PRODUCT INFORMATION

FTMg

FLOW SENSOR WITH ENERGY MEASUREMENT

Flow sensors

SICK
Sensor Intelligence.

A SMALL FLOW SENSOR ENSURES GREAT EFFICIENCY

Compressed air one of the most expensive types of energy, which is why energy efficiency and energy transparency are playing an increasingly important role in factory automation. The investment costs, for example for procuring powerful compressors, are enormous. To save money, you must ensure loss-free operation. The FTMg (abbreviation for Flow Thermal Meter for gases) thermal flowmeter detects leaks in the compressed air system early on and stands for efficient energy management in accordance with DIN EN ISO 50001.

SAVING CONSIDERABLE COSTS WITH DATA TRANSPARENCY

Optimizing energy efficiency with reliable leak monitoring of compressed air systems

Through integrated data monitoring and automated storage of data from the last seven days in the sensor, the FTMg reliably detects changes and fluctuations in energy consumption. With this data transparency, the sensor provides efficient assistance in finding leaks in the compressed air system and helps minimize energy loss as well as save money.

Quickly identification of changes with high measuring dynamics

Mechanical component wear or defects result in changes to the consumption system. The FTMg detects these deviations with its high measuring dynamics, making it possible to initiate maintenance or repair work early on.

8024858/2022-11-02
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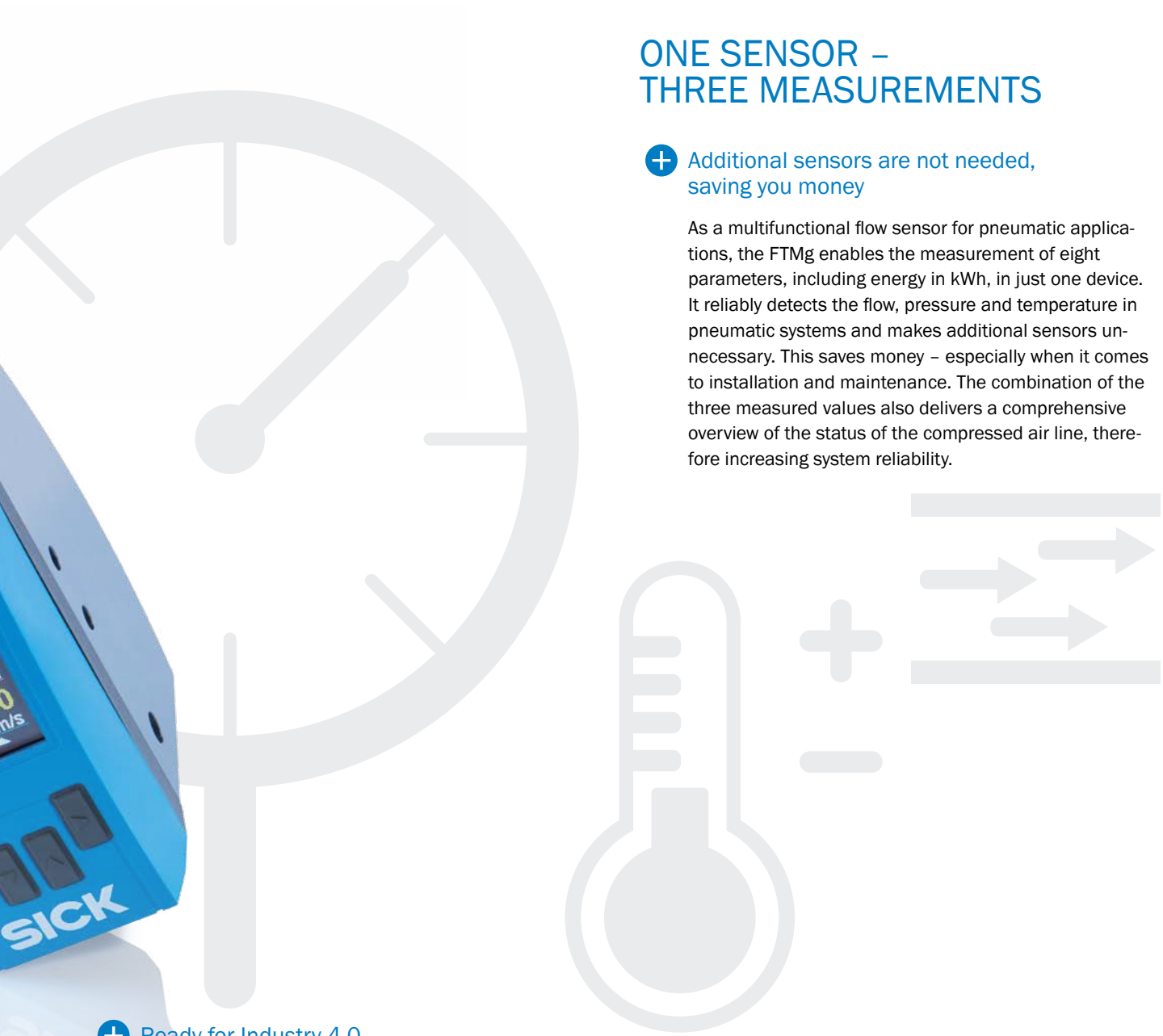
ONE SENSOR – THREE MEASUREMENTS

