Flow-X

FLOW COMPUTER

SICK
Sensor Intelligence.
Flow-X
FLOW COMPUTER

Ordering information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow-X</td>
<td>On request</td>
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</table>

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.

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

Other models and accessories ➔ www.sick.com/Flow-X

Product description

The Flow-X flow computer provides gas volume conversion, event logging, parameter logging, and reports using state-of-the-art technology. Identical modules are combined in different housings, offering a multi-stream version Flow-X/P for 1 - 4 measuring distances with a local touch screen, or the version Flow-X/S for smaller installations with one measuring distance. Each module combines high-precision measurement technology, fast digital signal processing, abundant processing power, versatile data communication, and high storage capacity in a fully equipped flow computer. The Flow-X flow computer meets the requirements of even the most demanding applications and is the ideal partner for custody transfer gas metering solutions in installations with FLOWSIC600 ultrasonic gas flow 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
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

System

| Ambient temperature | +5 °C ... +55 °C |
| Storage temperature | –20 °C ... +70 °C |
| Ambient humidity    | ≤ 90 % Relative humidity; non-condensing |

Conformities

- MID
- API 21.1
- EN 12405

Analog outputs

- 4 outputs:
  - 0/4 ... 20 mA
  - 1 V ... 5 V
  - Resolution 14 bits; 0.075 % full scale.

Analog inputs

- 6 inputs, configurable as:
  - 0/4 ... 20 mA
  - 0 ... 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
  - Software configured as status inputs or outputs

Additional inputs

- 2 PRT(RTD) inputs for PT100 temperature sensors: –220 °C ... +220 °C
  - Resolution 0.02 °C maximum error
  - +0.05 °C at -220 °C ... +220 °C: +0.5 °C

Ethernet

- ✔ Type of fieldbus integration
  - 2x

Modbus

- ✔ Type of fieldbus integration
  - ASCII RS-485 (2x)
  - RTU RS-485 (2x)

HART

- ✔ Remark
  - Input
  - Type of fieldbus integration
  - 6x

Correction method

- PTZ

Compressibility

- SGREG
- 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
- 50 MB RAM
- 32 MB Flash memory
- Real-time clock with internal lithium battery, accuracy better than 1 s/day

Dimensions (W x H x D)

- See dimensional drawings
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<table>
<thead>
<tr>
<th>Weight</th>
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<tbody>
<tr>
<td>Flow-X/P1: ≤ 4.4 kg</td>
</tr>
<tr>
<td>Flow-X/P2: ≤ 5.2 kg</td>
</tr>
<tr>
<td>Flow-X/P3: ≤ 6 kg</td>
</tr>
<tr>
<td>Flow-X/P4: ≤ 6.8 kg</td>
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<tr>
<td>Flow-X/S: ≤ 2.4 kg</td>
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<table>
<thead>
<tr>
<th>Electrical connection</th>
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</thead>
<tbody>
<tr>
<td>Voltage 24</td>
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<tr>
<td>Current consumption</td>
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<tr>
<td>≤ 0.3 A</td>
</tr>
<tr>
<td>Nominal value; per module</td>
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<tr>
<td>≤ 0.8 A</td>
</tr>
<tr>
<td>Peak value; per module</td>
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**Dimensional drawings** (Dimensions in mm (inch))

Flow-X/P

[Diagram of Flow-X/P]
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