

MAG 900

SPECIFICATION



Compact (C) version

Inductive flowmeter MAG 910/900 is an instrument designed for measuring and indicating flow and total volume of conductive liquids. The flowmeter MAG 910/900 records both positive and negative flows. As there are no moving parts in the flow profile the device can be used to measure extremely dirty liquids containing solids. The flowmeter is for use with conductive liquids only.

Range of applications. The inductive flowmeter MAG 910/900 has been designed for use in all process industries including chemical, water and wastewater.

Features. The inductive flowmeter MAG 910/900 is a highly accurate and stable device. The construction of the MAG 910/900 indicator uses components with long-term time and temperature stability. Configuration data is backed up and can be recovered after a power failure. The back-up structure enables data recovery in case of a partial loss of data (as a result of e.g. high level electrostatic discharge or noisy power supplies). The internal CPU provides all functions usually built in electronic flowmeters, incl. low flow rate correction, frequency response setting, bandwidth of sensitivity setting at low flow rates, etc.

Inputs / Outputs. Flowmeter MAG 910 is equipped with six isolated outputs and one isolated input as standard. Digital outputs (frequency, pulse and relays) and input are user configurable. Current output 4-20 mA can be used as passive or active type. RS232 and RS485 outputs are available for communication.

Transmitter Specification

Mag900

Min. Media electrical conductivity	$\geq 5 \mu\text{S/cm}$ / $\geq 20 \mu\text{S/cm}$ for demineralised water
Flow range	0.1 to 10 m/s
Accuracy	0.5 % (0.5 to 10 m/s) of reading value 1 % (0.1 to 0.5 m/s) of reading value
Power supply	230 / 115 VAC (+10%, -20%), 50 / 60 Hz 12, 24, 48 V AC/DC (+10%, -15%)
Power consumption	8 VA
Outputs	<ul style="list-style-type: none"> Frequency 0 to 12 kHz with programmable flowrate and function Pulse 0 to 50 Hz with programmable volume, function and pulse width Relay contacts 100V/0.5A with programmable function (as option) Current 4 to 20 mA with programmable flowrate and function Max 500 Ω
Input	Not available on Mag900
Communication	RS232
Displayed values	<ul style="list-style-type: none"> Flowrate (m^3/h, l/s) Volume (m^3, l) Positive, negative and total volume
Control	RS232
Low flow cut-off	Fixed value
Time delay	Fixed value
Electronics Protection	IP65 / Nema 4
Weight of electronics	2 kg
Dimensions of electronics	160 x 160 x 91 mm
Housing material	Die Cast Aluminium
Display	LCD Alphanumeric
Flow Direction	Bi-directional measurement
Other features	Not available on Mag900
Diagnostics	Not available on Mag900
Real time	Not available on Mag900
Datalogger	Not available on Mag900
Control principle	Pulsed DC from transmitter
Hazardous Area Approval	Not available on Mag900
Measurement Filtration	Multi-mode adjustment
Real time	Clock and calendar with back up
Cable terminals	3 pieces PG11

Sensor Specification

Flange	Steel 1.0402 or higher
	Dimensions according to DIN 2501 (BS 4504), ANSI B16.5
Nominal size	10 .. 800 mm
Maximum nominal pressure	1,0 MPa - 2,5 MPa (10,16,25 bar)
Max. media temperature	70°C (158°F) for Hard rubber liner 130°C (266°F) for PTFE liner in remote version
Ambient temperature	-5 to 60°C (23 to 140°F)
Sensor Protection	Standard IP65 / Nema 4, (IP67 / Nema 5)
Liner	Hard rubber, PTFE
Electrodes	CrNi steel 1.4571, Tantalum, Hastelloy C276
Measuring tube	Stainless steel 1.4201, dimensions according to DIN 17457
Accessories options	Earthing rings for plastic and lined pipes
Hazardous Area Approval	Not available on Mag900
Coils	Class E
Outer Casing	Carbon steel as standard
External Coating	Lacquered finish (anticorrosive)
Conformity requirements	<ul style="list-style-type: none"> LVD (safety) according to EN 61010-1, EN61010-1/A2 PED according to directive 97/23/EC EMC according to EN 61000 part 3-2, 3-3, EN 61000 4-3, 4-4, 4-5, 4-6, 4-8, 4-11, EN 61000 part 6-2, EN 50081-1

