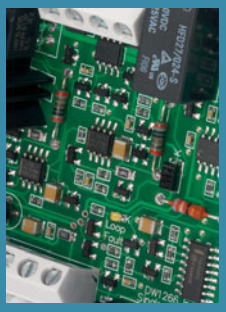
VIMPEX

Loop Sounder System



Fire Alarms

Banshee Excel™

Electronic Sounders

BS 5839-1

Evacuation

VADs

Audible Alarm

EN 54-3

Sounder Circuits

EN 54 Approved Loop Sounder System

Installing a Vimpex Loop Sounder System with short-circuit isolation provides complete sounder circuit integrity. By wiring the sounder circuit in a loop instead of a traditional radial, all sounders will remain operational in the event of a short-circuit or open circuit fault.

The system and its components have been tested by leading European notified bodies and have been shown to comply with EN 54-3, EN 54-17 and EN 54-18. The system is fully compliant with BS 5839-1 using a single sounder loop. Use of the Vimpex Loop Sounder System will greatly increase the reliability of the sounder circuits and in many cases result in a saving in the amount of cable used.

Each loop can accommodate up to 45 sounders. Suitable for use on both conventional and addressable fire alarm systems, the system provides much greater protection against faults than the 'dual radial' circuit arrangements commonly used.

Loop Integrity

The Vimpex Loop Sounder System significantly enhances the reliability of any sounder system. With conventional radial circuits a single open or short-circuit fault on a sounder circuit could result in the loss of at least half of the sounders in an area of a building.

Certification

The Vimpex Loop Sounder System has been fully tested and approved by LPCB and Intertek to relevant EN 54 standards - certificates are available on request. This system is detailed in BS 5839-1:2002+A2:2008 (clause 12.2.2 j and Fig 1b) as an alternative to the use of dual radial circuits. A detailed application guide is available from Vimpex as is a system loop calculator.

Enhanced Reliability

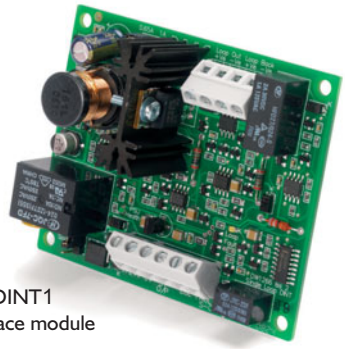
Installations which rely on a 'secondary sounder circuit' consisting of a solitary back-up sounder are particularly prone to loss of sounders.

For example; an installation with one back-up sounder near to the panel could lose all sounders on the main circuit during an emergency. This might not be apparent to an individual standing at the panel who is able to hear the back-up sounder operating, but might be completely oblivious to the fact that the main sounder circuit might be partially or completely disabled.

With the Vimpex Loop Sounder System loss of even a single sounder on a circuit is very unlikely.

Features

- Enhanced sounder circuit integrity and reliability
- Compliant with EN 54 and BS 5839-1
- Certified by LPCB to EN 54 Part 17 and 18
- Potential cable savings
- 45 Sounders per loop
- System includes Banshee Excel™
- Can also be used with other sounder and strobe units
- Multiple interfaces can be installed dependent on size of system
- Isolator fits into standard base or deep base
- Signalling device is monitored
- Incorporates double switch short circuit isolator in sounder base and interface modules
- Interface module has fail safe operation



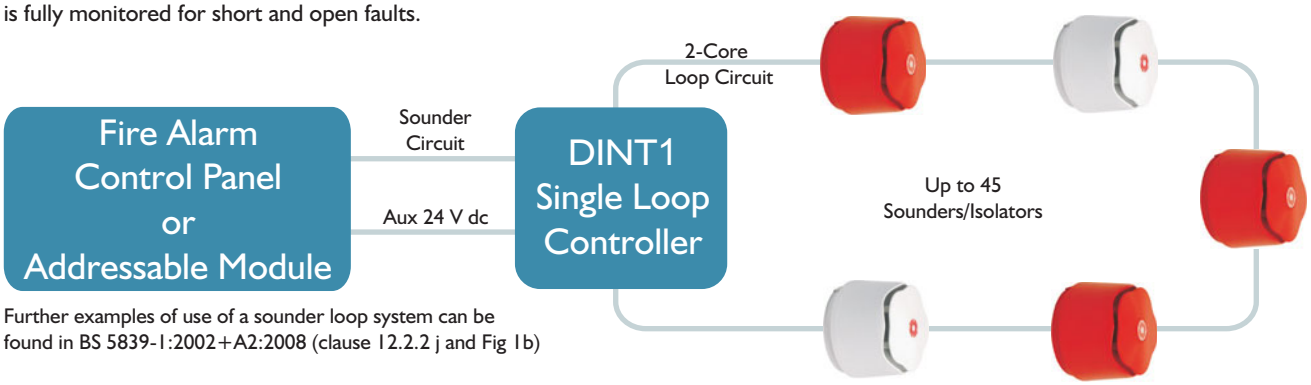
DINT1
interface module

System Architecture

DINT1 interface module mounted in an enclosure

The Vimpex Loop Sounder System is based around the DINT1 Loop Controller Module, which is interfaced with a standard sounder circuit. Sounders are activated and monitored just like any other conventional sounder circuit. The small module is designed for DIN rail mounting within the PS18181-11m wall-mounted enclosure which is available from Vimpex.

