ULTRASONIC FLOW SENSOR
QALCOSONIC F2

APPLICATION

Ultrasonic flow sensor QALCOSONIC F2 is designed as sub-assembly of heat meter for measuring heat-conveying liquid volume in heating/cooling systems and conversion it into electrical pulse signal. It is used in conjunction with the type approved heating/cooling energy calculator.

As a component of heat energy meter the QALCOSONIC F2 flow sensor could be used for commercial account of energy quantity in district heating plants, in factories, in single or multifamily houses.

- Ultrasonic technology
- High accuracy
- Heating/cooling
- AMR

SPECIAL FEATURES

- Accuracy class 2
- Nominal flow DN15/20/25/40/65/80/100
- Dynamic range up to $Qp/Qi = R\ 100/250$
- Ambient class B
- Protection class IP 65/67
- Nominal pressure PN16/25 bar
- Temperature of conveying liquid: 5° C ...130° C
- Power supply options: Battery/External 24V AC/DC
- Battery lifetime > 12 years
- Mounting in any installation position
- Can be mounted in both flow and return pipe.
- No straight sections required up to DN50
- No measurement of air
- Pulse value   is freely ordered*

APPROVALS

MID
EN 14154

POWER SUPPLY:

Power supply (one of following depending on meter configuration):
• AA battery 3,6 V 2,4 Ah (Li-SOCl2) battery, operation time at least 12 years,

• 12..42 V DC or 12...36 V 50/60Hz AC external power supply, used current 10 mA and back up battery AA 3,6 V (Li-SOCl2), operation time at least 12 years.

## TECHNICAL DATA

Limits of flow rate, m^3/h						
Permanent flow rate q_p, m^3/h	Upper flow rate q_s, m^3/h	Lower flow rate q_i, m^3/h	Threshold value of flow rate, m^3/h	Overall length L, mm	Pressure losses at q_p, kPa	Joining to the pipeline (Thread – G, flange–DN)
0,6	1,2	0,006	0,003	110	7	G3/4"
0,6	1,2	0,006	0,003	190	0,9	G1", DN20
1,0	2,0	0,01	0,005	110	11,3	G3/4"
1,0	2,0	0,01	0,005	190	2,5	G1", DN20
1,5	3,0	0,006	0,003	110; 165	17,1	G3/4"
1,5	3,0	0,006	0,003	190	5,8	G1", DN20
1,5	3,0	0,015	0,003	110; 165	17,1	G3/4"
1,5	3,0	0,015	0,003	190	5,8	G1", DN20
1,5	3,0	0,015	0,005	130	7,2	G1"
2,5	5,0	0,01	0,005	130	19,8	G1"
2,5	5,0	0,01	0,005	190	9,4	G1", DN20
2,5	5,0	0,025	0,005	130	19,8	G1"
2,5	5,0	0,025	0,005	190	9,4	G1", DN20
3,5	7,0	0,035	0,017	260	4	G1 1/4",DN25,DN32
6,0	12,0	0,024	0,012	260	10	G1 1/4",DN25,DN32
6,0	12,0	0,06	0,012	260	10	G1 1/4",DN25,DN32
10,0	20,0	0,04	0,02	300	18	G2", DN40
10,0	20,0	0,100	0,02	300	18	G2", DN40
15,0	30,0	0,06	0,03	270	12	DN50
15,0	30,0	0,15	0,03	270	12	DN50
25	50	0,1	0,05	300	20	DN65
25	50	0,25	0,05	300	20	DN65
40	80	0,16	0,08	300; 350	18	DN80
40	80	0,4	0,08	300; 350	18	DN80
60	120	0,24	0,12	350; 360	18	DN100
60	120	0,6	0,12	350; 360	18	DN100
60	120	0,24	0,12	360	18	DN100
60	120	0,6	0,12	360	18	DN100

