FlowMeter System
electromagnetic flowmeters

ISO 9001:2000 CERTIFIED COMPANY

seko

innovation > technology > future

Suitable
for any flow-rate

The electromagnetic **FlowMeter System** is a fluid flow measurement system based on Faraday's electromagnetic induction law.

The unit measures the fluid's conductivity and is compatible with all automatic manufacturing processes.

Compact and light by design, it is composed of two separate parts, connected by a single wire:

- **Converter Flowmeter** checks and receives the electrical signal from the **Electromagnetic Flowmeter MAG**; it displays the value on the LCD and creates an analog signal for remote control
- **Electromagnetic Flowmeter MAG** through which the measured liquid flows

This unit's unique feature is a square current signal for the **Electromagnetic Flowmeter MAG.**

This allows the system unit to do accurately measure.

Main applications:

- Food Industry
- Laundry industry
- Dyer industry
- Waterworks
- Paper Industry
- Metallurgy
- Fish farming
- Textile industry
- Thermal power plants

Main Applications

FlowMeter
modular converter

FlowMeter is a microprocessor-based modular converter **(C-MOS)** with non-volatile memory **(EEPROM)**.

Keyboard and display

Keyboard:

- Clear 16 keys dust-free keyboard with mnemonic symbols and keyword access

Display:

- 16 character, 2 line LCD with Italian / English messages
- Displaying volume and weight in engineering units
- Bi-directional istantaneous flow, resettable and absolute totalization, autotest, programming
- Back-lit LCD

Totalizers

- 2 resettable (for bidirectional flow)
- 2 absolute (for bidirectional flow)
- 1 presetter for batch

Analog output

- Mono / bidirectional 4÷20 mA with galvanic separation

Digital outputs

4 relay (Max 50Vdc 0,2A) programmable as:

- direct totalizer
- inverse totalizer
- minimum and maximum flow alarm
- malfunction
- flow direction
- presetter (batch)

Technical Features

Mounting	Field
Casing	In plastic material
Compensation	Automatic to zero (autozero)
Range	0 ÷ 12 m/s
F.S.	Programmable
Autorange	Automatic
DC output	galvanically insulated monodirectional 4÷20mA: • Passive (10÷30 Vdc) • Active (0÷600 Ω)
Connections	With terminal block and PG11/PG13,5 fittings cable
Electric protection	Line filters, fuses, varistors on power supply (CE)
Mechanical protection	IP65 CEI EN 60529
Temperature range	-10 ÷ 50 °C
Humidity range	4 ÷ 90 % non condensing
Power supply	220/110 Vac ± 10% (3W)
Dimensions	W240 H210 D110 mm
Weight	2 Kg

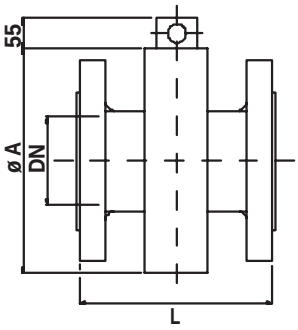
MaG1
electromagnetic flowmeter

Overall dimensions (mm)
with flanges UNI 2278 PN16 (DIN 2576)

DN	A Ø	L Standard	L ISO	Weight (Kg) Standard	Weight (Kg) ISO
20	152	250	200	6	5
25	152	250	200	7	6
32	178	250	200	8	7
40	178	250	200	9	8
50	178	250	200	10	9
65	219	250	200	12	11
80	219	250	200	13	12
100	235	250	250	16	16
125	273	250	250	19	19
150	278	300	300	23	23
200	327	300	350	30	32
250	387	300	450	38	42
300	425	300	500	50	54
350	490	300	550	72	77
400	527	300	600	96	112
450	590	300	-	102	-
500	628	300	-	120	-
600	730	400	-	150	-

A Vesrion

B Version



Dimensional Drawing

Technical Features

Mounting Flanges UNI 2278/67 PN16

Nominal size
- A Version: from DN20 to DN400 mm
- B Version: from DN40 to DN600 mm

