

FLD-FBS

Monitoring Module

FLD-FBS is an intrinsically safe high-performance monitoring module designed for detecting leaks of refined products or crude oils in extreme environmental conditions. The device is engineered for outdoor installation in challenging environmental conditions. The measurement frontend is designed for interfacing with reusable, fully passive hydrocarbon sensor cables and sensing probes manufactured by Naftosense.

This T-Branching device is designed to run on the multiplexed architecture of the acquisition module and allows for up to 4 individual sensor sections not exceeding 82 ft (25 m) per FLD-FBS.

Advanced measurement techniques and data treatment algorithms are used to provide intelligent thresholding for eliminating the nuisance alarms due to the presence of motor/lube oils, greases, residues of old leaks, etc.

Features and Benefits

- Detects reliably viscous hydrocarbons at very low temperatures
- True multi-leak capability
- Real-time transmission of sensor contamination
- Intelligent thresholding with adjustable sensitivity
- Low power consumption for reliable remote monitoring over long distances
- Very wide operating temperatures range
- Able to detect the vapors diffused in the soil after spill from underground pipes
- 10-year warranty

Typical Applications

- T-Branch Acquisition module used for long line leak detection in oil & gas facilities
- Detection of leaking fuel from airport hydrant systems, military, custody transfer generators and plumbing in demanding environments installations in harsh outdoor, demanding environmental conditions
- Leak detection in refineries, tank farms, mainline pipe sections, or repair sites
- Leak detection in commercial buildings, downstream and fuel retail facilities



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Agency Approvals

- In the US: Intrinsically safe - Class I, Division 1, Groups A, B, C and D, Class I, Zone 0, AEx ia IIC
- Atex: Intrinsically safe – II 1 G, Ex ia IIC Gb T4
- IECEx: Intrinsically safe – Ex ia IIC Gb T4
- Tested by FM Approvals for compliance as per FM Class 3610

Typical Detection Time at 68°F (20°C) with FLD-HSC Sensor Cable

Unleaded Gasoline	1 minute 30 seconds
Diesel/Jet Fuel	2 to 3 minutes
Light Crude Oils	6 to 8 minutes
Motor/Hydraulic/Silicone Oils	16 to 19 minutes
Bunker C Oil	45 to 55 minutes

Technical Data

Dimensions	2.52" x 2.592" x 1.575" (64 x 65.8 x 40 mm)
Weight	0.67 lb (345 g)
Fire Rating	UL94-HB
Ingress Rating	IP67/NEMA4X - suitable for outdoor/direct burial
Operating Temperature Range	-40°F to 176°F (-40°C to 80°C)
Power Supply Voltage Range	12 - 20 VDC
Mounting	Wall-mounted or tie-wrapped to a suitable solid support
Hazardous Locations Classification	IS/ I/ 1/ CD/ T4 ; I/ 0/ AEx/ ia IIB T4 ; Class I, Zone 0, Ex ia T4 Class I, Div. 1, Groups C,D; T4 II 1 G Ex ia IIB T4 Ga

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Technical Data

Warranty	10 years
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Warning! This is an agency-approved product. It shall be installed according to the corresponding hazardous location certificates. Any deviation from the conditions of use defined in the Control Drawing is strictly prohibited.

Product Codes

FLD-FBS-4-xxx	T-Branch Acquisition module for up to 4 sensors (monitoring by ERBUS proprietary bus).
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