METAL TUBE ROTARY FLOWMETER CMLZ SERIES

The series adopts variable area measuring principle to measure liquid and gas of multiple directions. It is widely applied in industries such as petro,chemical,poer supply,food,pharmcy and water treatment,etc.

INDICATOR INDTODUCTION

M1 Indicator

1. Introduced a pair of coupled magnet to realize flow indicating and transmission of electric signal.
2. Introduced the newest ESK signal transmitter with 4~20mA output.
3. Compatible with HART agreement.
4. Equipped with upper and lower limit alarming switch.
5. Intrinsic safety structure design with ExibIICT5 and EXiaIICT1-T4 explosion-proof mark.

M2 Indicator

1. Through cam board transmitting non-linear magnetic float to be linear current value and indicated by indicator needle on the dail.
2. Equipped with 4~20mA output angular rotation transmitter of KSW1.

M6 Indicator

1. Adopts magnetic snesor to response drift of magnetic float. Output 4~20mA amd digital display without magnetic lag.
2. Digital display instantaneous flow and accumulative flow.
3. Compatible with HART agreement.
4. Explosion supression standard with ExdIICT4-T6.

Ordering Code

CMLZ □ - □ □ □ □ □ □ □ □

Z= standard model
D=electric remote transmission model

DN
15 25
50 80
100
125
150

Medium Direction	
1	Bottom-in, top-out
2	Left-in,right-out
3	Right-in,left-out
4.5	Side-in,side-out
6	Bottom-in,side-out

Medium Material C	
RR0	0Cr18NiMo2Ti
RR1	1Cr18Ni9Ti
RL	316L
RP	PTFE
Ti	Titanium

Auxiliary Structure	
F	non-corrosive type
T	jacket type
A	damping type
G	high=temperature type
W	sterile connection type

M1=ESK indicator
M2=linear indicator
M6=Round explosion-suppression indicator

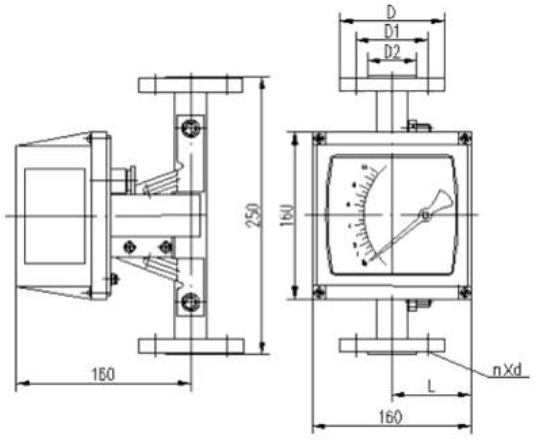
K1	upper limit alarming output
K2	lower limit alarming output
K12	upper and lower limit alarming output
JsB	battery power supply,LCD display instantaneous flow and accumulative flow.
JsD	24V DC power supply,LCD display instantaneous flow and accumulative flow.
JsE	24V DC power supply,LCD display instantaneous flow and accumulative flow,4~20mA/RS485 output nstantaneous flow.
JsH	24V DC power supply,LCD display instantaneous flow and accumulative flow,4~20mA output nstantaneous flow. With HART communication.

