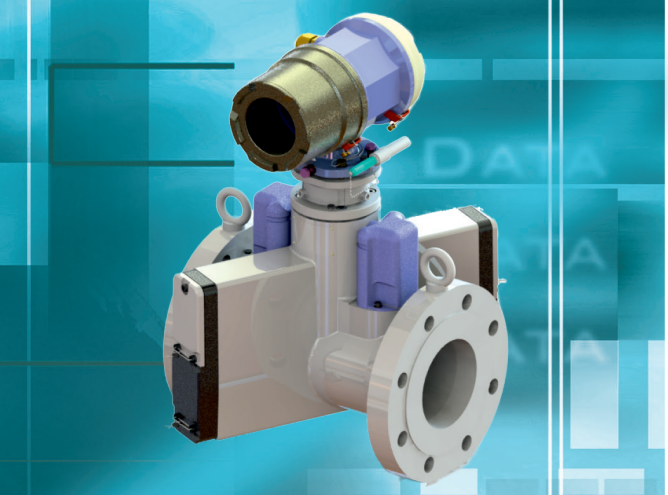
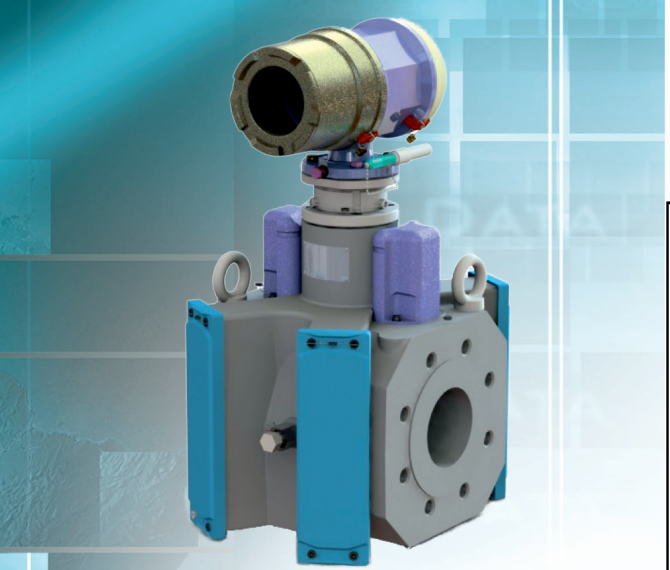
ULTRASONIC GAS FLOW METERS
GFA 202, GFA414





PPLICATION

GFA202/GFA414 gas meters are the next generation ultrasonic gas flow meters designed to measure the flow rate and volume of natural in the forward and reverse direction. The meters have an integrated flow corrector with pressure and temperature sensors for effective and eliable custody transfer measurements.

The meters c omply with the requirements of O IML R137:2012 /amend.2014), EN 12405-1:2021, E N12405-2:2012 and the EU ectives MID, ATEX, EMC and PED.

he G FA202/G FA414 gas meters a re d esigned with t ypes o f tection "explosion- proof enclosu re " d" a nd "intrinsically s afe electrical circuit "i" as per EN IEC 60079-0:2018/AC:2020-02, EN 60079-1:2014/AC:2018-09 and EN 60079-11:2012.

The GFA202/GFA414 meters can be powered by an external 12 VDC ce or from in-board battery for autonomous operation. The battery is not less than 5 years.

The meters have the following outputs: 1 x LF pulse, 1 x LF/HF pulse (user configurable); 1 x RS485 (Modbus); 1 x RS485 (Modbus)/4...20 mA analog output (as ordered).

ominal values of volume flow rates

DN	Standard Size Code	Volumetric flow rate, m3/h				Measuring ranges, Qmin/Qmax	Length of the meter L, mm
		threshold Q_{nop}	minimal Q_{min}	transitional Q_t	maximal Q_{max}		
50	G65	0,2	1	12,5	100	1:100	350/250
	G100				160	1:160	
	G160				250	1:250	
80	G160	0,5	2.5	32,5	250	1:100	400/240
	G250				400	1:160	
	G400				650	1:250	
100	G250	0,8	4,0	50,0	400	1:100	300
	G400				650	1:160	
	G650				1000	1:250	
150	G400	2,0	10,0	125,0	650	1:65	450
	G650				1000	1:100	
	G1000				1600	1:160	
	G1600				2500	1:250	
200	G650	3,2	16,0	200,0	1000	1:65	600
	G1000				1600	1:100	
	G1600				2500	1:160	
	G2500				4000	1:250	
250	G1000	5,0	25,0	325,0	1600	1:65	750
	G1600				2500	1:100	
	G2500				4000	1:160	
	G4000				6500	1:250	
300	G1600	8,0	40,0	500,0	2500	1:65	900
	G2500				4000	1:100	
	G4000				6500	1:160	
	G6500				10000	1:250	
400	G2500	12,8	64,0	800,0	4000	1:65	1200
	G4000				6500	1:100	
	G6500				10000	1:160	
	G10000				16000	1:250	
500	G4000	20,0	100,0	1250,0	6500	1:65	1500
	G6500				10000	1:100	
	G10000				16000	1:160	
	G16000				25000	1:250	
600	G6500	32,0	160,0	2000,0	10000	1:65	1800
	G10000				16000	1:100	
	G16000				25000	1:160	
	G25000				40000	1:250	

ULTRASONIC GAS FLOW METERS
GFA 202, GFA414

SPECIFICATION

Model	GFA202	GFA414
Measuring method	Transit time	
Number of ultrasonic channels	2	4
Direction of flow	Downstream, Upstream	
Pressure range	Up to 25 MPa	
Pressure drop, max	200 Pa	
Accuracy		
- when measuring gas volume at operating conditions	from Q_{min} to Q_t ± 2% from Q_t to Q_{max} ± 1%	from Q_{min} to Q_t ± 1% from Q_t to Q_{max} ± 0,5%
- when measuring the volume of gas with PTZ correction	from Q_{min} to Q_t ± 2,25% from Q_t to Q_{max} ± 1,25%	from Q_{min} to Q_t ± 1,25% from Q_t to Q_{max} ± 0,75%
- pressure measurement	±0,1%	
- temperature measurement	±0,3 °C	
- calculation of volumetric flow rate, volume of gas reduced to standard conditions and energy	±0,02%	
Repeatability	0,1 %	
Requirement of straight pipelines before and after the meter	Requires 10DN before and 3DN after the meter	
Medium temperature	from - 55°C to + 70°C	
Ambient temperature	from - 25°C to + 55°C (optionally +70°C)	
Flow velocity measurement range	from 0,15 m/s to 40,0 m/s	
In-line section body material	Aluminium/Carbon steel/Stainless steel	
Electronics enclosure material	Aluminium alloy	
Degree of protection (IEC 60529):	IP67	
Natural gas compressibility factor calculation methods:	NX19mod. / GERG-91 mod. / SGERG88	
Power Supply: - autonomous power supply - from external power supply	On-board lithium batteries (battery life 5 years) 12 ±3 V DC power supply	
Explosion protection marking	II 2(1)G Ex db ib [ia Ga] IIA T4 Gb	


Bureau Veritas Certification
PRIVATE JOINT STOCK COMPANY «ENERGOUCHET»
ISO 9001:2015
Development, production, sale, installation and repair of control equipment instruments and integrated systems for measuring, monitoring and control of technological process parameters.


Bureau Veritas Certification
PRIVATE JOINT STOCK COMPANY "ENERGOUCHET"
ISO 14001:2015
Development, production, sale, installation and repair of control equipment instruments and integrated systems for measuring, monitoring and control of technological process parameters.