

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Киргизия (996)312-96-26-47

Россия (495)268-04-70

Казахстан (772)734-952-31

<https://reliant.nt-rt.ru/> || rtw@nt-rt.ru

RMAG Electromagnetic Flowmeters Manual DOC.ID.:RSS21A2R2



■ GENERAL

RMAG Series is a type Electromagnetic Flowmeter ideal for conductive liquids. It comes in sizes from 6 to 2000mm. The RMAG is widely used for tap-water, waste water, food & beverage Pulp & Paper and many other applications. RMAG Series Electromagnetic Flowmeter could be used in compact or separate installation.

■ FEATURES

- Various liner can be selected that satisfies most industrial applications.
- Flow Velocity range: 0.01 to 12 m/s, with good results for low flow applications
- Connection can be any flanges such as ANSI, DIN, JIS ...etc. Or wafer type or thread type and others
- It excellent for high pressure application.
- Protection class: IP68 is available, and the sensor can sink into the water.
- FEP Liner suitable in vacuum tube.
- High accuracy of +/-0.5% of reading (or +/-0.2% of reading)
- With Forward/Reverse flowrate measure function.

■ SPECIFICATION

- DN (mm): 10,15,20, 25, 32, 40, 50, 65, 80, 100,125, 150,200,250,300,350,400,450,500,600,700, 800,900,1000,1200,1400,1600,1800,2000
- Measuring Range: Velocity 0 to 0.25 m/s min. and 0 to 12 m/s max.
- Conductivity: more than 5 uS/cm
- Accuracy: +/-0.5% of reading (Velocity >= 0.5 m/s), +/-0.0025 m/s (Velocity < 0.5 m/s), +/-0.2% of Reading
- Max. Pressure: 350 Kg/cm²



- Electrode & Grounding: Stainless Steel 316L, Hastelloy B, Hastelloy C, Titanium, Tantalum, Platinum, Tungsten Carbide, Monel
- Lining Material: Polyurethane(25 to 600 mm), Neoprene(50 to 2000 mm), FEP(6 to 300 mm), PTFE(25 to 800 mm)
- Measuring Tube: Stainless Steel 304
- Coil Housing: Carbon Steel (standard), Stainless Steel 304(Optional), Stainless Steel 316(Optional)
- Flange: Carbon Steel (standard), Stainless Steel 304(Optional), Stainless Steel 316(Optional)
- Flanges Type: JIS, DIN, ANSI and others as option
- Ambient Temperature: -25 to +60 °C
- Cable Entry: 2 M20x1.5
- Grounding Resistance: Must be less than 10 Ω
- Protection: IP 65, IP67 and IP68

■ Electrode Material Selection

Electrode Material	Corrosion Resisting Property
Stainless Steel	Used for measuring water, waste water, inorganic acid, organic acid or other corrosive medium.
Hastelloy B	Good corrosion resistance of different concentration of hydrochloric acid under boiling point, resist the corrosion of non-oxidizing acid, alkali, non-oxidizing salt solution, such as sulfuric acid, phosphoric acid, organic acid, etc..
Hastelloy C	Resist the corrosion of oxidizing acid, such as nitric acid, mixed acid, the mixture of chromic acid and sulfuric acid, oxidizing salt like Fe ⁺⁺⁺ , Cu ⁺⁺ or other oxidants such as hypochlorite solution above ordinary temperature and seawater.
Tungsten Carbide	Used for measuring non-corrosiveness or strong abrasive liquid.
Titanium	Used for measuring seawater, kinds of chloride, pyochloride, oxidizing acid (including nitrosonitric acid) and organic acid-base. Not suitable for measuring pure reducibility acid (e.g. vitriol, hydrochloric acid). Note: if there is oxidizing agent in acid, corrosion resistance will be greatly decreased.
Tantalum	Have excellent corrosion resistance, as much as glass. can be used for measuring every chemical medium including boiling hydrochloric acid and vitriol below 175 °C , but there is exception of hydrofluoric acid, fuming acid and alkali.
Platinum	For measuring kinds of acid, alkali and salt, except aqua regia.
Monel	A kind of Nickel-copper alloy, suitable for every alkaline liquid.

■ Lining Material Selection

Liner material	Main performances	Applicability
Polytetrafluoroethylene (PTFE)	<ol style="list-style-type: none"> 1.It is a plastic material with the stablest Chemical properties, resist the corrosion of Boiling Hydrochloric acid, sulfuric acid, nitric acid, aqua regia, Concentrated alkali and many kinds of organic solvent, unable to resist the corrosion of chlorine trifluoride, high Temperature vanadyltrifluoride, high flow-rate Liquid fluorine, liquid oxygen and ozone; 2.Poor abrasion resistance; 3.Poor ability of anti-negative pressure. 	<ol style="list-style-type: none"> 1.100℃, 180℃(special order required); 2.Strong corrosive medium like concentrated acid, alkali, etc.; 3.Sanitary medium.
polychloroprene rubber (Neoprene)	<ol style="list-style-type: none"> 1.Excellent elasticity, high degree of tensile strength, good wear resistance; 2.Able to resist the corrosion of generally low concentration acid, alkali and salt, unable to resist that of the oxidative medium. 	<ol style="list-style-type: none"> 1.80℃, 120℃(special order required); 2.General water, polluted water, weak wear ability mud and ore pulp.
Polyurethane rubber (PU)	<ol style="list-style-type: none"> 1.Excellent wear resistance (ten times of the natural rubber's); 2.Poor abrasion resistance of acid and alkali; 3.Not able to work with water mixed with organic solvent. 	<ol style="list-style-type: none"> 1.<80℃; 2.Middle and strong wear ability ore pulp, coal pulp, mud, etc..
PFA	Having the same abrasion resistance with PTFE. Having strong ability of load pressure resistance.	<ol style="list-style-type: none"> 1.Below 220℃ 2.Applicable in state of load pressure.
F46	<ol style="list-style-type: none"> 1.Have the same abrasion resistance with PTFE. 2.Resistable for low abrasion. 3.Having strong resistance to load pressure. 	<ol style="list-style-type: none"> 1.Below 220℃ 2.The same as PTFE. 3.Applicable in mediums of low abrasion.