Nominal pressure Standard PN16 (see optionals)

Measurement piping AISI304 (see optionals)

Structure and flange Painted carbon steel

Structure Repairable (not welded)

Lining
- A Version: PTFE
- B Version: Alimentary hard rubber

Process temperature
- A Version: -30 ÷ 130 °C (150 °C 1 hour max)
- B Version: -10 ÷ 100 °C

Anticondensate sealing Polyurethane resin

Measurement electrodes AISI316L – 1.4404 (see optionals)

Measurement range 0,1÷12m/s

Electrical connections
with terminal block and PG13,5 fitting cable

Thermical class insulation F (155 °C)

Protection degree IP67 CEI EN 60529 (see optionals)

Temperature range -30 ÷ 70 °C

Humidity range 4÷95 % non condensing (see optionals) (air inside)

Power supply From converter (24Vdc)

Power consumption 6W

System accuracy (meter + conv.) after adjustment with absolute mode (not by comparison)
Standard: ±0,5% • ±1% of read value (function of diamenter)

Optionals

- Nominal pressure PN25 – PN40
- Measurement piping AISI316
- Hastelloy B or C - Titanium electrodes
- IP68/10 w.c.m. protection degree
- Length on request
- Special executions on request

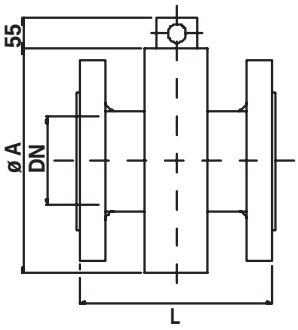
MaG2
electromagnetic flowmeter

Overall dimensions (mm)
with flanges UNI 2277 PN10 (DIN 2576)

DN	A Ø	L Standard	L ISO	Weight (Kg) Standard	Weight (Kg) ISO
20	152	250	200	6	4
25	152	250	200	7	5
32	178	250	200	8	6
40	178	250	200	9	7
50	178	250	200	10	8
65	219	250	200	12	9
80	219	250	200	13	11
100	235	250	200	16	12
125	273	250	250	19	16
150	278	300	300	23	19
200	327	300	350	30	23
250	387	300	450	38	32
300	425	300	500	50	42
350	490	300	550	72	54
400	527	300	600	96	77
450	590	300	-	102	112
500	628	300	-	120	-
600	730	400	-	150	-
700	834	400	-	195	-
800	940	400	-	250	-
900	1038	400	-	290	-
1000	1138	400	-	360	-
1100	1234	600	-	450	-
1200	1341	600	-	540	-

A Vesrion

B Version



Dimensional Drawing

Technical Features

Mounting Flanges UNI 2277/67 PN10

Nominal size
- A Version: from DN20 to DN400
- B Version: from DN40 to DN1200*

Nominal pressure Standard PN10 (see optionals)

Measurement piping AISI304 (see optionals)

Structure and flange Painted carbon steel (see optionals)

Structure Repairable (not welded)

Lining
- A Version: TEFLON®
- B VErsion: Alimentary hard rubber

Process temperature
- A Version: -40 ÷ 150 °C
- B Version: -25 ÷ 110 °C

Anticondensate sealing Polyurethane resin

Measurement electrodes AISI316L - 1.4404 (see optionals)

Measurement range 0,1 ÷ 12m/s

Electrical connections With industrial connector

Thermical class insulation H (180 °C)

* Quotation on request for Ø from DN500 to DN1200 (MaG 2 B Version)

Protection degree IP67 CEI EN 60529 (see optionals)

Temperature range -30 ÷ 80 °C

Humidity range 100% (no air inside)

Power supply From converter (24Vdc)

Power consumption 6W

System accuracy (meter + conv.) after adjustment with absolute mode (not by comparison)

Standard: ±0,2% • ±2% of read value (function of diamenter)

