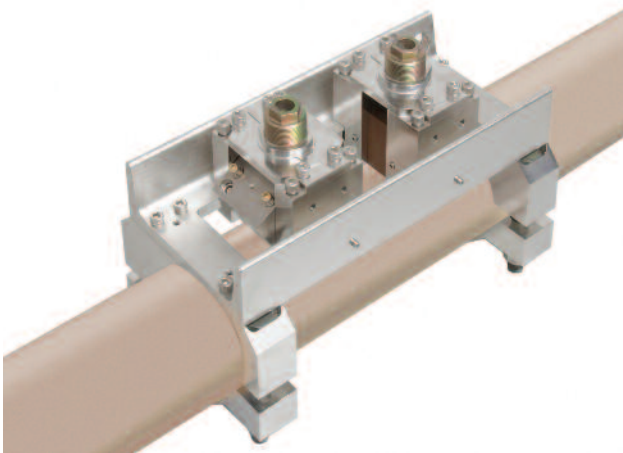


CALDON®

# LEFM® 2010MSE Moisture Separator Drain Flow Meter



The Caldon LEFM 2010MSE System provides accurate and reliable measurement of moisture separator drain flow, which is critical in calculation of the efficiency of the moisture separator system. The LEFM 2010MSE uses acoustic transducers installed on the outside of the pipe to measure average velocity through the pipe. The measured velocity is integrated over the cross-sectional area of the pipe to determine volumetric flow rate. System accuracy is  $\pm 1\%$  to  $\pm 3\%$  of flow, and is a function of the size of the drain pipe and the exact installation conditions.

Use of externally mounted transducers allows the system to be installed easily, without requiring alteration of the pipe. The system is very low maintenance and provides continuous on-line verification that all meter elements are operating correctly. Whether used for one-time moisture separator efficiency during turbine performance testing, or for long-term trending, the LEFM 2010MSE provides cost-effective flow measurement for a difficult application.

Cost-effectively measures moisture separator flow rate

External system – installed completely outside the piping

High temperature operation to 550°F (288°C)

Used in conjunction with tracer monitoring to determine moisture separator efficiency

## Operation Specifications

### System Accuracy

Moisture Separator Drain Flow	±1% to ±3%
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### Electronics Unit

Storage Temperature	-65°F to 165°F (-53°C to 73.9°C)
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Ambient Temperature	0°F to 120°F (-17.8°C to 48.9°C)
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Storage/Operating Humidity	0% to 95% (non-condensing)
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Outputs	0-5V or 0-12V pulse output Up to four (4) 4-20mA analog outputs Two (2) Modbus RS-485 outputs
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### Pipe Mounted Hardware

Process Temperature	32°F to 550°F (0°C to 288°C)
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Process Pressure	No Limit (External System)
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### Supply Power

Normal Voltage	120 VAC (60 Hz) or 240 VAC (50/60 Hz)
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Power Surges	Up to 1200 V for < 50 μs
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Outputs	(4) 4-20 mA RS 422/485
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## Services

Cameron provides the following with every LEFM 2010MSE System:

- On-site installation of fixtures and transducers
- System commissioning
- Collection of baseline design data
- Customer training
- Field testing
- Uncertainty analysis in accordance with ASME PTC 19.1

For more information contact: CALDON® Ultrasonics Technology Center  
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