Product family overview

FLOWSIC600-XT

The perfect match

GAS FLOW METERS

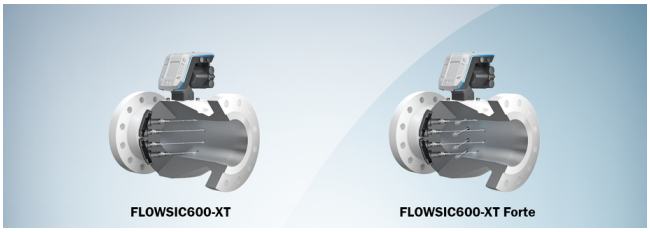
SICK
Sensor Intelligence.

Advantages

The perfect ultrasonic gas flow meter for any application

Every ultrasonic gas flow meter of the FLOWSIC600-XT product family is designed for custody transfer gas flow measurement. The device family satisfies national and international standards and guidelines for metrology (for example MID, OIML R137, AGA9, ISO17089), explosion protection (for example ATEX, IECEX, NEC, GOST) and pressure devices (ASME, EN2014/68/EU). Four device variants are available, whereby every gas flow meter satisfies very special performance requirements. The requirements on a gas flow meter are not always the same. This performance-oriented classification of the FLOWSIC600-XT, -XT Forte, -XT 2plex and -XT Quatro is therefore helpful as the first step in focusing and solving tasks and meeting customer requirements in a unique manner. No matter which version you chose, every FLOWSIC600-XT can be easily installed into all custody transfer applications with a nominal width between 3 and 48 inches. Connection to all conventional Flow computers on the market is also easy.

Precise, innovative, long-term stability

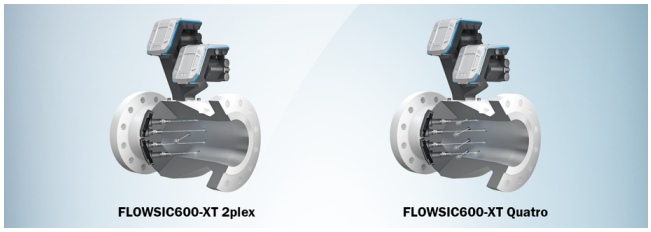


FLOWSIC600-XT

The proven all-rounder for all natural gas custody transfer applications
15 years of field experience with the FLOWSIC600 flowed into this 4-path technology

FLOWSIC600-XT Forte

8 paths on two different path levels deliver the highest measurement accuracy
The first choice for installations in plants with short inlet and outlet zones



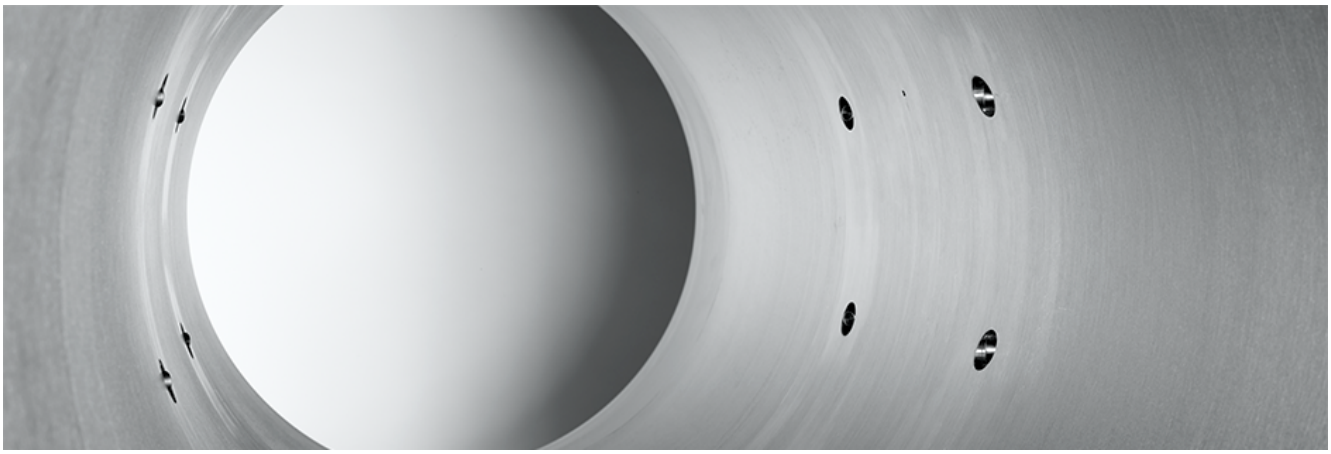
FLOWSIC600-XT 2plex

Combines a very compact gas flow meter and control measurement device, featuring extended diagnostic functionality thanks to its additional independent measurement path

FLOWSIC600-XT Quatro

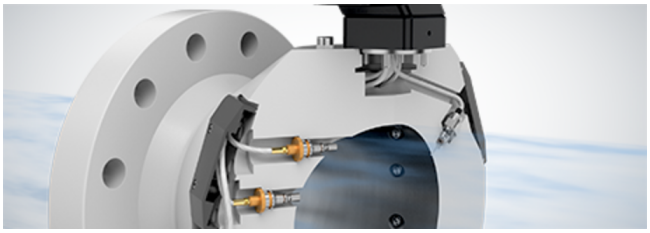
Unites two measurement devices for redundant custody transfer measurements in one, with an installation length equivalent to that of a single device

