



DESCRIPTION

NovaMAG Pro is an advanced, accurate, reliable and durable electromagnetic flowmeter.

It has a built-in electrode cleaning circuit functionality and on-site verification function (together with ArtCHECK device), which makes NovaMAG a maintenance-free flowmeter.

The NovaMAG Pro has a wide diameter range available and a variety of mechanical connections (flange, wafer, hygienic). PTFE or hard rubber liner options allow an excellent chemical resistance.

The flow measurement of the electromagnetic flowmeter is bi-directional.

NovaMAG Pro is available in compact and remote versions, with HART output option, temperature and pressure transmitters input options.

SPECIFICATIONS

Line diameters: 20...1600 mm

Pulse output: up to 50 pulse/s

Frequency output: 0.1...2000 Hz

Current output: 4...20 mA

Digital interface: RS-485 (Modbus RTU); HART (optional)

Basic accuracy: $\pm 0.25\%$, $\pm 0.5\%$, $\pm 1\%$

Velocity range: 0.2...12.5 m/s

Flow rate range: 0.0035...90477.9 m³/h

Media temperature: -40...+150 °C

Ambient temperature: Compact version (sensor and transmitter) -20...+50 °C;

Remote version (sensor) -40...+80 °C; (transmitter) -20...+50 °C

APPLICATIONS

Wastewater processes

Irrigation networks

Power generation

Clean water processes

Desalination processes

Pulp and paper industry

Water distribution

Cooling stations - district heating

Potable, chlorinated, fluorinated water, etc.

Appearance, mounting kit contents and/or specifications are subject to change without prior notice. We are constantly working on further improvement of our products.
Delivery is subject to standard terms of delivery.
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TECHNICAL SPECIFICATIONS

MEASUREMENT RANGES OF ACCURACY CLASSES A/B/C FOR TYPICAL DNS

DN mm	Q _{min} m ³ /h			Q _t m ³ /h			Q _{max} m ³ /h		
	±0.25 %	±0.5 %	±1 %	±0.25 %	±0.5 %	±1 %	±0.25 %	±0.5 %	±1 %
20	0.0566	0.1131	0.2280	0.1697	0.3393	0.6841	14.137	14.137	14.137
25	0.0884	0.1767	0.3563	0.2651	0.5301	1.0688	22.089	22.089	22.089
32	0.1448	0.2895	0.5837	0.4343	0.8686	1.7512	36.191	36.191	36.191
40	0.2262	0.4524	0.9121	0.6786	1.3572	2.7362	56.549	56.549	56.549
50	0.3534	0.7069	1.4251	1.0603	2.1206	4.2754	88.357	88.357	88.357
65	0.5973	1.1946	2.4084	1.7919	3.5838	7.2253	149.32	149.32	149.32
70	0.6927	1.3854	2.7932	2.0782	4.1563	8.3797	173.18	173.18	173.18
80	0.9048	1.8096	3.6483	2.7143	5.4287	10.945	226.19	226.19	226.19
100	1.414	2.827	5.7	4.241	8.482	17.101	353.43	353.43	353.43
125	2.209	4.418	8.907	6.627	13.254	26.721	552.23	552.23	552.23
150	3.181	6.362	12.826	9.543	19.085	38.478	795.22	795.22	795.22
200	5.655	11.31	22.802	16.965	33.929	68.406	1413.7	1413.7	1413.7
250	8.836	17.671	35.628	26.507	53.014	106.88	2208.9	2208.9	2208.9
300	12.72	25.45	51.3	38.17	76.34	153.91	3180.8	3180.8	3180.8
400	22.62	45.24	91.21	67.86	135.72	273.62	5654.8	5654.8	5654.8
500	35.34	70.69	142.51	106.03	212.06	427.54	8835.7	8835.7	8835.7
600	50.89	101.79	205.22	152.68	305.36	615.65	12723	12723	12723
800	90.48	180.96	364.83	271.43	542.87	1094.5	22619	22619	22619
1000	141.4	282.7	570	424.1	848.2	1710.1	35343	35342	35343
1200	203.6	407.2	-	610.7	1221.5	-	50894	50894	-
1600	361.9	723.8	-	1085.7	2171.5	-	90478	90478	-

PERFORMANCE

Basic accuracies	±1 %	±0.5 %	±0.25 %
Dynamic range, no less than	1:250	1:125	1:62.5
Nominal error limits of volumetric flow value conversion to frequency output signal	±0.05 %		
Range error limits of volumetric flow value conversion to current output signal	±0.5 %		
Allowable absolute error limits when converting resistance to temperature value	±0.2 °C		

OPERATING CONDITIONS

Media temperature	-40...+150 °C
Ambient temperature	-20...+50 °C (transmitter or transmitter+sensor); -40...+80 °C (sensor)
Non-condensing relative humidity, maximum	80-95 %
Suspended solids content in the fluid	no more than 5 %
Maximum operating pressure	4 MPa
Transmitter ingress protection	IP65 (IP68 option)
Sensor ingress protection	IP67 (IP68 option)
Operation mode	continuous
Average lifetime	10 years
Warranty	2 years

