

METAL TUBE FLOW METER MF200

Technical Data

MF200 for low flow of gas, liquid and steam

Material: aluminum alloy painted for case; body in stainless steel.

Indication: via magnetic coupling (no seals)

Scales: calibrated in l/h, m³/h, kg/h, %

Flow rate: water-0.4 l/h up to 4000 l/h
air-21 NL/h up to 120,000 NL/h

Connection types: BSP, NPT, flange type on request

Working Temperature:

Combine with electronic parts: -40°C~+150°C

Combine without electronic parts: -40°C~+180°C

Working Pressure: standard 100 kg/cm²; other options upon request

Connection size: 1/4" ~ 1 1/2"

Protection Class: IP66

Accuracy: ± 2% F.S (± 1.6% F.S option)

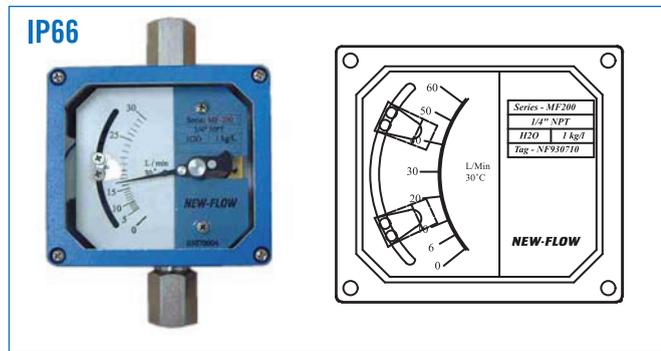


PATENT NO.
M275405



Alarm Option

MF200-C (Inductive Switch)



- **Adjustable inductive alarm switch**
Hysteresis: ±2% F.S (Dead Band)
Inductive sensors slotted type : 3.5mm slot switch
DC. voltage 2 wire's to DIN19234(NAMUR) for use in hazardous areas.
— **Power supply:** 8 Vdc(Ri.approx. 1kΩ)
— **Current consumption:** active face uncovered 3mA
active face covered 1mA
— **Ambient temp:** -25°C ~ +100°C

Isolated barriers output relay for inductive sensor :

- Rail mounting
- Control circuit EEx ia IIC
- EMC acc to NAMUR NE21
- Contact loading 250 VAC 2A SPDT 40 VDC 2A

1 adjustable alarm

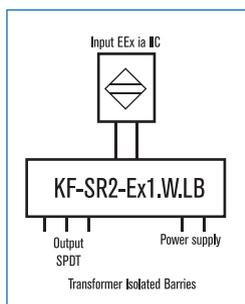
Contact setting point should be within 10% to 100% of F.S.

- For 24VDC : KFD2-SR2-Ex1.W
- 115VAC : KFA5-SR2-Ex1.W
- 230VAC : KFA6-SR2-Ex1.W

2 adjustable alarm

The second setting point should be a gap 35% from first setting point.

- For 24VDC : KFD2-SR2-Ex2.W
- 115VAC : KFA5-SR2-Ex2.W
- 230VAC : KFA6-SR2-Ex2.W



MF200-R (Reed Switch)



- **Adjustable reed alarm switch**
Alarm Switch: one or two setting points, form A bistable type (N.O. type)
Hysteresis: ±15% F.S (Dead Band)
Switch Rating: AC 125V 0.5A / DC 100V 10W / Max. DC 250V < 40mA

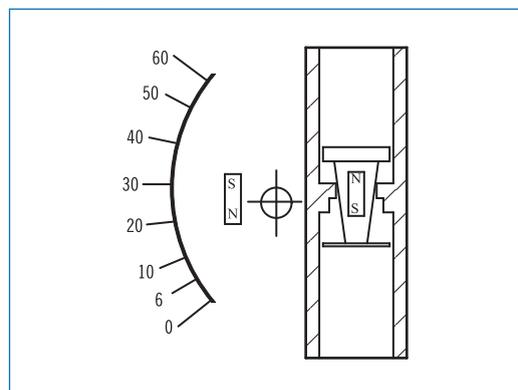
1 adjustable alarm

Contact setting point should be within 20% to 100% of F.S.

2 adjustable alarm

The second setting point should be a gap 20% from first setting point.

