

SHARKY 475

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DIEHL
Metering



APPLICATION

The 2-path flowmeter SHARKY FS 475 is suitable for measuring water flow in district heating plants, local networks, boiler stations, substations, chiller plants and other general water applications.

The flowmeter SHARKY FS 475 is approved according to energy meter standards EN 1434 class 2, OIML R 75 class 2 and MID class 2. Metrological parameters are protected against manipulation.

FEATURES

- ▶ 115/230 V mains-powered
- ▶ Fast measuring frequency 15 Hz/0.5 Hz (230 VAC)
- ▶ Easy one-button straight forward display
- ▶ 2-path measuring principle for optimum accuracy
- ▶ Compact or split mounting
- ▶ Measures on most district water qualities and water conductivities
- ▶ No pressure drop
- ▶ Long-term stability
- ▶ 2 galvanically isolated digital outputs for easy connection to a calculator (potential-free)
- ▶ Bidirectional measurement, with 2 totalizers and outputs (without verification)
- ▶ Dynamic range $Q_i:Q_p$ up to 1:50/100

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TECHNICAL SPECIFICATIONS

SHARKY 475	
Pipe design	2-path sensor with flanges and inline transducers wet-calibrated from factory
Nominal size	DN 125, 150, 200, 250, 300, 350, 400, 500, 600, 700, 800, 900, 1000, 1200
Pressure rate	PN 16, PN 25, PN 40, EN 1092-1
Pipe material	Carbon Steel EN 1.0345/P235 GH, light-gray
Transducer design	Inline version and welded onto the pipe
Tranducer material	Stainless steel (AISI 316/1.4404)/brass (CuZn36Pb2AS)

SENSOR OPERATING CONDITIONS

SHARKY 475	
Storage	-40 ... +85 °C
Measured medium	Heating water/heating-cooling water, according to VDI-2035 (pH 8.2 - 10.5), industrial VdTÜV information sheet 1466 and AGFW information sheet FW 510.
Medium/surface temperature	2...200 #
Degree of protection	Sensor connetion IP67/NEMA 4X/6
Eletromagnetic ompatibility	EN 61000-6-4, EN 61000-6-2, MID E2 and M1
Max. flow at q_s	9 m/s

SENSOR CABLE

SHARKY 475	
Cable length	10 / 20 / 30 m

CERTIFICATES AND APPROVALS

SHARKY 475	
Approvals	CPA, MID
Standard	GB/T 32224, EN1434, OIML R 75

TECHNICAL DATA

Nominal flow rate	q_p	m^3/h	200'	300'	500'	800'	1120'	1500'	1900'
Nominal diameter	DN	mm	125	150	200	250	300	350	400
Overall length	L	mm	350	500	500	600	500	550	600
Minimum flow rate	q_i	m^3/h	2	3	5	8	11.2	15	19
Maximum flow rate	q_s	m^3/h	280	420	700	1120	1560	2100	2660
Overload flow range (105% of q_s)	q_{max}	m^3/h	294	441	735	1176	1638	2205	2793
Operating pressure	PN	bar	16/-/40	16/-/40	16/25/40	16/25/40	16/25/-	16/25/-	16/25/-
Pulse value		l/pulse	10	10	10	10	50	50	50

Nominal flow rate	q_p	m^3/h	2950	4300'	5800'	7600'	10000'	10000'	10000'
Nominal diameter	DN	mm	500	600	700	800	900	1000	1200
Overall length	L	mm	625	750	875	1000	1230	1300	1360
Minimum flow rate	q_i	m^3/h	29.5	43	58	76	100	100	100/200
Maximum flow rate	q_s	m^3/h	4130	6020	8120	10640	14000	14000	14000
Overload flow range (105% of q_s)	q_{max}	m^3/h	4336.5	6321	8526	11172	14700	14700	14700
Operating pressure	PN	bar	16/25/-	16/25/-	16/25/-	16/25/-	16/25/-	16/25/-	16/-/-
Pulse value		l/pulse	100	100	100	100	100	100	100

* OIML R 75 and MID flow values

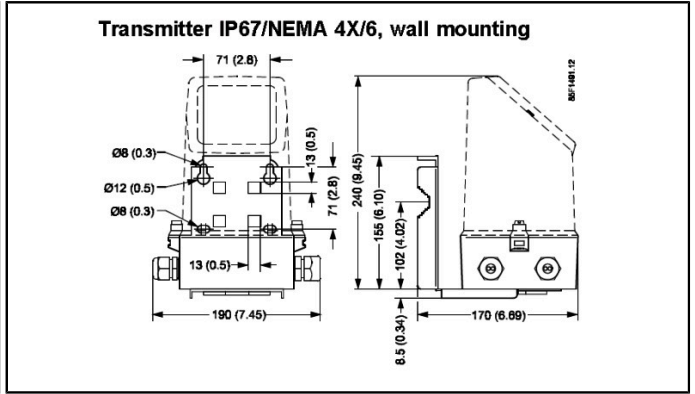
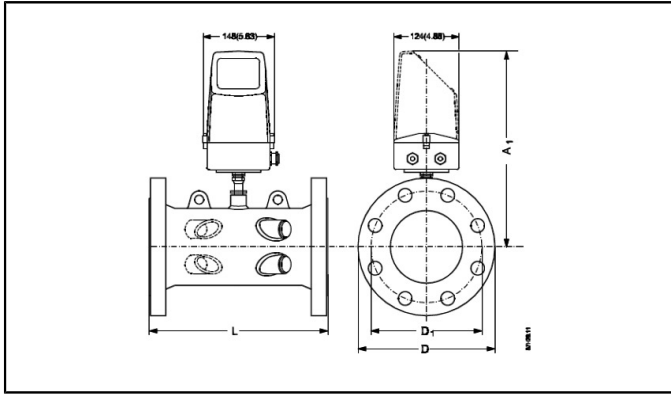
q_i (q_{min}) means the minimal and q_p (q_{nom}) the nominal flow rate according to the approval requirements.

q_s is the highest operatable flow rate. The maximum flow rate (q_{max}) is 105 % of q_s . The low flow cut off is 50 % of q_i .

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DIMENSIONS



Nominal flow rate	qp	m ³ /h	200 [*]	300 [*]	500 [*]	800 [*]	1120 [*]	1500 [*]	1900 [*]
Nominal diameter	DN	mm	125	150	200	250	300	350	400
Overall length	L	mm	350	500	500	600	500	550	600
Height	A ₁	mm	380	390	414	440	466	495	507
Flange diameter	D	mm	250	285	340	405	460	520	580
Screw hole diameter	D ₁	mm	210	240	295	355	410	470	525
Number of screw holes	PN16	pcs	8	8	12	12	12	16	16
Weight	PN16	kg	18	28	38	60	66	94	124
Number of screw holes	PN16	pcs	-	-	12	12	16	16	16
Weight	PN25	kg	-	-	47	76	81	121	153
Number of screw holes	PN25	pcs	8	8	12	12	-	-	-
Weight	PN40	kg	24	34	55	91	-	-	-
Lift hug			-	Yes	Yes	Yes	Yes	Yes	Yes

Nominal flow rate	qp	m ³ /h	2950	4300 [*]	5800 [*]	7600 [*]	10000 [*]	10000 [*]	10000 [*]
Nominal diameter	DN	mm	500	600	700	800	900	1000	1200
Overall length	L	mm	625	750	875	1000	1230	1300	1360
Height	A ₁	mm	668	609	660	710	810	910	1110
Flange diameter	D	mm	715	840	910	1025	1125	1255	1485
Screw hole diameter	D ₁	mm	650	770	840	950	1050	1170	1390
Number of screw holes	PN16	pcs	20	20	24	24	28	28	32
Weight	PN16	kg	190	303	361	494	475	594	860
Number of screw holes	PN16	pcs	20	20	24	24	28	28	-
Weight	PN25	kg	244	365	565	770	835	1078	-
Number of screw holes	PN25	pcs	-	-	-	-	-	-	-
Weight	PN40	kg	-	-	-	-	-	-	-
Lift hug			Yes	Yes	Yes	Yes	Yes	Yes	Yes

* OIML R 75 and MID flow values