■ FLOW RANGE

Flow: m³/h

DN(mm)	Flow Velocity (m/s)							
	0.01	1	2	3	4	5	10	15
10	0.0028	0.2827	0.5655	0.8482	1.1310	1.4137	2.8274	4.2412
15	0.0064	0.6362	1.2723	1.9085	2.5447	3.1809	6.3617	9.5426
20	0.0113	1.131	2.2619	3.3929	4.5524	5.6549	11.3097	16.9646
25	0.0177	1.7671	3.5343	5.3014	7.0686	8.8357	17.6715	26.5072
40	0.0452	4.5239	9.0478	13.5717	18.0956	22.6195	45.2389	67.8584
50	0.0707	7.0686	14.1372	21.2058	28.2743	35.3429	70.6858	106.0290
65	0.1195	11.946	23.8918	35.8377	47.7836	59.7295	119.4590	179.1890
80	0.181	18.0956	36.1911	54.2867	72.3823	90.4779	180.9560	271.4340
100	0.2827	28.274	56.5487	84.8230	113.0973	141.3720	282.7430	424.1150
150	0.6362	63.617	127.2350	190.8520	254.4690	318.0860	636.1730	954.2590
200	1.131	113.097	226.1950	339.2920	452.3893	565.4870	1130.9730	1696.4600
250	1.7671	176.715	353.4290	530.1440	706.8583	883.5730	1767.1460	2650.7190
300	2.5447	254.469	508.9380	763.4070	1017.8760	1272.3450	2544.6900	3817.0350
350	3.4636	346.361	692.7210	1039.0820	1385.4420	1731.8030	3463.6060	5195.4090
400	4.5239	452.389	904.7790	1357.1680	1809.5570	2261.9470	4523.8930	6785.8400
450	5.7256	572.555	1145.1110	1717.6660	2290.2210	2862.7760	5725.5530	8588.3290
500	7.0686	706.858	1413.7170	2120.5750	2827.4330	3543.2920	7068.5840	10602.8800
600	10.079	1017.876	2035.7520	3053.6280	4071.5040	5089.3800	10178.7600	15268.1400
700	13.854	1385.442	2035.7520	4156.3270	5541.7690	6927.2120	13854.4200	20781.6400
800	18.096	189.557	2770.8850	5428.6720	7238.2300	9047.7870	18095.5700	27143.3600
900	22.902	2290.221	3619.1150	6870.6630	9160.8840	11451.1100	22902.2100	34353.3200
1000	28.274	2827.433	4580.4420	8482.3000	11309.7300	17137.1700	28274.3300	42411.5000
1200	40.715	4071.504	5654.8670	12214.5100	16286.0200	20357.5200	40715.0400	61072.5600
1400	55.418	5541.769	8143.0080	16625.3000	22167.0800	27708.8500	55417.6900	83126.5400
1600	72.382	7238.23	11083.5400	21714.6900	28952.9200	36191.1500	72382.3000	108573.4000
1800	91.609	9160.884	14476.4600	27482.6500	36643.5400	45804.4200	91608.8400	137413.3000
2000	113.1	11309.73	18321.7700	33929.2000	45238.9300	56548.6700	113097.3000	169646.0000

Model Selection Guide

● RMAG-

Liner

- R** Chloroprene Rubber(Neoprene) (50 to 2000mm,)
- F** FEP (10 to 300mm)
- P** PTFE (25 to 800mm)
- O** Polyurethane (25 to 600mm)
- PF** PFA
- F4** F46

Size

0010 to 2000 10 to 2000mm

Electrode Material

- S** Stainless Steel 316L
- T** Titanium
- B** Hastelloy B
- C** Hastelloy C
- A** Tantalum
- P** Platinum
- U** Tungsten Carbide
- Z** Others

Process Connection

- 1** DIN PN10
- 2** DIN PN16
- 3** DIN PN25
- 4** DIN PN40
- A** ANSI 150 #
- B** ANSI 300 #
- C** ANSI 600 #
- J** JIS 10K
- K** JIS 20K
- L** JIS 40K
- Z** Others

Grounding

- N** None
- E** Grounding Electrode(The 3rd Electrode)
- R** Grounding Ring(S.S.316)
- A** Grounding & Protection Ring(S.S.316)

Enclosure

- 8** IP65
- 9** IP68 (only for Separate type)

Cable Entry

- M** M 20x1.5

N ½" NPT

Z others

Flange & Housing Material

- 0 Carbon Steel (standard)
- 4 S.S.304 Flange
- 6 S.S.316 Flange
- 8 S.S.304 Flange & Housing
- 9 S.S.316 Flange & Housing
- Z others

Installation & Cable Length

- NNN Compact Type
- 010 to 300 Separate Type, Cable 10m to 300m

Power Supply

- DC DC24V ±5%
- AC AC100 to 240V, 47 to 63Hz
- BA Li ion Battery

Output Signal

- ST Standard output (4 to 20mA and pulse)
- SR Standard output + RS485
- SH Standard output + HART
- ZZ Others

Option

- N None Explosion Proof
- X Explosion Proof
- P Pressure higher than standard
- T Max. Temp. higher than 180°C

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

Киргизия (996)312-96-26-47

Россия (495)268-04-70

Казахстан (772)734-952-31

<https://reliant.nt-rt.ru/> || rtw@nt-rt.ru