TECHNICAL SPECIFICATIONS

TRANSMITTER

Digital indicating device	999999.999 m ³
Data display: – LCD indicator for measurements and messages – resolution of the lowest order digit (flow measurement) – resolution of the lowest order digit (volume measurement)	2 x 16 characters 0.001 m ³ /h 0.01 m ³
Height	200 mm
Width	200 mm
Length	116 mm
Weight, maximum	1.7 kg

ELECTRICAL SPECIFICATIONS

Pulse output	up to 50 pulse/s (passive, U _s =5..25 V, I _{max} =50 mA)
Frequency output	0.1...2000 Hz (passive, U _s =5...25 V, I _{max} =50 mA)
Current output	4...20 mA (passive, U _s =12...30 V)
Digital communication interface (protocol)	RS-485 (Modbus RTU)
Power supply: – AC voltage 50 Hz – DC/AC voltage – power consumption	110 to 250 V (nominal 220 V) 18 to 36 V (nominal 24 V) no more than 10 W (10 V·A)

ORDERING CODE

NovaMAG Pro		-X	-X	-DNXX-PNXX	-X	-X	-X	-X	-X	-XXX	-XX
TRANSMITTER											
Compact (IP67)		K									
Remote (IP65)		P									
Remote special (IP68)		X									
MECHANICAL CONNECTION											
FLANGE. EN1092			F								
HYGIENIC. TAPER SOCKET WITH GROVED UNION AS PER DIN11851 - DN20 - DN150			M								
WAFER - DN20 - DN200			S								
LINE DIAMETER											
DN	Code	Standard max. pressure	Code	Optional max. pressure	Code						
20	DN20	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
25	DN25	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
32	DN32	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
40	DN40	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
50	DN50	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
65	DN65	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
80	DN80	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
100	DN100	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
125	DN125	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
150	DN150	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
200	DN200	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
250	DN250	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
300	DN300	1.6 MPa	PN16	2.5 / 4.0 MPa	PN25 / PN 40						
350	DN350	1.0 MPa	PN10	1.6 / 2.5 / 4.0 MPa	PN16 / PN25 / PN 40						
400	DN400	0.6 MPa	PN6	1.0 / 1.6 / 2.5 / 4.0 MPa	PN10 / PN16 / PN25 / PN 40						
450	DN450	0.6 MPa	PN6	1.0 / 1.6 / 2.5 / 4.0 MPa	PN10 / PN16 / PN25 / PN 40						
500	DN500	0.6 MPa	PN6	1.0 / 1.6 / 2.5 / 4.0 MPa	PN10 / PN16 / PN25 / PN 40						
600	DN600	0.6 MPa	PN6	1.0 / 1.6 / 2.5 / 4.0 MPa	PN10 / PN16 / PN25 / PN 40						
700	DN700	0.6 MPa	PN6	1.0 / 1.6 / 2.5 MPa	PN10 / PN16 / PN25						
800	DN800	0.6 MPa	PN6	1.0 / 1.6 / 2.5 MPa	PN10 / PN16 / PN25						
900	DN900	0.6 MPa	PN6	1.0 / 1.6 / 2.5 MPa	PN10 / PN16 / PN25						
1000	DN1000	0.6 MPa	PN6	1.0 / 1.6 / 2.5 MPa	PN10 / PN16 / PN25						
on demand 1100-1600	DNXXXX	on demand	PNXX	-	-						
LINER											
Hard rubber (only for flange and wafer)					HR						
					PTFE	PTFE					
Other (specify when ordering)					X						
ACCURACY											
Class A – accuracy ±1.0 %					A						
Class B – accuracy ±0.5 %					B						
Class C – accuracy ±0.25 %					C						
Other (specify when ordering)					S						
OUTPUT SIGNAL											
RS-485 output (Modbus RTU) by default / pulse/frequency output (passive)					0						
RS-485 output (Modbus RTU) by default / pulse/frequency output (passive) + 4...20 mA (passive)					1						
RS-485 output (Modbus RTU) by default / 4...20 mA with HART interface					H						

ORDERING CODE

NovaMAG Pro	-X	-X	-DNXX-PNXX	-X	-X	-X	-X	-X	-XXX	-XX
POWER SUPPLY										
							110–250 V AC (50 Hz)	0		
							18–36 V DC/AC	2		
ELECTRODE MATERIAL										
							Stainless steel 316L	S		
							Hastelloy (nickel alloy)	H		
							Titanium	T		
							Platinum	P		
							Other (specify when ordering)	A		
INTERCONNECTING CABLE (SENSOR-TRANSMITTER)										
							Not available in compact version		00	
							5 m (standard minimum length)		M5	
							Any value up to 50 m (1 m)		M50	
							More than 50 m (1 m) – on request		MXX	
ADDITIONAL OPTIONS										
							Not available in compact version			0
							2 inputs for Pt100 temperature sensor (4-wire connection)			T
							1 input for 4...20 mA pressure transmitter (2-wire connection), passive			D
							2 inputs for Pt100 temperature sensor (4-wire connection) and 1 input for 4...20 mA pressure transmitter (2-wire connection), passive			TD
							Grounding rings (included)			GR