Principle



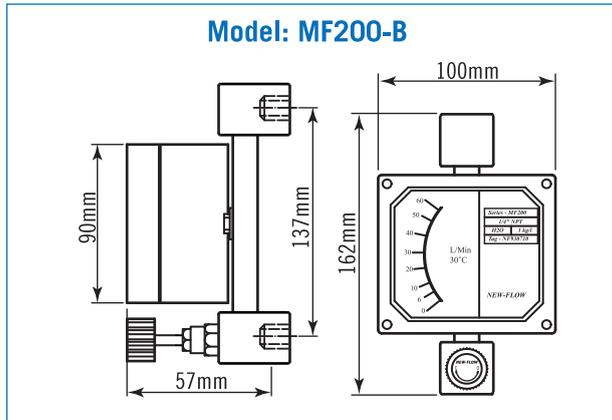
Dimensional Drawings

MF200-B Metal Tube Flow Meter

Basic Model:
Rear connection + needle valve

NOTE.

Max. range: 1000 L/H for Liquid; 30000 NL/H for Air
Connection size: 1/4" ~ 3/4" BSP/NPT available

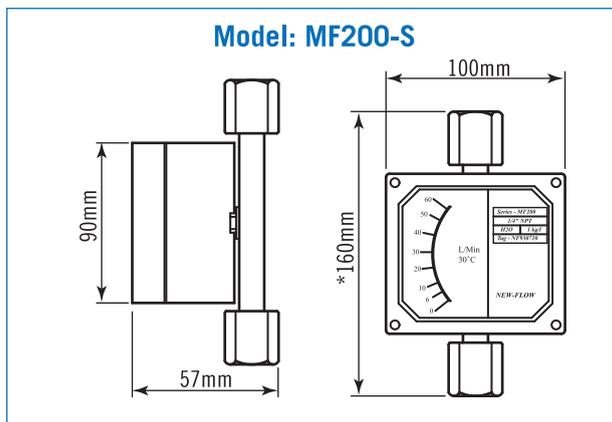


MF200-S Metal Tube Flow Meter

Basic Model:
Thread connection

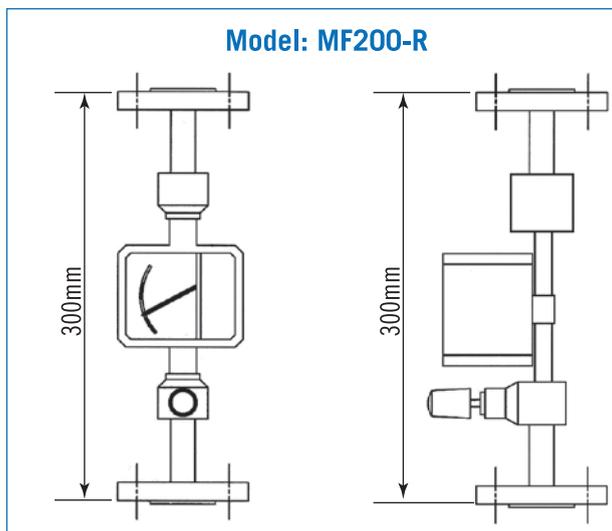
NOTE.