I=ia / ib
D=explosion-supression

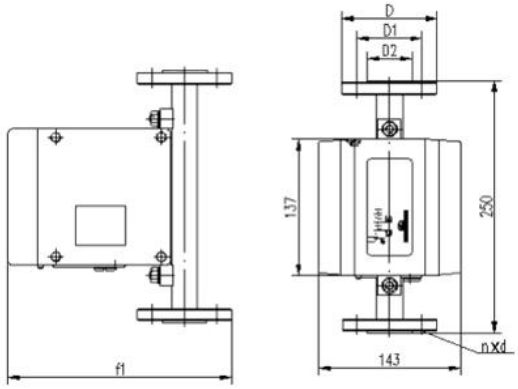
Main Parameter

Measuring range	Water(20℃):.5~180,000L/h Air(20℃,101325 Pa):0.07~1800m³/h
Range ratio	DN15~100: 10:1 DN125~150: 5:1
Accuracy	2.5 / 1.5
Max.working pressure	DN15~50: 4.0 MPa DN80~150: 1.6 MPa
Jacket pressure	1.6MPa
Mdieum temperature	-80~+200℃ 0~80℃(non-corrosive model)
Environment temperature	-25~+120℃ -20~+70℃(electric remote transmission model) -20~+60℃(LCD display model)
Medium viscosity	DN15≤5mPa.s DN(25~150)≤250mPa.s
Connection type	Flange, can OEM according to the specific requirement
Protection	IP65
Electric remote transmission	24(1±10%)VDC, 4~20mADC or 2-wire(HART for option),RS485
Linear	1%
Load resistance	≤500Ω(24VDC)
Temperature effection	<±0.05%F.S/℃
Power consumption	<1W
Cable	RVVP3×28/0.15
Connector thread	M20×1.5
Limit alarm	Voltage:24(1±10%)VDC power consumption:<1W Operation temperature:-25~+65℃ max.load current: 50mA
Intrinsic explosion-proof	EXibIICT5 / ExiaIICT1-T4
Explossion supppression	ExdIICT4-T6

Mounting & Dimension



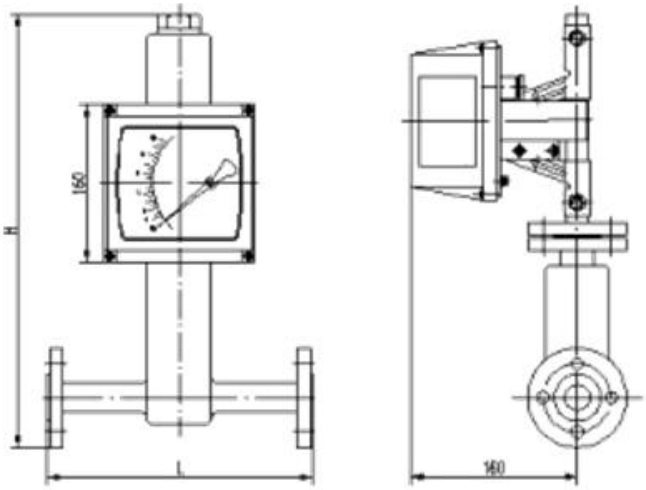
Bottom-in,top-out with M1 Indicator



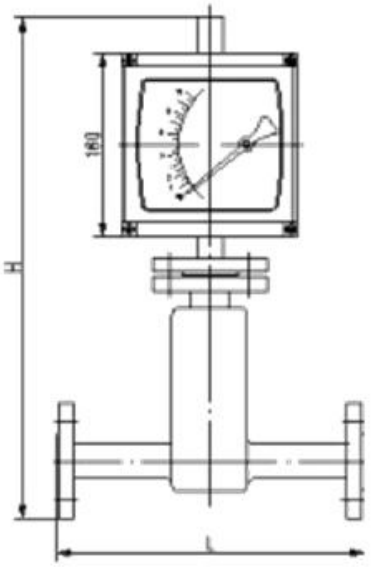
Bottom-in,top-out with M2 Indicator

DN mm	ØD mm	ØD1 mm	ØD2 mm	n×Ød mm	L mm	f1 mm	H mm
15	95	65	46	4×Ø14	80	228	250
25	115	85	65	4×Ø14	89	247	250
50	165	125	99	4×Ø18	104	287	250
80	200	160	132	4×Ø18	120	318	250
100	220	180	156	4×Ø18	130	338	250
125	250	210	184	4×Ø18	137	362	250
150	285	240	211	4×Ø22	157	400	350

