

Slurry Electromagnetic Flow Meter



Description

Noise is common in process fluids containing solid particulates, and it can influence the measurement, our slurry magnetic flow meter adopts square wave excitation and 25Hz/30Hz high excitation, which can eliminate interference between the sharp wave noise generated by solid particles, ensures accurate measurement of viscous medium.



Industries

Cement slurry, sludge, gypsum slurry, paper pulp, juice, syrup, ore slurry, coal slurry, etc.



Oil Field



Ore Slurry



Paper Pulp



Gypsum Slurry



Cement Slurry



Features

01

Special design grouting converter: Special converter can eliminate interference between the sharp wave noise generated by solid particles.

02

Medium concentration: the concentration of slurry can reach 55%, and the variation range is usually less than 5%.

03

Excitation method: square wave excitation (4 kinds of square waves) improves flow measurement stability.

04

Excitation Frequency: 25 Hz/30 Hz excitation frequency for choose. High excitation frequency has high anti-interference ability, ensures accurate measurement of viscous medium.

05

LCD backlight display: instantaneous flow, total flow, flow velocity, percentage flow, etc.



Technical Data

Size	DN3-DN3000 (1/8"-120")	
Accuracy	$\pm 0.5\%$ of reading at flow velocity $\geq 0.5\text{m/s}$	
Velocity	0.1~15 m/s	
Repeatability	$\leq 0.17\%$	
Excitation current	125 mA, 187 mA, 250 mA	
Excitation Frequency	25 Hz/30 Hz	
Structure	Compact / remote, cable length 10m standard, 100m max	
Conductivity	$> 5 \mu\text{S/cm}$, demineralized water $> 20 \mu\text{S/cm}$	
Protection Grade	Transmitter: IP65 standard, IP67 optional	
	Sensor: IP65 standard, IP68 (submersible, only available for remote type)	
Electrode	SS316L, Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinum-iridium	
Power Supply	85~250 VAC (50/60 Hz), 20~36 VDC	
Power Consumption	$< 20\text{W}$	
Signal Output	Analog	4~20mA (load resistor 0~750 Ω)
	Frequency	Forward & reverse flow output with a frequency range of 1~5000Hz
	Alarm	Two isolated open collector transistor (OCT) outputs for alarm signals
Communication	RS485 MODBUS standard, HART, GPRS, PROFIBUS optional	
Display	LCD Display, 128X128mm, three lines, 4 buttons	
Ambient Temperature	$-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$	
Fluid Temperature	Compact: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$, Remote: $-20^{\circ}\text{C} \sim 120^{\circ}\text{C}$	
Liner Material	PTFE ($-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$, DN15-DN1600)	
	FEP ($-20^{\circ}\text{C} \sim 120^{\circ}\text{C}$, DN15-DN1800)	
	PFA ($-20^{\circ}\text{C} \sim 160^{\circ}\text{C}$, DN15-DN800)	
	Polyurethane ($-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$, DN40-DN1600)	
	Neoprene ($-10^{\circ}\text{C} \sim 80^{\circ}\text{C}$, DN40-DN3000)	
	Hard Rubber ($-10^{\circ}\text{C} \sim 80^{\circ}\text{C}$, DN 40-DN3000)	
	Ceramic ($-20^{\circ}\text{C} \sim 180^{\circ}\text{C}$, DN15-DN200)	
Sensor Material	Measuring tube: SS304	
	Flange & housing: carbon steel (standard), SS304 / SS316 optional	
Transmitter Material	Aluminium alloy with epoxy painting	
Nominal Pressure	Flange	PN10 / PN16 / PN25 / PN40 DIN 10K / 20K / 30 K JIS 150# / 300# / 600# ANSI
	Insertion, tri-clamp wafer, thread	PN16
Display	Instantaneous flow, total flow, flow velocity	
Function	High and low alarm, empty pipe alarm, exciting alarm, self-diagnosis	
Totalizer	Three built-in totalizers: forward flow, reverse flow and net flow	
Display Unit	L/s, L/m, L/h, m ³ /s, m ³ /m, m ³ /h, UKG, USG, gal/s, gal/m, gal/h, kg/s, kg/m, kg/h, t/s, t/m, t/h	
Language	English, Chinese	

