

FMR100 SERIES METAL ROTAMETER

FEATURES

- ◎ Vertical, horizontal, corner type installation
- ◎ Optional on-site instant or cumulative flow display
- ◎ Stainless steel 304 material
- ◎ Low pressure drop, large flow range (10:1)
- ◎ Various outputs: 4-20mA, pulse and alarm.



INTRODUCTION

The FMR100 Series Metal Tube Rotameter is a variable area flow meter that measures flow based on the position of a float within a metal tube. Featuring a fully metal construction, this flow meter offers a compact size, low pressure drop, and a wide flow range (10:1), making it an ideal solution for precise flow measurement in complex and harsh environments. Its easy installation and maintenance make it suitable for industries that require accurate flow measurement under challenging conditions, such as low flow rates, low velocities, and aggressive media.

The FMR100 utilizes advanced non-contact magnetic field angle detection sensors, along with a Motorola microprocessing system, to provide features like LCD indication, flow accumulation, remote output (4-20mA), pulse output, and alarm outputs for both upper and lower limits. The flow meter is available in various installation configurations, including vertical, top-in bottom-out, side-in side-out, bottom-in side-out, threaded connections, and horizontal mounting options, offering flexibility to suit a variety of application needs.

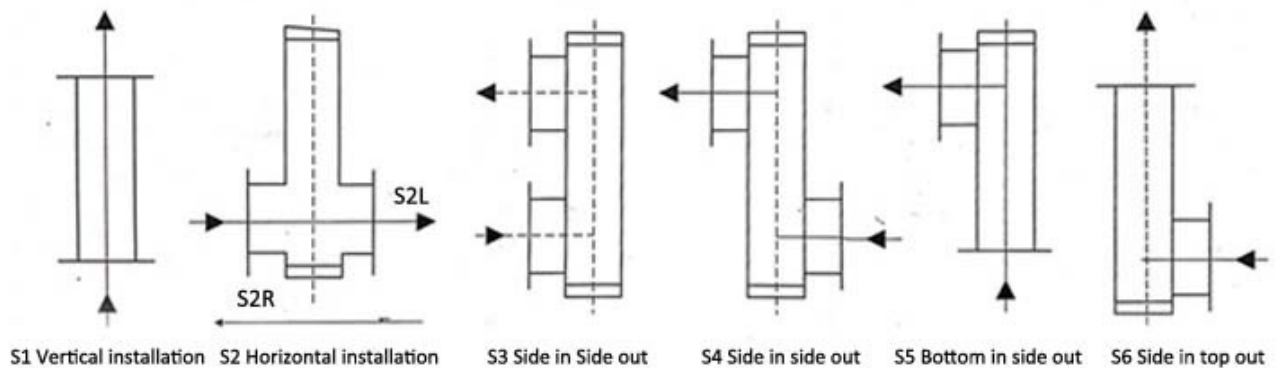
This series is widely used in flow measurement and process control for small flow rates and harsh media in industries such as chemical processing, petrochemical, pharmaceuticals, and water treatment.

SPECIFICATIONS

Measuring range	Water(20°C)6~200,000L/h Gas(20°C ,0.1013MPa) 0.05~4000m ³ /h
Range ratio	10:1(20:1 Customized)
Accuracy	1.5(1.0 Customized)
Working pressure	DN15~DN50 PN4.0MPa(32MPa Customized) DN80~DN100 PN1.6MPa(25MPa Customized)

Medium temperature	Standard: -80~140 °C High temperature: 400 °C PTFE lined: ≤ 85°C
Environmental temperature	-40~120 °C
Medium viscosity	DN15: ≤ 5mPa. S(F15.0~F15.4) ≤ 30mPa. S(F15.0~F15.9) DN25: ≤ 250mPa. S DN50~DN150: ≤ 300mPa. S
Display	Instantaneous Flow Display Range: 0~ 50,000 Cumulative Flow Display Range: 0~ 99,999,999
Output signal	4-20mA, pulse and alarm
Power supply	24VDC(10.8~36VDC), 220VAC(85~265VAC) Or battery
Process connection	Flange, thread
Installation type	Vertical, top-in bottom-out, side-in side-out, bottom-in side-out, threaded connections, and horizontal mounting options
Electrical connection	M20X1.5, PG11, 1/2NPT
Protection	IP65

