

Engelmann Ultrasonic Thermal Meter

SENSOSTAR[®] 2U



The new ***SENSOSTAR[®] 2U***:

- Flow measurement without moving parts
- Nominal flow 100 % overloadable: **qp 3,5 -> 7 m³**
- Dynamic temperature measurement: **4 / 60 sek**
- Low pressure drop: **qp 0,6 = 0,03 bar; qp 1,5 = 0,210 bar**
qp 2,5 = 0,115 bar; qp 3,5 = 0,210 bar
- Removable calculator unit
- Back flow detection

Technical data:**Flow sensor**

Measuring method		Ultrasonic; Time-of-Flight					
Sizes	Nominal flow q_p	m ³ /h	0,6	1,5	2,5	3,5	3,5
	Low flow threshold	l/h	6	6	12	17	17
	Minimum flow q_i	l/h	12	15	25	35	35
	Maximum flow q_s	m ³ /h	1,2	3,0	5	7	7
	Pressure drop Δp at q_p/q_s	bar	0,03/0,15	0,21/0,87	0,115/0,425	0,21/0,835	0,21/0,835
	Nominal diameter	mm	DN15	DN15	DN20	DN20	DN25
	Thread	Inch	G3/4B	G3/4B	G1B	G1B	G1 1/4B
	Lenght	mm	110	110	130	130	150
	Dynamic range q_i/q_p (optional)	-	1:50	1:100 (1:125)	1:100	1:100 (1:125)	1:100 (1:125)
	Nominal pressure PN	bar	16				
	Accuracy class according MID		Class 2				
	Temperature range	°C	15 ... 90				
	Point of installation		Return flow; optional: forward flow				
	Mounting position		Horizontal / vertical				
	Protection class		IP54				

Calculator unit

Temperature range	°C	1 - 105
Ambient temperature	°C	5 - 55
Temperature difference range ΔT	K	3 - 90
Minimum temperature difference ΔT	K	> 0,5
Resolution temperature	°C	0,01
Measurement frequency dynamic	sec	4 / 60
Display		LCD – 8 digits + special characters
Decimal places		up to 3 after comma
Units		kWh, MWh, GJ, l, m ³ , m ³ /h, l/h, kW, MW
Interfaces		optical interface (M-Bus protocol); optional: M-Bus; M-Bus + 2 pulse inputs; wireless M-Bus; wireless M-Bus + 2 pulse inputs; pulse output
Power supply	V	3; lithium battery
Estimated lifetime	years	6 + 1
Data storage		non-volatile memory; once daily
Billing dates		15 monthly values via display; selectable yearly billing date; 18 monthly values via optical interfaces or M-Bus
Storage of maximun values		Flow and power
Protection class		IP54
CE		Yes
EMC		EN1434

Temperature sensors

Platinum precision resistor		Pt1000	
Diameter	mm	5	
Length of cables	m	1,5	
Point of installation		TS return flow - integrated in the flow sensor; TS forward flow - direct installation	
		optional:	
		TS forward flow - integrated in the flow sensor; TS return flow - direct installation	

Dimensions

Calculator housing	mm	75 x 110	
Pulse cable length	m	0,85	
Height from pipe middle	mm	68	
Weight (standard version)	kg	0,73	0,73 0,78 0,78 0,93

Pressure drop compact heat meter *SENSOSTAR®2U*