AXIØMA

Technical data	qp [m³/h]	0.6 /1.0/1.5/2.5/3.5/6.0/10/15/25/40/60
	R qp/qi [m³/h]	100/250
	Medium Temp. (operating temperature)	+5 ℃...+ 90/130 ℃ ... 130°C
	Protection class [IP]	IP65/67
	Ambient class	Class B / EN 14 154
	Ambient temperature	+5 ℃...+55 ℃
	Installation place	indoor, outdoor in a pit or inst. box
	Installation position	all installation positions (vertical, horizontal, rising pipe, down pipe)
	Nominal pressure [bar]	PN16/25 bar
	Cable length between electronic unit and flow part	1,2m ./2,5m. /5 m.
	Pulse sensor cable	3m./5m./10m./15m.....200m.
	Battery lifetime	12 years
	Mounting of calculator	Mounting on standard DIN-rail
	Environment class	M1, E2

DIMENSIONS AND MOUNTING OF CALCULATOR

117 mm x 44 mm x 89,5 mm,
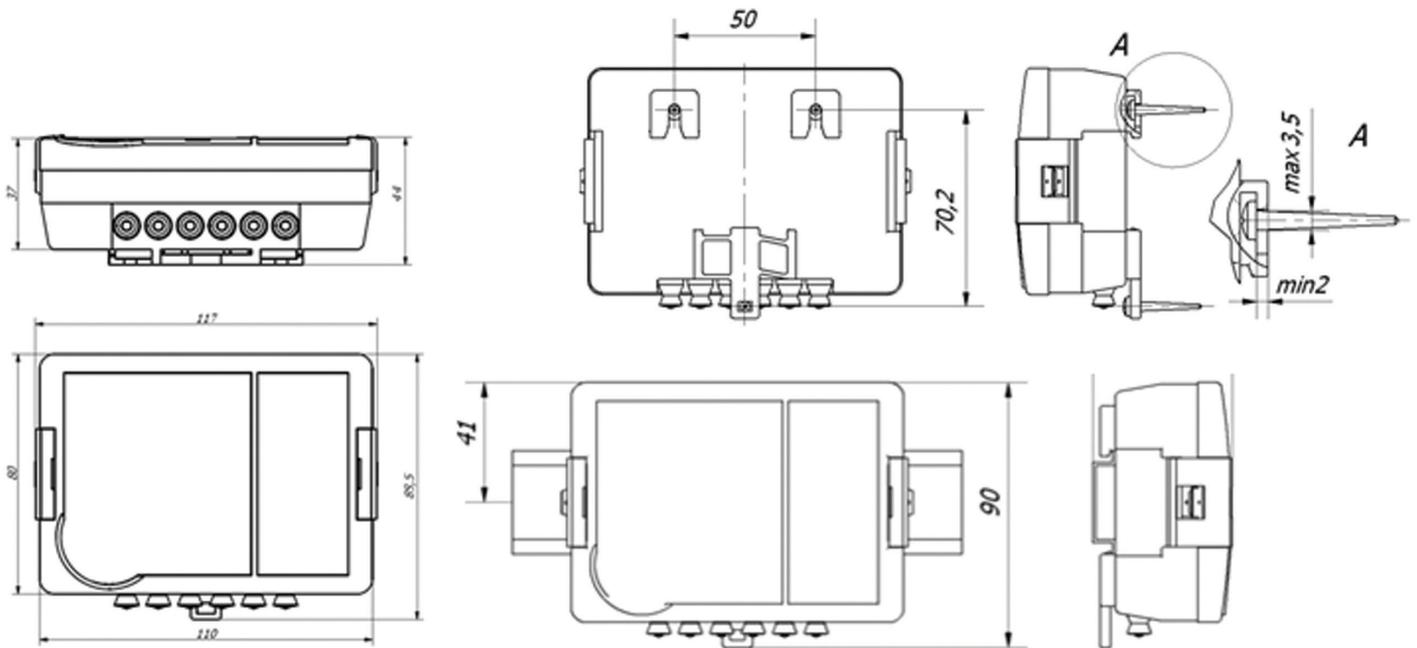
MECHANICAL DIMENSIONS OF FLOW SENSOR
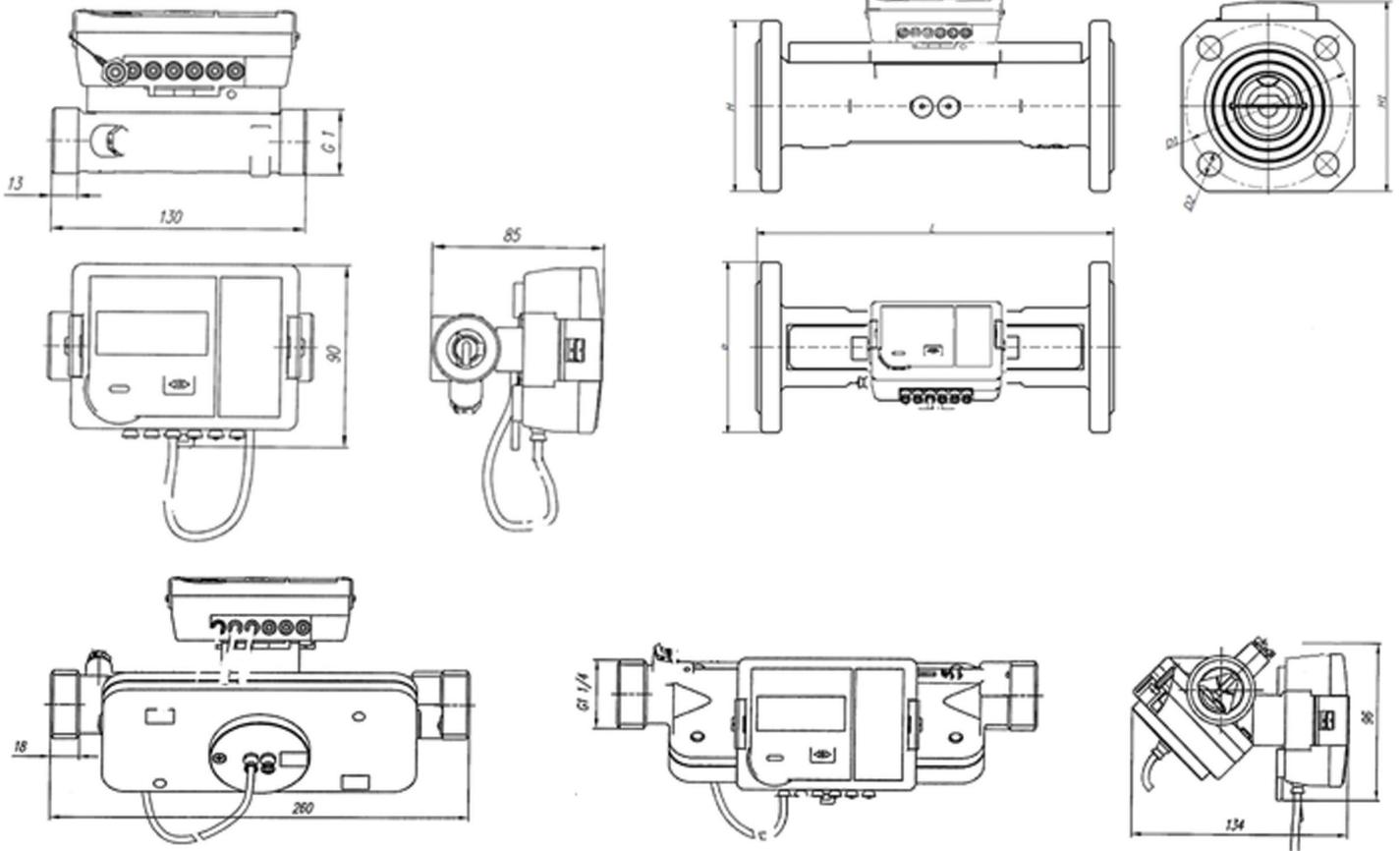
DN [mm]	15	20	25	40	50	65	80	100
L [mm]	110	130/190	260	300	270	300	350	350
H [mm]	81	85	123/134	141/163	145	166	180	196
G/ Flange DN	G3/4"	G1" or DN20	G1 1/4" or DN25	G2" or DN40	DN50	DN65	DN80	DN100

Connection type	Sensor weight, kg
G3/4"	0,7
G1"	0,7
G1 ¼"	3,2
G2"	3,7
DN40	6,8
DN50	8,5
DN65	12
DN80	14
DN100	15

AXIOMA