Intelligent Addressable Duct Detector - 60950

Application

The 60950 series of duct smoke and heat detectors provide early warnings of smoke and increase in temperature by continually sampling air movement within heating and ventilation ducts in industrial and commercial premises.

60950 systems provide additional safety features such as switching facilities to shut-down associated devices on a building's HVAC network. This allows control of fans and dampers to prevent the spread of smoke from the duct into other areas of the building.

60950 is developed to be combined with Velox smoke detector. Both the venturi pipe and the housing are especially designed to optimize the airflow through the smoke detector. The system fulfils all the requirements for safe fire detection with airflow speeds from 0,5 m/s to 20 m/s (100 ft./min to 4000 ft./min), depending on the smoke detector's sensitivity. The detector housing made to compline with EN54-27, and the venturi pipe is made of aluminum provide high strength, durability, and resistance to chemicals, which enables the installation of 60950 devices in challenging indoor and outdoor environments.

VENTURI EFFECT

By using the shape of an airplane wing, the unique and venturi tube is probably the most effective air sampling tube available on the duct smoke detector market. The venturi effect, created by using dual outflows at the optimal points of separation, enables smoke detection even at very low duct air velocities.
The length of the venturi tube shall be chosen based upon how wide the ventilation duct is. The venturi pipes are available in 3 lengths: 0.6, 1.5 and 2.8 m. When the ventilation duct is wider than 0,6 m (dia), the venturi pipe should penetrate the whole duct. Please see below sketch.

Features

- Easy mounting of sampling tube
- Single pipe/air sampling system
- One-pipe air sampling system Uni guard Super flow
- Test hole on cover
- Simple installation
- Simple service and maintenance
- Duct detectors can operate in air speeds ranging from 0.5 m/s to 20 m/s

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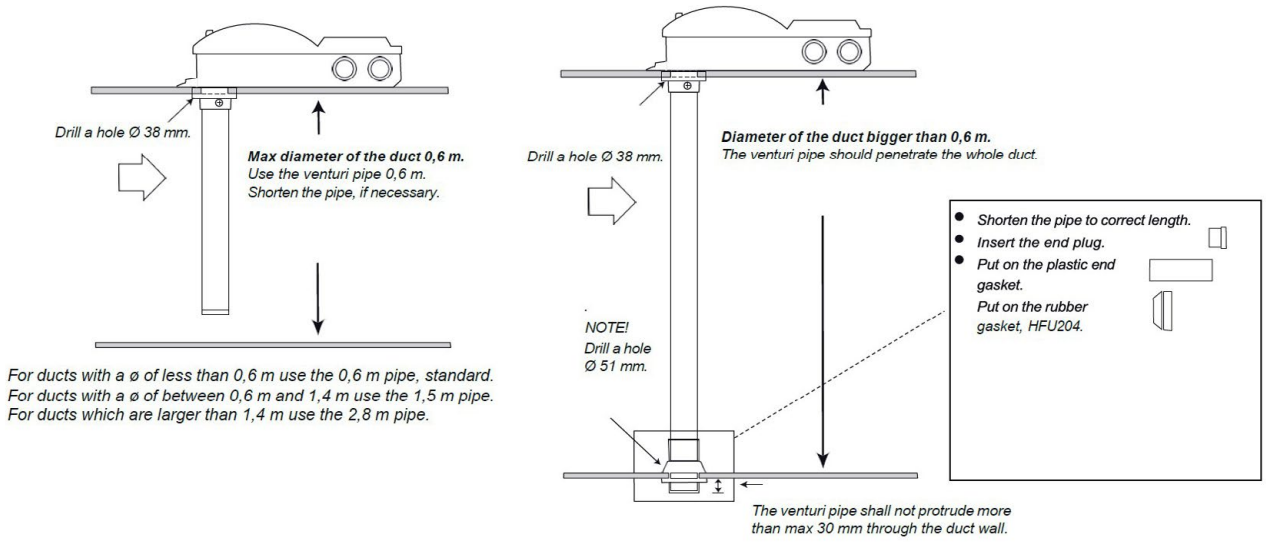

BASIC PRINCIPLES FOR POSITIONING

The 60950 shall be installed pointing towards the air flow direction. The Uniguard can be installed on any side of the duct. Rectangular ducts: In order to gain maximum air sampling coverage, install the Uniguard on the shortest side of a rectangular duct.
We recommend that the Uniguard is mounted at an equal distance from heating, cooling, or humidity devices, and similar to the placement of flow monitors. Please see our installation manual.

