

US BR 473

Ultrasonic flow meter qp 25 - 60 m³/h

US BR 473 is a new ultrasonic flow meter well adapted to the needs of district heating companies. This flow meter is equipped with an universal interface which allows easiest combination with Itron calculators such as CF51, CF55 or CF800. The US BR 473 is powered by the connected calculators and therefore it doesn't need an own source of electrical power (e.g. battery).

The flow meter transmits standard pulses with programmable pulse weight in liter/pulse to the connected calculators. For test purposes the meter provides an additional output for HF test pulses.

FEATURES AND BENEFITS

- » High accuracy
- » Robustness
- » Ease of installation
- » Power supply by calculator
- » Repeatability over time
- » Robustness
- » Reliability

Applications

- » Heat
- » Cooling / combined (optional version)
- » Horizontal / vertical mounting

Standards

- » MID approval according to 2004/22/EC
- » Class 2 according to EN1434
- » Environmental class C, E1; M1
- » IP 54 for heat versions
- » IP 68 for cooling and combined H/C versions

SPECIFICATIONS

Type		DN65 qp25	DN80 qp40	DN100 qp60
Ambient temperature	°C	5 - 55	5 - 55	5 - 55
Stockage temperature	°C	-20 -60	-20 -60	-20 -60
Maximum flow	qs (m ³ /h)	50	80	120
Nominal flow	qp (m ³ /h)	25	40	60
Minimum flow	qi (l/h)	250	400	600
Cut off flow	qc (l/h)	50	80	120
Head loss @ qp	bar	0.075	0.08	0.09
Water temperature (heat versions)	°C	5... 150°C	5... 150°C	5... 150°C
Water temperature (cooling and combined versions)	°C	5... 120°C	5... 120°C	5... 120°C
Nominal diameter	DN	65	80	100
Body length	length (mm)	300	300	360
Connections		FL PN25	FL PN25	FL PN25/PN16
Cable to calculator	L (m)	5	5	5

Characteristic of pulse output

- » Version: Open collector (Drain)
- » Polarity: non reversible (observe connection diagram)
- » Pulse length: 100 ms ± 10%
- » Max. input voltage: 30V DC
- » Max. input current: 20 mA
- » Max. output frequency: 150 Hz
- » Pulse weight options: see references

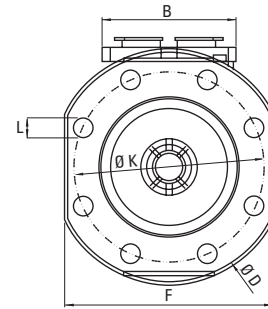
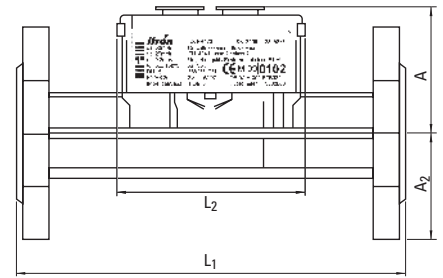
Power supply

- » Nominal voltage: 3,0 ... 5,5V DC
- » Average current consumption: < 100 mAh per year
- » Peak current consumption I_{max}: < 10 mA

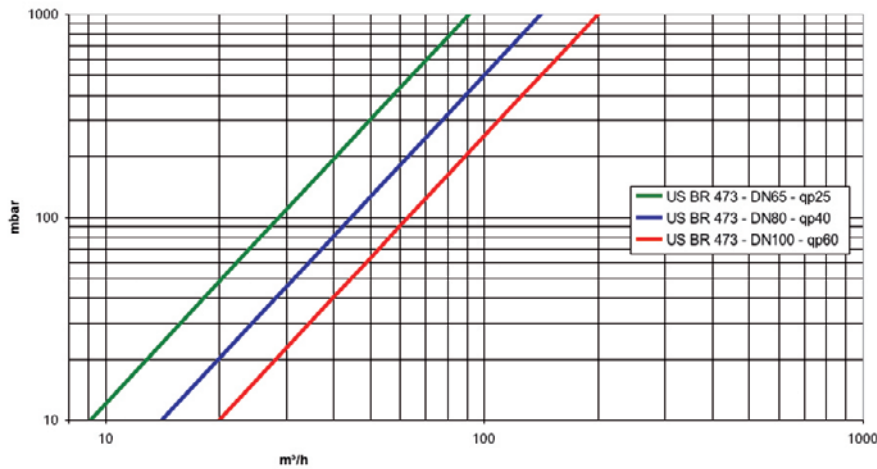
DIMENSIONS

Type		DN65 qp25 PN25	DN80 qp40 PN25	DN100 qp60 PN25	DN100 qp60 PN16
Body length L1	mm	300	300	360	360
Length of electronic L2	mm	90	90	90	90
Width of electronic B	mm	65.5	65.5	65.5	65.5
Nominal diameter		65	80	100	100
Height A	mm	79	86.5	95.5	95.5
Height A2	mm	85	92.5	108	108
Flange diameter D	mm	184	200	235	235
Bolt circle diameter K	mm	145	160	190	180
Bolt holes diameter L	mm	18	18	22	18
Number of holes		8	8	8	8
Flange dimension F	mm	170	185	216	216

In line version



HEAD LOSS



References heat

Art. No.	DN	qp	pulse weight*	PN
5886 38 14 65	65	25	10l/p	25
5886 38 17 65	65	25	250l/p	25
5887 38 14 65	80	40	10l/p	25
5887 38 17 65	80	40	250l/p	25
5888 38 14 65	100	60	10l/p	25
5888 38 17 65	100	60	250l/p	25
5889 38 14 65	100	60	10l/p	16
5889 38 17 65	100	60	250l/p	16

References cooling + combined H/C

Art. No.	DN	qp	pulse weight*	PN
5886 39 14 65	65	25	10l/p	25
5886 39 17 65	65	25	250l/p	25
5887 39 14 65	80	40	10l/p	25
5887 39 17 65	80	40	250l/p	25
5888 39 14 65	100	60	10l/p	25
5888 39 17 65	100	60	250l/p	25
5889 39 14 65	100	60	10l/p	16
5889 39 17 65	100	60	250l/p	16

*optional 25l/p or 100l/p available.

ELECTRICAL CONNECTION AND POWER SUPPLY

The basic version of BR 473 must be power-supplied by the integrator (CF 51, CF 55 or CF 800) or an external power supply. Compatibility in accordance with the following table.

	Compatibility US BR 473 with power supply of calculators			
	Battery small	Battery large	Mains 230V	via M-BUS
CF 51	✓	✓	not allowed	not allowed
CF 55	✓	✓	✓	✓
CF 800	-	-	✓	-
PulseBox	✓	✓	✓	-



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