

SHD-SE15 Battery Powered Magnetic Flow meter



Overview

SHD-SE15 series battery powered electromagnetic flow meter is often used in water applications, such as irrigation, municipal water distribution line, industrial sewage treatment ,remote area without access to main power. It is worked on the base of Faraday's Law of electromagnetic induction.

SHD-SE15 series Battery electromagnetic flow meter is available with IP68 protection level, external with 12-24 V DC power supply extension, size available from DN10 to DN1000

Features

- Battery powered option with RS485, GPRS, and CDMA
- Battery can be used for 3-6 years and can be replaced easily
- Flow sensor size available from 1/2 inch to 40 inch
- Flow Converter max with 32 months flow recording.
- IP68 protection level
- Accuracy 0.5%, option with 0.25%

Specifications

Environmental Temperature:-20°C-- 50°C

Relative Humidity: $\leq 95\%$

Protection Level: IP68

Flow Speed Measurement Range: 0-15m/s

Conductivity: $> 20 \mu\text{S/cm}$

Measuring Diameter: DN10---DN 2000 ,1/2" to 80 inch flow sensor

Accuracy Class: 0.5%, option 0.25%

Measurement Parameter: instant flow, instant flow rate, velocity

Record Parameter: Total Flow

Communication Mode: RS485 (Modbus RTU protocol), GPRS, CMDA

Battery: 3.6V lithium battery

Battery Working Time:

Cycle Measuring Time	50mA Excitation Use Time	20mA Excitation Use Time
30S	74months	103months
25S	62months	87months
20S	49months	69months
15S	37months	52months
14S	34months	48months
13S	32months	45months
12S	30months	42months
11S	27months	38months
10S	24months	34months
9S	21months	31months
8S	18months	27months
7S	15months	24months
6S	13months	21months
5S	10months	17months
3S	7months	10months

Magnetic Flow meter Flow Range and Pressure Rating

Size(DN)	Pressure	Min flow range velocity(0-0.5)m/s	Max Flow range velocity(0-10)m/s
10	4.0 Mpa	(0-2.25)L/min	(0-45)L/min
15	4.0 Mpa	(0-5)L/min	(0-100)L/min
20	4.0 Mpa	(0-7.5)L/min	(0-150)L/min
25	4.0 Mpa	(0-10L)/min	(0-200)L/min
32	4.0 Mpa	(0-20L)/min	(0-400)L/min
40	4.0 Mpa	(0-30L)/min	(0-600)L/min
50	4.0 Mpa	(0-3)m ³ /h	(0-60)m ³ /h
65	4.0 Mpa	(0-6)m ³ /h	(0-120)m ³ /h
80	4.0 Mpa	(0-9)m ³ /h	(0-180)m ³ /h
100	1.6 Mpa	(0-12)m ³ /h	(0-240)m ³ /h
125	1.6 Mpa	(0-21)m ³ /h	(0-420)m ³ /h
150	1.6 Mpa	(0-30)m ³ /h	(0-600)m ³ /h
200	1.6 Mpa	(0-54)m ³ /h	(0-1080)m ³ /h

250	1.6 Mpa	(0-90)m ³ /h	(0-1800)m ³ /h
300	1.0 Mpa	(0-120)m ³ /h	(0-2400)m ³ /h
350	1.0 Mpa	(0-165)m ³ /h	(0-3300)m ³ /h
400	1.0 Mpa	(0-225)m ³ /h	(0-4500)m ³ /h
500	1.0 Mpa	(0-330)m ³ /h	(0-6600)m ³ /h
600	1.0 Mpa	(0-480)m ³ /h	(0-9600)m ³ /h
700	1.0 Mpa	(0-660)m ³ /h	(0-13200)m ³ /h
800	1.0 Mpa	(0-900)m ³ /h	(0-18000)m ³ /h
900	1.0 Mpa	(0-1200)m ³ /h	(0-24000)m ³ /h
1000	1.0 Mpa	(0-1350)m ³ /h	(0-27000)m ³ /h