CUSTODY TRANSFER MEASUREMENTS OF GASES - NO COMPROMISES

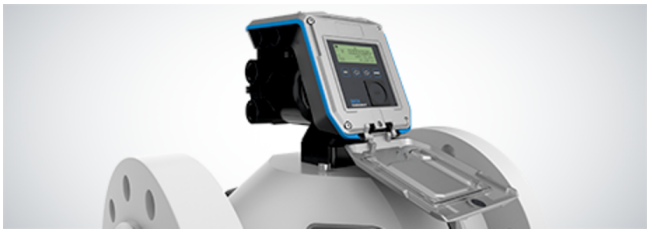


EXCELLENT MEASUREMENT DATA SAFETY AND AVAILABILITY

FLOWSIC600-XT devices fulfill all requirement for safe, stable custody transfer gas measurement throughout the entire service life. Measurement and diagnostics data as well as status changes can be recorded permanently in six accessible data archives. The FLOWSIC600-XT further ensures that measurements continue to be taken and data is stored even in the event of a mains voltage failure, thanks to PowerIn Technology™.

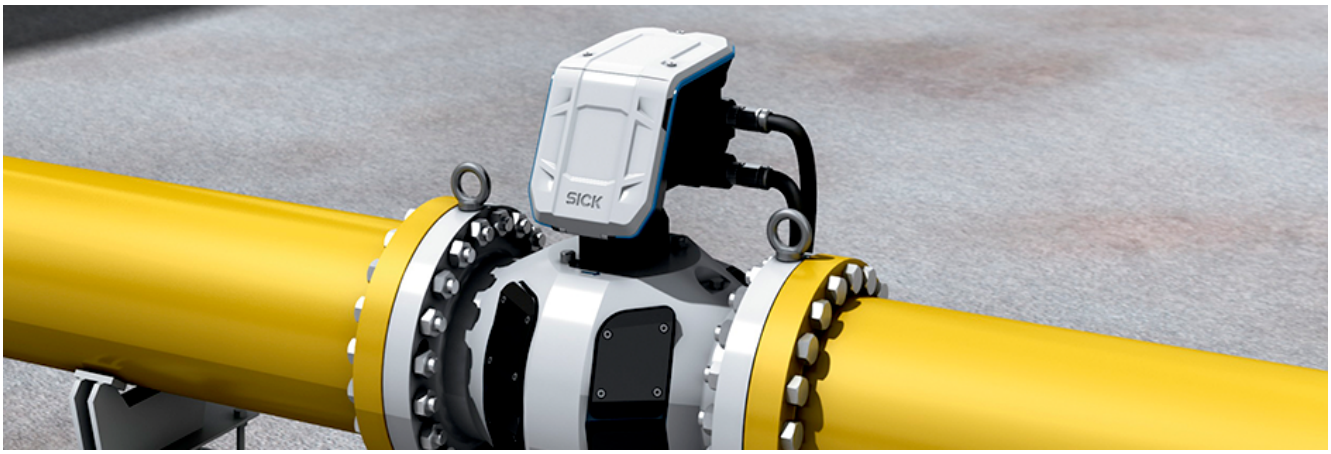


- Improved measurement accuracy thanks to automated correction of measured values in fluctuating operating conditions
- Safe and easy transfer of calibration and application conditions



- Continuous measurement and data backup even if the event of a mains voltage failure thanks to the backup battery

SAFE AND RELIABLE MEASUREMENTS THROUGHOUT THE ENTIRE SERVICE LIFE - THE PERFECT SOLUTION



Easy device integration and quick device commissioning and checks

The FLOWSIC600-XT is compatible with its predecessor, the FLOWSIC600. It can therefore be integrated into any plant with ease. i-diagnostics™ supports quick and easy commissioning and inspection of the device. Furthermore, i-diagnostics™ provides extended flow meter and application diagnostics during operation. Should maintenance ever be required, the intelligent solution wizard provides support. The built-in infrared interface means measured value and diagnostics data can be accessed in no time, making servicing quick and efficient.

Easy, convenient, reliable.

Quick and easy access to measured value and diagnostic data thanks to the integrated infrared interface

i-diagnostics™ with integrated solution assistant supports safe and reliable device operation

