



Sierra Expands Thermal Leadership with New TM100™ and TM500™ Thermal Mass Flow Meters

Sierra Global Headquarters, Monterey, CA / October 11, 2023 - [Sierra Instruments](#), celebrating its 50th year in business, introduces its new [TM100™](#) and [TM500™](#) high-performance thermal mass flow meters. Both meters were designed and built to provide a broader range of power and value for industrial applications. They feature precision gas flow measurement, field flexibility, and delivery as fast as one week.

“We’re committed to being [Measurably Different](#),” says Greg Smith, Product Line Manager. “50 years marks the beginning of a new era in flow measurement innovation for Sierra. The TM100 and TM500 will play a powerful role in reaching new customers, many of whom are already aware of Sierra’s pioneering meters, including our flagship [QuadraTherm® 640i](#), the world’s most accurate thermal mass flow meter.”

Both meters utilize DigiSense®, Sierra’s state-of-the-art sensor technology. Unlike other thermal flow sensors, it interfaces directly with its microprocessor for greater control, precision, and programmability. DigiSense accurately responds to changes in process variables (gas flow rate, pressure, and temperature) to determine mass flow rate, totalized flow, and temperature. DigiSense’s correlation algorithms allow the meter to be calibrated on a single gas in the factory while enabling the user to select other gases in the Gas-Mix menu.

Sierra’s thermal technology delivers direct measurement of gas mass flow. Unlike differential pressure (dP) meters that measure volumetric flow, it’s simpler to make and maintain, and no temperature or pressure corrections are required.

TM500 Applications

Sierra designed the [TM500](#) for the most demanding industrial processes in facilities management, chemical plants, gas refineries, and petrochemical production. Sierra flow measurement instruments are built to last and meet application, budget, and delivery needs.

TM500 Key Features

- Accuracy
 - +/- 1.0% of reading plus +/- 0.2% of full-scale – Air, Nitrogen
 - +/- 1.5% of reading plus +/- 0.5% of full-scale – All other gases
- Repeatability +/- 0.2% of full scale

-MORE-

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- Inline, Insertion, and remote versions
- Velocity range: 0 to 45,000 sfpm
- AC or DC power
- Optional Gas-Mix feature to easily change gas selection or create gas mixes in the field - no recal required
- Modbus RTU, HART, USB
- Wide measurement range: up to 1000:1 turndown; 100:1 typical
- Sensor (Calibration) validation with TM-CAL
- Delivery as fast as one week

TM100 Applications

The [TM100](#) delivers amazing value to end user's burner and combustion applications, natural gas and pure gas monitoring, and compressed gas and packing leaks. Sierra's TM100 is built to last and meet application, budget, and delivery needs.

TM100 Key Features

- Accuracy
 - +/- 1.0% of reading plus +/- 0.2% of full-scale – Air, Nitrogen
 - +/- 1.5% of reading plus +/- 0.5% of full-scale – All other gases
- Repeatability +/- 0.2% of full scale
- Inline and Insertion versions
- Velocity range: 0 to 25,000 sfpm
- 12 to 24 volt DC power
- Optional Gas-Mix feature to easily change the gas selection or create gas mixes in the field - no recal required
- HART with pulse output or Modbus RTU (RS485), BACnet MS/TP (RS485)
- Wide measurement range: up to 1000:1 turndown; 100:1 typical
- Sensor (Calibration) validation with TM-CAL
- Delivery as fast as one week

Learn more about Sierra's new TM100 and TM500 industrial thermal mass flow meters today, click here for [TM100](#) / [TM500](#).

We deliver on the promise of being Measurably Different™.

Sierra provides advanced flow measurement solutions for the world that control industrial processes, regulate greenhouse gases, convert waste to energy, deliver life-saving vaccines, and help create silicon chips that enable everyday life.

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