SENSOR SIZING AND INSTALLATION

HYGIENIC AND WAFER SENSOR SPECIFICATION



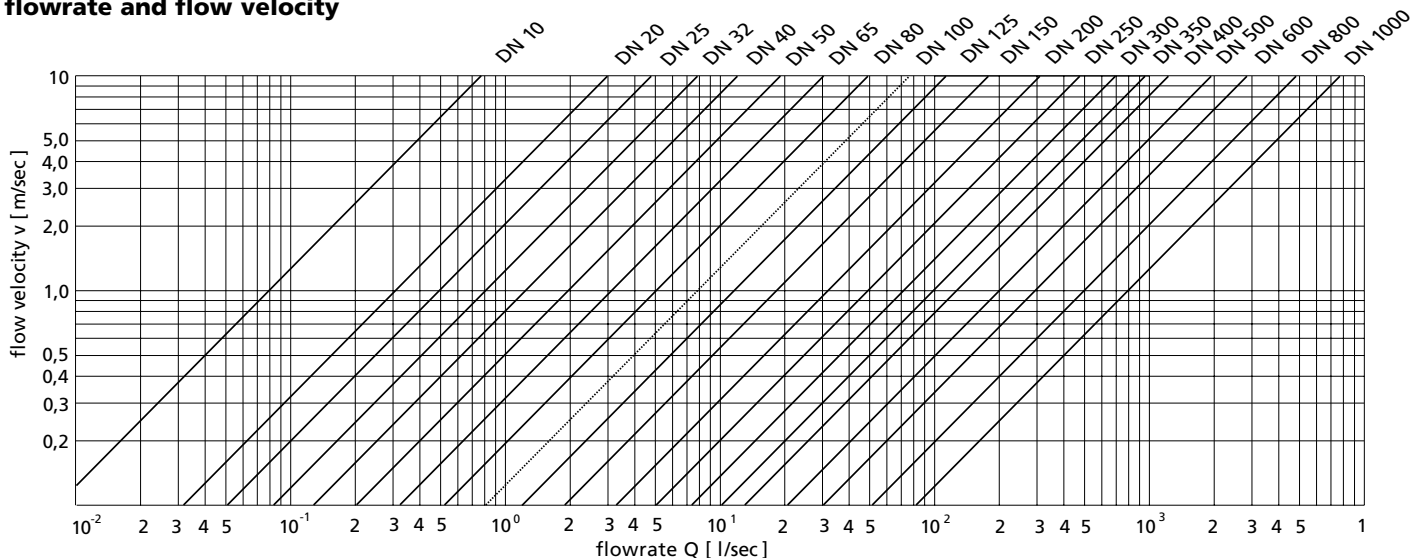
Sanitary fittings
DIN 11851 (S)



Wafer (W)

Hygienic Sensor specification	
Fittings	10 mm to 100 mm 1/2 inch to 4 inch Sanitary fittings DIN 11 851
Option	DIN Flanges
Flow Tube material	Non Magnetic Stainless Steel
Liner	Extruded White PTFE
Electrodes	Stainless Steel
Outer Casing	Stainless Steel
Protection	Standard IP 67 / Nema 5, (IP 68 / Nema 6)
Max. Temperature, and Pressure	356°F / 230 psig (150 degC / 16 bar)
Wafer (W)	
DN	Wafer
50 - 100	PN 10, 16

Diagram for size,
flowrate and flow velocity



Recommended positions
for sensor installation

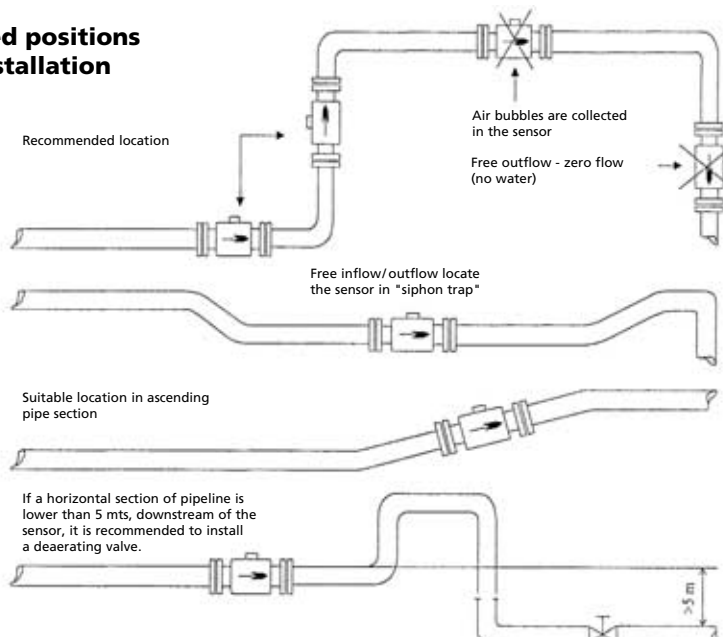


Table for
1 m/s flowrates

DN	m ³ / h	l / min	l / s
10	0,283	4,712	0,079
20	1,131	18,85	0,314
25	1,767	29,452	0,491
32	2,895	48,255	0,804
40	4,524	75,398	1,257
50	7,069	117,81	1,964
65	11,946	199,1	3,318
80	18,096	301,59	5,027
100	28,274	471,23	7,854
125	44,179	736,31	12,272
150	63,617	1060,3	17,671
200	113,10	1885	31,42
250	176,71	2945,2	49,087
300	254,47	4241,2	70,686
350	346,36	5772,7	96,211
400	452,39	7539,8	125,66
500	706,86	11781	196,35
600	1017,9	16965	282,74
800	1809,6	30159	502,65
1000	2827,4	47124	785,4