

HYDRASONIC S8

Ultrasonic In-line BTU meters (Flanged)

Revolutionizing Flow



Hydrasonic S8 ultrasonic BTU meter is designed for measuring the energy consumption in heating/cooling application for billing purpose.

Its static ultrasonic technology is based on the measurement of the transit time. It offers benefits like easy battery & temperature sensor replacement, IP68 protection, M-Bus and Wireless M-Bus communication options.

INTERCHANGABLE
BATTERY &
TEMPERATURE SENSOR



M-BUS
COMMUNICATION



IP68 PROTECTION



SELF FLOW
CONDITIONING
MECHANISM



FEATURES

GENERAL

Application	-	Heating or bi-functional (heating/cooling) Heat-transfer fluid: glycol-free water
Approval	-	In compliance with MID-EN1434
Accuracy class	-	Class 2
Ambient temperature	°C	+5 ... +55
Storage temperature	°C	+5 ... +55 max. -20...+60 (max. 4 weeks)
Humidity	%	95 maximum
Power supply	-	3.6 VDC ; 24 VDC
Temperature sensor type	-	PT1000 , 2-wires: Ø 5.2 mm
Cable length of temperature sensor	m	3
Test possibilities	-	via display
Volume measuring cycle	s	2
Temperature measuring cycle	s	30
Power calculation cycle	s	2

CALCULATOR

Protection class	-	IP66 (Optional IP67)
Environmental class-mechanical	-	M1, M2
Environmental class electromechanical	-	E1, E2
Calculator	-	Removable, with 3m cable to flow sensor
Absolute temperature range	°C	+1...+90 (+150 optional)
Starting temperature difference $\Delta\theta$	K	0.125
Min. temperature difference $\Delta\theta_{min}$	K	In compliance with MID
Max. temperature difference (heating) $\Delta\theta_{max}$	K	147 (In compliance with MID)
Extensive readable data memory	-	Monthly for 18 months (hourly, daily, yearly optional) values of energy, volume and error hours; additionally event memory (error log)
Interchangeable components	-	Battery (Standard) ; Temperature sensors (Optional)

FLOW SENSORS

Dynamic range (Qp/Qi) - 1:100

Mounting position flow sensor	-	Any position
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Temperature range (heating/ cooling) °C 2-87*

Protection class	-	IP68 (heating/cooling)
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*150 °C optional

INTERFACES

Optical ZVEI interface, for communication and testing. M-Bus protocol

Display	LCD-8 digit
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M-Bus According to EN13757-3: 2013

Wireless M-Bus	According to EN13757-4; 2013
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DISPLAY

Display indication LCD-8 digit + special characters

Units	kWh - m ³ - °C - m ³ /h*
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Total values 99,999.999

Values displayed (main loop)	Energy - Volume - Flow - Power - Temperature - Differential temperature - Operating hours - Meter SN-Meter size-Meter time-Error Status - Display test
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*MWh-GJ optional

M-BUS

M-Bus Auto baud detect (300 and 2,400 bauds); galvanically insulated

M-Bus cable	24 AWG , 2 Core
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Data transmission Data reading via 2 non-polarized wire (1.5m)

Battery life-time	Up-to 12 years*
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*Under standard conditions of use and temperature

FLOW SENSOR TECHNICAL DATA

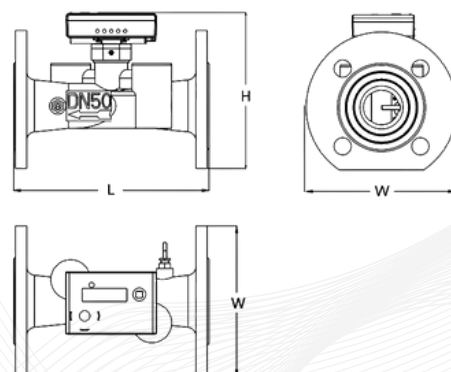
Measuring Method

Ultrasonic; Time of Flight

Nominal Diameter	mm	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400	DN450	DN500
Nominal flow q_p	m ³ /h	15	25	40	60	100	150	250	400	600	750	900	1200	1500
Minimum flow q_i	m ³ /h	0.3	0.5	0.8	1.2	2.0	3.0	5.0	8.0	12	15	18	24	30
Maximum flow q_s	m ³ /h	30	50	80	120	200	300	500	800	1200	1500	1800	2400	3000
Length	mm	200	200	225	250	250	300	350	450	500	500	500	500	500
Dynamic range Q_p/Q_i	-	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50	1:50
Accuracy class (MID)	-	class 2												
Nominal pressure P_N	Bar	16 / 20(optional)												
Pressure drop Δp at q_p	Bar	<0.25												

DIMENSIONS

Nominal diameter (DN)	Length L(mm)	Stainless Steel (SS)		Cast Iron(CI)		Stud Bolt	Bolt Holes
		Width W(mm)	Height H(mm)	Width W(mm)	Height H(mm)		
50	200	165	180	165	180	M16	4
65	200	182	197	182	197	M16	4
80	225	197	209	197	209	M16	8
100	250	218	229	218	229	M16	8
125	250	245	260	245	260	M16	8
150	300	283	295	283	295	M20	8
200	350	335	340	335	340	M20	12
250	450	405	405	405	405	M24	12
300	500	460	460	460	460	M24	12
350	500	520	520	520	520	M24	16
400	500	580	580	580	580	M27	16
450	500	640	640	640	640	M27	20
500	500	715	715	715	715	M30	20



ORDERING CODE

HYDRASONIC	S8	-	XX	-	XX	-	XX	-	XX	-	XX	-	XX
Connection Size(Flanged)													
DN50			50										
DN65			65										
DN80			80										
DN100			100										
DN125			125										
DN150			150										
DN200			200										
DN250			250										
DN300			300										
DN350			350										
DN400			400										
DN450			450										
DN500			500										
Material of Construction(MOC)													
Stainless Steel					SS								
Cast Iron					CI								
Flow Sensor Cable Length													
3m						3							
Temperature Sensor Cable Length													
3m							3						
Interchangeable Components													
Battery(standard)											B		
Battery & Temperature Sensors											BT		
Power Supply											DC		
Temperature Range													
1- 90°C												TS	
1-150°C												TO	

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