GASSONIC
A General Monitors Company

GASSONIC SURVEYOR

Ultrasonic Gas Leak Detector

Features

- Advanced stainless steel microphone technology
- Interface outputs include 4-20 mA analogue and alarm/fault relays
- Full AISI 316L stainless steel intrinsically safe housing enclosure
- Compatible with the Gassonic 1701 – Portable Test and Calibration Unit
- Wide dynamic range (44-104 dB)
- Local LED indicator
- Intrinsically safe

Benefits

- Instant detection of high-pressure gas leaks with coverage up to 20 meter in radius
- Industry standard output for remote alarm and fault indication
- Corrosion resistance in harsh environments
- Minimal maintenance and calibration requirements
- Retrofittable with Gassonic MM0100 installations
- Displays detector status
- Potential use in locations where power is restricted

Description

The Gassonic Surveyor is a non-concentration based gas detector used to detect leaks from high-pressure systems. Like other ultrasonic gas leak detectors, the Gassonic Surveyor responds to the airborne ultrasound generated from gas releases in open, well ventilated areas, where traditional methods of detection may be unsuitable or dependent on ventilation. Because the Gassonic Surveyor responds to the source of a gas release rather than the dispersed gas, it is unaffected by changing wind directions, gas dilution, and the direction of the gas leak. Further, with its maximum coverage radius of 20 meters, it can supervise a relatively large area with a single device.

The Gassonic Surveyor is immune to most false signals and can be configured to filter short timescale ultrasonic noise that can produce nuisance alarms. Frequencies below 25 kHz are removed by a high pass filter, effectively eliminating interference from audible and low frequency ultrasonic noise. At the same time, setting the alarm trigger level above the ultrasonic background noise ensures immunity to other noise sources. The result is a reliable method of detection, able to monitor environments with high levels of ultrasound such as turbine rooms and compressor stations.

Besides high-pressure gas applications in general, the Gassonic Surveyor is suited for installations restricted to low power (< 1 W).

Applications

- Offshore and Onshore Oil and Gas Installations
- Floating Production Storage and Offloading Vessels (FPSOs)
- Gas Compressor and Metering Stations
- Underground Gas Storage Facilities
- Petrochemical Processing Plants
- Hydrogen Storage Facilities
- LNG / LPG Trains
- LNG Re-gasification Plants
- Gas Turbine Power Plants
- Refineries

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System Specifications

Detector Type:
Ultrasonic (acoustic) Gas Leak Detector

Detector Frequency Range:
25 kHz – 70 kHz

Dynamic Range:
44 – 104 dB

Detector Coverage*:
Very low noise areas (< 64 dB)
20 m radius at leak rate = 0.1 kg/s
12 m radius at leak rate = 0.03 kg/s

Low noise areas (< 74 dB)
12 m radius at leak rate = 0.1 kg/s
8 m radius at leak rate = 0.03 kg/s

High noise areas (< 84 dB)
8 m radius at leak rate = 0.1 kg/s
4 m radius at leak rate = 0.03 kg/s

Response Time: < 1 s (speed of sound)

Warranty: 2 years

Electrical Classification:
ATEX: II 2G EEx ia IIC T4
IECEx: EEx ia IIC T4

Approvals:
ATEX, IECEx, IEC 61508 certified to SIL 1 and 2**

Accessories:
Portable test and calibration unit, wind screen, sun shield, mounting bracket

** Reference gas: Methane. All dB levels are in the ultrasonic frequency range.*

*** It has a SIL 1 rating in simplex applications and SIL 2 in voted applications with "m+1" redundancy.*

Environmental Specifications

Operating Temperature Range:
-40° F to 155° F (-40° C to 75° C)

Operating Humidity Range: 0 to 100% RH

Ingress Protection: IP66

Electrical Specifications

Input Power: 13 - 28 VDC 49 mW

Max. Power Consumption: 150 mA

Analog Signal:
0 mA: No power/Low supply voltage
3 mA: Unit inhibit
4 – 20 mA: 44 dB – 104 dB

Relays (option 1 or 2 operator selectable)
Option 1: Alarm relay
Option 2: Error relay

Cable Requirements:
Max. cable length between Surveyor and power source @ 24 VDC (40 Ohm)
14 AWG – 7,900 ft (2,408 m)

Mechanical Specifications

Housing: Stainless steel AISI 316L

Dimensions: 7.17 x 5.71 in (182 x 145 mm)

Weight: 4.94 lbs (2.24 kg)

Conduit Entries: M20 x 1.5

Mounting: Stainless steel bracket

Specifications subject to change without notice.

Represented by:

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Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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