DN mm	H mm	L mm
15	370	250
25	390	250
50	400	300
80	580	400
100	600	400

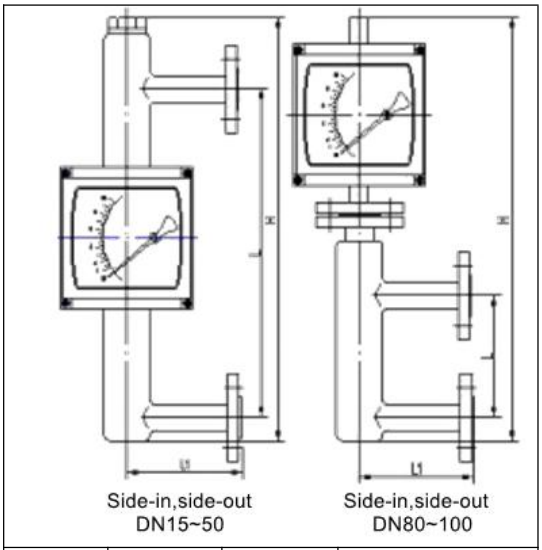


DN15~50 Horizontal Mounting

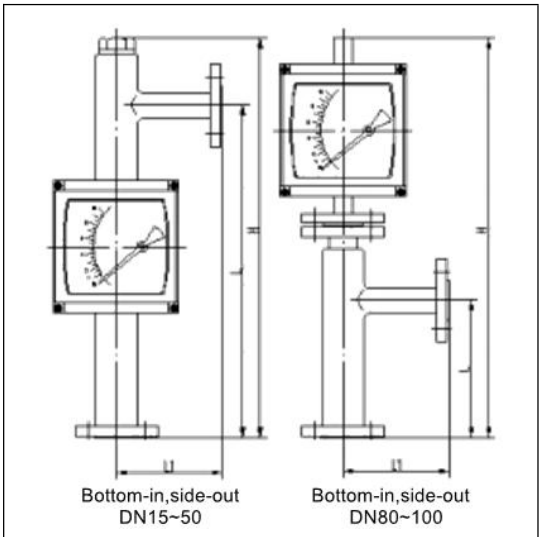


DN80~100 Horizontal Mounting

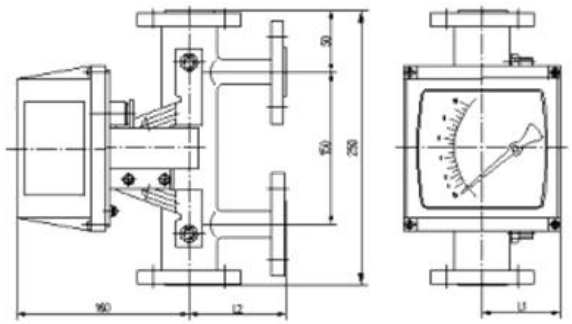
DN mm	H mm	L mm	L1 mm
15	350	250	120
25	350	250	120
50	600	250	120
80	700	250	50
100	700	250	150



DN mm	H mm	L mm	L1 mm
15	500	250	120
25	500	250	120
50	650	250	120
80	800	300	150
100	800	300	150

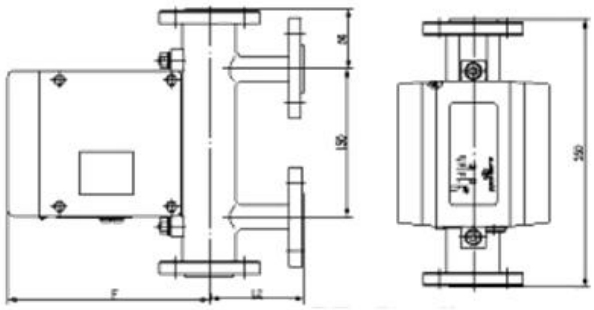


DN mm	H mm	L mm	L1 mm
15	500	250	120
25	500	250	120
50	650	250	120
80	800	300	150
100	800	300	150