The sounder loop consists of a two core sounder loop which starts and finishes from the Loop Controller Module. The loop is fully monitored for short and open faults.



Further examples of use of a sounder loop system can be found in BS 5839-1:2002+A2:2008 (clause 12.2.2 j and Fig 1b)

Vimpex Loop Sounders

Each sounder is supplied with a bi-directional short-circuit isolator fitted within its base. In the event of a short-circuit the isolators will activate and disconnect the faulty section of cable while reporting (in monitoring mode) the fault to the control panel. When the sounders are activated, the loop is driven from both ends ensuring that all sounders will remain operational even in the event of a single short-circuit or open-circuit fault.

Sounders and their isolator bases are installed just like any other conventional sounders on the twin core circuit.

Specification

Sounder and Isolator

Current (monitoring mode):	1.4 mA
Average current @ 24 V dc (active mode):	13 mA
Operating voltage (monitoring mode):	9 to 11.3 V dc
Operating voltage (active mode):	18 to 28.5 V dc
Sound output at 1m @ 24 V dc:	101 dB(A)
Temperature range:	-40 to +70 °C

DINT1 Single Loop Controller

Auxiliary voltage:	21.5 to 28.5 V dc
Auxiliary quiescent current (monitoring):	15 mA + monitor current drawn by sounder isolators
Auxiliary quiescent current:	50 mA
Auxiliary peak current:	1 A (av 0.78 A) @21.5 V dc, 0.9 A (av 0.7 A) @24 V dc
(see Notes 1 & 2 below)	0.8 A (av 0.6 A) @27.5 V dc
Input voltage (monitoring):	-30 V to +8 V dc
Input voltage (active):	+14 V to +30 V dc
Fault contact current (max):	1 A
Fault contact maximum switching capability:	60 VA
Temperature range:	0 to +50 °C
Mounting:	Wall-mounted enclosure, steel, grey paint finish
Enclosure dimensions:	230 (w) x 170 (h) x 83 (d) mm
Connector maximum wire size:	2.5 mm^2 (CSA)

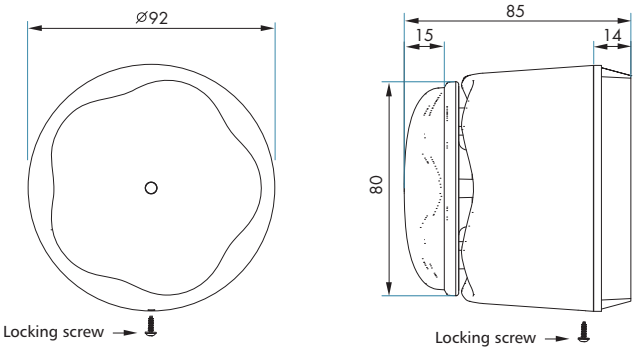
Notes:

1) These calculations are based on a fully loaded DINT1, with 30 sounders using the Banshee Excel™ Slow Whoop tone

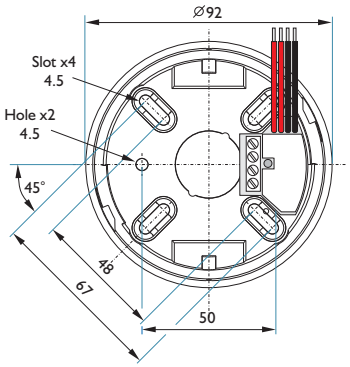
2) These calculations, using the 1A current setting, will be approx.1.6 times higher with 45 sounders using Banshee Excel™ Slow Whoop tone

Installation

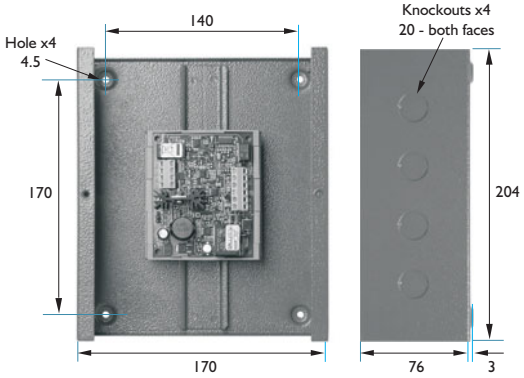
Banshee Excel™ Sounder and Base



View from inside Base



DINT1 Single Loop Controller



Dimensions (mm)

About Vimpex

Vimpex are acknowledged experts in voice sounder and audible/visual evacuation technology. The Fire-Cryer® Voice Sounder is testimony to Vimpex's enthusiasm for innovation and a fresh approach to evacuation.

From its highly efficient distribution warehouse, Vimpex can supply this complete range of voice sounders, audible and visual alarms and accessories. All bells and sounders can be brand labelled, if required.

Commitment to third party approval and testing has meant massive investment both by Vimpex and its suppliers to gain LPCB approval on a growing mix of products including the Banshee Excel™ sounders, Fire Alarm Bells and ReSet Call Point.

LPCB LOSS PREVENTION CERTIFICATION BOARD
UKAS MANAGEMENT SYSTEMS 007
Assessed to ISO 9001
Cert/LPCB ref. 456

FIA Fire Industry Association

Vimpex Limited
Star Lane, Great Wakering
Essex SS3 0PJ England
Tel: +44 (0) 1702 216999
Fax:+44 (0) 1702 216699
E-mail:sales@vimpex.co.uk
www.vimpex.co.uk

DS/LSS/ISS 4

VIMPEX Shaping Alarm Technology