Gas flow measuring devices
Ultrasonic gas meter, FLOWSIC500
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Model Name  > FLOWSIC500

The cutting-edge technology for ultimate measurement accuracy: The new FLOWSIC500 ultrasonic compact gas meter from SICK enables highly accurate metering in natural gas distribution. In absence of mechanical moving parts, the FLOWSIC500 is a robust, fail-safe and low-maintenance device - allowing for a significant reduction in operating costs. It is overload-proof, accurate and is monitored by an intelligent diagnostics system. Recalibration is simple and straightforward by replacing the cartridge. FLOWSIC500 can easily be integrated into existing measuring stations. The FLOWSIC500 operates either in an energy self-sufficient configuration or failsafe in network operation with battery back-up. It complies with all relevant standards and regulations. When utilized in transfer and measuring stations, FLOWSIC500 ensures the safety of a continuous and blockage-free gas supply.

At a glance
- Cutting-edge technology: ultrasound
- Diagnostics and permanent operational check
- Robust and reliable without moving parts
- Replacable cartridge
- Straight inlet/outlet piping not required
- Overload-proof
- Optional integrated volume correction/data 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 volume correction
- Simple installation, compatible with conventional technologies (turbine and rotary displacement meters)
- Minimal operating costs as nearly maintenance-free
- Simplified recalibration due to straightforward cartridge replacement
- 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

Note
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.
## Technical data

<table>
<thead>
<tr>
<th>Measurement principle:</th>
<th>Ultrasonic transit time difference measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured values:</td>
<td>Gas velocity</td>
</tr>
<tr>
<td></td>
<td>Volume a. c.</td>
</tr>
<tr>
<td></td>
<td>Volumetric flow, a. c.</td>
</tr>
<tr>
<td>Measuring medium:</td>
<td>Natural gas (dry, odorized)</td>
</tr>
<tr>
<td>Measuring ranges:</td>
<td>Volumetric flow, a. c., DN 100: 4 ... 650 m³/h</td>
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<tr>
<td></td>
<td>Volumetric flow, a. c., DN 150: 4 ... 1.000 m³/h</td>
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<td>Volumetric flow, a. c., DN 50: 1.3 ... 160 m³/h</td>
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<td></td>
<td>Volumetric flow, a. c., DN 80: 2.5 ... 400 m³/h</td>
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<tr>
<td>Comment:</td>
<td>Depending on device version</td>
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<tr>
<td>Process temperature:</td>
<td>-25 ... +60 °C</td>
</tr>
<tr>
<td></td>
<td>Optional: -40 ... +70 °C</td>
</tr>
<tr>
<td>Process pressure:</td>
<td>Class 150 (ASME B16.5): 0 ... 20 bar (g)</td>
</tr>
<tr>
<td></td>
<td>PN16 (EN 1092-1, GOST 12815-80): 0 ... 16 bar (g)</td>
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<tr>
<td>Ambient temperature:</td>
<td>-25 ... +60 °C</td>
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<tr>
<td></td>
<td>Optional: -40 ... +70 °C</td>
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<td>Conformities:</td>
<td>2004/22/EC MI-002</td>
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<td></td>
<td>OIML R137 1&amp;2, 2012</td>
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<td>Ex-approvals IECEx:</td>
<td>Ex ia [ia Ga] IIB T4Gb</td>
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<td>Ex-approvals ATEX:</td>
<td>II 2G Ex ia [ia Ga] IIB T4 Gb</td>
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<td>Ex-approvals USA/Canada:</td>
<td>CSA Class1 Division 1 Group C, D T4</td>
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<tr>
<td>Enclosure rating:</td>
<td>IP 65</td>
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<tr>
<td>Digital outputs:</td>
<td>1 output according EN 60947-5-6 (NAMUR), f&lt;sub&gt;max&lt;/sub&gt; = 2 kHz, optically isolated</td>
</tr>
<tr>
<td></td>
<td>3 Open collector outputs not electrically isolated, f&lt;sub&gt;max&lt;/sub&gt; = 10 Hz or</td>
</tr>
<tr>
<td>Interfaces:</td>
<td>Optical interface</td>
</tr>
<tr>
<td></td>
<td>RS-485 alternative to the digital output (externally powered)</td>
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<tr>
<td>Diagnostics functions:</td>
<td>Permanent monitoring of measured values</td>
</tr>
<tr>
<td>Mounting:</td>
<td>Horizontal or vertical installation with 0 D straight inlet/outlet piping</td>
</tr>
</tbody>
</table>
Australia
Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg
Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil
Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada
Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika
Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China
Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark
Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland
Phone +49 211 5301-301
E-Mail info@sick.de

España
Phone +34 93 480 31 00
E-Mail info@sick.es

France
Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain
Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India
Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel
Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia
Phone +39 02 27 43 41
E-Mail info@sick.it

Japan
Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország
Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland
Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge
Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich
Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska
Phone +48 22 837 40 50
E-Mail info@sick.pl

România
Phone +40 356 171 120
E-Mail office@sick.ro

Russia
Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz
Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore
Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija
Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa
Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea
Phone +82 2 786 6321/4
E-Mail sick@sickkorea.net

Suomi
Phone +358-9 25 15 800
E-Mail sick@sick.fi

Sverige
Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan
Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye
Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates
Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México
Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies at www.sick.com