

Voice Alarm

Loop Technology

Technology has developed rapidly in the area of electronics in recent years. This has opened up a host of new possibilities for optimizing existing technical solutions and developing new, innovative products. This trend can also be noted in the area of voice alarms.



Spur circuit versus loop wiring system

In the past, 100 V loudspeaker lines were designed exclusively using spur technology. This led to a high risk of failure, because if one spur circuit was interrupted, all the loudspeakers after the open break would fail. The entire spur circuit would go down in the case of a short circuit.

Minimizing the risk of failure

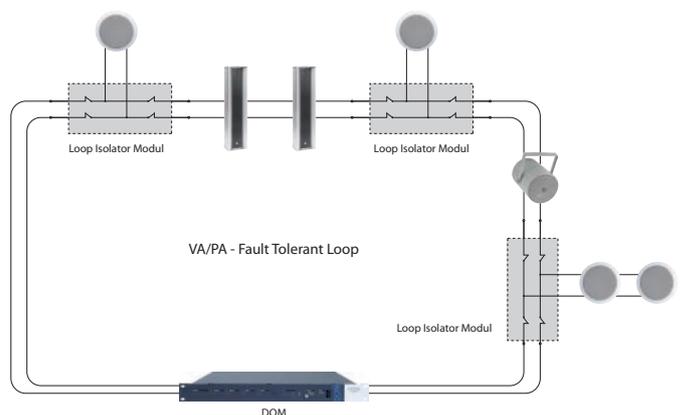
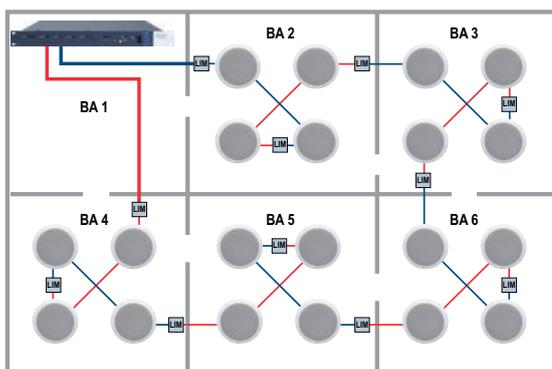
To minimize this risk of failure in the case of an open break or short circuit, A/B wiring systems have been employed to ensure system integrity where systems are installed to BS5839-8. In the case of A/B wiring, half of the loudspeakers in a room are operated on different loudspeaker lines.

This means that in the case of a basic line fault, such as an open break or short circuit, half of the loudspeakers in the relevant area will still be in operation. If half of the loudspeakers fail and the alarms are therefore operating at half power, the sound level is reduced by 3 dB if the loudspeakers are arranged correctly.

The Honeywell VA loop is a new technology for optimising the reliability of the loudspeaker connection. With this new type of technology, an open and short-circuit-resistant loop is constructed, similar to the case of fire detection technology.

Key Features:

- Fully redundant loop technology
- Wire-break and short-circuit resistant
- 100% system reliability when a loop isolator module is used for each loudspeaker
- Up to 4 loops per Digital Output Module (DOM)
- Up to 64 loop isolator modules per loop
- Complies with EN 54-16 standards.
- For all commercially available 100 V loudspeakers
- Various loop topologies available



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One of the first systems on the market

Honeywell Voice Alarm is one of the first VA systems on the market to have this loop wiring system technology. This new technology is based on the proven DOM4-8/24 which is used for creating up to 4 wire-break and short-circuit-resistant loops. On each of these 4 loops, up to 64 loop isolator modules can be used. Impedance monitoring is used in terms of monitoring technology, which, unlike other solutions, does not require coupling capacitors in the loudspeakers.

The loop isolator modules monitor the loudspeaker loop in connection with the DOM and isolate the faulty piece of wire from the loop in the case of a short circuit. This means that if each loudspeaker is equipped with a loop isolator module, 100% system reliability is ensured in the case of a basic line fault.

The main advantages of this loop technology are as follows:

- 100% system reliability when each loudspeaker is provided with a loop isolator module
- A/B wiring can be replaced easily
- Considerable cost savings for wiring and installation
- Second loudspeaker not necessary in small rooms



Loop isolator module, Part No. 583342

Technical Specifications

SPECIFICATION	
Power supply	100 V (loop wiring system)
Power consumption	Max. 150 mW
Ambient temperature	-20 °C to +65 °C
Protection rating	IP 66
Weight	Approx. 0.22 kg
Dimensions (W x H x D)	114 x 114 x 57 mm

DESCRIPTION	ORDER CODES
Loop isolator module (short-circuit isolator)	583342

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