

MSF-2202

Marmonix Steam flowmeter swirl flow meter

Overview:

Marmonix Steam flow meter swirl flow meter MSF-2202 can improve energy efficiency. This meter contains many features such as: high temperature sensors, high stability and accuracy, low power consumption LCD display and etc.

Features:

- Low power consumption LCD display
- Anti-vibration, Anti interference, Digital circuit Board
- Dual power
- High sensitivity, high temperature sensor
- Low pressure loss, high reliability, less maintenance.
- Internal forging, anti-rust, long service life.
- Body material SS304, Optional SS316.



SPECIFICATION

Measured Medium	Liquid, Gas, Steam
Medium Temp	-40°C~+200°C; -40°C~+280°C; 40°C~+350°C
Nominal Pressure	1.6MPa;2.5MPa;4.0MPa;6.4MPa(Other pressure can be custom, need consult supplier)
Accuracy	1.0%(Flange), 1.5%(Insertion)
Measuring range ratio	1:10(Standard air condition as reference) 1:15(Liquid)
Flow Range	Liquid:0.4-7.0m/s; Gas:4.0-60.0m/s; Steam:5.0-70.0m/s
Specifications	DN15-DN300(Flange), DN80-DN2000(Insertion), DN15-DN100(Thread), DN15-DN300(Wafer), DN15-DN100(Sanitary)
Material	SS304(Standard), SS316(Optional)
Pressure Loss Coefficient	$C_d \leq 2.6$
Vibration Acceleration Allowed	$\leq 0.2g$
IEP ATEX	II 1G Ex ia IIC T5 Ga
Ambient Condition	Ambient Temp:-40°C-65°C(Non-explosion-proof site); -20°C-55°C(Explosion-proof site) Relative Humidity: $\leq 85\%$ Pressure:86kPa-106kPa
Power Supply	12-24V/DC or 3.6V battery powered
Signal Output	Pulse frequency signal2-3000Hz, Low level $\leq 1V$, high level $\geq 6V$ Two-wire system 4-20 signal(isolated output), Load ≤ 500



Flow Range

Size (mm)	Liquid(Reference medium:normal temperature water, m ³ /h)		Gas(Reference medium:20°C, 101325pa condition air, m ³ /h)	
	Standard	Extended	Standard	Extended
15	0.8~6	0.5~8	6~40	5~50
20	1~8	0.5~12	8~50	6~60
25	1.5~12	0.8~16	10~80	8~120
40	2.5~30	2~40	25~200	20~300
50	3~50	2.5~60	30~300	25~500
65	5~80	4~100	50~500	40~800
80	8~120	6~160	80~800	60~1200
100	12~200	8~250	120~1200	100~2000
125	20~300	12~400	160~1600	150~3000
150	30~400	18~600	250~2500	200~4000
200	50~800	30~1200	400~4000	350~8000
250	80~1200	40~1600	600~6000	500~12000
300	100~1600	60~2500	1000~10000	600~16000
400	200~3000	120~5000	1600~16000	1000~25000
500	300~5000	200~8000	2500~25000	1600~40000
600	500~8000	300~10000	4000~40000	2500~60000



Superheated Steam Density Value (relative pressure & temperature)

Absolute Pressure (Mpa)	Temperature(°C)					
	150	200	250	300	350	400
0.1	0.52	0.46	0.42	0.38		
0.15	0.78	0.70	0.62	0.57	0.52	0.49
0.2	1.04	0.93	0.83	0.76	0.69	0.65
0.25	1.31	1.16	1.04	0.95	0.87	0.81
0.33	1.58	1.39	1.25	1.14	1.05	0.97
0.35	1.85	1.63	1.46	1.33	1.22	1.13
0.4	2.12	1.87	1.68	1.52	1.40	1.29
0.5		2.35	2.11	1.91	1.75	1.62
0.6		2.84	2.54	2.30	2.11	1.95
0.7		3.33	2.97	2.69	2.46	2.27
0.8		3.83	3.41	3.08	2.82	2.60
1.0		4.86	4.30	3.88	3.54	3.26
1.2		5.91	5.20	4.67	4.26	3.92
1.5		7.55	6.58	5.89	5.36	4.93
2.0			8.968	7.97	7.21	6.62
2.5			11.5	10.1	9.11	8.33
3.0			14.2	12.3	11.1	10.1
3.5			17.0	14.6	13.0	11.8
4.0				17.0	15.1	13.6

Special mark

Format	common	Standard signal out put	Intrinsically safe explosion- proof	One site display	High temperatur e(350°c)	temperature compensation	Pressure compensa tion	Temperature ,pressure compensati on
Mark no.	None	M	B	X	G	W	Y	Z

Nominal diameter

SIZE	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Mark no.	150	200	250	320	400	500	650	800	101	125	151	201	251	301

Insertion type

SIZE	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
Mark no.	100	125	151	201	251	301	351	401	501	601	701	801	901	102	122	142	162	182	202

Measured medium

Measured medium	liquid	Common gas	Saturated steam	Superheated steam	others
Mark no.	1	2	3	4	5

Connection mode

Connection mode	Flange connection	Wafer connection	Insertion type	others
Mark no.	1	2	3	4

