

SHARKY 774

ULTRASONIC COMPACT ENERGY METER

DIEHL
Metering



APPLICATION

The ultrasonic compact energy meter can be used for measuring the energy consumption in heating application for billing purposes.

FEATURES

- ▶ Approval for ultrasonic meter with dynamic range of 1:100 ($q_i:q_p$) in class 2
- ▶ Improved power consumption, longer battery lifetime
- ▶ High long term stability, tested and verified at independent AGFW test
- ▶ Insensitive against dirt
- ▶ Extensive readable data memory
- ▶ M-Bus communication or 434 MHz integrated radio

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GENERAL

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Application	Heating
Approval	CMC / CPA class 2
Mounting position flow sensor	Any position
Protection class	IP 65
Supply	Battery 3.6 VDC, up to 12 years lifetime
Temperature sensor type	Pt 500 with 2-wire leads; Φ 5.2mm
Temperature range medium	°C 5 ... 105
Cable length of temperature sensor	m 1.5 / 3 / 5 / 10
Volume measuring cycle	s 2
Test possibilities	Via display, optical test pulses, communication test

CALCULATOR-BASIC FEATURES

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Environmental class	Class C
Ambient operating temperature	°C 5 ... 55
Ambient storage temperature	°C -25 ... +60 (>35°, max. 4 weeks)
M-Bus interface	According to EN13757-3, GB/T26831, cable length 1.5 m
Radio interface	Optional, 434 MHz
Optical interface	ZVEI standard
Extensive readable data memory	History log; event memory

DISPLAY

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Display indication	LCD, 8-digits
Units	kWh (MWh, GJ)
Total values	99,999,999 (9,999,999.9 - 999,999.99 - 99,999.999)
Values displayed	Energy - Power - Volume - Flow rate - Temperature and more

INTERFACE

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M-Bus	According to EN 13757-3, GB/T 26831 for data reading and parametrization, auto baud detect (300 and 2400 baud)
Radio	Open Meter Standard (OMS), according to EN13757-4, GB/T 26831

TEMPERATURE INPUT

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Measuring cycle	T	s	16
Starting temperature difference	$\Delta\Theta$	K	0.125
Min. temperature difference	$\Delta\Theta_{\min}$	K	3
Max. temperature difference	$\Delta\Theta_{\max}$	K	102
Temperature range calculator	Θ	°C	1 ... 130

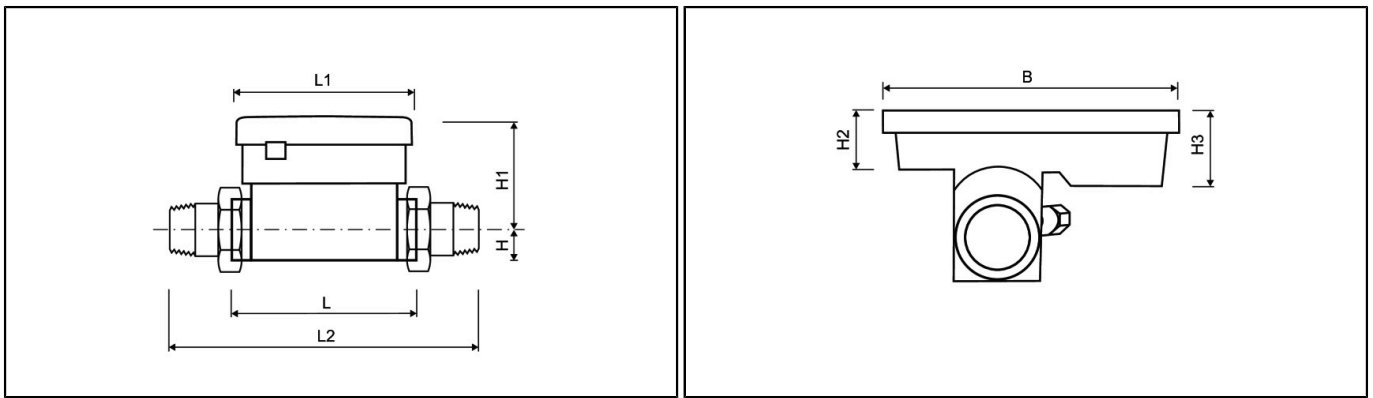
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TECHNICAL DATA FLOW SENSOR

