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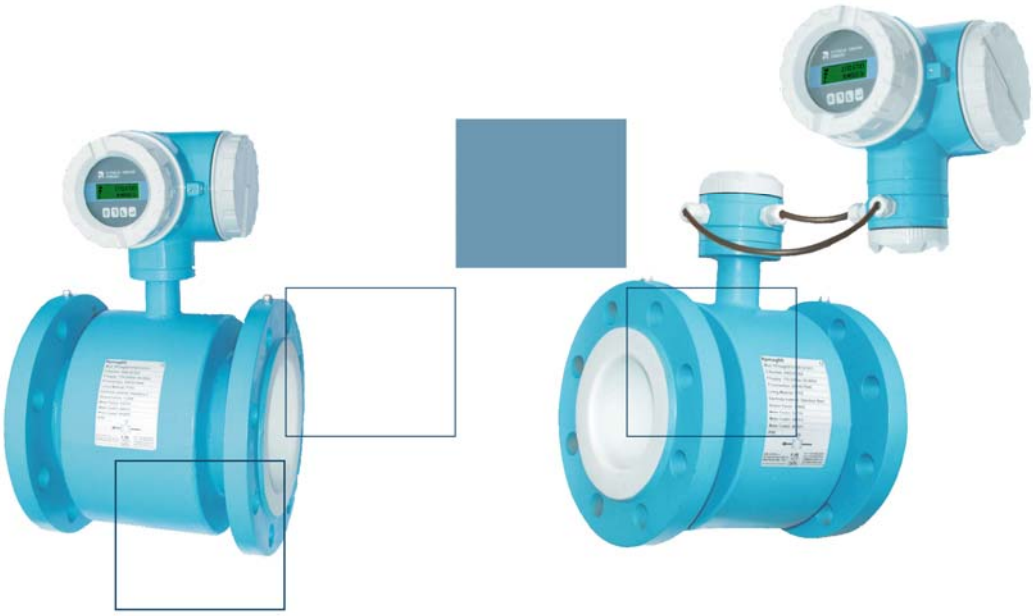
RPMag62

Electromagnetic Flow meter



- Suitable for conductive liquids (>5μS/cm), even with a content of suspended solids
- Measurement range: from <0.6m^3/h to >70000m^3/h
- High accuracy measurement: ±0.2%
- Power supply options: 85-265vAC or 24vDC
- IP67 Compact or IP68 Remote mounting options
- Microprocessor based controller
- A wide choice of wetted materials and linings
- Sizes from DN15 to DN1600
- Analogue Output 4-20mA
- Communications Protocol: Modbus or Optional HART

An electromagnetic flow meter consists of a sensor and a transmitter. Working on the principle of Faraday's Law, the flow meter measures volumetric flow rate for conductive liquids and pulps. The RPmag62 flow meter is suitable for use in many industries including chemical, power generation and distribution, mining, water treatment, pulp and paper, pharmaceutical, food and environmental protection.
The measurement is independent of the density, viscosity, temperature, pressure and conductivity of the measured fluid. No moving parts are in the measuring tube and there is no pressure loss when using the RPmag62. Several output signal options are available. The analogue output or frequency output is proportional to the velocity of fluid. The RPmag62 flow meter has a wide measuring range and is available with a choice of wetted materials and linings to suit a wide range of applications.

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Features

The RPmag62 flow meter has a microprocessor controlled transmitter and can display the measured values and messages in the operating menu in both English and Italian language. The Multifunction intelligent transmitter has self-test and self-diagnosis functions and the EEPROM saves the flow meter settings and the counter values when the power is switched off. There are two versions available, an IP67 Compact version and the IP68 remote transmitter version. A special feature of the RPmag62 is that it the magnetic field excitation uses a programmable rectangular wave with low frequency. This increases the stability of flow measurement and has low power consumption. The RPmag62 flow meter uses a 16-bit microprocessor for fast processing and high accuracy and also by utilising digital processing, high disturbance resistance reliable measurement with high accuracy over a wide measuring range is achieved. The flow meter has a wide switching power supply range and is EMC compliant according to CE requirements. The RPmag62 flow meter has a back lit LCD display with high definition and can display both the instantaneous and also the totalised flow. Another function of the RPMag62 flow meter is it has a Dual direction measurement function enabling the flow meter to display both the forward direction flow rate and the reverse direction flow rate. Three internal counters can respectively display forward direction volume, reverse direction volume and the difference between the volumes of both directions. It is possible to communicate via RS485 or optional PROFIBUS and HART protocols.
The RPmag62 also has a self cleaning electrode system which runs every 4 minutes.

