

# LEAK ALERT 75/80

FILTER DUST & LEAK MONITORS



The Leak Alert 75/80 sensors provide powerful bag-leak detection with sufficient dynamic range (0-500 mg/m<sup>3</sup>) to track emissions from all types of bag filters

## FEATURES AND BENEFITS

- Range of leak and dust monitors for control and monitoring of arrestment plant, especially bagfilters
- Approved and meets the requirements for Filter Dust Monitors and Filter Leak Monitors under EN 15859
- ElectroDynamic™ Probe Electrification technology rejects signals outside a defined frequency range which virtually eliminates the effect of any particle contamination on the rod.
- Bag-leak location capability by use of the optional Filter Display Module (FDM). Faulty bag media can be determined by row assisting bag replacement and reducing the cost of operating bag filters
- Automatic internal zero and reference self-checks for regulatory compliance



**ELECTRODYNAMIC™**  
INSIDE

MCERTS CLASS  
2 & 3 EQUIVALENT



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## SENSOR SPECIFICATIONS

Feature	Specification
<b>Ambient Temperature Range</b>	-20°C to +50°C (-4°F to 122°F)
<b>Sensor Variants</b>	Standard sensor: 0–250°C (482°F) Insulated sensor: 0–250°C (482°F) High-temperature sensor: 0–400°C (752°F),
<b>Sensor-to-Stack Connection</b>	1½" BSP
<b>Enclosure Protection Rating</b>	IP65 (with hinged lid closed)
<b>Power Requirements</b>	100–240V AC, 50/60Hz (32 mA) or 24V DC (300 mA)
<b>Outputs (standard)</b>	<ul style="list-style-type: none"><li>• Isolated 4-20 mA (500 Ω)</li><li>• Warning alarm relay (SPST, 1A@24V DC), Fail safe</li><li>• Emission alarm relay (SPST, 1A@24V DC), Fail safe</li></ul>
<b>Outputs (optional)</b>	<ul style="list-style-type: none"><li>• RS-232 (Modbus RTU)</li><li>• RS-485 (Modbus RTU)</li></ul>
<b>Inputs</b>	Plant Stop signal (output set to zero when plant is off), marker for start of bag-cleaning sequence
<b>External Indicators (3x LEDs)</b>	<ol style="list-style-type: none"><li>1. Power / sensor OK</li><li>2. Warning and limit alarm</li><li>3. Self-check status (optional)</li></ol>
<b>User Controls</b>	4-digit Display and Setup buttons with menu-selectable items Option: external keypad (standard on LEAK ALERT 80)
<b>Cable Entries</b>	3x M20 cable glands
<b>Air Purge</b>	Air purge fitting: ¼" BSP connection to instrument airline Requires external supply of 5–10 l/min of dry, clean, oil-free instrument air, depending on dust loading.

## OPTIONS

The LEAK ALERT 75/80 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.