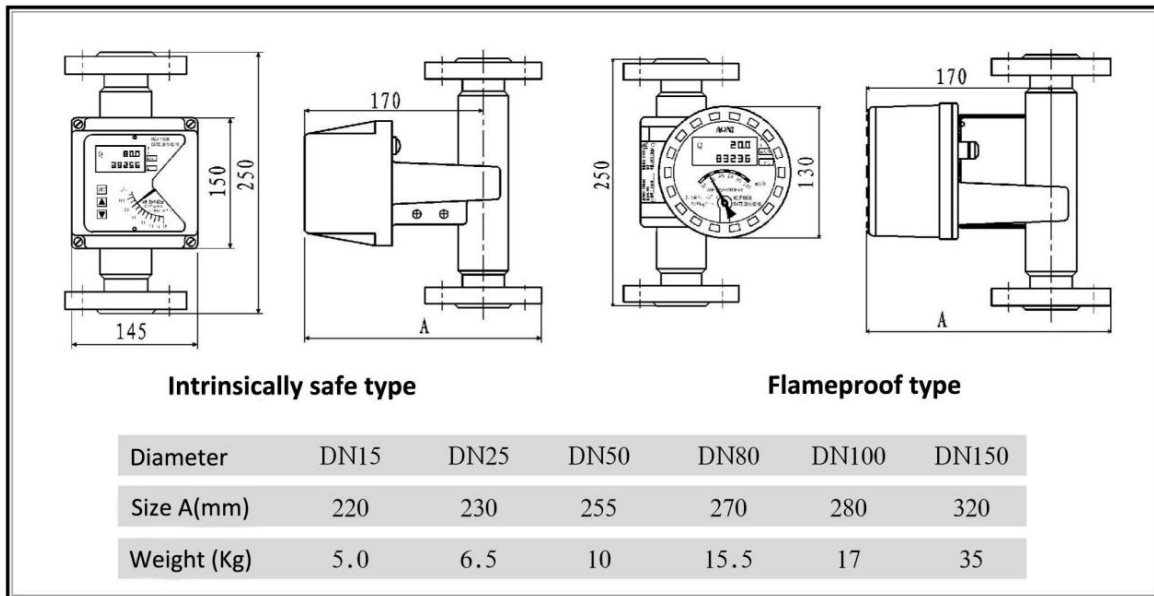
INSTALLATION TYPE



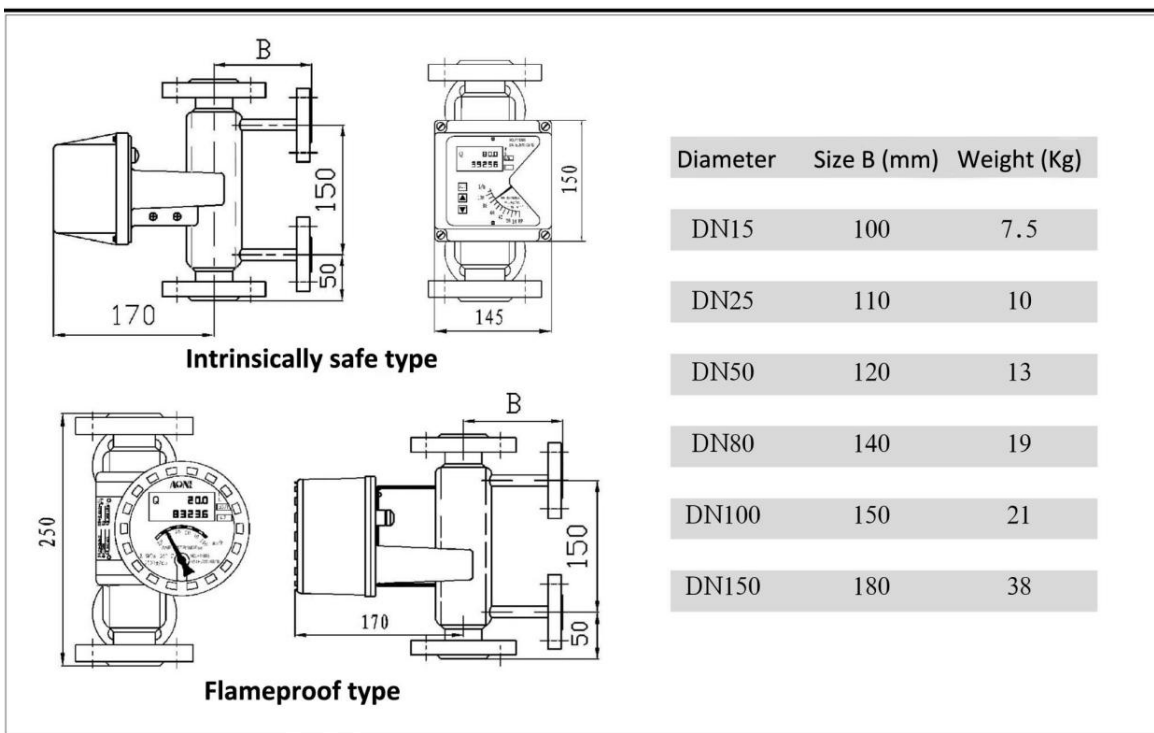
FLOW RANGE

Diameter DN	Float number	Water H ₂ O (20°C L/H)		Air m ³ /h (0.1013MPa 20°C)		Max. pressure loss (KPa)	
		Stainless steel	PTFE	Stainless steel	Water	Air	
15	F15.0	10	—		1.8	6.7	
	F15.1	16	—	0.5	2.0	7.0	
	F15.2	25	16	0.7	2.3	7.2	
	F15.3	40	25	1.1	2.5	7.3	
	F15.4	63	40	1.8	2.5	7.5	
	F15.5	100	63	2.8	2.5	7.8	
	F15.6	160	100	4.8	2.6	8.0	
	F15.7	250	160	7.0	2.7	10.0	
	F15.8	400	250	10.0	2.9	10.8	
	F15.9	630	400	16.0	3.4	14	
25	F25.1	630	400	16	4.0	7.0	
	F25.2	1000	630	30	4.1	8.0	
	F25.3	1600	1000	45	4.4	12.0	
	F25.4	2500	1600	70	5.2	19.0	
	F25.5	4000	2500	110	7.0	25.0	
	F25.6	6300	4000	180	12.5	33.0	
50	F55.1	6300	4000	180	4.7	8.0	
	F55.2	10000	6300	250	5.1	15.0	
	F55.3	16000	10000	400	6.2	22.0	
	F55.4	25000	16000	1000	8.0	35.0	
80	F85.1	25000	16000	1000	5.3	15.0	
	F85.2	40000	25000	1200	7.8	22.0	
	F85.3	63000	40000	1800	11.4	35.0	
100	F105.1	63000	40000	1800	11.4	35.0	
	F105.2	100000	63000	3000	16.7		
150	F155.1	100000	63000	3000	16.7		
	F155.2	150000	100000	4000	17.0		
200	F200.1	150000		4000	17.0		
	F200.2	200000					

