PRODUCT INFORMATION

FLOWSIC600 DRU-S

SIMPLE AND ROBUST UPSTREAM GAS FLOW MEASUREMENT

Gas flow meter

SICK
Sensor Intelligence.

Product description

FLOWSIC600 DRU-S is the compact and innovative ultrasonic gas flow meter for gas production. FLOWSIC600 DRU-S extends the successful product family FLOWSIC600 DRU. The gas meter is especially developed for wellhead and gas lift applications. With a measuring span of up to 150:1[1], flow ranges can be measured with only one device, for which several orifices were previously required. Its special wet gas robust sensor design ensures continuous measurement even with permanently higher liquid loading. FLOWSIC600 DRU-S enables remote monitoring of measurement and diagnostic data. Thus, the process can be monitored in real time and the maintenance effort can be reduced. Service inspections can be planned according to demand. We think that's intelligent.

[1] Below Q_{min} increasing uncertainty.

At a glance

- Ultrasonic sensors made of titanium
- High measuring span
- No pressure loss - installation without flow conditioner
- Suitable for wet gas applications
- Small meter footprint
- Possibility for remote monitoring thanks to digital interfaces
- Simple commissioning via the SICK operating software

Your benefit

- Easy remote commissioning away from harsh and challenging environmental conditions
- Low initial investment - accurate measurement without expensive flow calibration
- Optimum availability - almost wear-free operation and the possibility of remote maintenance
- Highly reliable - continuous measurement even under challenging process conditions
- Long service life - wet gas robust ultrasonic sensors made of titanium

Fields of application

- Natural gas measurement in gas production
- Wellhead measurement
- Gas lift applications
- Gas flow measurement before and behind production separators
- Replacement of orifice meters
- Unconventional gas production

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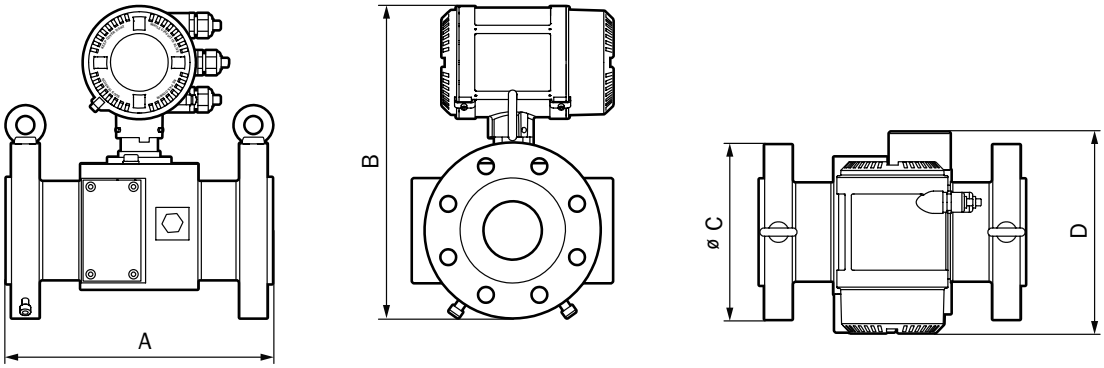
Detailed technical data

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.

