounder VAD bases by assigning devices to groups on commissioning, with the group information being stored in each device. One command will then switch on all devices in the group.

## Sounder, VAD or both

The Discovery Sounder Base VAD enables full independent control of both sounder and VAD to provide alert and evacuation signals by the control panel.

## Location-specific volume setting

When configuring the Discovery Sounder VAD Base the adjustment of volume can be configured at the point of installation.

The commissioning engineer simply sets the control panel to 'Setup' and then walks from one device to the next to set the required volume using a magnetic wand, Part No. 29650-001. When all the devices have been set the control panel is used to register all the individual volume settings.

## Protocol usage

Output bits	
2	VAD control
1	Sounder control
0	0 = Alert, 1 = Evacuate
Interrupt	No
Analogue value	
1	Sounder failure
2	VAD failure
3	Sounder and VAD failure
4	General failure
17 to 23	Quiescent, volume setting 1 to 7
Input bits	
2	VAD status, 1 = On
1	Sounder status, 1 = On
0	Confirmation of alert (0), Evacuate (1)
Flag setting	
XP95 flag	Yes
Alarm flag	No

## EMC Directive 2014/30/EU

The Discovery Sounder Base VAD complies with the essential requirements of the EMC Directive 2014/30/EU, provided that it is used as described in this datasheet.

A copy of the Declaration of Conformity is available from the Apollo website: [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk)

Conformity of the Discovery Sounder Base VAD with the EMC Directive, does not confer compliance with the directive on any apparatus or systems connected to them.

## Construction Products Regulation 305/2011/EU

The Discovery Sounder Base VAD complies with the essential requirements of the Construction Products Regulation 305/2011/EU.

A copy of the Declaration of Performance is available from the Apollo website: [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk)

## Tone table

Byte value	Primary tone		Tone No.	Secondary tone		Tone No.
1	Apollo Evacuation Tone*	567 Hz for 0.5 seconds 850 Hz for 0.5 seconds	T1	Apollo Alert Tone*	1 second off, 1 second 850 Hz	T0
2	Alternating - Hochiki and Fulleon*	925 Hz for 0.25 seconds 626 Hz for 0.25 seconds	T12	Continuous* Hochiki and Fulleon	925 Hz	T11
3	Medium Sweep*	800 Hz to 970 Hz at 1 Hz	T14	Continuous*	970 Hz	T13
4	Fast Sweep	2500 Hz -2850 Hz at 9 Hz	T16	Continuous	2850 Hz	T15
5	Dutch Slow Whoop - sweep*	500 Hz to 1200 Hz for 3.5 sec, 0.5 sec off	T3	Continuous*	850 Hz	T2
6	DIN Tone - sweep*	1200 Hz to 500 Hz for 1 sec	T4	Continuous*	850 Hz	T2
7	Swedish Fire Tone*	660 Hz, 150 ms on, 150 ms off	T18	Swedish all clear signal - continuous*	660 Hz	T17
8	Australia - fast rise sweep	3 x (500 Hz - 1200 Hz for 0.5 sec), 0.5 sec off	T6	Australia Alert Tone	420 Hz, 0.625 sec, 0.625 sec off	T5
9	New Zealand -slow rise sweep	500 Hz - 1200 Hz for 3.75 sec, 0.25 sec off	T7	New Zealand Alert Tone	420 Hz, 0.625 sec, 0.625 sec off	T5
10	US Temporal LF ISO8201	3 x (970 Hz, 0.5 sec on, 0.5 sec off) 1 sec off	T19	Continuous*	970 Hz	T13
11	US Temporal HF ISO8201	3 x (2850 Hz, 0.5 sec on, 0.5 sec off) 1 sec off	T20	Continuous	2850 Hz	T15
12	Simulated Bell-Continuous	Continuous	T8	Simulated Bell - Intermittent	1second on 1 second off	T9
13	Emergency Warning Siren	N/A	T10	Emergency Warning - All Clear	N/A	T10
14	Evacuation Tone*	970 Hz continuous	T13	Alert Tone	Silence for 1 second 970 Hz for one second	T21
15	Apollo Evacuation Tone*	567 Hz for 0.5 sec, 850 Hz for 0.5 sec	T1	Apollo Alert Tone*	1 second off 1 second 850 Hz	T0

\* EN 54 compliant tone

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