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# Sensors, Inc.

# MIDI: new flowmeter for SEMTECH® HI-FLOW 2



# MIDI: for HI-FLOW 2 users who want to "close couple" their methane emission measurement

When you (the user) want to measure the emission source directly, MIDI could be for you.

Traditional high-volume samplers rely on excess air entering the sampling system for total leak capture. This requires a suction fan with higher flow rate than the leak. Such fans require significant power which could drain your battery power if the application is extended.

However, when the leak can be directly connected ("close coupled") to the flowmeter, the fan is not required – then the MIDI accessory flowmeter can be used. In this configuration, the total flow rate and the methane concentration are measured, and corresponding leak rate is calculated and reported.

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#### **SEMTECH** GLOBAL NEWS

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The MIDI (when connected to the HI-FLOW 2 Analyzer) can measure small or large methane leak rates with the same accuracy, precision, and traceability as the HI-FLOW 2 Sampler. The MIDI operates as a plug-and-play module like the SAMPLER and requires no additional software features. The MIDI simplicity provides for inherent robustness by design.

The HI-FLOW 2 MIDI accessory accurately quantifies and reports real-time, average and peak flow rates when directly coupled to the wellhead, eliminating the need for an active fan. Leveraging the flow of the wellhead, the MIDI reduces power consumption of the HI-FLOW 2 while providing precise flow and pressure data crucial for environmental monitoring.

As the world intensifies its efforts to combat climate change, abandoned and orphaned wells (AOWs) have come under increased scrutiny. These wells, often left unmanaged, can emit significant quantities of methane, a greenhouse gas with a warming potential many times greater than carbon dioxide.

To address this, regulatory bodies and carbon registries are turning to advanced technologies like high-volume samplers. Carbon registries, such as ACR at Winrock International<sup>1</sup>, rely on accurate data to validate carbon offset projects. High-volume samplers like the SEMTECH<sup>®</sup> HI-FLOW 2 provide critical measurements needed to certify emission reductions.

Almost all carbon registries allow the use of high-volume samplers to capture emission rates of orphaned and abandoned wells. They also allow you to direct-couple such measurements, as long as the well-pressure is measured in addition to determining the methane leak rate. By integrating these devices into a monitoring, reporting, and verification (MRV) framework, operators can confidently document methane abatement and monetize their efforts through carbon credits. **S** 



Orphan well photo courtesy of

Curtis Shuck, Well Done Foundation

<sup>1</sup>ACR Methodology Plugging Orphaned Oil and Gas Wells in the U.S. and Canada, Version 1.0 and their corresponding Errata and Clarifications Version 1.0 2024-09-13). See https://acrcarbon.org/methodology/plugging-orphaned-oil-and-gas-wells/

This article is the first of a 3-part series on HI-FLOW 2 Accessories

- Close Coupling when you need to ideal or directly connecting to the emission source
- Large Area Leak Capture Geometries (e.g. "Thief Hatches")
- Complete Leak Capture Geometries (e.g. Orphaned wells that look like "Christmas Trees")

#### **FUGITIVE METHANE**

**EPA Update** – The US EPA issued a <u>press release</u> "EPA Finalizes Rule to Reduce Wasteful Methane Emissions and Drive Innovation in the Oil and Gas Sector" announcing the final rule to reduce methane emissions from the oil and gas sector on November 12, 2024. According to the press release "EPA estimates that this rule alone will result in cumulative emissions reductions of 1.2 million metric tons of methane (34 million metric tons CO2-equivalent) through 2035 — the equivalent of taking nearly 8 million gas-powered cars off the road for a year — and will have cumulative climate benefits of up to \$2 billion." Read the <u>press release on the EPA website</u> and learn more about the <u>Methane Reduction act here</u>.

### **FUGITIVE METHANE**

## **Distributor Corner**

Montrose Environmental's Insight Blog <u>Why We</u> <u>Recommend HI-FLOW 2 For Voluntary QMRV projects</u>. In the blog, Dr. Booker, Sensors' CTO explains why the SEMTECH® HI-FLOW 2 is the best choice for use in Quantification, Monitoring, Reporting, and Verification (QMRV) projects. "The HI-FLOW 2 offers a best-in-class dynamic range of 0.0005 to 25 CFM. This is a very large dynamic range that encompasses the expected range of sampled flow rates and concentrations."



Heath Consultants' LinkedIn post highlights how the SEMTECH<sup>®</sup> HI-FLOW 2 ensures your EPA OOOOb sampling is done correctly, meeting EPA standards measuring both low and high sampling requirements.



## **Product News**

Sensors showcased the SEMTECH® HI-FLOW 2 and the eREM, our new laser based, open-path, continuous monitoring system for fugitive methane at CH4 Connections in Fort Collins, Colorado in October. The eREM, created in collaboration with Physical Sciences, Inc. was demonstrated during the event.