Measured values	Volume flow rate a. c., Volume a. c., Gas velocity, Sound velocity			
Measurement principle	Ultrasonic transit time difference measurement			
Number of measurement paths	2			
Measuring medium	Natural gas			
Nominal pipe size / Flange	2" / 3" / 4" Schedule 80, Cl.600 RF			
Measuring ranges[1,2,3] Volume flow (a.c.)		Q_{min}	Q_t	Q_{max}
		ft^3/h		
	2"	140	1400	14000
	3"	280	3500	35000
	4"	460	5600	56000
Repeatability[4]	±0.2% of the measured value			
Accuracy[3,5]	±2% from Q_t to Q_{max} (±4% from Qmin to Q_t)			
Gas temperature	–40 °F ... 212 °F			
Ambient temperature	–40 °F ... 140 °F			
Operating pressure	0 psi(g) ... 1480 psi(g) at 100 °F 0 psi(g) ... 1350 psi(g) at 212 °F			
Ex-approvals NEC/CEC	 Class I, Division 1, Group D T4 Class I, Division 2, Group D T4 Ultrasonic transducer intrinsically safe			
Protection class	IP66 / IP67			
Digital outputs	2 DO and 1 FO: 30 V, 10 mA Passive, electrically isolated, Open Collector, fmax = 6 kHz (scalable)			
Interfaces	RS-485 (2x, for configuration data output and diagnostics)			
BUS protocol	MODBUS ASCII, MODBUS RTU			
Dimensions	See dimensional drawings			
Weight	2": 77 lbs 3": 101 lbs 4": 146 lbs			
Electrical connection Voltage Power consumption	 12 V DC ... 28.8 V DC ≤ 1 W			
Footnotes	[1] Below Q_{min} increasing uncertainty. [2] Q_{max} can be limited by the working pressure and the damping of the gas medium. [3] In consideration of the installation requirements [4] Between Q_t and Q_{max} and taking into account the installation requirements [5] Verified with pipe configurations according to OIML R-137:2012 Annex B (mild)			

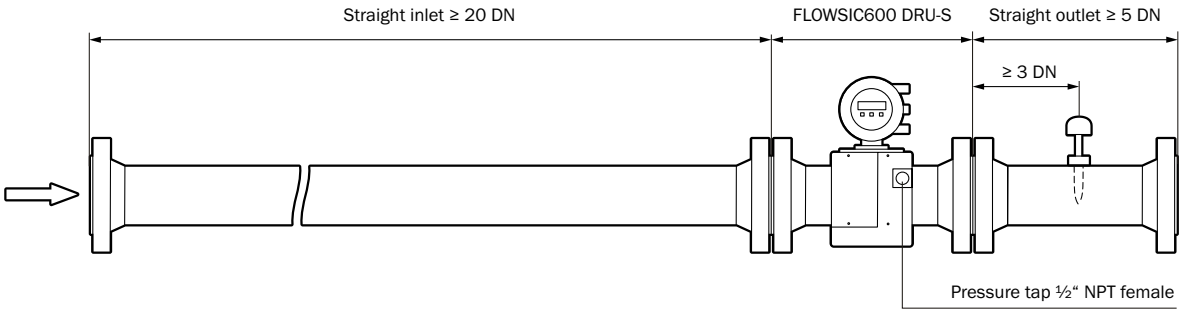
Dimensional drawings (dimensions in inch)



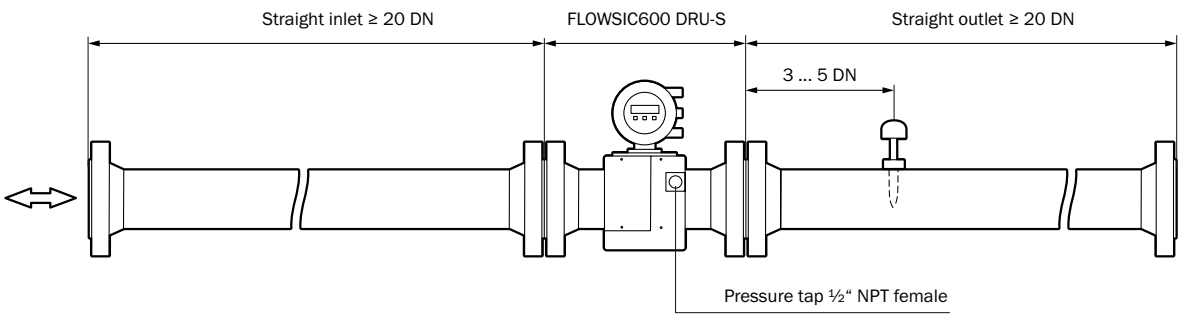
Nominal pipe size	Dimensions			
	A	**B**	**C**	**D**
2"	9.84	13.2	6.5	8.99
3"	12.6	14.74	8.25	9.5
4"	11.81	15.3	10.75	10.79

Instruction for installation

Unidirectional installation



Bidirectional installation



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SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 11,000 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. 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.

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Detailed addresses and further locations → www.sick.com

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