

ELECTROMAGNETIC FLOW METER



DHR

Electromagnetic FlowMeterF

DN3-DN3000mm / Flange Connection

Description

Electromagnetic flowmeter consists of sensors and converters in two parts. The product is based on Faraday's law of electromagnetic induction, used to measure the conductance greater than $5 \mu\text{S} / \text{cm}$ volume of conductive liquid flow, In addition to measuring the general volume of conductive liquid flow, but also can be used to measure strong acid, alkali and other strong corrosive liquids and mud, pulp, pulp and other liquid-solid two-phase suspension of uniform volume flow

Features

- No moving parts, no pressure loss.
- self-diagnosis, empty pipe alarm, exciting alarm. high and low flow alarm.
- Infrared telecontrol keyboard.
- Recording time when power off, record power broken time automatically.
- Dual frequency excitation and stable zero point.
- Precision coil winding technology, makes magnetic field more uniform.
- Built-in reference electrodes, no need to connect ground ring.
- Measure forward and reverse direction flows.
- High accuracy: $\pm 0.5\%$ of reading, $\pm 0.2\%$ optional, velocity $> 0.3 \text{ m/s}$.

Specifications

• Size.	DN3-DN3000mm (1/8" ~ 120")	• Velocity.	0.1 m/s ~ 15 m/s
• Accuracy.	$\pm 0.5\%$ of reading, $\pm 0.2\%$ optional, velocity $> 0.3 \text{ m/s}$	• Nominal Pressure.	4.0 MPa (DN3-DN150) 1.6 MPa (DN200-DN600) 1.0 MPa (DN700-DN1000) 0.6 MPa (DN1200-DN3000)
• Conductivity.	Normal liquid $> 5 \mu\text{S/cm}$, DI water $> 20 \mu\text{S/cm}$	• Frequency Output.	0.1 m/s ~ 15 m/s
• Protection Grade.	IP65, IP68 optional	• Language	English, Chinese Other languages are available
• Electrode.	SS316L, Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinum, Iridium	• Flange Standar.	EN1092-1 PN10, PN16, PN25, PN40 ANSI BS16.5 Class 150, 300, 600 JIS2220 10K, 20K, 40 AS2129 Table D, Table E AS4087 PN16, PN21, PN35
• Power Supply.	AC85 ~ 250V, DC20V ~ 36V	• Exciting Current.	125mA, 187mA, 250mA, 500mA
• Power Consumption.	$< 20\text{W}$	• Exciting Frequency.	3.12Hz, 4.16Hz, 6.25Hz 12.5Hz, 25Hz, 30Hz
• Signal Output.	4 ~ 20 mA, pulse	• Body Materia.	Carbon Steel (standard) Stainless Steel 304 (optional) Stainless Steel 316 (optional)
• Communication.	RS485 Modbus, Hart, Profibus	• Certificates.	CE-EMC, CE, LVD, Atex
• Display.	LC Display, 128X128mm Three lines, 4 buttons		
• Ambient Temperature.	-20 ~ 60		
• Relative Humidity.	5% ~ 95%		
• Liner Material.	PTFE (-20 ~ 120 , DN15-DN1600) FEP (-20 ~ 120 , DN25-DN1800) PFA (-20 ~ 120 , DN3-DN800) PU (-10 ~ 60 , DN40-DN1600) CR (-10 ~ 80 , DN40-DN3000) FLS (-10 ~ 200 , DN40-DN3000)		

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Selection Table

Caliber	DN3-DN3000	
Structure	Compact	C
	Remote	R
Electrodes	SS316	S
	Hastelloy B	B
	Hastelloy C	C
	Titanium	T
	Tantalum	A
	Platinum-iridium	P
Liner	PTFE	T
	PFA	P
	Neoprene	N
	Hard Rubber	H
	Polyurethane	P
	Ceramic	C
Body Material	Carbon Steel	CS
	Ss304	S4
	Ss316	S6
Accuracy	±0.5% of reading	A5
	±0.2% of reading	A2
Signal Output	4~20 mA	A
	Pulse	P
Communication	Rs485 Modbus RTU	R4
	HART	H
	Profibus	P
	Rs232	R2
Flange	D10: DIN PN10, D16: DIN Pn16, D25: DIN PN25, D40: DIN Pn40	D
	A15: ANSI 150#, A30: ANSI 300#	A
	J10: JIS 10K, J20: JIS 20K, J30: JIS 30K	J
	AD: AS2129 Table D, AE: AS2129 Table E	T
Protection Grade	P65 Converter + IP65 Transmitter	5
	Ip68 Converter + IP65 Transmitter	8
Protection Grade	8 ~ 36 Vdc	DC
	85 ~ 265 Vac	AC
	3.6 V lithium battery	BP



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Size (mm)	Flow Range & Velocity Table							
	0.1m/s	0.2m/s	0.5m/s	1m/s	4m/s	10m/s	12m/s	15m/s
3	0.003	0.005	0.013	0.025	0.102	0.254	0.305	0.382
6	0.01	0.020	0.051	0.102	0.407	1.017	1.221	1.526
10	0.028	0.057	0.141	0.283	1.130	2.826	3.391	4.239
15	0.064	0.127	0.318	0.636	2.543	6.359	7.630	9.539
20	0.113	0.226	0.565	1.130	4.522	11.304	13.56	16.956
25	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
32	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
40	0.452	0.904	2.261	4.522	18.086	72.35	180.86	217.0
50	0.707	1.413	3.533	7.065	28.260	70.650	84.78	105.98
65	1.19	2.39	5.97	11.94	47.76	119.40	143.3	179.10
80	1.81	3.62	9.04	18.09	72.35	180.86	217.0	271.30
100	2.83	5.65	14.13	28.26	113.04	282.60	339.1	423.90
125	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.43
150	6.36	12.72	31.79	63.59	254.34	635.85	763.0	953.78
200	11.3	22.61	56.52	113.04	452.16	1130.40	1356	1696
250	17.66	35.33	88.31	176.53	706.50	1766.25	2120	2649
300	25.43	50.87	127.2	254.34	1017	2543.40	3052	3815
350	34.62	69.24	173.1	346.19	1385	3461.85	4154	5193
400	45	90	226.1	452	1809	4522	5426	6782
450	57	114	286.1	572	2289	5723	6867	8584
500	71	141	353.3	707	2826	7065	8478	10598
600	102	203	508.7	1017	4069	10174	12208	15260
700	138	277	692.4	1385	5539	13847	16617	20771
800	181	362	904.3	1809	7235	18086	21704	27130
900	229	458	1145	2289	9156	22891	27469	34336
1000	283	565	1413	2826	11304	28260	33912	42390
1200	407	814	2035	4069	16278	40694	48833	61042
1400	554	1108	2769	5539	22156	55390	66468	83084
1600	723	1447	3617	7235	28938	72346	86815	108518
1800	916	1831	4578	9156	36625	91562	109875	137344
2000	1130	2261	5652	11304	45216	113040	135648	169560
2200	1368	2736	6839	13678	54711	136778	164134	205168
2400	1628	3256	8139	16278	65111	162778	195333	244166
2600	1910	3821	9552	19104	76415	191038	229245	286556
2800	2216	4431	11078	22156	88623	221558	265870	332338
3000	2543	5087	12717	25434	101736	254340	305208	381510