EASY INSTALLATION, UNCOMPLICATED COMMISSIONING AND EFFICIENT MAINTENANCE - THE PERFECT SOLUTION

Technical data overview

Measured values	Volumetric flow a. c., volume a. c., gas velocity, sound velocity, optional volume correction via integrated, electronic volume corrector (EVC)
Measurement principle	Ultrasonic transit time difference measurement
Number of measuring paths	2, 4 (FLOWSIC600-XT & FLOWSIC600-XT C), 4+1 (FLOWSIC600-XT 2plex), 4+4 (FLOWSIC600-XT Quatro), 8 (FLOWSIC600-XT Forte)
Hazardous area	Zone 0 Zone 1 Zone 2 Class I Division 1 Class I Division 2
Measuring ranges	Measuring ranges depend on nominal pipe size
Gas temperature	–46 °C ... +180 °C On request: –194 °C ... +280 °C
Operating pressure	0 bar (g) ... 450 bar (g)
Nominal pipe size	3 ″ ... 56 ″ (DN 80 ... DN 1400), other nominal pipe sizes on request
Conformities	OIML R 137-1&2:2012 (class 0.5) OIML D 11:2013 ISO 17089-1 AGA-Report Nr. 9 MID: 2014/32/EU PED: 2014/68/EU ASME: B16.5, B16.47 A/B ATEX: 2014/34/EU EMC: 2014/30/EU GOST 8.611-2013 GOST 8.733-2011 CPA: JJG1030-2007 PCEC: GB 3836.1-2010, GB 3836.2-2010, GB 3836.4-2010, GB/T 3836.22-2017
Enclosure rating	IP66 / IP67
Modbus **Modbus** **Modbus** Type of fieldbus integration	✓, ✓ TCP RTU RS-485 (3x) ASCII RS-485 (3x)
Ethernet Remark	✓ Option
HART	✓
Optical interface	✓
Serial Remark	✓ Encoder

Product description

As the follow-up to the successful FLOWSIC600, the FLOWSIC600-XT ultrasonic gas flow measuring device is setting new standards in its market segment.
The FLOWSIC600-XT is available in variants with 4, 4+1, 4+4, and 8 measurement paths to meet the requirements of every application, whether it is being used as a stand-alone or system solution. In addition to the OIML R 137 Class 1.0 requirements, the FLOWSIC600-XT meets the requirements of Class 0.5 and AGA9 in their entirety.

The FLOWSIC600-XT contains i-diagnostics™ – an intelligent application diagnostics function – and PowerIn Technology™, which enables continuous measurement operation for up to three weeks in the event of a mains voltage failure. These functions help ensure usability and unparalleled operational safety – and what"s more, the equipment offers the very best possible measurement accuracy and long-term stability.

At a glance

- User-friendly product family
- Automatic adjustment of pressure and temperature influences
- Available for all operating conditions
- PowerIn Technology™ for reliable backup operation
- Intelligent application diagnostics with i-diagnostics™
- Can be extended to include flow computers using connect-and-go technology
- Measuring capability up to 30% hydrogen in natural gas
- Gas quality indicator for quantifying the H_2 content

Your benefits

- Low measurement uncertainty in every application
- Excellent measurement data reliability and availability
- The right ultrasonic gas flow measuring device for every application – without compromise
- Simple device integration – even in compact systems
- Quick and easy commissioning and checks
- Economical quantification of the H_2 content in natural gas

Fields of application

- Custody transfer measurement of natural gas
- Custody transfer measurement of natural gas with up to 30% H_2
- Transport and storage of gas
- Onshore and offshore applications
- Gas production applications with H_2S and CO_2

Ordering information

Other models and accessories ➜ www.sick.com/FLOWSIC600-XT

- **Product segment:** Flow measurement technology
- **Product family group:** Gas flow meters
- **Product family:** FLOWSIC600-XT
- **Measurement principle:** Ultrasonic transit time difference measurement
- **Measured values:** volumetric flow a. c., volume a. c., gas velocity, sound velocity, optional volume correction via integrated, electronic volume corrector (EVC)
- **Number of measuring paths:** 2, 4 (FLOWSIC600-XT & FLOWSIC600-XT C), 4+1 (FLOWSIC600-XT 2plex), 4+4 (FLOWSIC600-XT Quatro), 8 (FLOWSIC600-XT Forte)
- **Measuring medium:** natural gas, air, natural gases containing increased levels of CO_2, N_2, H_2S, O_2
- **Ex area category:** 1G, 2G, 3G, Ga, Gb, Gc, Class I Division 1, Class I Division 2
- **Conformities:** OIML R 137-1&2:2012 (class 0.5), OIML D 11:2013, ISO 17089-1, AGA-Report Nr. 9, MID: 2014/32/EU, PED: 2014/68/EU, ASME: B16.5, B16.47 A/B, ATEX: 2014/34/EU, EMC: 2014/30/EU, GOST 8.611-2013, GOST 8.733-2011, CPA: JJG1030-2007, PCEC: GB 3836.1-2010, GB 3836.2-2010, GB 3836.4-2010, GB/T 3836.22-2017
- **Communication interface:** Modbus, Modbus, Modbus, Ethernet, HART, optical interface, Serial
- **Communication Interface detail:** TCP, RTU RS-485, ASCII RS-485
- **Nominal pipe size min.:** ≥ 3 ″
- **Nominal pipe size max.:** ≤ 56 ″
- **Process temperature min.:** ≥ –46 °C, ≥ –194 °C

Process temperature max.	Operating pressure min.	Operating pressure max.	Enclosure rating	Type	Part no.
≤ +180 °C ≤ +280 °C	≥ 0 bar (g)	≤ 450 bar (g)	IP66 / IP67	FLOWSIC600-XT	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

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