Additional sensors are not needed, saving you money

As a multifunctional flow sensor for pneumatic applications, the FTMg enables the measurement of eight parameters, including energy in kWh, in just one device. It reliably detects the flow, pressure and temperature in pneumatic systems and makes additional sensors unnecessary. This saves money – especially when it comes to installation and maintenance. The combination of the three measured values also delivers a comprehensive overview of the status of the compressed air line, therefore increasing system reliability.



Ready for Industry 4.0

The FTMg not only has digital and analog outputs, but can also transmit measurement data to the PLC via IO-Link. It also features variants with Power over Ethernet (PoE) via an integrated web server. The sensor can be accessed via the network using a computer, tablet or smartphone. This makes it possible to analyze consumption and plan maintenance intervals regardless of the location. The FTMg is therefore perfectly suited for condition monitoring and predictive maintenance. The integrated MQTT and OPC UA communication interfaces also ensure optimal cloud connectivity.

INDUSTRY 4.0 READY

MQTT.ORG

IO-Link

OPC UA

SMALL AND CLEVER DESIGN – HIGH EFFICIENCY

Flexible installation – even in tight spaces

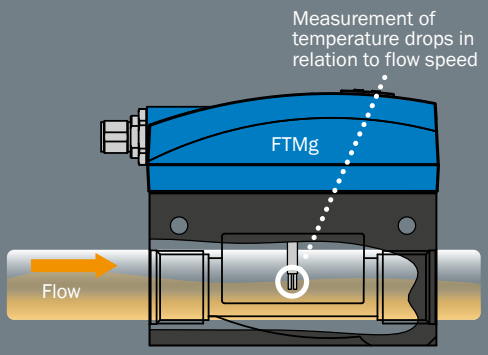
The FTMg is characterized by its light and compact construction. This means it is easy to install, even in tight spaces. With its rotatable display, it can be installed in any position – upside down, on the side or at an angle.

Nearly loss-free operation

Thanks to its straight measurement channel, the flow sensor minimizes pressure loss in the pneumatic system caused by the measurement technology.

The calorimetric principle of operation

The sensor probe is heated up with the calorimetric principle of operation. The medium flowing by the sensor cools the probe during operation. The drop in temperature is proportional to the flow speed, meaning it is higher the faster the medium flows. The sensor evaluates the detected temperature difference and calculates the values for flow monitoring.



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CLEAR CONDITIONS FOR HANDLING AND OPERATION

Flexible configuration

Different reference standards in accordance with DIN or ISO can be selected easily using the FTMg. Even individually defined reference values are easy to set using the device. Configurable outputs also allow for simple adaptation to the desired application.

Clear overview with OLED display

The large, contrast-rich OLED display enables intuitive operation thanks to the plain text messages, saving time and money during commissioning. With high resolution, up to six different measured values can be shown as text and progress diagrams.

Easy operation thanks to integrated web server

The integrated web server shows the data logging of all eight parameters from the last seven days and enables a clear view of the measured values and simple operation via PC or a mobile end device. This makes it easy to identify if the system is running without faults or if leaks are present.

RELIABLE LEAK MONITORING IN COMPRESSED AIR SYSTEMS

Even the smallest leaks in a compressed air system can result in high costs. The typical sources of leaks are leaky or defective lines, hoses, couplings, valves and screw or flange connections, to name a few examples.

If leaks in these areas remain undetected or ignored for long periods of time, the operator suffers from a reduction in economic efficiency and financial losses. The following applies: The larger the leak, the higher the costs threaten to be. The FTMg helps reliably detect leaks, saving valuable energy and unnecessary expenses.