Electromagnetic Flow Meter Electrodes Material

Material	Corrosion resistance
316L	Applicable:1.Domestic water, industrial water,raw well water, municipal water
	2.Dilute acid, dilute alkali, and other weak corrosion, alkali and salt solution
Hastelloy B	Applicable:1.Hydrochloric acid (concentration less than 10%) non-oxidizing acid
	2.Sodium hydroxide (concentration less than 50%) all ammonium hydroxide aqueous alkali
	3.Phosphoric acid, organic acid
	Non-applicable: Nitric acid
Hastelloy C	Applicable:1.Mixed acid, like mixed solution of chromic acid and vitriolic
	2. Oxidizing salt,like Fe ⁺⁺⁺ 、Cu ⁺⁺ 、 sea water
	Non-applicable: Nitric acid
Titanium	Applicable:1.Salt. Like (1) Chloride (chloride/Mg/AL/Ca/Ammonium/Fe,etc)
	(2) Sodium salt, ammonium salt, pypochloride, sea water
	2.Concentration less than 50%,potassium hydroxide, ammonium hydroxide, barium hydroxide alkalis
	Non-applicable:Hydrochloric acid ,sulfuric acid,phosphoric acid,phosphoric acid,hydrofluoric acid,and other reducibility acid
Tantalum	Applicable:1.Hydrochloric acid (concentration less than 40%) ,dilutesulfuric acid,concentrated sulfuric acid,not including fuming sulfuric acid
	2.Chlorine dioxide,ferric chloride,hypochlorous acid,sodium cyanide,aluminium acetate
	3.Hydrogen nitrate,including fuming nitric acid,and other oxidizing acid,aqua regia whose temperature is less than 80° C
	Non-applicable:Alkali,hydrofluoric acid
Pt	Applicable:Nearly all acid,alkali,salt solution,including fuming sulfuring acid,fuming nitric acid,etc
	Non-applicable:Aqua regia,ammonium salt

Tungsten	Applicable:Pulp,sewage.anti-interference of solid particle
Carbide	Non-applicable:Inorganic acid,organic acid,chloride

Liner Material Selection

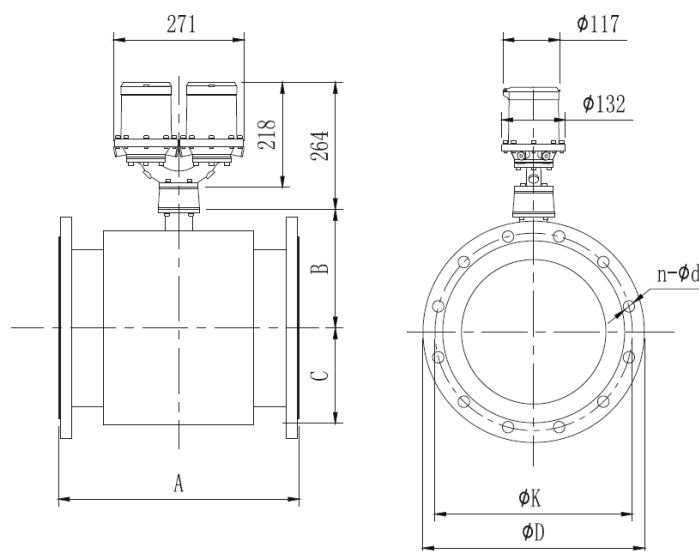
Liner	Main Function	Applicable Range
Rubber	1. Good abrasiveness resistance, Resist hydrochloric acid, acetic acid, oxalic acid, ammonia water, phosphoric acid, and 50% sulfuric acid,sodium hydroxide, potassium hydroxide. 2. Non-resistance of strong oxidant	1. Less than 65° C 2. Measuring normal water, sewage mud, pulp 3. Normal low concentration acid,alkali,salt solution 4. Non-resistant to be corroded by oxidizing medium
PTFE F46 PFA	1. The most stable material in plastic, can resist boiling hydrochloric acid,sulfuric acid,nitric acid,aqua regia.It can also resist strong alkali and all organic solvent. 2. Bad abrasiveness resistance and adhesion.	1. -40° C~+130° C (PTFE) -40° C~+180° C (F46) -40° C~+200° C (PFA) 2. Strong corrosion medium, like acid and alkali 3. Hygiene medium

