

RAY FS WP MID

MECHANICAL FLOW SENSOR

DIEHL
Metering



APPLICATION

RAY FS WP is a Woltman volume measuring device with a built-in pulse transmitter to measure heat for billing hot water consumption (max. 105°C). Its helix axis is parallel to the pipe ensuring low resistance to flowing and limited pressure loss.

FEATURES

- ▶ M1004 approval in class 2 with dynamic range 10:1 (qp:qi)
- ▶ Complete range from DN50 qp 15 m³/h to DN200 qp 200 m³/h
- ▶ Remote transmission of quantities of flow (3 m cable), compatible with calculators with pulse input
- ▶ Installation in any position
- ▶ Register can be rotated as required for easier reading
- ▶ Very low pressure loss
- ▶ Encapsulated and waterproof meter
- ▶ As a safeguard against magnetic influences, a sealable anti magnetic screen is fitted on the meter
- ▶ Temperature range: 10°C to 105°C

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GENERAL

RAY FS WP			
Application	Heating		
Mounting position	Any position		
Medium temperature range	°C	10 ... 105	
Ambient temperature	°C	5 ... 55	
Ambient class	E1 + M1		
Nominal pressure	PN	bar	16 ¹
Protection class	IP 54		
Approval	MID (DE-15-MI004-PTB004)		

¹special version on request

REACH

Information pursuant to Article 33 (1) of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006:

This product series contains components with the following substances in a concentration of more than 0.1% weight by weight (w/w):
- Lead (CAS no.: 7439-92-1)

TECHNICAL DATA

Nominal diameter	DN	mm	50	65	80	150	200
Nominal flow rate	q _p	m ³ /h	15	25	32	200	200
Overload flow rate (short term)		m ³ /h	60	60	90	400	500
Maximum flow rate	q _s	m ³ /h	30	30	45	300	300
Minimum flow rate	q _i	m ³ /h	1.5	2.5	3.2	20	20
Starting flow rate		l/h	130	130	400	1,500	2,000
Pressure loss at q _p	Δp	bar	0.02	0.02	0.01	0.05	0.002
Flow resistance coefficient Zeta			0.9	0.9	0.65	1	0.13
Pulse value reed switch ¹		l/pulse	100	100	100	1,000	1,000
Dynamic range ²		q _p / q _i	10:1	10:1	10:1	10:1	10:1

¹other pulse values on request

²other q_p / q_i on request

DISPLAY RANGE

Nominal diameter	DN	mm	50	65	80	150	200
0.5 l ... 999,999 m ³			•	•	•		
5.0 l ... 9,999,999 m ³						•	•

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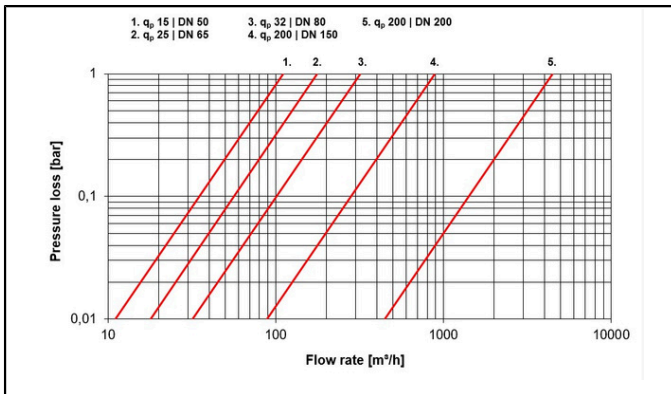
MECHANICAL FLOW SENSOR

DIMENSIONS

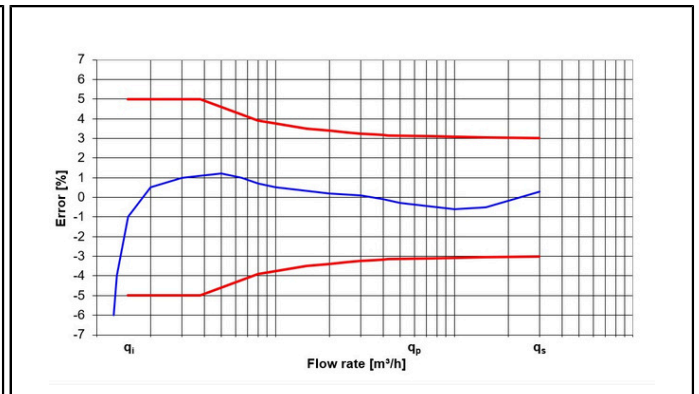


Nominal diameter	DN	mm	50	65	80	150	200
Overall length	L	mm	200	200	225	300	350
Flange diameter	D	mm	165	185	200	285	340
Hole circle diameter	K	mm	125	145	160	240	295
Number of screwholes		pcs	4	4	8	8	8 / 12
Screw hole diameter	D1	mm	18	18	18	22	22
Height	H	mm	75	82.5	94	135	163
Height (without counter extension)	H1	mm	141	141	141	244	244
Height (with counter extension)	H1	mm	182	182	182	284	284
Diameter	ØB	mm	150	150	150	285	340
Weight		kg	11.1	11.6	12.5	39	49

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph