



Flow-X

GAS FLOW COMPUTER FOR CUSTODY METERING SOLUTIONS

Flow computers

SICK
Sensor Intelligence.

A PERFECT COMBINATION – Flow-X AND FLOWSIC600

FLOWSIC600 ultrasonic gas flow meters have set standards in design, usability and reliability over years. The Flow-X flow computer is now complementing the FLOWSIC product line with its next generation technology, both in hardware and software, and the intuitive user interface. The Flow-X series is based on powerful single stream modules which are combined in a number of different casings, for different application types.



Flow-X – FLOW COMPUTING EXCELLENCE

The perfect combination

Flow-X flow computers come with pre-loaded configurations for standard gas metering applications in combination with FLOWSIC600 making field installation easy and fast.

Sophisticated user interface

The Flow-X offers a compelling user interface, on the local touch screen and through the integrated web server. The color icons and the menu text provide a really intuitive user interface making it easy to operate and configure the Flow-X.

Reliable gas volume conversion

Flow-X offers volume conversion in-line with MID running on leading edge hardware utilizing a 64 bit double precision processor. Conversion cycles every 250 ms or less make sure volume totals have been calculated with highest accuracy.

Outstanding versatility

Each stream module offers advanced measurement technology combined with data communication and high capacity storage. Adding a stream is simple – installing the module, updating the configuration of the Flow-X – and you're done.

Data logging

Each Flow-X module is equipped with large integrated on-board storage (1 GB) which enables logging of the audit trail, events and of the primary data.

Remote access

The integrated web server, also supporting secure protocols, gives you the same access as on the local touch screen. Hence, you can operate the Flow-X from your control room the same way as standing in front of Flow-X.



Flow-X/P4

- Flow-X/P is a panel-mounted flow computer with up to four streams, and an additional station module with a 7" multi-lingual color touch-screen and additional serial (3x) and Ethernet interfaces (2x).



Flow-X/S

- Flow-X/S is a single stream, DIN rail enclosure with direct screw terminals for field connections. Interfaces include dual Ethernet with built-in web-server via RJ45 connectors. LCD display with 4 lines for local multi-lingual display of measured and calculated data.



External touch display

- The external seven-inch color touch screen connects to multiple Flow-X through the Ethernet interface supporting true remote operation in one place.

THE IDEAL FLOW COMPUTER FOR GAS METERING WITH SICK ULTRASONIC GAS METERS



Product description

The Flow-X flow computer provides gas volume conversion, event logging, audit trails and reports using latest technology. Each module combines advanced measurement technology, fast digital signal processing, abundant processing power, versatile data communication and high capacity storage into a fully equipped flow computer. Stream modules are combined in different enclo-

tures, offering a multi-stream version Flow-X/P for 1 - 4 streams with local touch screen or a single stream version Flow-X/S for smaller installations with one stream. The Flow-X flow computer meets the requirements for even the most demanding applications and is the ideal partner for custody gas metering solutions in installations with FLOWSIC600 ultrasonic gas meters.

At a glance

- MID approved configuration for gas metering streams with FLOWSIC600
- Powerful modules for demanding applications
- Each module features CPU, memory and equal in/outputs
- Compelling 7" graphic display with touch operation
- Intuitive user interface for graphics display and web browser
- True remote access via Ethernet
- Station computer for multiple streams

Your benefits

- Reduced planning and installation costs through standard configurations
- Very accurate volume conversion with multiple calculation cycles per second
- High reliability through independent modules with their own volume conversion and storage of measured values, counter readings and events
- Easy extension of installations with modules featuring equal in/outputs and 100% software configuration
- Very simple operation through intuitive user interface featuring identical menus and displays on the device and in the control room
- Reduced service and maintenance costs with tamper-proof remote maintenance
- Cost-efficient and flexible system integration of multiple streams



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→ www.mysick.com/en/Flow-X

For more information, just enter the link and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

Fields of application

- Custody gas metering with FLOWSIC600 gas meters
- Demanding natural gas and process gas applications
- Totals at base conditions for gas volume, mass and energy
- For natural gas, special gases and steam
- Gas metering with advanced diagnostics with FLOWSIC600 2plex
- Redundant gas metering with FLOWSIC600 Quatro

Detailed technical data

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.

System

Ambient temperature	+5 °C ... +55 °C
Storage temperature	-20 °C ... +70 °C
Ambient humidity	≤ 90 % Relative humidity; non-condensing
Conformities	MID, EN 12405 API 21.1
Analog outputs	4 outputs: 0/4 ... 20 mA or 1 V ... 5 V Resolution 14 bits; 0.075 % full scale.
Analog inputs	6 inputs: Configurable as 0/4...20 mA or 0/1...5 V HART loop for connection to HART transmitters on four analog inputs Inputs with high accuracy: error < 0.008% full scale, resolution 24 bits
Digital inputs and outputs	16 Open collector ports: Software configured as status inputs or outputs
Additional inputs	2 inputs for PT100 temperature sensors: -220 °C ... +220 °C Resolution 0.02 °C Maximum error: 0 ... +50 °C: +0.05 °C -220 ... +220 °C: +0.5 °C
Interfaces	Flow-X/M: 2 x RS-232/RS-485 2 x RJ45 (Ethernet TCP/IP 100 MBit/s) Flow-X/P: 3 x RS-232/RS-485 additionally
Correction method	PTZ
Compressibility	SGERG AGA NX-19 AGA 8 Gross methods AGA 8 (detailed)
Supported gas chromatographs	Supports all major gas chromatographs (e.g. ABB, Daniel, Elster, Siemens)
Components CPU board	400 MHz i.MX processor with math coprocessor and FPGA 128 MB RAM 128 MB Flash memory Real time clock with internal lithium cell; accuracy better than 1s/day
Dimensions (W x H x D)	See dimensional drawings
Weight	Flow-X/P1: ≤ 4.4 kg Flow-X/P2: ≤ 5.2 kg Flow-X/P3: ≤ 6 kg Flow-X/P4: ≤ 6.8 kg Flow-X/S: ≤ 2.4 kg