Specification

Measuring range:	<0.6m^3h - >70000m^3/h
Fluid conductivity:	>5µS/cm
Fluid velocity:	0.5m/s to 15m/s
Pressure:	4.0MPa (DN15-DN150) 1.6MPa (DN100-DN150) 1.0MPa (DN200-DN1000) 0.6MPa (DN1200-DN1600)
Pipe dimension range:	DN15 to DN1600
Measuring tube material:	AISI 321
Lining materials:	Rubber; PTFE, FEP
Housing material:	Aluminium
Electrodes materials:	SS 316Ti, Hastelloy B, Hastelloy C, Titanium, Tantalum
Remote version operating temperature:	Rubber <80°C, PTFE <60°C, PTFE <180°C (Short term), 150°C Continuous
Compact version operating temperature:	<70°C
Ambient temperature:	-25 to + 55°C
Relative humidity:	5% to 90%
Ambient pressure:	86-106kPa.
Accuracy:	±0.5%
Repeatability:	±0.07%
Open-collector output:	30v, 250mA
Analogue output:	4 to 20mA, maximum load 750 Ohms 0-10mA, maximum load 1.5KOhm
Pulse output:	1 to 5000Hz
Power supply:	85 to 265v, 48 to 63Hz or 24vdc
Consumption:	Less than 20w
Housing protection:	Compact model: IP67

Order Codes

There are many options for the RPmag62 electromagnetic flow meters. Order codes are detailed below:

Code	Description
F	Remote (Standard cable length 5 Metres)
Y	Compact
Code	**DN flange / Max. pressure / Lining**
001513	DN15 / 4.0MPa / FEP (-40° - +150°C) Range 0.3 - 6m^3/h
002513	DN25 / 4.0MPa / PTFE (-40° - +150°C) Range 0.6 - 11m^3/h
003213	DN32 / 4.0MPa / PTFE (-40° - +150°C) Range 1 - 25m^3/h
004013	DN40 / 4.0MPa / PTFE (-40° - +150°C) Range 1.8 - 36m^3/h
005011	DN50 / 4.0MPa / Rubber (-10° - +80°C) Range 3 - 60m^3/h
005013	DN50 / 4.0MPa / PTFE (-40° - +150°C) Range 3 - 60m^3/h
006511	DN65 / 4.0MPa / Rubber (-10° - +80°C) Range 5.8 - 126m^3/h
006513	DN65 / 4.0MPa / PTFE (-40° - +150°C) Range 5.8 - 126m^3/h
008011	DN80 / 4.0MPa / Rubber (-10° - +80°C) Range 8.9 - 180m^3/h
008013	DN80 / 4.0MPa / PTFE (-40° - +150°C) Range 8.9 - 180m^3/h
010011	DN100 / 4.0MPa / Rubber (-10° - +80°C) Range 11 - 250m^3/h
010013	DN100 / 4.0MPa / PTFE (-40° - +150°C) Range 11 - 250m^3/h
010041	DN100 / 1.6MPa / Rubber (-10° - +80°C) Range 11 - 250m^3/h
010043	DN100 / 1.6MPa / PTFE (-10° - +150°C) Range 11 -250m^3/h
012511	DN125 / 4.0MPa / Rubber (-10° - +80°C) Range 11 - 250m^3/h
012513	DN125 / 4.0MPa / PTFE (-40° - +180°C) Range 11 - 250m^3/h
012541	DN125 / 1.6MPa / Rubber (-10° - +80°C) Range 20 - 400m^3/h
012543	DN125 / 1.6MPa / PTFE (-40° - +150°C) Range 20 - 400m^3/h
015011	DN150 / 4.0MPa / Rubber (-10° - +80°C) Range 30 - 600m^3/h
015013	DN150 / 4.0MPa / PTFE (-40° - +150°C) Range 30 - 600m^3/h
015041	DN150 / 1.6MPa / Rubber (-10° - +80°C) Range 30 - 600m^3/h
015043	DN150 / 1.6MPa / PTFE (-40° - +150°C) Range 30 - 600m^3/h
020021	DN200 / 1.0MPa / Rubber (-10° - +80°C) Range 50 - 1000m^3/h
020023	DN200 / 1.0MPa / PTFE (-40° - +150°C) Range 50 – 1000m^3/h
020043	DN200 / 1.6MPa / PTFE (-40° - +150°C) Range 50 – 1000m^3/h
025021	DN250 / 1.0MPa / Rubber (-10° - +80°C) Range 85 - 1800m^3/h
025023	DN250 / 1.0MPa / PTFE (-40° - +150°C) Range 85 - 1800m^3/h
025041	DN250 / 1.6MPa / Rubber (-10° - +80°C) Range 85 - 1800m^3/h
025043	DN250 / 1.6MPa / PTFE (-10° - +80°C) Range 85 - 1800m^3/h
030021	DN300 / 1.0MPa / Rubber (-10° - +80°C) Range 110 - 2500m^3/h
030023	DN300 / 1.0MPa / PTFE (-40° - +180°C) Range 110 - 2500m^3/h
030043	DN300 / 1.6MPa / PTFE (-40° - +150°C) Range 110 - 2500m^3/h
035021	DN350 / 1.0MPa / Rubber (-10° - +80°C) Range 180 - 3200m^3/h
035023	DN350 / 1.0MPa / PTFE (-40° - +150°C) Range 180 - 3500m^3/h
035043	DN350 / 1.6MPa / PTFE (-40° - +150°C) Range 180 - 3500m^3/h
040021	DN400 / 1.0MPa / Rubber (-10° - +80°C) Range 220 - 4500m^3/h
040023	DN400 / 1.0MPa / PTFE (-40° - +180°C) Range 220 - 4500m^3/h
040043	DN400 / 1.6MPa / PTFE (-40° - +180°C) Range 220 - 4500m^3/h
045021	DN450 / 1.0MPa / Rubber (-10° - +80°C) Range 270 - 6000m^3/h
045023	DN450 / 1.0MPa / PTFE (-40° - +150°C) Range 270 - 6000m^3/h
045043	DN450 / 1.6MPa / PTFE (-40° - +150°C) Range 270 - 6000m^3/h
050021	DN500 / 1.0MPa / Rubber (-10° - +80°C) Range 320 - 6500m^3/h
050023	DN500 / 1.0MPa / PTFE (-40° - +150°C) Range 320 - 6500m^3/h
060021	DN600 / 1.0MPa / Rubber (-10° - +80°C) Range 490 - 9500m^3/h
060023	DN600 / 1.0MPa / PTFE (-40° - +150°C) Range 490 - 9500m^3/h
070021	DN700 / 1.0MPa / Rubber (-10° - +80°C) Range 680 - 12600m^3/h
070023	DN700 / 1.0MPa / PTFE (-40° - +150°C) Range 680 - 12600m^3/h
080021	DN800 / 1.0MPa / Rubber (-10° - +80°C) Range 900 - 17600m^3/h
080023	DN800 / 1.0MPa / PTFE (-40° - +180°C) Range 900 - 17600m^3/h
090021	DN900 / 1.0MPa / Rubber (-10° - +80°C) Range 1200 - 25200m^3/h
090023	DN900 / 1.0MPa / PTFE (-40° - +150°C) Range 1200 - 25200m^3/h
100021	DN1000 / 1.0MPa / Rubber (-10° - +80°C) Range 1450 - 27000m^3/h
100023	DN1000 / 1.0MPa / PTFE (-40° - +180°C) Range 1450 - 27000m^3/h
120031	DN1200 / 0.6MPa / Rubber (-10° - +80°C) Range 2000 - 40000m^3/h
140031	DN1400 / 0.6MPa / Rubber (-10° - +80°C) Range 2900 - 51000m^3/h
160031	DN1600 / 0.6MPa / Rubber (-10° - +80°C) Range 3800 - 70000m^3/h
999999	Special / Special / Special