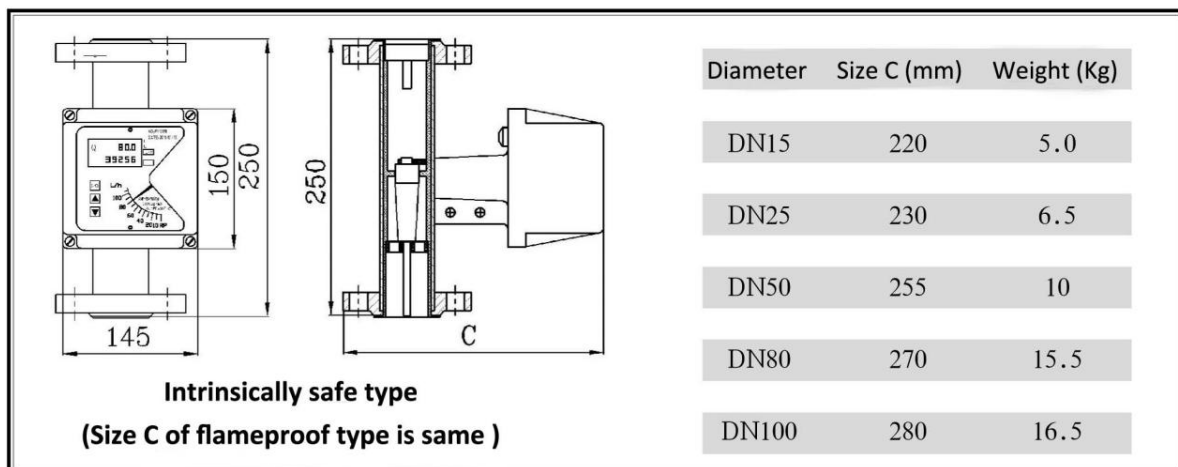
DIMENSION



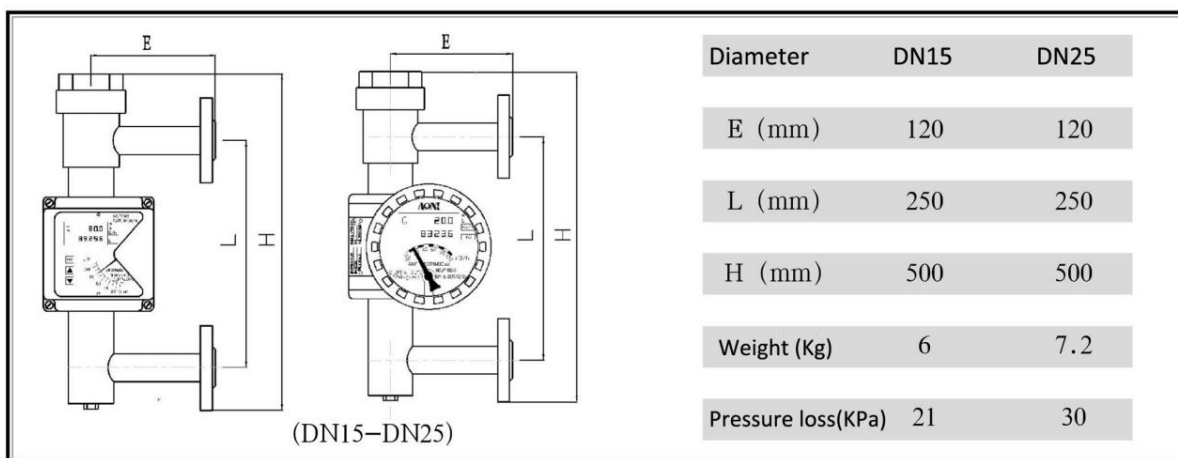
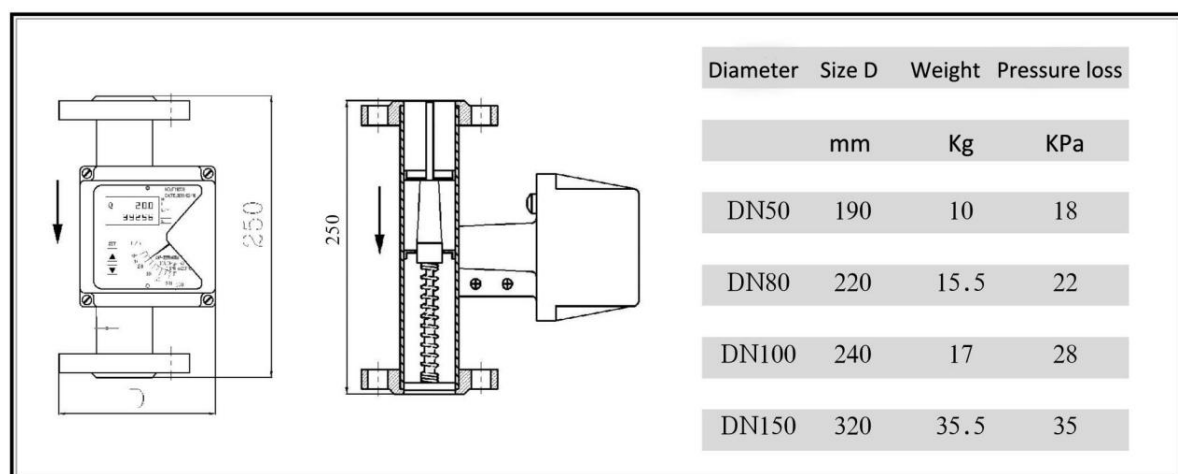
STANDARD TYPE DIMENSION AND WEIGHT



CLAMP TYPE DIMENSION AND WEIGHT



PTFE TYPE DIMENSION AND WEIGHT

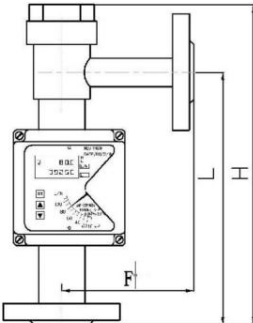
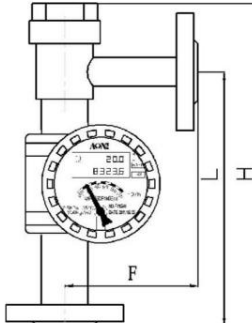