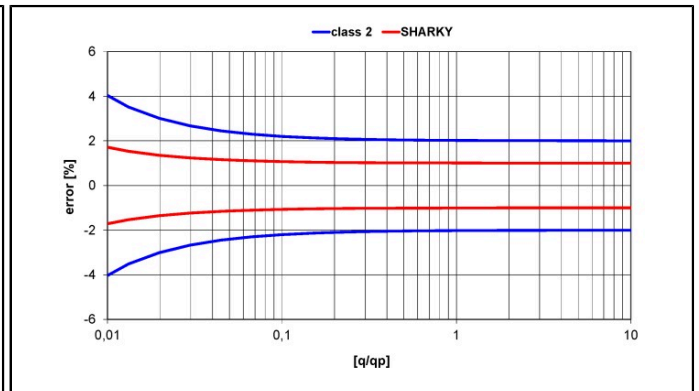
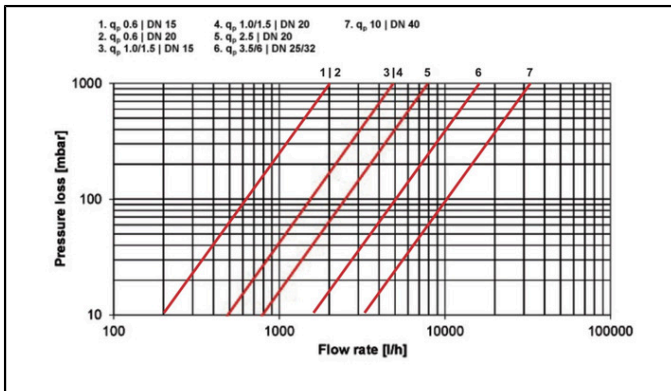
Nominal flow rate	q_p	m^3/h	1.5	2.5	3.5	3.5	6	6	10
Nominal diameter	DN	mm	15	25	25	32	25	32	40
Overall length	L	mm	110	130	260	260	260	260	300
Starting flow rate		l/h	2.5	4	7	7	7	7	20
Minimum flow rate	q_i	l/h	15	25	35	35	60	60	100
Maximum flow rate	q_s	m^3/h	3	5	7	7	12	12	20
Overload flow rate		m^3/h	4.6	6.7	18.4	18.4	18.4	18.4	24
Operating pressure	PN	bar	16	16	16	16	16	16	16
Pressure loss at q_p	Δp	mbar	75	100	44	44	128	128	95
Temp. range heating		$^{\circ}C$	5...105	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105	5 ... 105

DIMENSIONS THREAD VERSION



Nominal flow rate	q_p	m^3/h	1.5	2.5	3.5	3.5	6	6	10
Nominal diameter	DN	mm	15	25	25	32	25	32	40
Overall length	L	mm	110	130	260	260	260	260	300
Overall length with coupling	L2	mm	190	250	380	380	380	380	440
Length of calculator	L1	mm	90	90	90	90	90	90	90
Height	H	mm	14.5	23	23	23	23	23	33
Height	H1	mm	55	58	62.5	62.5	62.5	62.5	68
Height of calculator	H2	mm	27	27	27	27	27	27	27
Height of calculator	H3	mm	40	40	40	40	40	40	40
Width of calculator	B	mm	135	135	135	135	135	135	135
Connection thread on meter		Inch	G3/4B	G5/4B	G5/4B	G3/2B	G5/4B	G3/2B	G2B
Connection thread of coupling		Inch	R1/2	R1	R1	R5/4	R1	R5/4	R3/2
Weight		kg	0.70	0.88	1.53	1.53	1.53	1.53	3.13

PRESSURE LOSS GRAPH/TYPICAL ERRORGRAPH



Pressure loss graph

Typical error graph

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 Subject to technical adjustments.

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