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Order Codes (Continued)

Code	Electrodes material
1	Stainless steel 316TI
2	Hastelloy B
3	Hastelloy C
4	Titanium
5	Tantalum
Code	**Power Supply**
1	85-265vAC 50-60Hz
2	24vDC
Code	**Accessory**
0	None
1	Grounding rings 321SS grounding rings for plastic
2	Protective rings
Code	**Output**
1	Standard
2	RS485 (optional)
3	4-20mA + HART
Code	**Protection degree**
1	IP67
2	IP68 (only for remote version)

Order Code Examples

RPmag62 - Order codes

RPmag62	Code	Version

Code	DN flange / Max. pressure / Lining
120031	DN1200 / 0,6MPa / rubber (-10° ÷ +80°C); range 2000 ÷ 40000m3/h
140031	DN1400 / 0,6MPa / rubber (-10° ÷ +80°C); range 2900 ÷ 51000m3/h
160031	DN1600 / 0,6MPa / rubber (-10° ÷ +80°C); range 3800 ÷ 70000m3/h
999999	Special / Special / Special

Code	Electrodes material
1	316SS stainless steel
2	Hastelloy B
3	Hastelloy C
4	Titanium
5	Tantalum

Code	Power supply
1	85÷265Vac 50÷60Hz
2	24Vdc

Code	Accessory
0	None
1	321SS grounding rings for plastic pipe installation. Current accessory from DN25 to DN40 with PTFE lining
2	Protective rings

Code	Output
1	Standard
2	RS485 (optional)
3	4÷20mA + HART

Code	Protection degree
1	IP67
2	IP68 (only for remote version)

RPmag62	Y	005013	1	1	0	1	1

These products comply with current European Directives

Certificate No. FM 13843