Model Selection

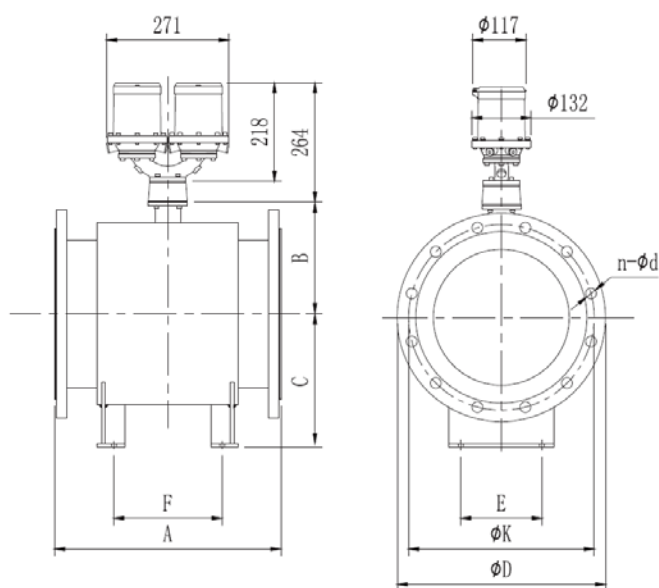
Item	Code	Description
Factory Mark	SHD	Silver Automation Instruments
Meter Type	SE15	Battery powered Mag meter
Meter Size	-XXX	Example:150=DN150,6 inch mag flow meter
Electrode Material	E0	316L SS
	E1	Hastelloy B
	E2	Hastelloy C
	E3	Titanium
	E4	Tantalum
	E5	Pt/Iridium Alloy
Liner Material	L1	Teflon (PTFE)
	L2	F46 (FEP)
	L3	PFA
	L4	Hard rubber
Rated Pressure	1G	GB1.6Mpa 1D DIN PN16 1A ANSI 150#
	2G	GB2.5Mpa 2D DIN PN25 2A ANSI 300#
	3G	GB4.0Mpa 3D DIN PN40 3A ANSI 600#

	S	Special
Working Temperature	E	<60 °C
	H	60~160 °C
Protection Level	P2	IP68
Converter Type	0	Compact
	1	Remote (standard cable 5 meters)
Communication	S1	RS-485
	S5	GPRS (please specify your country network)
	S6	CDMA
Housing Material	H0	Carbon steel
	H1	304 SS
	H2	Special Demand
Flange Material	F0	Carbon steel
	F1	304 SS
	F2	Special Demand
Power Supply	G2	Battery supply (without 4~20mA output)
	G3	Battery power + External 12-24V DC power supply

Dimensions



DN50~DN450



DN500

DN	Rated pressure	Outline dimension			Unit: mm		PTFE/Rubber		
	Mpa	A	B	C	E	F	φ D	φ K	N* φ d
10	4.0	150					95	65	4* φ 14
15							95	65	4* φ 14
20							105	75	4* φ 14
25			100	55			115	85	4* φ 14
32			105	60			140	100	4* φ 18
40			110	65			150	110	4* φ 18
50		197/202	121	76			165	125	4* φ 18
65			130	85			185	145	8* φ 18
80			135	90			200	160	8* φ 18
100	1.6	247/252	145	100			220	180	8* φ 18
125		247/252	161	116			245	210	8* φ 18
150		297/302	171	126			280	240	8* φ 22
200		348/352	199	154			335	295	12* φ 26
250		395/402	224	179			405	355	12* φ 22
300	1.0	498/502	249	204	300	240	440	400	12* φ 22
350			247	229			500	460	16* φ 22
400		598/602	305	260			565	515	16* φ 26
450			330	285			615	565	20* φ 26
500		/600	360	403			670	620	20* φ 26
600		/600	410	403			780	725	20* φ 30
700		/700	467	560			895	840	20* φ 30
800		/800	517	610			1010	950	20* φ 33
900		/900	567	660			1110	1050	20* φ 33
1000		/1000	617	712			1225	1160	20* φ 36