

# RBMAG

- For conductive liquids ( $>5\mu\text{S/cm}$ ), even with a content of suspended solids
- Dn 10 ÷ 1000 mm
- $\pm 0.2\%$  ;  $\pm 0.5\%$  accuracy
- RUBBER / PTFE lining
- 85 ÷ 265 Vac o 12; 24 Vdc power supply
- Wireless data transmission (pending)
- Battery powered



The battery powered RBmag flowmeters are ideal for remote monitoring application where there are no external power supplies available.

## TECHNICAL FEATURES

### Flow Rate Range

RBmag is able to process signals from fluids with flow rates of up to 10m / s in both directions (bidirectional meter).

### Range / Lining material

PTFE DN10 ÷ DN500  
RUBBER DN65 ÷ DN2000

### Sensor pipe material

SS321

### Housing material

aluminium

### Electrodes material

SS316L - Hastelloy C - Titanium - Tantalum - Platinum

### Measure range

$<0,1\text{m}^3/\text{h} \div >110000\text{m}^3/\text{h}$

### Accuracy

$\pm 0,5\%$  standard;  $\pm 0,2\%$  optional

### Repeatability

$\pm 0,1\%$

### Fluid conductivity

$>5\mu\text{S/cm}..$

### Power supply

Battery

### Ambient Temperature Limits

Remote version operating temperature: RUBBER  $-10 \div +80^\circ\text{C}$ ; PTFE  $-40 \div +150^\circ\text{C}$   
Compact version operating temperature: RUBBER  $-10 \div +80^\circ\text{C}$ ; PTFE  $-40 \div +100^\circ\text{C}$   
Storage temperature:  $-40 \div 85^\circ\text{C}$

### Communication protocol

Modbus (opt.)

### Output

Frequency: 0,1÷5000 Hz  
Pulse: open collector

### Reverse Flow

Allow measure reverse flow.

### Output Testing

Frequency Source: Transmitter can be commanded to supply a specified test frequency between 0.1 and 5000 Hz.

### Start-up Time

0.5 seconds

### Low Flow Cutoff

Adjustable between 0.0 and 9.9% $Q_{\text{max}}$ . Below selected value, output is driven to the zero flow rate signal level.

### Humidity Limits

0-100% RH to 150 °F (65 °C), not condensing.

### Damping

Adjustable between 0.1 and 99 seconds.

### Compact version IP rating

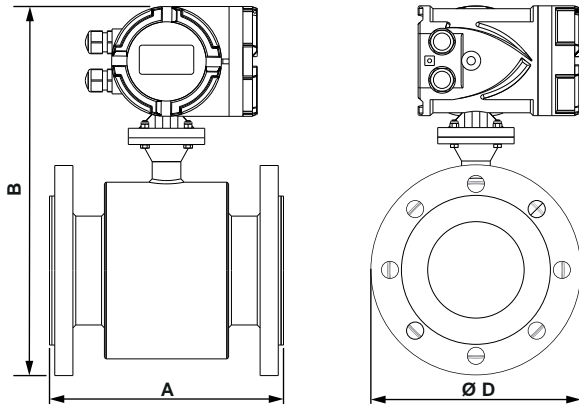
IP67

### Remote version IP rating

sensor IP67 / IP68 (by request) - converter IP67

### Anti-condensation filter

Anti-condensation filter installed on converter



DN (mm)	A (mm)	PN 16 - PN 40	
		B (mm)	ØD (mm)
10	200	295	90
15		295	95
20		300	105
25		300	115
32		315	140
40		335	150
50		344	165
65		360	185
80		375	200

DN (mm)	A (mm)	PN 10		PN 16		PN 40	
		B (mm)	ØD (mm)	B (mm)	ØD (mm)	B (mm)	ØD (mm)
100	250	-	-	400	220	410	235
125	250	-	-	420	250	435	270
150	300	-	-	460	285	468	300
200	350	520	340	520	340	538	375
250	450	570	395	575	405	598	450
300	500	620	445	620	460	648	515
350	550	670	505	678	520	708	580
400	600	730	565	738	580	778	660
450	600	780	615	793	640	816	685
500	600	830	670	850	715	870	755
600	600	930	780	960	840	985	890
700	700	1050	895	1080	910	-	-
800	800	1165	1015	1170	1025	-	-
900	900	1270	1115	1275	1125	-	-
1000	1000	1360	1230	1375	1255	-	-