NOTE: Teflon® is registered trademark of DuPont Dow Elastomers

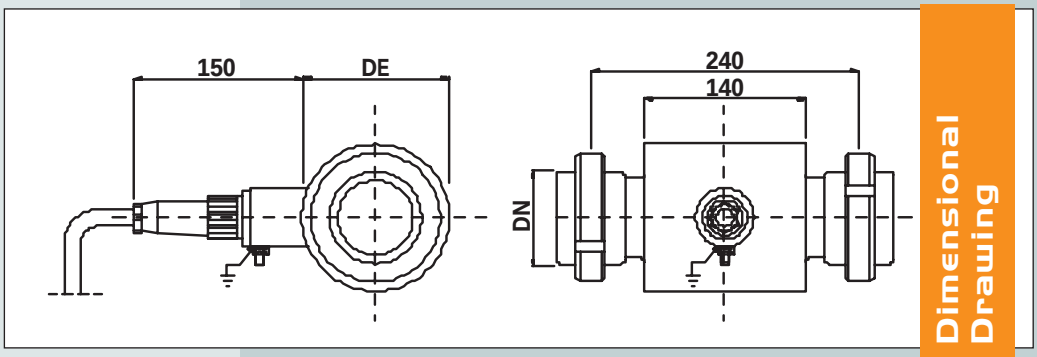
Optionals

- Nominal pressure PN16 – PN25 – PN40 – PN64
- Measurement piping AISI316
- Stainless steel construction (AISI304-1.4301 - 316-1.4401)
- Hastelloy B or C – Titanium electrodes
- IP68-10 w.c.m. protection degree (cable connected and resinated by manufacturer)
- Length on request

MaGD
electromagnetic flowmeter

Overall dimensions (mm)

DN	DE	Weight (Kg)
25	105	6
32	105	6
40	105	6
50	105	7
65	127	7
80	142	8
100	162	9
150	220	11



Dimensional Drawing

Technical Features

Mounting
DIN 11851

Nominal size
From DN25 to DN150

Nominal pressure
Standard PN10

Structure
- Stainless steel (AISI304-1.4301)
- Repairable (not welded)

Lining
Teflon®

Process temperature
-40 ÷ 150 °C

Anticondensate sealing
Polyurethane resin

Measurement electrodes
AISI316L-1.4404 (see optionals)

Measurement range
0,1 ÷ 12 m/s

Electrical connections
with industrial connector

Thermical class insulation
H (180 °C)

Protection degree
IP66 CEI EN 60529 (see optionals)

Temperature range
-30 ÷ 80 °C

Humidity range
100% (no air inside)

Power supply
from converter (24Vdc)

Power consumption
6W

System accuracy (meter + conv.) after adjustment with absolute mode (not by comparison)
±0,2% of read value

NOTE: Teflon® is registered trademark of DuPont Dow Elastomers

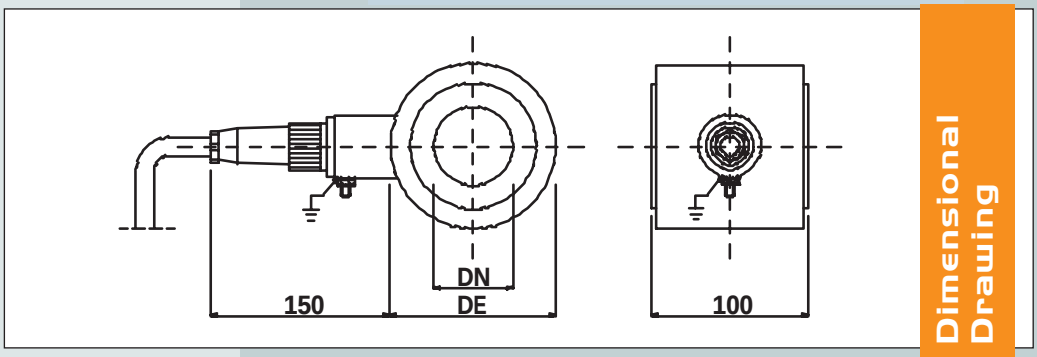
Optionals

- Hastelloy B or C - Titanium electrodes

MaGW
electromagnetic flowmeter

Overall dimensions (mm)