*1 1/2" BSP, C to C = 170mm



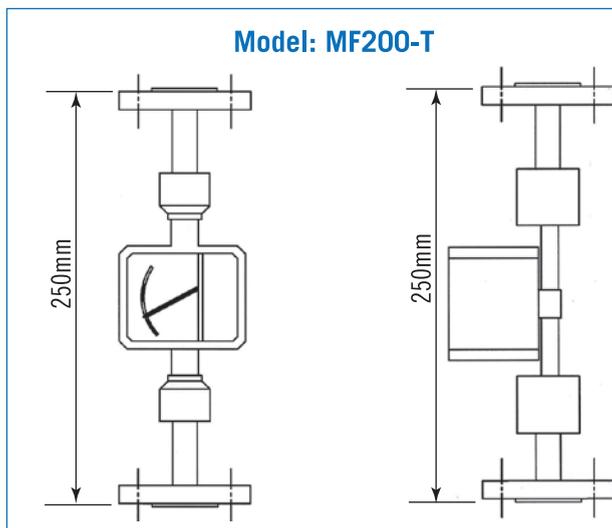
MF200-R Metal Tube Flow Meter

Flange-needle Model:
flange connection + needle valve



MF200-T Metal Tube Flow Meter

Flange Model:
flange connection



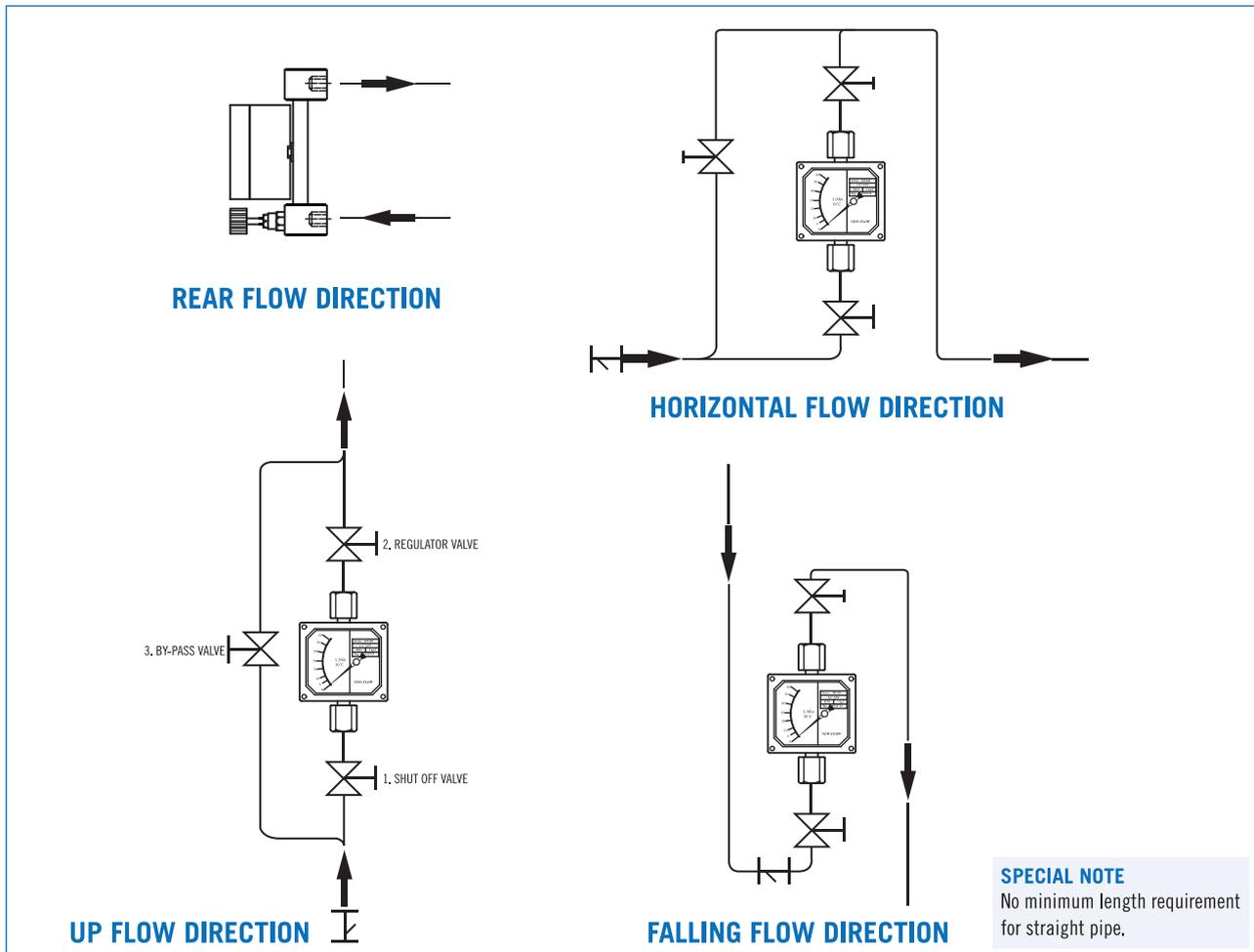
Standard Scales

| Tube | L/H 20°C Water | NL/H Air 0°C 1.013 bar | ΔPmm Water | BSP/NPT | Accuracy (NOTE 1.) |
|--------|----------------|------------------------|------------|---------|--------------------|
| MF2001 | 0.4 ~ 4 | 21~210 | 340 | 1/4" | ±6% F.S |
| MF2002 | 0.6 ~ 6 | 33~330 | 340 | 1/4" | ±3% F.S |
| MF2003 | 1 ~ 10 | 48~480 | 340 | 1/4" | ±2% F.S |
| MF2004 | 1.5 ~ 15 | 60~600 | 340 | 1/4" | ±2% F.S |
| MF2005 | 2 ~ 20 | 72~720 | 340 | 1/4" | ±2% F.S |
| MF2006 | 3 ~ 30 | 90~900 | 340 | 1/4" | ±2% F.S |
| MF2007 | 5 ~ 50 | 120~1200 | 340 | 1/4" | ±2% F.S |
| MF2008 | 6 ~ 60 | 180~1800 | 340 | 1/4" | ±2% F.S |
| MF2009 | 10 ~ 100 | 300~3000 | 340 | 1/4" | ±2% F.S |
| MF2010 | 15 ~ 150 | 500~5000 | 340 | 1/2" | ±2% F.S |
| MF2011 | 25 ~ 250 | 750~7500 | 340 | 1/2" | ±2% F.S |
| MF2012 | 45 ~ 450 | 1500~15000 | 340 | 1/2" | ±2% F.S |
| MF2013 | 75 ~ 750 | 2000~20000 | 340 | 3/4" | ±2% F.S |
| MF2014 | 100 ~ 1000 | 3000~30000 | 340 | 1" | ±2% F.S |
| MF2015 | 150~1500 | 5000~50000 | 450 | 1-1/2" | ±2% F.S |
| MF2016 | 200~2000 | 7500~75000 | 450 | 1-1/2" | ±2% F.S |
| MF2017 | 300~3000 | 9000~90000 | 450 | 1-1/2" | ±2% F.S |
| MF2018 | 350~3500 | 11000~110000 | 450 | 1-1/2" | ±2% F.S |
| MF2019 | 400~4000 | 12000~120000 | 450 | 1-1/2" | ±2% F.S |

NOTE.

- The accuracy ±6% F.S for tube MF2001; The accuracy ±3% F.S for tube MF2002.
The accuracy ±2% F.S for tube MF2003~MF2019 and option ±1.6% F.S on request.
- Performance Technical Data are effective with date of issue and are subject to change without prior notice.

Installation



Ordering Information