**RBMAG****Battery electromagnetic flowmeter**

For conductive fluids. With sensor pipe in SS321  
 Medium ambient temperature range: -20° ÷ +75°C  
 Housing protection degree for electronic: IP67

Version	
<b>E</b>	Remote - accuracy 0,2% (up to DN150) - standard cable length 5m - max 50m)
<b>F</b>	Remote - standard cable length 5m - max 50m)
<b>W</b>	Compact - accuracy 0,2% (up to DN150) - max temperature of the fluid 100°C
<b>Y</b>	Compact - max temperature of the fluid 100°C

DN flangia / Pressione max. / Rivestimento (limiti di temperatura del fluido)	
<b>0010B2</b>	DN10 / 4.0MPa / PTFE (-40° ÷ +150°C); range 0,14 ÷ 2,9m3/h; standard UNI 1092-1
<b>0010E2</b>	DN10 / 1.6MPa / PTFE (-40° ÷ +150°C); range 0,14 ÷ 2,9m3/h; standard UNI 1092-1
<b>0015B2</b>	DN15 / 4.0MPa / PTFE (-40° ÷ +150°C); range 0,3 ÷ 6m3/h; standard UNI 1092-1
<b>0015E2</b>	DN15 / 1.6MPa / PTFE (-40° ÷ +150°C); range 0,3 ÷ 6m3/h; standard UNI 1092-1
<b>0020B2</b>	DN20 / 4.0MPa / PTFE (-40° ÷ +150°C); range 0,5 ÷ 12m3/h; standard UNI 1092-1
<b>0020E2</b>	DN20 / 1.6MPa / PTFE (-40° ÷ +150°C); range 0,5 ÷ 12m3/h; standard UNI 1092-1
<b>0025B2</b>	DN25 / 4.0MPa / PTFE (-40° ÷ +150°C); range 0,6 ÷ 18m3/h; standard UNI 1092-1
<b>0025E2</b>	DN25 / 1.6MPa / PTFE (-40° ÷ +150°C); range 0,6 ÷ 18m3/h; standard UNI 1092-1
<b>0032B2</b>	DN32 / 4.0MPa / PTFE (-40° ÷ +150°C); range 1 ÷ 30m3/h; standard UNI 1092-1
<b>0032E2</b>	DN32 / 1.6MPa / PTFE (-40° ÷ +150°C); range 1 ÷ 30m3/h; standard UNI 1092-1
<b>0040B2</b>	DN40 / 4.0MPa / PTFE (-40° ÷ +150°C); range 1,8 ÷ 42m3/h; standard UNI 1092-1
<b>0040E2</b>	DN40 / 1.6MPa / PTFE (-40° ÷ +150°C); range 1,8 ÷ 42m3/h; standard UNI 1092-1
<b>0050B2</b>	DN50 / 4.0MPa / PTFE (-40° ÷ +150°C); range 3 ÷ 66m3/h; standard UNI 1092-1
<b>0050E2</b>	DN50 / 1.6MPa / PTFE (-40° ÷ +150°C); range 3 ÷ 66m3/h; standard UNI 1092-1
<b>0065B1</b>	DN65 / 4.0MPa / Neoprene (-10° ÷ +80°C); range 5,8 ÷ 120m3/h; standard UNI 1092-1