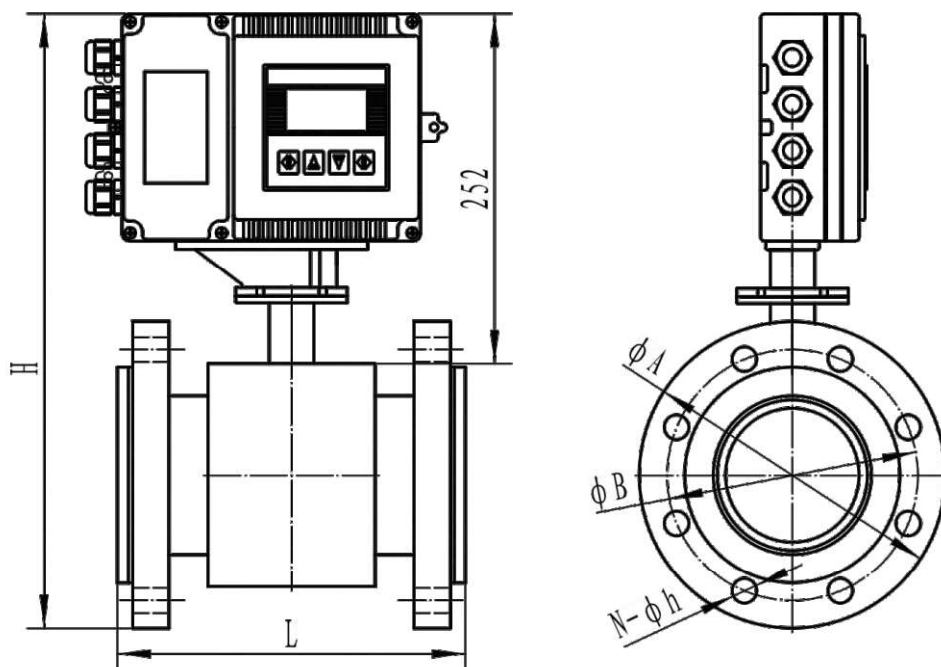


Process Connection





Dimension



Diameter		Flange	Pressure	H(mm)	L(mm)	φA(mm)	φB(mm)	φh(mm)	N(mm)
mm	Inch								
DN15	1/2"	ANSI	150#	343	200	88.9	60.45	4	15.7
DN20	3/4"	ANSI	150#	348	200	98.6	69.85	4	15.7
DN25	1"	ANSI	150#	353	200	108	79.25	4	15.7
DN32	1¼"	ANSI	150#	358	200	117.3	88.9	4	15.7
DN40	1½"	ANSI	150#	368	200	127	98.6	4	15.7
DN50	2"	ANSI	150#	388	200	152.4	120.7	4	19.1
DN65	2½"	ANSI	150#	408	200	177.8	139.7	4	19.1
DN80	3"	ANSI	150#	423	200	190.5	152.4	4	19.1
DN100	4"	ANSI	150#	451	250	228.6	190.5	8	19.1
DN125	5"	ANSI	150#	474	250	254	215.9	8	22.4
DN150	6"	ANSI	150#	502	300	279.4	241.3	8	22.4
DN200	8"	ANSI	150#	563	350	342.9	298.5	8	22.4
DN250	10"	ANSI	150#	638	450	406.4	362	12	25.4
DN300	12"	ANSI	150#	701	500	482.6	431.8	12	25.4
DN350	14"	ANSI	150#	753	550	533.4	476.3	12	28.4
DN400	16"	ANSI	150#	809	600	596.9	539.8	16	28.4
DN450	18"	ANSI	150#	855	600	635	577.9	16	31.75
DN500	20"	ANSI	150#	912	600	698.5	635	20	31.75
DN600	24"	ANSI	150#	1024	600	812.8	749.3	20	35.1



Selection Table

VMF-J		X	X	X	X	X	X	X	X	X	X
Caliber size	DN15-DN3000 (1/2"-120")										
Structure	Compact		C								
	Remote		R								
	Compact with explosion proof		CEP								
	Remote with explosion proof		REP								
Accuracy	±0.5%			1							
	±0.2%			2							
	Others			3							
Lining Material	PTFE			1							
	FEP			2							
	PFA			3							
	Neoprene			4							
	Polyurethane			5							
	Hard Rubber			6							
	Ceramic			7							
Electrode Material	SS316L			1							
	Hastelloy B			2							
	Hastelloy C			3							
	Titanium			4							
	Tantalum			5							
	Platinum-iridium			6							
	Stainless steel covered with tungsten carbide			7							
Sensor Material	Carbon Steel						1				
	SS304						2				
	SS316						3				
Power Supply	20~36 VDC							G			
	85~265 VAC							E			
	9~36 VDC solar power							SD			
Signal Output /Communication	4~20 mA + Pulse + RS485 MODBUS								A		
	4~20 mA + HART								B		
	4~20 mA + Profitbus								C		
	GPRS								D		
Process Connection	Flange	DIN D10: DIN PN10, D16: DIN PN16, D25: DIN PN25, D40: DIN PN40								D**	
		ANSI A15: ANSI 150#, A30: ANSI 300#, A60:ANSI 600#								A**	
		JIS J10: JIS 10K, J20: JIS 20K, J30: JIS 30K								J**	
		Other								O	
	Insertion	Insertion with G2" thread ball valve								IB	
		Insertion with DN50 flange ball valve								IF	
	Tri-clamp									TC	
	Wafer									W	
	Thread									T	
Protection Grade	IP65 Transmitter + IP65 sensor										1
	IP65 Transmitter + IP68 sensor (remote)										2