

Marmon Sensing Solutions provide Pipeline Leak Detection and condition monitoring based on fiber optic temperature sensing, an ideal component in any integrity monitoring program. Using a fiber optic sensing cable deployed alongside the pipe, or integrated into a heat tracing system, any temperature event, such as a leak, is quickly detected and located.

The system provides:

- Leak detection
- Pipeline condition
- Flow assurance
- Heat trace monitoring.

Applications

- Buried pipelines
- Drinking water lines
- Gas pipelines
- Processed fluid lines
- Refined production lines — gasoline, aviation fuel, chemicals etc.
- LNG plants — tank, pipeline, under tank heating.

Features

- Uninterrupted monitoring of entire pipeline with a single standard fiber optic cable
- Up to 25 miles (40 km) of pipeline can be monitored from a single interrogator, which can be housed in a control room or pump/valve station along the route.
- Networking of multiple systems for longer pipelines
- No electronics or power in the field
- Intrinsically safe sensing cable, suitable for hazardous areas
- Pinpoints small leaks or flow impediments at their source
- Eliminates the need for trackside/roadside installation of copper cables and resource attendance along the infrastructure
- All data controlled and managed from integrated visualization software and controls in one or shared locations
- Delivers real-time, accurate data to help rapid decision making and appropriate incident response.



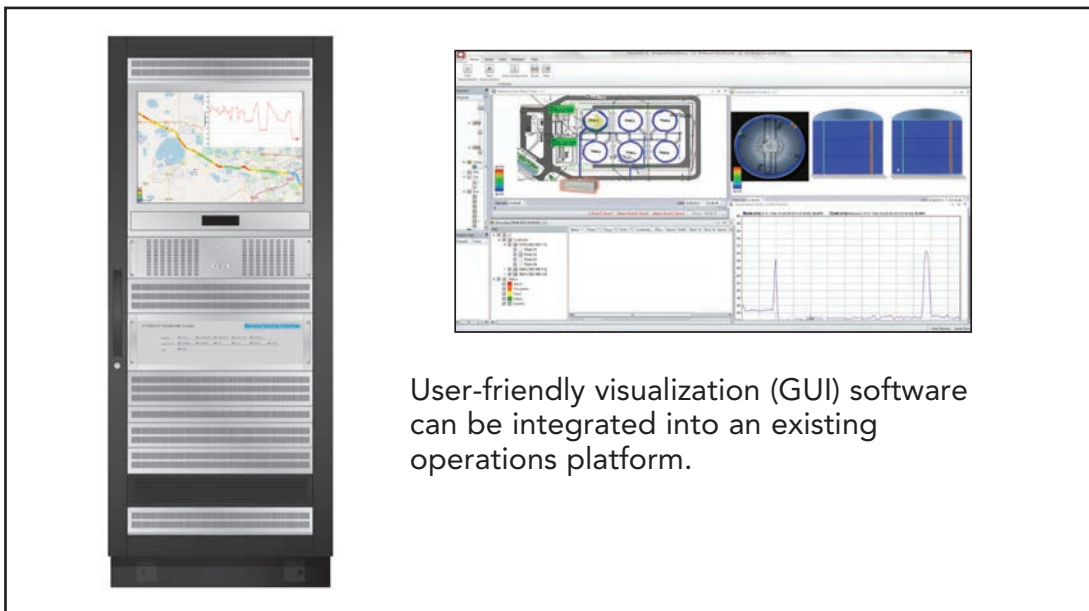
Pipeline and LNG Plant Leak Detection

Typical Performance

Notes: Results shown use a multimode fiber interrogator. Measurement parameters are interdependent.

Temperature accuracy: <1.8°F (<1.0°C)	Optional switch (up to 16 channels) to monitor multiple cables/assets from one instrument
Temperature resolution: <0.45°F (0.25°C) at 18.6 miles (30 km) using 13.1 ft (4 m) spatial resolution and 10 minute measurement time	Maintenance free with outdoor installation capability
Spatial Resolution down to 3 ft (1 m)	Redundancy options available
Measurement Range: 1.2 to 25 miles (2 to 40 km) per channel	Alarm as well as pre-alarm criteria selectable for each zone
Measurement Time: 30 sec to 15 min	Over 1000 individually programmable zones per channel (overlapping zones, distinct alarm types)
Unit Operating Temperature: +14°F to +140°F (-10°C to +60°C)	

Systems are available for single mode monitoring. These provide monitoring over longer distances up to 43.5 miles (70 km). Please ask for details.



A range of sensing cables, cabinet, UPS and battery back-up options exists to suit project requirements.

Marmon Sensing Solutions helps utilities and operators:

Detect intrusion in pump/valve stations and along pipeline right of way, please see:

Marmon Sensing Solutions Technical Information: *Perimeter Intrusion Detection*, or contact us.



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