<b>0065B2</b>	DN65 / 4.0MPa / PTFE (-40° ÷ +150°C); range 5,8 ÷ 120m3/h; standard UNI 1092-1
<b>0065E1</b>	DN65 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 5,8 ÷ 120m3/h; standard UNI 1092-1
<b>0065E2</b>	DN65 / 1.6MPa / PTFE (-40° ÷ +150°C); range 5,8 ÷ 120m3/h; standard UNI 1092-1
<b>0080B1</b>	DN80 / 4.0MPa / Neoprene (-10° ÷ +80°C); range 8,9 ÷ 180m3/h; standard UNI 1092-1
<b>0080B2</b>	DN80 / 4.0MPa / PTFE (-40° ÷ +150°C); range 8,9 ÷ 180m3/h; standard UNI 1092-1
<b>0080E1</b>	DN80 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 8,9 ÷ 180m3/h; standard UNI 1092-1
<b>0080E2</b>	DN80 / 1.6MPa / PTFE (-40° ÷ +150°C); range 8,9 ÷ 180m3/h; standard UNI 1092-1
<b>0100B1</b>	DN100 / 4.0MPa / Neoprene (-10° ÷ +80°C); range 11 ÷ 282m3/h; standard UNI 1092-1
<b>0100B2</b>	DN100 / 4.0MPa / PTFE (-40° ÷ +150°C); range 11 ÷ 282m3/h; standard UNI 1092-1
<b>0100E1</b>	DN100 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 11 ÷ 282m3/h; standard UNI 1092-1
<b>0100E2</b>	DN100 / 1.6MPa / PTFE (-40° ÷ +150°C); range 11 ÷ 282m3/h; standard UNI 1092-1
<b>0125B1</b>	DN125 / 4.0MPa / Neoprene (-10° ÷ +80°C); range 20 ÷ 450m3/h; standard UNI 1092-1
<b>0125B2</b>	DN125 / 4.0MPa / PTFE (-40° ÷ +150°C); range 20 ÷ 450m3/h; standard UNI 1092-1
<b>0125E1</b>	DN125 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 20 ÷ 450m3/h; standard UNI 1092-1
<b>0125E2</b>	DN125 / 1.6MPa / PTFE (-40° ÷ +150°C); range 20 ÷ 450m3/h; standard UNI 1092-1
<b>0150B1</b>	DN150 / 4.0MPa / Neoprene (-10° ÷ +80°C); range 30 ÷ 600m3/h; standard UNI 1092-1
<b>0150B2</b>	DN150 / 4.0MPa / PTFE (-40° ÷ +150°C); range 30 ÷ 600m3/h; standard UNI 1092-1
<b>0150E1</b>	DN150 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 30 ÷ 600m3/h; standard UNI 1092-1
<b>0150E2</b>	DN150 / 1.6MPa / PTFE (-40° ÷ +150°C); range 30 ÷ 600m3/h; standard UNI 1092-1

