

RAY FS WP 456/457

FLOW SENSOR | MECHANICAL

DIEHL
Metering



APPLICATION

Volume measuring component for measuring heat.

FEATURES

- ▶ Facility for remote transmission of flow rates
- ▶ Encapsulated and evacuated counter
- ▶ Counter can be rotated as required for easier reading
- ▶ Easily replaceable reed switch
- ▶ The reed switch is fitted with a 100 Ω , 1/4 W protective resistor (cable length 3 m). Can be ordered without series resistor
- ▶ Contact rating (without series resistor) max. 24 V (SELV) 0.2 A
- ▶ Outstanding long-term accuracy achieved by mounting vane in ring sapphire and carbide bearing
- ▶ Sealed shield protects against magnetic interference
- ▶ Very low pressure loss
- ▶ Approved according MID in class 2 and 3
- ▶ Completely dry-running

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GENERAL

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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)	

¹ special 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	100	125	150	200
Nominal flow rate	q _p	m ³ /h	15	25	32	50	80	200	200
Overload flow rate (short term)		m ³ /h	60	60	90	180	250	400	500
Maximum flow rate	q _s	m ³ /h	30	30	45	100	150	300	300
Minimum flow rate	q _i	m ³ /h	1.5	2.5	3.2	5	8	20	20
Starting flow rate		l/h	130	130	400	400	600	1500	2000
Pressure loss at q _p	Δp	bar	0.02	0.02	0.01	0.03	0.03	0.05	0.002
Flow resistance coefficient Zeta			0.9	0.9	0.65	1.9	1.8	1	0.13
Pulse value reed switch ¹		l/pulse	100	100	100	100	100	100	100
Metrological class	q _p / q _i		10:1 ²	10:1 ²	10:1	10:1	10:1	10:1	10:1
Flow rate at 0.1 bar pressure loss		m ³ /h	35	56	102	91	150	280	1414

¹ other pulse values on request

² other q_p / q_i on request

DISPLAY RANGE

Nominal diameter	DN	mm	50	65	80	100	125	150	200
0.5 l ... 999,999 m ³			•	•	•	•	•		
5.0 l ... 9,999,999 m ³								•	•

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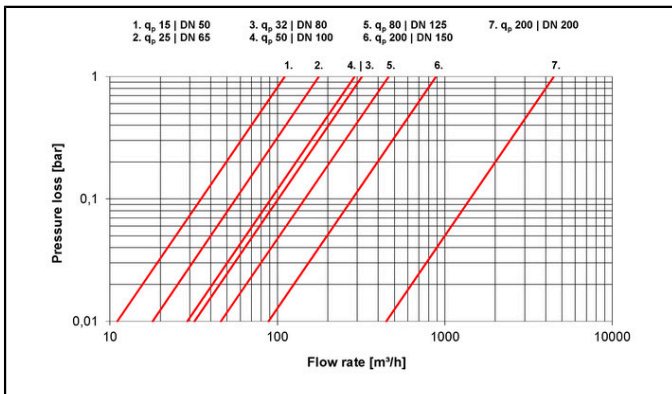
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DIMENSIONS

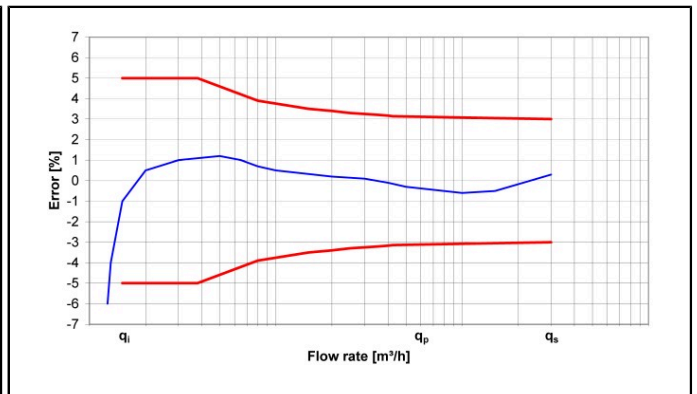


Nominal diameter	DN	mm	50	65	80	100	125	150	200
Overall length	L	mm	200	200	200 / 225	250	250	300	350
Flange diameter	D	mm	165	185	200	220	250	285	240
Hole circle diameter	K	mm	125	145	160	180	210	240	295
Number of screwholes		pcs	4	4	8	8	8	8	8 / 12
Screw hole diameter	D1	mm	18	18	18	18	18	22	22
Height	H	mm	75	82.5	94	110	125	135	163
Height (without counter extension)	H1	mm	141	141	141	200	200	244	244
Height (with counter extension)	H1	mm	182	182	182	240	240	284	284
Diameter	ØB	mm	150	150	150	220	250	285	340
Weight		kg	11.1	11.6	12.5	19.8	22.4	39	49

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph