FLOWSIC500
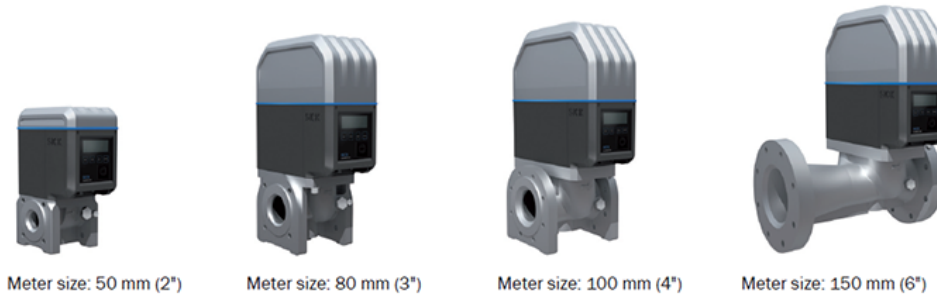
Custody transfer measurement in natural gas distribution

GAS FLOW METERS

SICK
Sensor Intelligence.

Advantages

Meter size: 50 mm (2") Meter size: 80 mm (3") Meter size: 100 mm (4") Meter size: 150 mm (6")

Gas flow meter and volume correction in one

Why use two devices for one task? Gas flow meters and with volume correctors are used for the same thing: Precise measurement of the transported gas volume. It makes sense to combine both into one device, saving on installation costs and reducing the number of interfaces.

When leaving the factory, the FLOWSIC500 gas flow meter already has everything you need. This makes installation easy and keeps installation costs low. The volume corrector can be integrated into the FLOWSIC500 on request. The volume corrector supports all typical correction algorithms, such as SGERG88, AGA 8, and AGA NX-19. There is the option of TZ or pTZ correction. The pTZ variant approved in accordance with MID. The right temperature and pressure sensors always come with the meter.

FLOWSIC500 variants

Simple installation into pipelines
Connection to all standard volume correctors via LF, HF, encoder, or RS-485 output

Minimum installation costs
The meter is preconfigured in line with the p/T sensor technology supplied with it
Easy access to the p/T sensors for operating point tests
Option of using the p/T tappings on the meter for connecting the sensors

Maximum convenience during installation
Integrated sensor technology for p/T fully pre-configured
Just install, connect the signal output, and you're done

Easy, convenient, reliable.

FLOWSIC500 fulfills the requirement of all standards and regulations relevant for natural gas distribution and is certified in accordance with MID guideline 2014/32/EU.
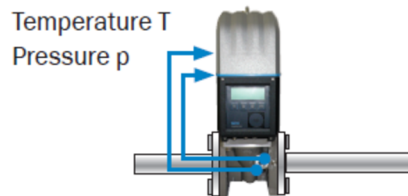
Everything in one: Gas flow meter, flow computers and pressure and temperature sensors.

Never lose anything, thanks to comprehensive data archive and log books.

A gas flow meter and volume corrector in one – simple, convenient, reliable. more than one option.

Voltage supply: no problem

Thanks to PowerIn Technology™, the FLOWSIC500 performs fail-safe measurements in intrinsically safe line powered operation with battery back-up. Alternatively, the gas flow meter operates by battery as an energy self-sufficient configuration for a period of at least five years.

Compact and intuitive

FLOWSIC500 operates without straight inlet or outlet zone requirements.

Pure comfort: USB/Infrared adapter for easy connection.

Intuitive user program – the FLOWgate™ software platform.

➕ Easy installation, compatible with conventional technologies, and minimal operating costs – The perfect solution for municipal gas suppliers and industrial consumers

FLOWSIC500

GAS FLOW METERS

Technical data overview

Measured values	Volume a. c., volumetric flow a. c., gas velocity, volume s. c. [*], volume flow under s.c. [*]
Measurement principle	Ultrasonic transit time difference measurement
Hazardous area	2G Class I Division 1
Gas temperature	–25 °C ... +60 °C Optional: –40 °C ... +70 °C
Operating pressure	PN16 (EN 1092-1): 0 bar (g) ... 16 bar (g) Class 150 (ASME B16.5): 0 bar (g) ... 20 bar (g)
Conformities	MID: 2014/32/EU OIML R 137-1&2:2012 EN 12405: 2010 (for integrated flow conversion)
Enclosure rating	IP66
Modbus	✓
Type of fieldbus integration	RTU RS-485
Optical interface	✓
Corrective functions	Volume correction
Diagnostics functions	Permanent monitoring of measured values

Product description

The latest technology for the ultimate in measurement accuracy: The FLOWSIC500 ultrasonic compact gas meter from SICK enables extremely accurate natural gas distribution measurement. Thanks to its lack of mechanical moving parts, the FLOWSIC500 is rugged, reliable, and maintenance-free – allowing for a significant reduction in operating costs. It is overload-proof, accurate and is monitored by an intelligent diagnostics system. Recalibration is extremely straightforward, as it is simply a matter of exchanging the cartridge. The FLOWSIC500 can easily be integrated into existing measuring stations. It operates either in a self-sufficient energy configuration or in failsafe network operation with battery back-up. It complies with all pertinent standards and directives. When used in transfer stations and measuring stations, the FLOWSIC500 provides the security of a continuous and blockage-free gas supply.

At a glance

- Cutting-edge technology: ultrasound
- Diagnostics and permanent operational check
- Rugged and reliable due to lack of moving parts
- Exchangeable cartridge
- Straight inlet/outlet zone not required
- Overload-proof
- Optional integrated flow conversion / date registration
- Battery or intrinsically safe power supply

Your benefits

- Ultimate measurement certainty and safety of continuous gas supply
- Reduction of installation costs due to integrated flow conversion
- Simple installation, compatible with conventional technologies (turbine and rotary displacement meters)
- Minimal operating costs due to being nearly maintenance-free
- Simplified recalibration due to straightforward cartridge exchange
- Reliable under dynamic load changes
- Self-sufficient operation

Fields of application

- Natural gas distribution in transfer and measuring stations for municipal and regional gas suppliers
- Measuring stations in industrial and commercial applications
- Applications where continuous gas supply must be ensured

Ordering information

Other models and accessories ➜ www.sick.com/FLOWSIC500

- **Product segment:** Flow measurement technology
- **Product family group:** Gas flow meters
- **Product family:** FLOWSIC500
- **Measurement principle:** Ultrasonic transit time difference measurement
- **Measured values:** volume a. c., volumetric flow a. c., gas velocity, volume s. c. [*], volume flow under s.c. [*]
- **Measuring medium:** natural gas (dry, odorized)
- **Ex area category:** 2G, Gb, Class I Division 1
- **Conformities:** MID: 2014/32/EU, OIML R 137-1&2:2012, EN 12405: 2010 (for integrated flow conversion)
- **Communication interface:** Modbus, optical interface
- **Communication Interface detail:** RTU RS-485
- **Process temperature min.:** ≥ –25 °C, ≥ –40 °C

Process tem-perature max.	Operating pressure min.	Operating pressure max.	Enclosure rating	Type	Part no.
≤ +60 °C ≤ +70 °C	≥ 0 bar (g) ≥ 0 bar (g)	≤ 16 bar (g) ≤ 20 bar (g)	IP66	FLOWSIC500	On request

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. 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.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our 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 us a reliable supplier and development partner.

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

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.