

VARIODYN D1 Loop Technology

- 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 DOM
 - Up to 64 loop isolator modules per loop
 - For systems in accordance with DIN VDE 0833-4 and EN 60849
 - Complies with EN 54-16 standards.
 - For all commercially available 100 V loudspeakers
 - Various loop topologies available
 - E30 wiring not necessary in all cases
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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 wire 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 a wire break or short circuit, A/B wiring was used for a long time for based systems on DIN VDE 0833-4 (safety level 2 and 3).

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 a wire 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.

This level decrease is permitted in accordance with DIN VDE 0833-4 standards.

VARIODYN D1 loop technology is a new technology for optimizing the reliability of the loudspeaker connection.

With this new type of technology, a wire-break and short-circuit-resistant loop is constructed, similar to the case of fire detection technology.



Loop isolator module, Part No. 583342

One of the first systems on the market

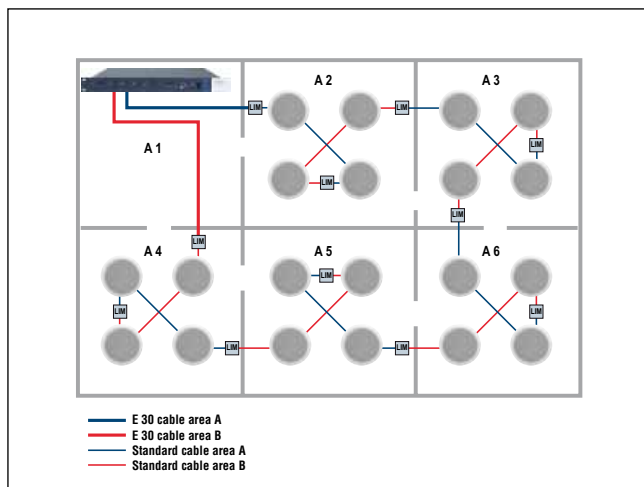
VARIODYN D1 is one of the first voice alarm systems on the market to have this loop wiring system technology. This new technology is based on the proven DOM4-8 which is used for creating up to 4 wire-break and short-circuit-resistant loops. On each of these 4 loops, up to 64 loop isolator modules can 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.

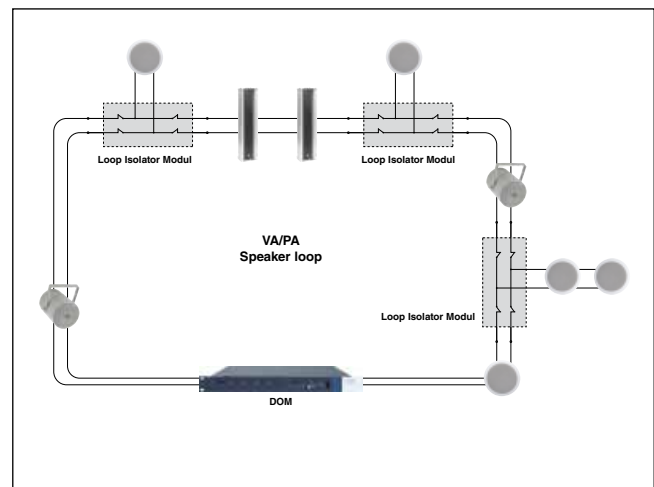
The main advantages of this loop technology are as follows:

- 100% system reliability when each loudspeaker is provided with a loop isolator module
- A/B wiring can be replaced easily
- E30 wiring not necessary in all cases
- Considerable cost savings for wiring and installation
- Second loudspeaker not necessary in small rooms

Due to the many advantages and high system reliability, it seems that VARIODYN D1 loop technology will establish itself as the industry leader in the medium and long term in the area of voice alarms just like in fire detection technology.



Investment savings thanks to standard cables



LIM functionality in the loop wiring system

Specifications

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

Order information

Part No.

Loop isolator module (short-circuit isolator)	583342
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For further order information, please refer to our voice alarm systems product catalog.

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