



Sounder Beacon Bases

FUNCTION

The Sounder Beacon Bases are comprised of a loop-powered sounder and beacon combined with a standard XP95/Discovery mounting base. It is used to signal a fire alarm in enclosed areas.

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

The Sounder Beacon Bases are supplied with a built-in isolator. A version without an isolator is also available.

FEATURES

The product offers:

- two volume ranges 55–75dB(A) and 75–91dB(A)
- beacon flash rate of once per second
- synchronisation of 'alert' and 'evacuate' tones
- synchronisation of beacon flash
- individual and group addressing
- unique acoustic self-test
- unique beacon self-test

In addition to the standard tone a version with slow whoop tone to Dutch standard NEN2575 is available

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.



Sounder Beacon Base

shown with a Multisensor Detector 58000-700

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 cost.

The acoustic self-test means that the sounder listens to itself when it is switched on. If no sound is detected a fault signal is transmitted when the sounder is polled.



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36 Brookside Road, Havant,
Hampshire, PO9 1JR, UK.

Tel: +44 (0)23 9249 2412
Fax: +44 (0)23 9249 2754

Email: sales@apollo-fire.com
Web: www.apollo-fire.co.uk

Overseas offices: America China Germany

The beacon self test is achieved by means of an LED monitoring circuit. If the LEDs do not draw current when the sounder beacon base has been switched on a fault signal is transmitted when the device is next polled.

ELECTRICAL CONSIDERATIONS

The Sounder Beacon Base are loop powered so needs no external power supply. It operates at 17–28V 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 Sounder Beacon 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 4-segment DIL switch and to a synchronisation address which is embedded in the unit.

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

Addresses 112–126 *may* be used as individual addresses but *only* if the 4-segment DIL switch is not used ie, group addressing is disabled. If the 4-segment DIL switch were set to any number other than the default 127, a pre-set analogue value of 4 would be transmitted to indicate a fault.

The Sounder Beacon Bases are normally polled by the individual address. If more than one Sounder Beacon 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 Beacon Base simultaneously. To enable this, devices may be controlled as a group and given a group address which is common to all sounder beacon 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 Sounder Beacon Bases: when it is switched on it tests itself by checking the actual sound output

and flash operation. If no sound is detected within 5 seconds of the Sounder Beacon Bases being switched on it will transmit an analogue value of 1 (= sounder fault) when it is next polled. If no current is drawn by the LEDs an analogue value of 2 (= beacon fault) is transmitted. If neither element is operating an analogue value of 3 (= sounder and beacon fault) is transmitted on the next polling.

This feature can also be used during commissioning or periodical maintenance testing. Simply activate the sounder for at least 5 seconds and check the control panel for a fault signal. If none is received, the sounder beacon base is working properly.

PROTOCOL COMPATIBILITY

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

SYNCHRONISATION

It is possible to synchronise the sound and flash outputs of all Sounder Beacon Bases connected to a loop. Other alarm devices, including the 100dB Sounder, the Integrated Base Sounder, the Intelligent Base Sounder, the Sounder Circuit Controller and the Loop-powered Beacon, may also be synchronised.

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

MECHANICAL CONSTRUCTION

The Sounder Beacon Base are moulded in polycarbonate and has stainless steel contacts that accept solid or stranded cables of up to 2.5mm².

DIMENSIONS AND WEIGHT

Part no	Description	Dimensions	Weight
45681-330	Sounder Beacon Base with Isolator	115 x 38mm	160g
45681-331	Sounder Beacon Base		
45681-332	Slow whoop Sounder Beacon Base with Isolator		
45681-292	White Cap	100 x 9mm	20g
45681-293	Red Cap		
45681-334	Sounder Beacon Base (DIN tone) with isolator	115 x 38mm	160g

Table 1 Dimensions and weights

TECHNICAL DATA

Operating voltage (polarity sensitive)	17–28V DC
Protocol pulses	5–9V
Current consumption at 24V switch-on surge, <1s	1.2mA
quiescent	300µA
device operated at 55–75dB or 75–91dB	8mA
Maximum sound output at 90°	91dB(A)
Sound pressure level data is published in PIN sheet PP2203 available from Apollo	
Operating temperature	–20°C to +60°C
Humidity (no condensation)	0–95%
IP rating	21C

Notes

1. The Sounder Beacon Base complies with EN54–3 when it is used in the higher volume range.
2. The lower volume range does not comply with EN54–3 and should not be used as part of an alarm application.

The purpose of the lower volume range is to provide a warning in specific cases such as hospital staff stations.
3. The Sounder Beacon Base are a Type A device, ie, for indoor use only.
4. The isolating circuit of the Sounder Beacon Bases conforms to EN54–17
5. For information on isolating circuits see publication PP2090 available on request from Apollo.