<b>0200C1</b>	DN200 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 50 ÷ 1100m3/h; UNI 1092-1 standard
<b>0200C2</b>	DN200 / 1.0MPa / PTFE (-40° ÷ +150°C); range 50 ÷ 1100m3/h; UNI 1092-1 standard
<b>0200E1</b>	DN200 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 50 ÷ 1100m3/h; UNI 1092-1 standard
<b>0200E2</b>	DN200 / 1.6MPa / PTFE (-40° ÷ +150°C); range 50 ÷ 1100m3/h; UNI 1092-1 standard
<b>0250C1</b>	DN250 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 85 ÷ 1700m3/h; UNI 1092-1 standard
<b>0250C2</b>	DN250 / 1.0MPa / PTFE (-40° ÷ +150°C); range 85 ÷ 1700m3/h; UNI 1092-1 standard
<b>0250E1</b>	DN250 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 85 ÷ 1700m3/h; UNI 1092-1 standard
<b>0250E2</b>	DN250 / 1.6MPa / PTFE (-40° ÷ +150°C); range 85 ÷ 1700m3/h; UNI 1092-1 standard
<b>0300C1</b>	DN300 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 110 ÷ 2400m3/h; UNI 1092-1 standard
<b>0300C2</b>	DN300 / 1.0MPa / PTFE (-40° ÷ +150°C); range 110 ÷ 2400m3/h; UNI 1092-1 standard
<b>0300E1</b>	DN300 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 110 ÷ 2400m3/h; UNI 1092-1 standard
<b>0300E2</b>	DN300 / 1.6MPa / PTFE (-40° ÷ +150°C); range 110 ÷ 2400m3/h; UNI 1092-1 standard
<b>0350C1</b>	DN350 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 180 ÷ 3300m3/h; UNI 1092-1 standard
<b>0350C2</b>	DN350 / 1.0MPa / PTFE (-40° ÷ +150°C); range 180 ÷ 3300m3/h; UNI 1092-1 standard
<b>0350E1</b>	DN350 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 180 ÷ 3300m3/h; UNI 1092-1 standard
<b>0350E2</b>	DN350 / 1.6MPa / PTFE (-40° ÷ +150°C); range 180 ÷ 3300m3/h; UNI 1092-1 standard
<b>0400C1</b>	DN400 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 220 ÷ 4200m3/h; UNI 1092-1 standard
<b>0400C2</b>	DN400 / 1.0MPa / PTFE (-40° ÷ +150°C); range 220 ÷ 4200m3/h; UNI 1092-1 standard
<b>0400E1</b>	DN400 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 220 ÷ 4200m3/h; UNI 1092-1 standard
<b>0400E2</b>	DN400 / 1.6MPa / PTFE (-40° ÷ +150°C); range 220 ÷ 4200m3/h; UNI 1092-1 standard
<b>0450C1</b>	DN450 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 270÷ 5400m3/h; UNI 1092-1 standard
<b>0450C2</b>	DN450 / 1.0MPa / PTFE (-40° ÷ +150°C); range 270÷ 5400m3/h; UNI 1092-1 standard
<b>0450E1</b>	DN450 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 270÷ 5400m3/h; UNI 1092-1 standard
<b>0450E2</b>	DN450 / 1.6MPa / PTFE (-40° ÷ +150°C); range 270÷ 5400m3/h; UNI 1092-1 standard
<b>0500C1</b>	DN500 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 320 ÷ 6600m3/h; UNI 1092-1 standard
<b>0500C2</b>	DN500 / 1.0MPa / PTFE (-40° ÷ +150°C); range 320 ÷ 6600m3/h; UNI 1092-1 standard
<b>0500E1</b>	DN500 / 1.6MPa / Neoprene (-10° ÷ +80°C); range 320 ÷ 6600m3/h; UNI 1092-1 standard
<b>0500E2</b>	DN500 / 1.6MPa / PTFE (-40° ÷ +150°C); range 320 ÷ 6600m3/h; UNI 1092-1 standard
<b>0600C1</b>	DN600 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 490 ÷ 9600m3/h; UNI 1092-1 standard
<b>0700C1</b>	DN700 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 680 ÷ 13500m3/h; UNI 1092-1 standard
<b>0800C1</b>	DN800 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 900 ÷ 18000m3/h; UNI 1092-1 standard
<b>0900C1</b>	DN900 / 1.0MPa / Neoprene (-10° ÷ +80°C); range 1200 ÷ 22500m3/h; UNI 1092-1 standard
<b>1000C1</b>	DN1000 / 1.0MPa / Neoprene (-10° ÷ +80°C); (-10° ÷ +80°C); range 1450 ÷ 28000m3/h; UNI 1092-1 standard

#### Process connection

<b>B</b>	DIN (UNI 1092-1) flange
<b>D</b>	ANSI flange (price on request)
<b>Z</b>	Special

#### Electrodes material

<b>1</b>	SS316L Stainless steel
<b>3</b>	Hastelloy C
<b>4</b>	Titanium
<b>5</b>	Tantalum
<b>6</b>	Platinum

#### Power supply

<b>D</b>	Battery - 5 years life
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#### Accessories

<b>0</b>	None
<b>1</b>	316SS or Hastelloy C grounding rings for plastic pipe installation (price on request)
<b>3</b>	3rd electrode - price on request

#### Output

<b>A</b>	Pulse output
<b>E</b>	Pulse output + MODBUS

#### Pipe protection degree

<b>1</b>	IP67
<b>2</b>	IP68 (only for remote version)

