XP95

Sounder Visual Alarm Device Base

Product Overview

Product	**XP95 Sounder VAD Base Cat. O (White Flash) - Isolating**
Part No.	**45681-705**
Product	**XP95 Sounder VAD Base Cat. O - DIN Tone (White Flash) - Isolating**
Part No.	**45681-707**
Digital Communication	**XP95, Discovery and CoreProtocol® compatible**

Product Information

The XP95 Sounder Visual Alarm Device (VAD) Base incorporates a standard mounting base with a loop-powered sounder VAD. It is used to signal a fire alarm in enclosed spaces.

The XP95 Sounder VAD Base can be used with a detector fitted or with a cap for operation as a stand-alone alarm device. The XP95 Sounder VAD Base is supplied with a built-in isolator.

- Two volume ranges, 55 - 75 dB(A) and 75 - 91 dB(A)
- Seven volume levels
- EN 54-23 compliant Category O VAD
- EN 54-3 compliant Sounder
- Synchronisation of 'alert' and 'evacuate' tones
- Individual and group addressing
- Built-in isolator

Manufacturer's Specification

All data is supplied subject to change without notice. Specifications are typical at 24V, 23°C and 50% RH unless otherwise stated.

Operating voltage	*17 - 28 V dc*
Digital communication	*Discovery, CoreProtocol and XP95 compatible*
Modulation voltage	*5–9 V peak to peak*
Current consumption at 24 V	
Quiescent current	*350 µA*
Power-up surge current	*1.2 mA for one second*
Device activated	*14 mA*
Maximum sound output at 90°	*90 ± 3 dB(A)*
Operating temperature	*-20°C to 60°C*
Humidity	*0% to 95% RH (no condensation or icing)*
IP Rating	*IP21C*
VAD frequency	*0.5 Hz*
Sounder Output -	
High tone setting volume (EN 54-3 compliant)	*nominally 75 dB(A) to 91 DB(A)*
Low tone setting volume (not EN 54-3 compliant)	*nominally 55 dB(A) to 75 dB(A)*
Dimensions	*115 mm diameter x 40 mm height*
Weight	*200 g*
Materials	*Housing: White flame-retardant polycarbonate* *Terminals: Nickel plated stainless steel*

Notes:
1. Sound Pressure information published in PP2203 - Sound Pressure Levels
2. Isolator operator information published in PP2090 - Short-circuit Isolation

Both of the above are available from www.apollo-fire.co.uk

The low volume range is useful in areas such as hospitals where a fire alert is initially intended to warn staff only. The sounder is set to the high range for general use.

Synchronisation of tones ensures the integrity of the signal - tones from different sounders do not merge into one signal that could be mistaken for a different tone.

Group addressing is a simple method of alerting an entire area or group of rooms without delay.

For systems requiring isolators at every point the built-in isolator saves installation time and costs.

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Electrical considerations

The Sounder VAD Base is loop-powered so needs no external power supply. It operates at 17 - 28 V dc and is polarity sensitive.

Tone frequency and volume control

The tone frequency of the sounders, together with sound pressure levels, is published in a separate document, PP2203 available from Apollo.

Addressing

The XP95 Sounder VAD base responds to its own individual address set with a DIL switch. It also responds both to a group address, set by means of a four segment DIL switch and to a synchronisation address which is embedded in the unit.

Addresses 1 - 111 are used exclusively for individual addresses; addresses 112 to 126 are used for group addressing. Any Sounder VAD bases on a loop may be freely assigned to a group. The address for the group *must* be chosen from the range 112 - 126.

Addresses 112 - 126 *may* be used as individual addresses but *only* if the four segment DIL switch is not used, i.e. group addressing is disabled. If the four segment DIL switch were set to any number other than the default 127, a pre-set analogue value of four would be transmitted to indicate a fault.

The XP95 Sounder VAD bases are normally polled by the individual address. If more than one Sounder VAD base is activated it is possible for the sounders to be synchronised with each other.

Group addressing

It may be desirable, in alarm conditions, to switch more than one Sounder VAD base simultaneously. To enable this, devices may be controlled as a group and given a group address which is common to all Sounder VAD bases in the group. When a device recognises its group address, it will process the output bits but it will not return any data to the control panel on that address. If it is required to confirm the status of the outputs of devices under group address control, it is necessary to interrogate all devices in the group at their individual addresses.

Self test

An important safety feature has been incorporated into the XP95 Sounder VAD bases: when it is switched on it tests itself by checking the actual sound output and flash operation. If no sound is detected within five seconds of the device being switched on it will transmit an analogue value of one (= sounder fault) when it is next polled. If no current is drawn by the LEDs an analogue value of two (=VAD fault) is transmitted. If neither element is operating an analogue value of three (-Sounder and VAD fault) is transmitted on the next polling.

This feature can also be used during commissioning or periodical maintenance testing. Simply activate the device for at least five seconds and check the control panel for a fault signal. If none is received, the device is working properly.

Protocol compatibility

The XP95 Sounder VAD Bases will operate only with compatible control equipment using the Apollo XP95 or Discovery protocols. The features of the Sounder VAD Base are available only when it is connected to a control panel with the appropriate software.

Protocol usage	
Output Bits	
2	VAD control
1	Sounder control
0	0 = Alert, 1 = Evacuate
Interrupt	No
Analogue Value	
16	Quiescent
4	Group address conflict
3	Sounder and VAD fail
2	VAD fail
1	Sounder fail
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

Synchronisation

It is possible to synchronise the sound and flash outputs of all Sounder VAD Bases connected to a loop.

The method of synchronisation depends upon the design and configuration of the control panel. Further information should be sought from the manufacturer of the panel.

EMC Directive 2014/30/EU

The XP95 Sounder VAD Base 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

Conformity of the XP95 Sounder VAD Base 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 XP95 Sounder VAD Base 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