#### PEMS

# **Expert Insights**

We are pleased to be a sponsor of Ameya Joshi's Mobility Notes newsletter. The November newsletter includes articles on EPA's 2024 report on the overall emissions trajectory for light-duty vehicles, Transport Energy Institutes' report on the viability of e-fuels, H2 fuel cell trucks in comparison to diesel trucks, and much more. You can read it on his LinkedIn post. You can also sign up and see past articles at his website, Mobility Notes.



### PEMS

# **Sensor Tech Post Processors**

Here is a snapshot of our latest and upcoming post processors. Contact <u>sales</u> for more information.

Regulation and Description	Software Title	Software Release Date	
Europe			
EU 2023/443 In accordance with the Euro 6e Standard (Package 5), with more specific on NOx drift of 3 ppm and PP is validated by Third Party as part of Regulation Requirement.	SENSOR Tech-CT LDV Package 5	9/22/2023	
EU 2022/2387 This is a 2022 update of the EU 2017/655 regulations, adding methods for testing small engines. This includes engines without ECUs.	SENSOR Tech-CT HDV EU-NRMM 2022	5/3/2024	
UN R168 The new UN 168 RDE regulations applies Euro 7 standards and testing requirements; This is pending TUV certification.	SENSOR Tech-CT LDV UN R168	coming soon	
United States			
<b>CARB/EPA Bin MAW</b> Sensors USA MAW software provides calculations and reporting for EPA and CARB MAW methods, including both gasoline and diesel applications. The reporting specification is still under discussion by CARB and EPA.	Sensors USA MAW Post Processor	12/6/2024	
<b>EPA HDIU</b> Reporting specification TBD by CARB/EPA Sensors EPA HDIU post processor is used to calculate NTE emissions results and submission report that are compatible with EPA's data exchange web site. EPA has updated the reporting schema and this latest version is up to date with these changes.	Sensors EPA HDIU Post Processor	10/11/2024	
India			
AIS 175 This new post processor will apply India's new AIS 175 RDE regulations	SENSOR Tech-CT LDV AIS 175	Q1, 2025	



### **Sensors on the Move**



Sensors regularly supports emissions measurement activities from around the globe. By participating in various trade shows to attending or hosting technology, product, and user conferences that attract regulatory agencies and customers alike, there is a wide array of opportunities to meet our team.

Be sure to look for our products and people at these future events:

#### **Fugitive Methane**

**B.L.E.W.S. 2025 Symposium** February 18 - 19, 2025 Dallas, Texas, USA AAPG Orphan, Abandoned, Idle, and Marginal Wells Conference February 18 - 19, 2025 Tulsa, Oklahoma, USA Methane Mitigation Europe February 25-27, 2025 Novotel, Amsterdam City, Netherlands

#### **Vehicle Emissions**

**SAE Clean Snowmobile Challenge** February 27 - March 2, 2025 Eagle River, Wisconsin, USA

**Testing Expo India** April 8 - 10, 2025 Chennai, India

**35th CRC Real World Emissions Workshop** April 13 - 16, 2025 Long Beach, California, USA **14th Annual International OSAR Conference** April 17 - 18, 2025 Riverside, California, USA

**Autopromotec** May 21 - 24, 2025 Bologna, Italy

**Testing Expo China** August 27 - 29, 2025 Shanghai, China

# **Holiday Greetings**

Wishing you and your team Happy Holidays and a joyful New Year from all of us at Sensors, Inc.



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# **Sensors Spotlight**



Join us in congratulating Teresa Bross on her promotion to Sales & Marketing Product Specialist.

Since joining Sensors more than two decades ago, Teresa has consistently shown a keen understanding of our products, an impressive ability to support our sales teams, and a strong dedication to improving the customer experience.

In her new role, Teresa will be responsible for sales and sales support, guiding customers along their purchasing journey by providing deep product knowledge to meet our clients' needs.

We're confident in this new role, Teresa will contribute even more to the success of our sales and marketing initiatives.

Welcome Back, Rob! We are pleased Rob Wilson has rejoined Sensors as Senior Sales & Marketing Product Specialist, focused on the Oil & Gas industry. Rob is bringing a wealth of knowledge and extensive experience back to the team to drive our product and sales initiatives in the oil and gas sector.

During his 35 year tenure at Sensors, Rob played a pivotal role in developing and executing successful sales and marketing strategies and contributing to the growth and success of our product lines. As the Senior Sales & Marketing Product Specialist, Rob will be instrumental in strengthening our relationships with key stakeholders and helping to shape our future in the oil and gas industry.

Please join us in welcoming Rob back to the team! We are excited for the continued impact his leadership will have as we expand our presence and deliver innovative solutions to our clients.



#### **SEMTECH GLOBAL NEWS**

Sensors, Inc. was founded in 1969 in the backyard of the University of Michigan and has gone on to become an innovative leader in the supply of gas analysis and particle measurement instrumentation.

#### Sensors, Inc.

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"powered by employee-owners to deliver & support innovative solutions to help our partners improve the air we ALL breathe"