CLAMP TYPE DIMENSION, WEIGHT AND PRESSURE LOSS

Diameter	Size E	Size L	Size H	Weight	Pressure loss
	mm	mm	mm	Kg	KPa
DN50	120	250	650	13	36
DN80	150	300	800	34	45
DN100	150	300	800	49	58
DN150	180	350	850	66	63

(DN50~DN150)

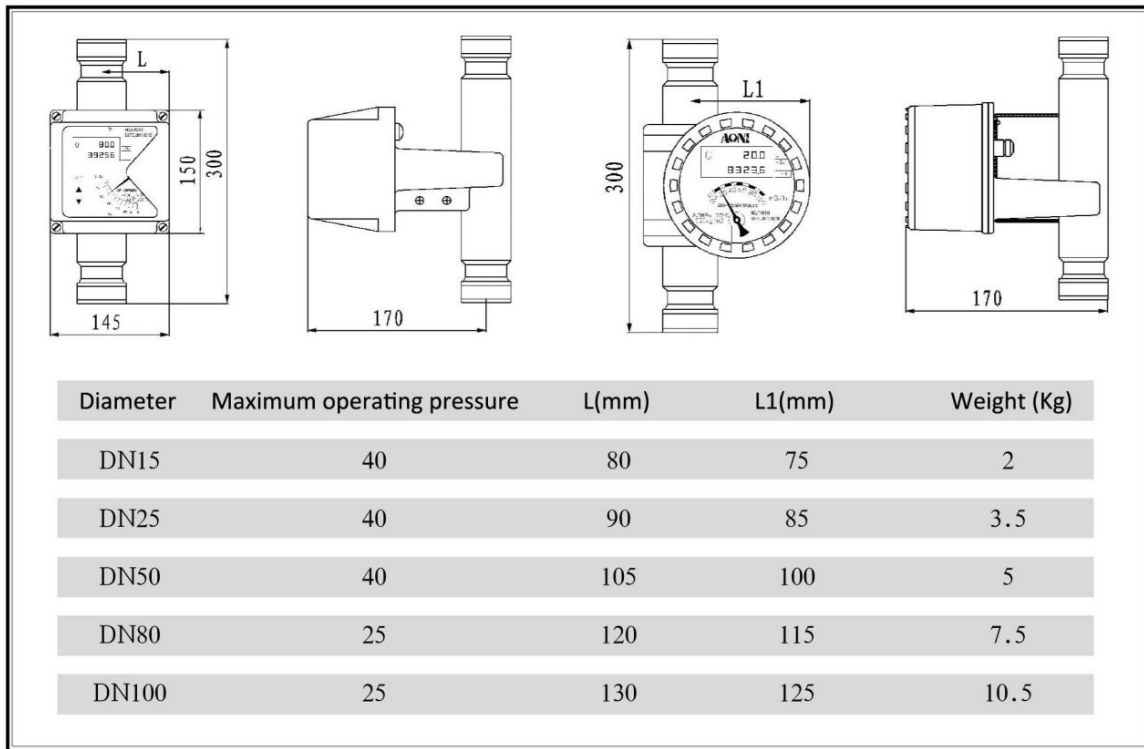
SIDE-IN SIDE-OUT TYPE DIMENSION, WEIGHT AND PRESSURE LOSS

		Diameter	DN15	DN25
		F (mm)	120	120
		L (mm)	250	250
		H (mm)	350	350
		Weight (Kg)	4.5	7
		Pressure loss(KPa)	18	22
(DN15~DN25)				

