



FLOWSIC600 DRU-S

SIMPLE AND ROBUST UPSTREAM GAS FLOW MEASUREMENT

Gas flow meter

SICK
Sensor Intelligence.

Product description

FLAWSIC600 DRU-S is the compact and innovative ultrasonic gas flow meter for gas production. FLAWSIC600 DRU-S extends the successful product family FLAWSIC600 DRU. The gas meter is especially developed for wellhead and gas lift applications. With a measuring span of up to 150:1¹, 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. FLAWSIC600 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

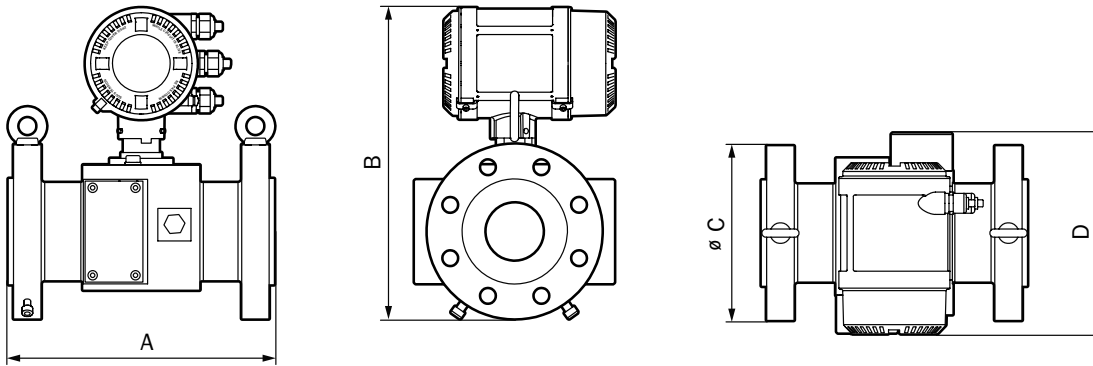
- Natural gas measurement in gas production
- Wellhead measurement
- Gas lift applications
- Gas flow measurement before and behind production separators
- Replacement of orifice meters
- Unconventional gas production

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
Repeatability⁴	±0.2% of the measured value			
Accuracy^{3,5}	±2% from Q_t to Q_{max} (±4% from Q_{min} 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	12 V DC ... 28.8 V DC		
	Power consumption	≤ 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)			

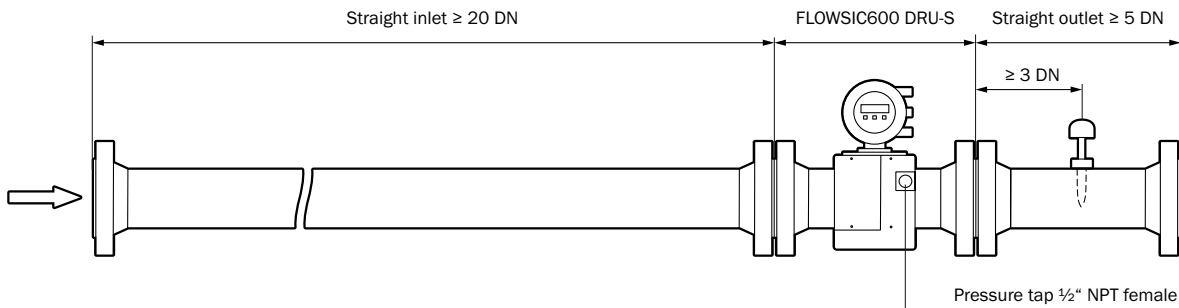
Dimensional drawings (dimensions in inch)



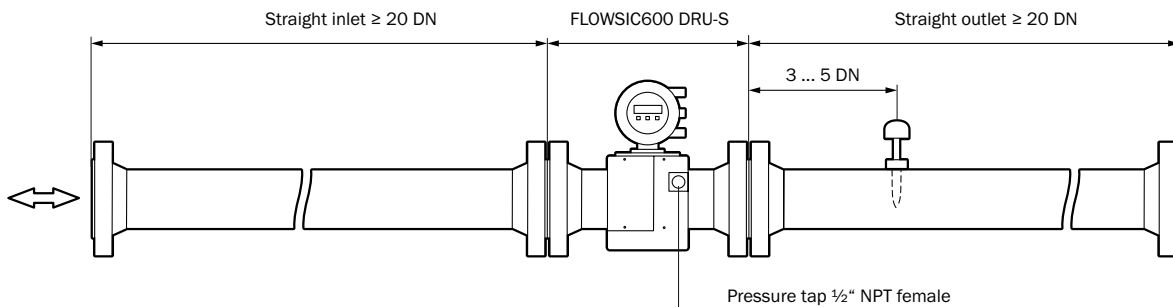
Nominal pipe size	Dimensions			
	A	B	C	D
2"	9.84	13.2	6.5	8.99
3"	12.6	14.74	8.25	9.5
4"	11.81	15.3	10.75	10.79

Instruction for installation

Unidirectional installation



Bidirectional installation



WORKING WITH SICK IN A DIGITAL WORLD

Making your digital business environment comfortable

Find a suitable solution in next to no time

- Online product catalog
- Application Solver
- Online configurators and selectors

My SICK is your personal self-service portal

- Open around the clock
- Clear product information
- Company-specific price conditions
- Convenience during the ordering process
- Document overview
- Availability and delivery times

Register now:

→ www.sick.com/myBenefits

Even more value

- Digital Customer Trainings → www.sick.com/c/g300887
- Digital Service Catalog → cloud.sick.com
- SICK AppPool → apppool.cloud.sick.com



SERVICES FOR MACHINES AND PLANTS: SICK LifeTime Services

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of products from SICK. The services range from product-independent consulting to traditional product services.



Consulting and design
Safe and professional



Product and system support
Reliable, fast, and on-site



Verification and optimization
Safe and regularly inspected



Upgrade and retrofits
Easy, safe, and economical



Training and education
Practical, focused, and professional

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.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the 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 SICK a reliable supplier and development partner.

Comprehensive services round out the offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

That is “Sensor Intelligence.”

Worldwide presence:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations → www.sick.com