| MF200 | Code | Connection | Code | Connection size |
|-------|-------------|---|-------------|--|
| | S | Thread connection | 4B | 1/4" BSP (Female) |
| | R | Connection with needle valve | 4N | 1/4" NPT (Female) |
| | T | Flange connection | 2B | 1/2" BSP (Female) |
| | B | Rear connection with needle valve | 2N | 1/2" NPT (Female) |
| | Code | Type | Code | Connection size |
| | G | Indicating only | 6B | 3/4" BSP (Female) |
| | GS | Indicating + switch | 6N | 3/4" NPT (Female) |
| | Code | Alarm | Code | Connection size |
| | 0 | Without alarm switch | 1B | 1" BSP (Female) |
| | C1 | One inductive alarm switch | 1N | 1" NPT (Female) |
| | C2 | Two inductive alarm switches | 15B | 1 1/2" BSP (Female) |
| | R1 | One reed switch | 15N | 1 1/2" NPT (Female) |
| | R2 | Two reed switches | 20B | 2" BSP (Female) |
| | Code | Body material | Code | Connection size |
| | A | SS316 | 20N | 2" NPT (Female) |
| | Code | Float & Wetted part material | 2F | 1/2" Flange |
| | A | SS316 | 6F | 3/4" Flange |
| | Code | Connection rating | 10F | 1" Flange |
| | 0 | Thread connection | 15F | 1 1/2" Flange |
| | 5 | JIS 5K | Code | Protection Class |
| | 10 | JIS 10K | IP | IP66 |
| | 20 | JIS 20K | Code | Fluid |
| | 15 | ANSI 150# | G | Gas |
| | 30 | ANSI 300# | O | Oil |
| | 40 | ANSI 400# | L | Liquid |
| | 60 | ANSI 600# | S | Steam |
| | T | Other: _____ | Code | Range |
| | | | S | Standard range |
| | | | | Please directly fill out the flow range in the order code. |

MF200 + Complete ordering code

- NOTE:**
1. Custom-made flow range and flange size upon request.
 2. Please fill in the ordering information and service condition,

Special instruction, if any:

Service Condition:

Fluid name: _____

Sp. Gr. (density): _____

Viscosity: _____

Press.: _____

Temp.: _____

Full scale: _____



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