

FLWSIC550

ultrasonic flowmeter

High pressure gas flowmeter for natural gas distribution



More information and current pricing:

www.endress.com/IFL550

Benefits:

- Ultimate measurement certainty and safety of continuous gas supply
- Simple installation, replacement of turbine gas meters
- Reduction of installation costs due to integrated volume correction
- Easy Commissioning and data reading via FLOWgate™ (PC and App)
- Minimal operating costs due to being nearly maintenance-free
- Reliable even when the gas flow fluctuates (on/off applications)
- Self-sufficient operation possible

Specs at a glance

- **Measured variables** Volume a. c., volumetric flow a. c., gas velocity, volume s. c. (*), volume flow under s.c. (*) (*) additional function included with integrated volume correction
- **Measuring Medium** Natural gas (dry, odorized), air
- **Nominal pipe size** DN 50 (2") ... DN 150 (6")

Field of application: State-of-the-art technology for maximum measurement accuracy: The FLOWgate™ ultrasonic compact gas flowmeter ensures highly accurate billing of low volume flows in high-pressure networks – a perfect complement to the FLOWgate™500. It is overload-proof, accurate and is monitored by an intelligent diagnostics system. FLOWgate™550 can be easily integrated into existing measuring stations. When used in transfer and measuring stations, FLOWgate™550 ensures a continuous and blockage-free gas supply.

Features and specifications

Gas

Measuring principle

Ultrasonic transit time difference measurement

Measured variables

Volume a. c., volumetric flow a. c., gas velocity, volume s. c. (*), volume flow under s.c. (*)

(*) additional function included with integrated volume correction

Measuring Medium

Natural gas (dry, odorized), air

Repeatability

≤ 0.1 %

Accuracy

Qmin up to Qmax ≤ ± 1 %; Accuracy class 1; typical error limits

Qmin up to 0.1 Qmax ≤ ± 2 %; Accuracy class 1; maximum allowed error limits

0.1 Qmax up to Qmax ≤ ± 1 %; Accuracy class 1; maximum allowed error limits

After high pressure flow calibration: ±0.2 % at test pressure; otherwise ±0.5 %

Medium temperature range

−40 °C ... +70 °C

Operating pressure range

ANSI300 (ASME B16.5) ≤ 48.7 bar (g); for −40 ... +70°C

ANSI600 (ASME B16.5) ≤ 97.4 bar (g); for −40 ... +70°C

PN40 (EN 1092-1) ≤ 40 bar (g); for −40 ... +70°C

PN63 (EN 1092-1) ≤ 63 bar (g); for −40 ... +70°C

Gas

Nominal pipe size

DN 50 (2") ... DN 150 (6")

Metrological approvals and certificates

MID: 2014/32/EU

OIML R 137-1&2:2012

EN 12405: 2010 (for integrated volume correction)

AGA 9, 2022

Hazardous area approvals

IECEX:

Ex ia [ia Ga] T4 IIB Gb

ATEX:

II 2 (1)G Ex ia [ia Ga] T4 IIB Gb

NEC/CEC (US/CA):

Class I Division 1, Groups C, D T4 Ex ia [ia Ga] IIB T4 Gb

Class I, Zone 1 AEx ia [ia Ga] IIB T4 Gb

Digital Outputs

2x Pulse and Status (HF with $f_{max} = 2\text{ kHz}$, LF with $f_{max} = 10\text{ Hz}$)

2x RS485, external powered

Encoder

HF pulses + malfunction, electrically isolated ($f_{max} = 2\text{ kHz}$)

Encoder + LF pulses, electrically isolated ($f_{max} = 100\text{ Hz}$)

Encoder + HF pulses, not electrically isolated ($f_{max} = 2\text{ kHz}$)

2x pulses, HF and LF, electrically isolated ($f_{max} = 2\text{ kHz} / 100\text{ Hz}$)

Digital communication

Modbus RTU

Modbus ASCII

More information www.endress.com/IFL550