

LOOP-POWERED BEACON

APPLICATION

The Loop-powered Beacon is a local-area beacon designed for indoor use. It can be connected to detection systems using XP95 or Discovery detectors and control panels with appropriate software.

The beacon has been developed as a supplement to sounders in situations where there is a risk that sounders will not be heard. This occurs, for example, where there is high background noise

- in a workshop or a machine room
- in a music room at school

It might also be because the occupants are deaf or hard of hearing so that a beacon is needed

- in public buildings or public access areas
- in workplaces

The beacon can also be used to give a 'staff alarm' where the use of sounders is undesirable, eg

- in TV or radio studios
- in cinemas and theatres
- in hospitals (especially operating theatres and high dependency units), care homes

See also the note on BS 5839 : 1 : 2002 overleaf.



Part no 55000-877

FEATURES

- uses LEDs—more reliable than xenon beacons
- lockable, like a detector
- fault-monitored
- wide angle of visibility
- synchronised with each other and with Apollo sounders (flashes once a second)

The beacon can be fitted to any XP95 or Discovery base and would normally be wall mounted. When fitted to an ancillary base sounder, 45681-276, the sounder will be controlled by the beacon.



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If the use of an intelligent sounder is specified, the beacon is fitted to a mounting base which in turn is fitted to the intelligent sounder. The devices can then be controlled separately.

ELECTRICAL CONSIDERATIONS

The Beacon is loop powered and requires no external power supply. It operates at 17–28V DC.

LOOP LOADING

Up to 20 beacons may be fitted between standard XP95 isolators (part no 55000-700/710/720) or isolating bases (part no 45681-321)

In order to determine the exact number in a loop please use 'Loop Calculator' available as a free download on Apollo's website: www.apollo-fire.co.uk

ADDRESSING

The Loop-powered Beacon must be assigned an address by coding the XPERT card in the usual way.

PROTOCOL COMPATIBILITY AND STANDARDS

The beacon will operate only with control equipment using the Apollo protocol. The features of the Beacon are available only when the beacon is connected to a control panel with the appropriate software.

Protocol bit use

The beacon responds to interrogation by the control panel and is switched by means of the output (forward command) bits. The function of the output bits is given in the following table:

Output Bit Settings			Beacon/Sounder action
2	1	0	
0	0	0	Beacon off, ancillary sounder off (if connected)
0	0	1	Beacon on, ancillary sounder on (if connected)
0	1	0	Beacon on, ancillary sounder off (if connected)
0	1	1	Beacon on, ancillary sounder on (if connected)
<i>NB Output bit 2 is not used</i>			

Input bits confirm the receipt of the corresponding output bits

** Note: The beacon may continue to flash for a short period after receipt of a valid command to turn off.*


MECHANICAL CONSTRUCTION

The case of the beacon is made of white polycarbonate with stainless steel contacts. The diffuser is made of red, translucent polycarbonate.

DIMENSIONS OF BEACON

Diameter x height	115 x 38mm
Fixing centres	50–60mm

Technical Data

Operating voltage	17–28V DC (polarity insensitive)
Current consumption at 24V	
quiescent	150µA
beacon operated	3mA
Switch-on surge	1mA for 100ms
Operating temperature	–20°C to +60°C
Humidity (no condensation)	0–95%
IP rating	42
	

Weight 140g

BS 5839 : PART 1 : 2002

The UK 'Code of Practice for the Design, Installation and Servicing of Fire Detection and Fire Alarm Systems' published by the British Standards Institution recommends the use of 'visual alarm signals' as indicated in 'APPLICATION' overleaf. It also suggests that they be mounted

- at least 2.1m from the floor
- not closer to the ceiling than 150mm