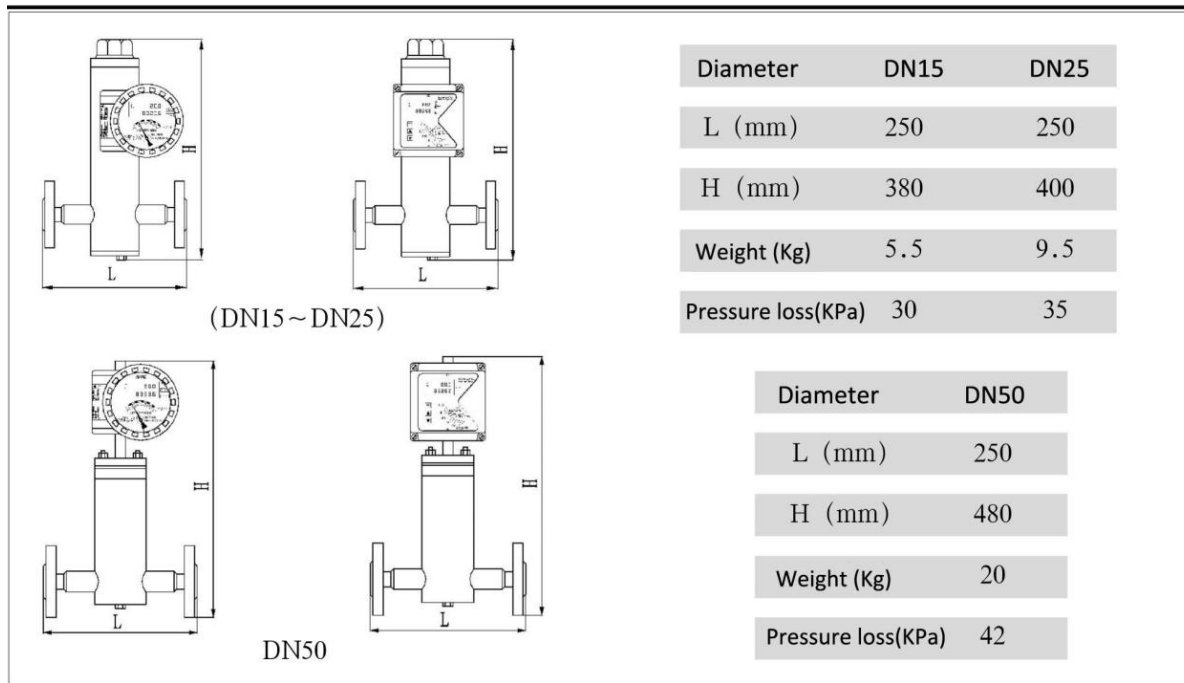
(DN50~DN150)

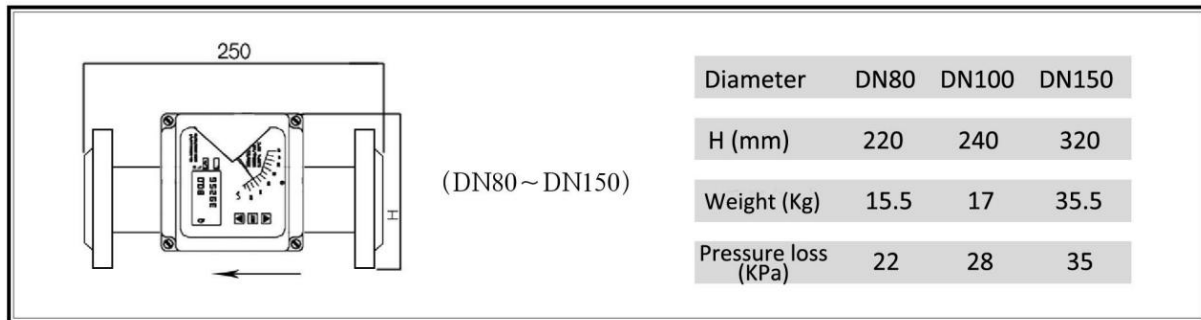
Diameter	Size F	Size L	Size H	Weight	Pressure loss
	mm	mm	mm	Kg	KPa
DN50	120	250	600	13	28
DN80	150	250	700	34	35
DN100	150	250	700	49	45
DN150	180	300	760	66	58

BOTTOM-IN SIDE-OUT TYPE DIMENSION, WEIGHT AND PRESSURE LOSS



THREAD TYPE DIMENSION AND WEIGHT





HORIZONTAL TYPE DIMENSION, WEIGHT AND PRESSURE LOSS

ORDER FORMAT

FMR100 - S1F15W100P40T08S4X

Structure	Model
Vertical installation	S1
Horizontal installation left	S2L
Horizontal installation right	S2R
Side in Side out	S3
Side in side out	S4
Bottom in side out	S5

Connection	Code
Flange	F
Thread	T
Clamp	C

Nominal diameter	Code
DN15mm	15
...	...
DN200mm	1600

Medium	Code
Water(H ₂ O)	W
Air	A

Code	Advanced option
C	4~20mA output
P	Pulse
A	Alarm
EX	Explosion proof

Code	Material
S4	SS304
3L	SS316L
F4	PTFE
Ti	Titanium

Code	Medium temperature
T08	0~80°C
T12	0~120°C
T14	0~140°C
T30	0~300°C
T40	0~400°C

Code	Nominal pressure
P40	4.0MPa
P16	1.6MPa

Flow range	Model
Refer to flow range table	