Electrical connection

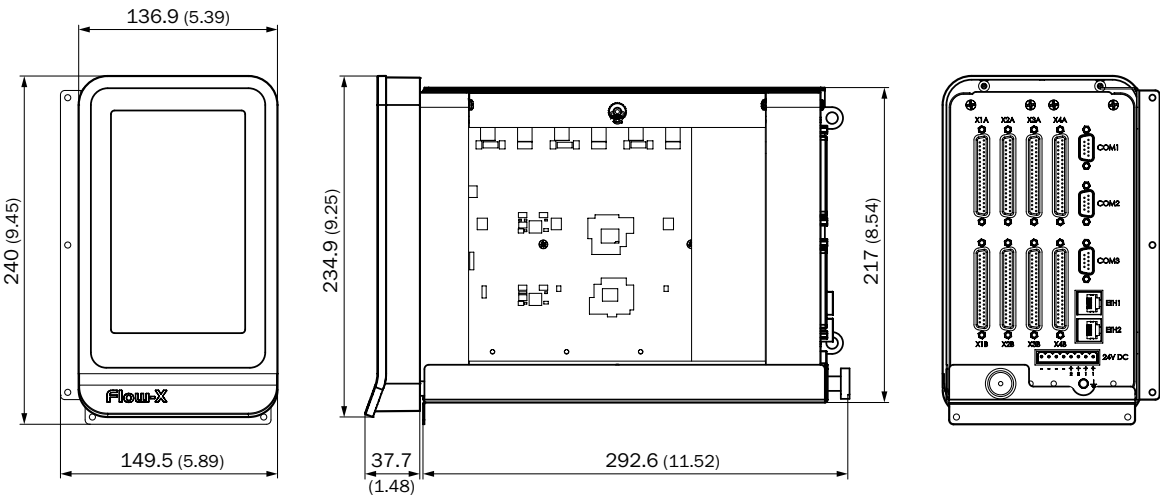
Voltage	24 V DC
Current consumption	≤ 0.3 A
	Nominal value; per module
	≤ 0.8 A
	Peak value; per module

Ordering information

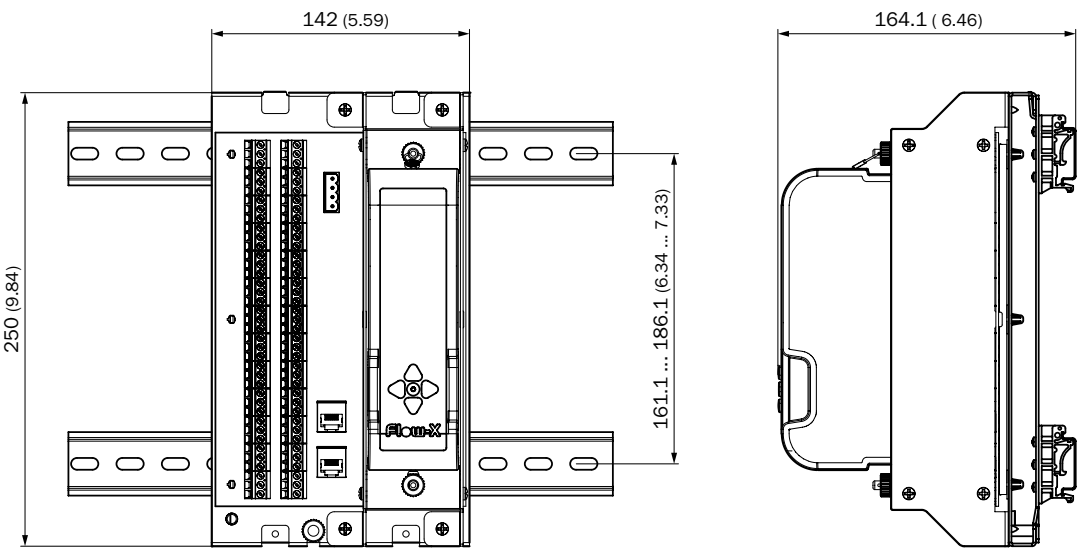
Our regional sales organization will help you to select the optimum device configuration.

Dimensional drawings (Dimensions in mm (inch))

Flow-X/P

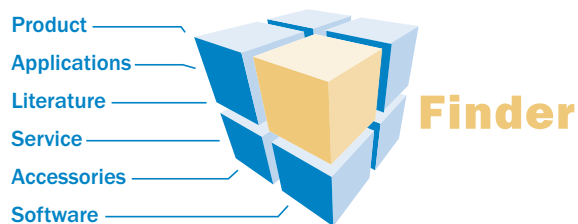


Flow-X/S



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SICK AT A GLANCE

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We have extensive experience in various 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 round out our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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Detailed addresses and additional representatives → www.sick.com