

► Ultrasound energy meter type Sharky

Compact ultrasound energy meter for energy consumption accounts and allocation

Properties

- Long-life static energy meter of the ultrasound type
- Approved for energy consumption accounts according to EN 1434 and MID in class 2 and 3
- Self-explanatory display with easy-to-read figures, which are easy to see from all sides and can be adapted to individual needs
- Two annual accounting days
- Rolling monthly log which saves the readings from the past 24 months
- Two-part meter, allowing the replacement of temperature sensors without breaking the verification seal
- Large dynamic range (qi/q_s) 1:200
- Power supply battery, 24 VAC or 230 VAC
- Optical interface with M-bus protocol for programming and reading
- Inserted modules for remote reading and pulse inputs and outputs
- Up to 10 m temperature sensor cable
- No installation requirements
- Pivoting counter, can be wall-mounted

Further information

The energy meter consists of a calculation unit with battery or power supply, which can be replaced without breaking any verification seal, two temperature sensors, which can also be replaced, and a wall mount, for separate mounting of calculation unit and flow sensor if desired.

The meter is constructed according to the ultrasound principle, without moveable parts. This ensures very high measuring accuracy and long life. The meter's ultrasound signal is reflection-free, which ensures very high stability at varying water quality. The energy meter is type approved in Denmark for energy accounting according to EN 1434 class 2, with approval number TS 27.01.141.

As standard, the meter is supplied with two Pt500 temperature sensors with 2 m cable (diameter 5.2 mm) according to DIN IEC 751 (ITS 90), but it can be supplied with temperature sensors with up to 10 m cable. The two temperature sensors are mounted in screw terminals and can be replaced without breaking the verification seal.



The Sharky meter is available with inset modules for remote communication via M-Bus, pulse outputs for energy and volume and pulse inputs from two other meters. The readings are displayed in kWh, m³, etc., and can be read remotely together with the other meter values.



The Sharky meter display is furnished with clear, easy-to-read figures and symbols, which are easy to see from all sides. This allows problem-free reading of the meter, even in difficult conditions.

Brunata a/s is a 100 % Danish owned company. We have more than 90 years of experience within developing and producing meters, cost allocators, allocation accounts and meter services. We are certified in accordance with EN ISO 9001 and 14001. Please contact us for further information.

Technical data

Counter			
General	Accuracy	EN 1434, class 2	
	Environmental class	EN 1434, class C	
	Protection	IP 54	
	Display	7 digits	
	Energy registration	kWh, MWh, GJ	
	Additional modules	Pulse inputs / outputs	number
Communication		number	1
Temperature	Temperature sensors	Type	Pt500, 2 conductors
	Cable length	Min. - max.	metres 1,5 - 10
	Absolute temperature difference	Min. - max.	°C 2 - 180
	Δt start	Registration start	K 0,25
	Temperature difference	Δt min. - max.	K 3 - 177
	Measuring interval	Battery supply	16 sec.
External supply		1 sec.	
Flow	Flow meter principle	Ultrasound direct shot	
	Cable length	metres	1,2
	Dynamic range	q_i / q_s	1:200
	Measuring interval	Sec.	s 1
	Temperature range	Min. - max.	°C 15 - 130
Power supply	Battery	Operating time	yrs. 10
	24 VAC	Power consumption	mA <1
	230 VAC	Power consumption	mA <1

Flow technical data

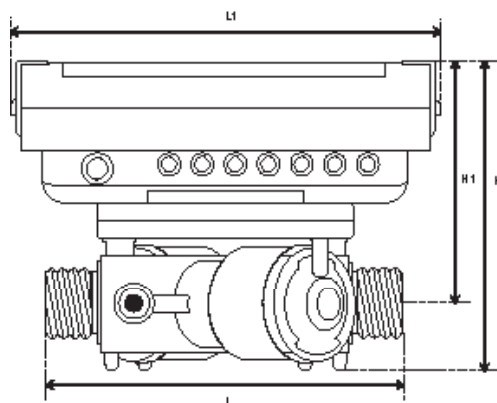
Flow sensor					
Size	q_p		0,6	1,5	2,5
Start flow	q_{start}	l/h	2	5	8
Minimal flow	q_i	l/h	6	15	25
Permanent flow	q_p	m ³ /h	0,6	1,5	2,5
Maximum flow	q_s	m ³ /h	1,2	3	5
Overflow	q_{maks}	m ³ /h	1,34	3,3	5,5
Max. operating pressure	bar	16			
Pressure loss at q_p	kPa	16	20	22	
Temperature range	°C	15 - 130*			

* at temp > 90 °C the calculation unit must be wall-mounted

Dimensions

Measurements and weight							
Type	q_p		0,6	0,6	1,5	1,5	2,5
Nominal connection	DN	mm	15	20	15	20	20
Build length	L	mm	110	130	110	130	130
	L1	mm	145	145	145	145	145
Height	H	mm	84	84	84	84	84
	H1	mm	32	38	32	38	38
Width		mm	105	105	105	105	105
Connection meter		inches (*)	G ¾ B	G 1 B	G ¾ B	G 1 B	G 1 B
Weight incl. counter		kg	0,93	0,95	0,93	0,95	0,93
Installation position	vertical / horizontal						

Measurement sketch



Pressure loss graph