DN	DE	Weight (Kg)
3 6 8 10 15 20 25 32	105	2
40 50	105	3
65	127	3
80	142	4
100	162	4



Dimensional Drawing

Technical Features

Mounting
Wafer

Nominal pressure
from DN3 to DN100

Line pressure
Standard PN10

Structure
- Stainless steel (AISI304-1.4301)
- Repairable (not welded)

Lining
Teflon®

Process temperature
-40 ÷ 120 °C

Anticondensate sealing
Polyurethane resin

Measurement electrodes
AISI316L-1.4404 (see optionals)

Measurement range
0,1 ÷ 12 m/s

Electrical connections
With industrial connector

Thermical class insulation
H (180 °C)

Protection degree
IP66 CEI EN 60529

Temperature range
-30 ÷ 80 °C

Humidity range
100% (no air inside)

Power supply
From converter (24Vdc)

Power consumption
6W

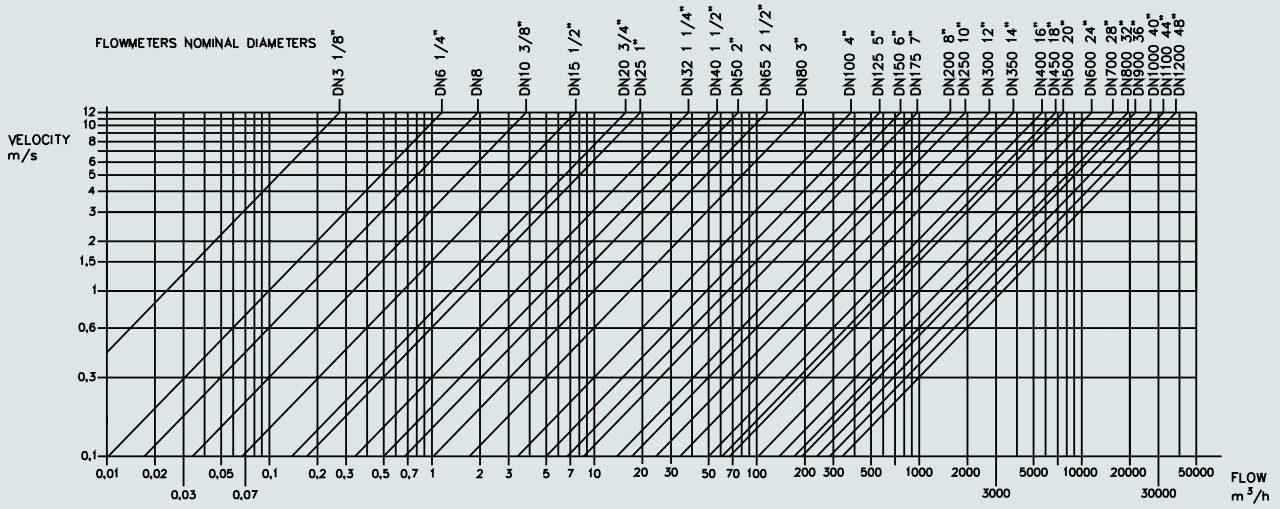
System accuracy (meter + conv.) after adjustment with absolute mode (not by comparison)
Standard: ±1% of read value

NOTE: Teflon® is registered trademark of DuPont Dow Elastomers

Optionals

- Hastelloy B or C - Titanium electrodes

Velocity/Flow Rate
plain to set diameters size



NOTE:
WE SUGGEST TO CHOICE FLOWMETER SIZE TO ENSURE WATER SPEED BETWEEN 1 AND 3 m/s.
THIS ALLOWS OPTIMAL FLOWRATE VALUES AND REDUCES PIPING LOAD LOSS.

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