

smart gas metering

Lattice

LATTICE A NEW PLATFORM FOR GAS METERING

Lattice is a solid-state sensor that forms the basis for a durable, low power and highly accurate smart gas meter. It is the ideal solution for manufacturers wishing to enter this highly competitive and promising market.

THE NEED FOR SMART METERING

As smart gas metering rises up the utility agenda, the requirements for the meters themselves are becoming progressively more sophisticated. In this increasingly competitive market, meter and system functionality combined with the ability to respond rapidly to changing demand will become critical success factors. Manufacturers who are able to integrate metrology function closely with smart capabilities will be at an advantage, thanks to reduced costs, shortened design time for new products and the ability to introduce future functionality as needed.

This close integration is only possible with a solid-state metrology solution, like Lattice. A proprietary solution, Lattice is easily integrated with metering firmware, communications solutions and shut-off valves, providing a smart meter design that can support a wide variety of applications. Its exceptional accuracy and low cost make it suitable for a wide range of meter types, allowing the design investment to be recouped across a full product family.

Lattice's technology works regardless of gas composition, temperature, flow regime and orientation, and provides an exceptionally durable and effective meter for all installations. Its small mechanical footprint makes it easy to adapt for meter designs that can be deployed in a variety of markets around the world. It scales effectively, and is an ideal platform for the developments of complete families of smart gas meters.

In addition, its simple design is based on components commonly available in long-lifetime consumer products, which reduces complexity in the supply chain and ensures its ability to perform in the field over a long period.

HOW IT WORKS

Lattice has a completely new technique for measuring gas. It uses components widely deployed in common consumer products to 'mark' a band of gas and then measures the period of time for it to travel between two points, from which it can calculate the volume of gas that is passing through the flow tube. It requires only minimal signal processing to meet metrology standards, such as the European MID. It draws very little power, creating the potential to design meters with a long lifetime between battery changes.

The simplicity of the design means it can easily be integrated with a wide range of communications and management functions with very little additional cost, ensuring it remains competitive even for basic metering applications.



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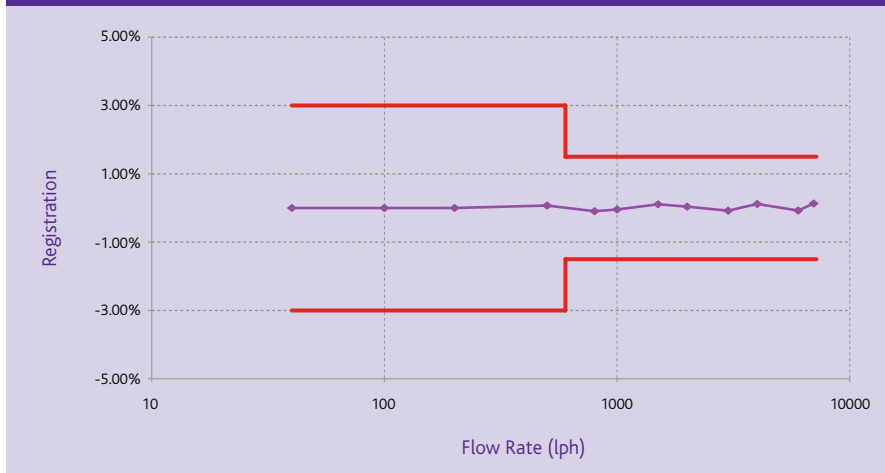
BETTER FUNCTIONALITY, LOWER DEVELOPMENT COSTS

Manufacturers using Lattice benefit from its inherently superior performance and design characteristics that include:

- Standardisation across all parts as well as availability from multiple sources
- Simple manufacturing processes that allow a flexible manufacturing strategy
- Low design risk and short time to market for a complete family of products
- Easy calibration and excellent meter-to-meter repeatability
- Straightforward integration of two-way communications, valves and displays, to meet demand for intelligence
- Patent protection that offers licence holders significant advantage in terms of functionality, cost and speed of response to tenders

Together these features make Lattice the ideal solution for manufacturers developing metering products to meet the requirements of the gas smart metering market.

TYPICAL REGISTRATION CURVE FOR A 6m³/HOUR GAS METER



LATTICE IN THE FIELD

Lattice offers the scope for all smart meter functionality, including remote credit/prepayment switchover, remote disconnect, safety cutoffs, and tamper and status alerts. Additional advantages include:

- Accurate and direct measurement at a wide range of flow rates, so that all gas passing into a household is measured
- High levels of flexibility for capturing and retrieving consumption data
- Inherent resilience, with no moving parts to wear, resulting in superior performance up to the end of life
- Low power requirements enabling full functionality on a single battery, over a 15-year lifespan

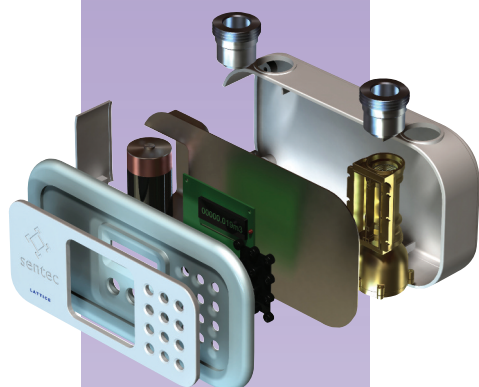
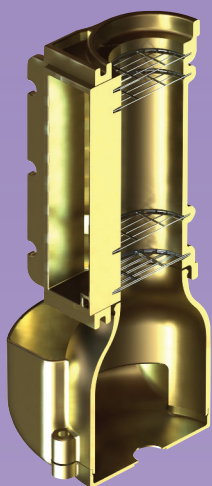
In addition, Lattice gas meters are the ideal platform for a diverse range of communication options and management functionality, and can play a key role in wider systems for providing detailed information about usage and network status.

COMMERCIAL PROPOSITION

The technology is protected by patents across the world. Manufacturers can either acquire a licence to use the technology in their own meter, or buy complete sensors from Sentec. Please contact Sentec for specific details of the rights and territories that are still available.

In addition, Sentec's world-class product development team are available to work with customers, whether they have purchased licenses or an entire sensor, on all aspects of the product development. This includes mechanical design, firmware, electronics, integration with existing systems, design for manufacture/test, tooling, contract manufacture support, manufacturing systems and databases, compliance, calibration and testing.

For more information about Sentec and Lattice please see our website, or contact lattice@sentec.co.uk to discuss meter options.



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