INSTALLATION

The venturi pipe is made of aluminium and can easily be shortened to suit the diameter of the duct. Hole diameter is 38 mm. With insulated or circular ducts - use the mounting bracket, hole diameter is then 51 mm.
When Uniguard is mounted in places where possible condensation problems could arise, e.g. in cold attics or outdoor, use 60950-WP to avoid condensation. A sign should be used to show location of the detector.

FUNCTION TEST

When installation is complete, the detector should be tested. This can be carried out with a suitable test spray. Use the test hole on the cover and briefly release a spray. Do not forget to refit the plastic plug after the test.

APPROVALS & COMPLIANCE WITH STANDARDS

The Velox Detectors are certified for EN 54-7, EN54-5 and EN54-17. The duct detectors compliance with EN54-27.

ARCHITECTURAL & ENGINEERING SPECIFICATIONS

ATEÏS Variable Time Communication Protocol enables secure data transmission over long distances. Advanced detection algorithms ensure thorough evaluation of the environments in which the detectors are placed, and thus, fire signals are activated only when smoke is actually present.

Each fire detection loop can accommodate up to 240 fire alarm devices with in-built isolators, and the loop length can extend up to 2 km depending on load and loop length calculations.

The ‘Automatic and manual addressing features’ feature allows automatic addressing of the detector from the fire alarm control panel, simplifying the commissioning process. ‘Manual Addressing’ allows setting new addresses to devices in a non-sequential manner. This allows the addressing to match site conditions or even allows the user to add more detectors to the loop at a later stage without the need to change or reassign addresses to all the devices.

Each device is equipped with an in-built isolator to minimize loss of communication in case of short circuits. Hence there’s no need for additional isolators or base isolators,

which can make the commissioning process a more difficult and costly task. For further cost reduction, devices can be supplied without isolators. In such cases, isolators will have to be installed on the loop

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Technical Specifications

Item	Specification Details
Dimensions	Refer Dimensions drawings
Weight	880 g
Protection class	IP 54
Air Sampling Tube	Aluminium
Airflow speed	0,5 m/s to 20 m/s
Operating Voltage	24VAC
Length of Air sampling Tube	The length of the venturi tube shall be chosen based upon how wide the ventilation duct is. The venturi pipes are available in 3 lengths: 0.6, 1.5 and 2.8 m. When the ventilation duct is wider than 0,6 m (dia), the venturi pipe should penetrate the whole duct.
Diameter of drill hole on duct	Refer venturi pipe sketch
Approvals	EN54-5 & 7 and Compliance to EN54-27
Detector compatible with 60950 housing analogue addressable smoke and heat detector	60910 & 60920 &60930

Order Codes

Part No.	Description
60950*	Intelligent Addressable duct detector with standard base
60950*	Smoke detector housing for duct installation with a high lid
60951*	Intelligent Addressable duct detector with relay base
60952	Wireless Intelligent Addressable duct detector
60950-06	Sampling tube (length 0.6 m)
60950-15	Sampling tube (length 1.5 m)
60950-28	Sampling tube (length 2.8 m)
60950-EXT	Extension of venturi tube VR & ST, 1.06M
60950-BR	Mounting bracket (for insulated/ circular ducts)
60950-WP	Waterproof housing (for mounting outdoors, in cold attics etc.)

*-H can be used with a high lid

Ref. 60950/R1/V1/290825

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