Jacket Type with M1 Indicator

DN (mm)	L1 (mm)	L2 (mm)
15	86	100
25	95	100
50	109.5	120
80	125.5	140
100	135	150



Jacket Type with M2 Indicator

DN (mm)	F (mm)	L2 (mm)
15	177	100
25	189	100
50	204	120
80	220	140
100	231	150

Measuring Range

1. Hole Board Type Metal Tube Float Flow Meter

Non-corrosive DN (mm)	Standard DN(mm)	Flow Range		Max.Pressure Loss	
		Water (20℃, L/h)	Air (20℃,101325MPa,m^3/h)	Water (kPa)	Air (kPa)
15	15	2.5~25	0.07~0.7	6.5	7.1
		4~40	0.11~1.1	6.5	7.2
		6~60	0.18~1.8	6.6	7.3
		10~100	0.28~2.8	6.6	7.5
		16~160	0.40~4.0	6.8	8.0
		25~250	0.70~7.0	7.2	10.8
		40~400	1.00~10	8.6	10
25		60~600	1.6~16	11.1	14
	25	100~1000	3~30	7	7.7
		160~1600	4.5~45	8	8.8
		250~2500	7~70	10.8	12
50		400~4000	11~110	15.8	19
	50	600~6000	18~180	8.1	8.6
		1000~10000	25~250	11	10.4
80		1600~16000	40~400	17	15.5
	80	2500~25000	60~600	8.1	12.9
100		4000~40000	100~1000	9.5	18.5
	100	6000~60000	180~1800	10	19.2
	125	20000~100000		25.4	
	150	32000~160000		32.0	
		36000~180000		40.0	

2. Cone Metal Tube Float Flow Meter

DN (mm)	Flow Range		Max.Pressure Loss	
	Water (20℃, L/h)	Air (20℃,101325MPa,m^3/h)	Water (kPa)	Air (kPa)
15	2.5~25	0.07~0.7	2.6	2.1
	4~40	0.1~1	2.6	2.1
	6~60	0.15~1.5	2.6	2.1
	10~100	0.22~2.2	2.6	2.1
	16~160	0.36~3.6	2.6	2.1
	25~250	0.55~5.5	2.6	2.1
	40~400	1.00~10	2.8	2.2
	60~600	1.4~14	3.3	2.2
25	60~600	1.4~14	3.3	2.4
	100~1000	2.2~22	3.3	2.4
	160~1600	3.5~35	3.4	2.5
	250~2500	5~50	3.8	2.6
	400~4000	8~80	4.5	3.0
50	600~6000	8~80	4.5	1.3
	1000~10000	11~110	4.7	1.3

	1600~16000	15~150	5.5	1.3
		18~180		1.4
		30~300		1.8
80	2500~25000	50~500	4.6	1.8
	4000~40000	75~750	6.5	1.8
100	6000~60000		9.0	

Main Parameter of Electric Remote Transmission

Power supply: 24(1±10%)VDC

Output: 4~20mADC, -wire

Linear: 1%

Load Resistance: ≤500Ω(24VDC)

Temperature Effect: <±0.05%F.S/℃

Consumption: <1W

Float Flow Meter Board Card with HART Function

The board card is a kind of brand-new and digital flow transmitter. Euipped with HART function to orgnize instruments on-site and LCD display data like instaneous flow, integrated flow and output current, etc.

1. Commission software to realize remote controllling through HART or PC.
2. Combine 2-wire,4~20mA output with HART agreement.
3. Powe supply of HART transmitter: 12~30VDC.
4. Damping: adjustable 0~32s.
5. Operation environment temperature: -20~+70℃.

Limit Switch Alarm Device

The alarm device is consist of flow meter and proximity switch. Realize alarming function through signal sensing by metal piece which is linked with needle and relative drift of proximity switch.

Power supply: 24(1±10%)VDC

Consumption: <1W

Operation Temperature: -25~+70℃

Max.load current: 50mA