Example calculation

The following table shows the expected costs per year caused by leaks, assuming the following:

- 8,760 operating hours per year (24 h, 365 days)
- Compressed air costs = 1.7 cents/standard cubic meter(Nm^3)

Leak area		Leaks per year	Cost per year (€)
Surface area (original size)	Hole diameter	At 6 bar (relative)	
·	0.5 mm	8,410 Nm^3	€143
•	1.0 mm	33,112 Nm^3	€563
•	1.5 mm	74,635 Nm^3	€1,269
●	2.0 mm	132,976 Nm^3	€2,261
●	3.0 mm	299,066 Nm^3	€5,084

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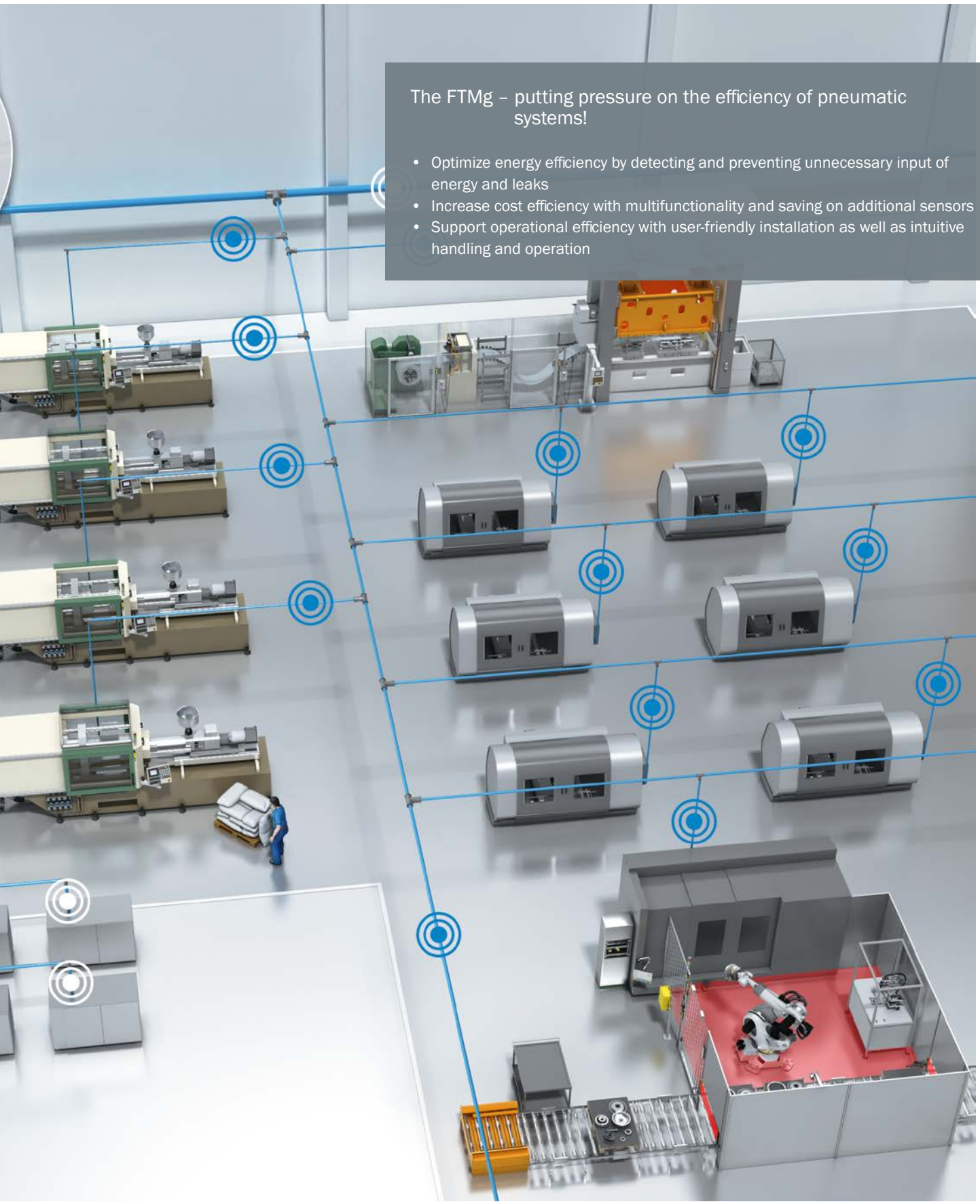

The FTMg – putting pressure on the efficiency of pneumatic systems!

- Optimize energy efficiency by detecting and preventing unnecessary input of energy and leaks
- Increase cost efficiency with multifunctionality and saving on additional sensors
- Support operational efficiency with user-friendly installation as well as intuitive handling and operation

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SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 11,000 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing damage to the environment.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the customers need. In application centers in Europe, Asia, and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes SICK a reliable supplier and development partner.

Comprehensive services round out the offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

That is "Sensor Intelligence."

Worldwide presence:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations → www.sick.com

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