

## ULTRASONIC GAS FLOWMETERS GUVR-011

Ultrasonic gas flowmeters are designed for measuring the flow velocity, volumetric flow rate and volume of gaseous substances (gases) transported through pipelines in direct or reverse direction under operating conditions as well as for measuring the operating and standby time.

The flowmeters provide measurement of the gas flow velocity  $V$  in both directions in the range from 0,1 to 25,0 m/s (up to 35,0 m/s - upon request).

Depending on the flow direction velocity has the sign «+» or «minus». The current flow rate is determined by the flowmeter as a product of the flow velocity and the pipeline internal cross-section area.

Foreign substances contained in gas (eg., dust or fine-dispersed condensate droplets) bring about dampening of the ultrasonic signal passing through the acoustic channel between EATs thus causing difficulties in measuring. The manufacturer guarantees stable operation of the flowmeter if the concentration rate of the dust and dispersed droplets does not exceed 2%.

The possibility to use flowmeters for more polluted gases is confirmed by control measurements.

The flowmeters allow the remote control through PC. When using special software it is possible to display the following data upon the customer's choice:

- measuring results, flow direction and velocity, current flow rate, progressive total volume;
- oscillogram of the signal passed through the acoustic channel;
- flowmeter setup and adjustment parameters;
- time and date;
- archive data.

Functional capabilities of the flowmeter and its setup are changed by programming of the built-in micro controller through internal PC. To prevent unauthorized access to the control unit the PC software is protected with password. Password is a sequence of several digits.

The PC operator's commands which do not lead to changes in the flowmeter configuration or setup and archive data erasure are performed without password.

The flowmeter is equipped with the passive former of the frequency-pulse signal.

## TECHNICAL FEATURES

Parameter	Value
Flow velocity, m/s	From 0,1 to 25 (upon request up to 35)
Maximal pressure, MPa	1,6, 6,3
Measurement accuracy, not more $Q_3$ to $Q_{max}$	0,7%
Measurement accuracy, not more $Q_2$ до $Q_3$	1 %
Measurement accuracy, not more $Q_1$ до $Q_2$	2 %
Measurement accuracy, not more $Q_{thr}$ до $Q_1$	Is not normalized

DN mm	Designation of the standard size	Volumetric flow rate value, m <sup>3</sup> /h					Pulse figure 1/dm <sup>3</sup>
		Threshold $Q_{thr}$	Min $Q_1$	Transitional $Q_2$	Transitional $Q_3$	Max $Q_{max}$	
50	G100	0,35	1,0	4,7	32	160	0,05
80	G250	0,9	2,7	12,0	80	400	0,1
100	G400	1,4	4,25	18,9	130	650	0,2
150	G1000	3,2	9,6	42,5	320	1600	0,5
200	G1600	5,6	17,0	75,0	500	2500	1,0
250	G2500	9,0	27	120	800	4000	2,0
300	G4000	12,7	38,0	170	1300	6500	5,0
400	G6500	21,0	70,0	340	2000	10000	5,0

JSC «Energouchet» Ukraine, 61052, Kharkov, post office box 332

Tel./ fax: +38 (057)734-98-57, 734-98-58, 734-98-59

Tel./ fax: +38(057)734-98-51, 734-98-52, 734-98-53, 734-99-16

Moscow tel.: +7(495)3639735;

E-mail: sales@energo.kh.ua Site: www.energo.kh.ua

