

LEAK ALERT 73

DUST FILTER **LEAK MONITOR**



The Leak Alert 73 sensors provide powerful bag-leak detection with sufficient dynamic range and time response to track emissions from single and multi-compartment, pulse-cleaned bag filters

FEATURES AND BENEFITS

- Designed to differentiate between gross filter failure and dust leakage from faulty/failing filter systems, including bag filters
- ElectroDynamic™ Probe Electrification technology rejects signals outside a defined frequency range which virtually eliminates the effect of any particle contamination on the rod.
- Instrument drift and minimum detection level below $0.1\text{mg}/\text{m}^3$ with leak monitoring to $500\text{mg}/\text{m}^3$
- Fully configurable warning alarm and limit alarm levels with independent alarm delay
- Supports simple and flexible configuration via keypad/display or using the remote PC software tool



LEAK ALERT 73

DUST FILTER LEAK MONITOR



SENSOR SPECIFICATIONS

Feature	Specification
Ambient Temperature Range	-20°C to +50°C (-4°F to 122°F)
Sensor Variants	Standard sensor: 0–250°C (482°F) Insulated sensor: 0–250°C (482°F) High-temperature sensor: 0–400°C (752°F),
Sensor-to-Stack Connection	1½" BSP
Enclosure Protection Rating	IP65 (with hinged lid closed)
Power Requirements	100–240V AC, 50/60Hz (32 mA) or 24V DC (300 mA)
Outputs (standard)	• 4-20 mA (500 Ω, isolated) • Warning alarm relay (SPST, 1 A@24 V DC), Fail safe • Emission alarm relay (SPST, 1 A@24 V DC), Fail safe
Outputs (optional)	• RS-232 (Modbus RTU) • RS-485 (Modbus RTU)
Inputs	Plant Stop signal (output set to zero when plant is off), marker pulse for start of bag-cleaning sequence, multiple calibrations
External Indicators (3x LEDs)	1. Power / sensor OK 2. Warning and limit alarm 3. Self-check status (optional)
User Controls	4-digit Display and Setup buttons Options: external display and / or external keypad (excl. Ex sensor version, see Sensor Options)
Cable Entries	3x M20 cable glands
Air Purge	Air purge fittings: ¼" BSP connection to instrument airline Options: 1½" BSP or 2" ANSI flanged air purge process connection. Requires external supply of 5–10 litres/min of dry, clean (oil-free) instrument air, depending on dust loading.

OPTIONS

The LEAK ALERT 73 provides a full choice of user selectable, added-value features.

These include the following options:

Automatic Insulator Short-Circuit Check for Contamination Detection

ElectroDynamic™ sensors are tolerant to dust contamination of the sensor rod (unlike Triboelectric systems) due to the non-contact measurement principle; however, build-up of conductive material across the insulator at the base of the rod can lead to error (as with all Probe Electrification systems).

For standard, dry dust collector applications contamination is unlikely, but a possibility. The automatically initiated Short-circuit Check provides a reliable method for detecting insulator contamination and hence improved Quality Assurance. For applications where water condensation is likely, ENVEA's patented insulated sensor is a preferred option.

Electronic Zero and Reference Drift Detection

Electronic dust signals are injected into the front end of the sensor electronics to ensure any electronic and signal measurement malfunction is detected. This Quality Assurance feature checks that the sensor electronics are operating within manufacturer specification.

User Scaling of Display

Of assistance to plant personnel wishing to manually scale the display to an approximate known dust level rather than a relative % level.