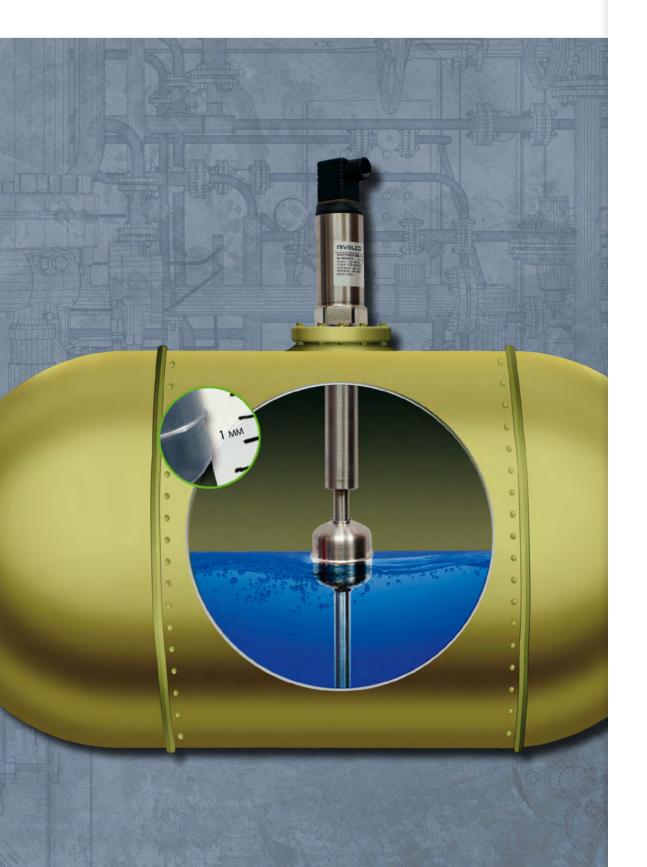
NIVOTRACK



MAGNETOSTRICTIVE INTEGRATED LEVEL TRANSMITTERS



GENERAL DESCRIPTION

NIVOTRACK MID-5DD, MYD-5DD magnetostrictive level transmitters are ideal solutions for high accuracy measurements of clean fluids. Its high precision renders the NIVOTRACK suitable for custody transfer measurements. Integrating the transmitter into a process control system is easy thanks to the intelligent signal processing and communication software as well as the wide of range of accessories offered.

OPERATING PRINCIPLE

A float containing a magnetic disc moves along a guide tube with the specific magnetostrictive wire in it. A pulse generated by the electronics travels along the magnetostrictive wire. At the point the pulse reaches the float's magnetic field, a torsion develops. Reflected from the torsion point, the pulse creates an acoustic wave that travels back along the wire. The 4-20~mA output of the transmitter is proportional to the elapsed time between the excitation and detection.

MAIN FEATURES

- 2-wire integrated transmitter
- 1 mm resolution
- Distance and level measurement
- Standard and mini type versions
- Stainless steel or titanium floats
- IP65 protection
- HART® communication
- Chemicals, solvents, hydrocarbons
- Level monitoring of tanks
- Interface measurement

APPLICATIONS

- Level measurement of liquids, with minimum 0.4 kg/dm³ density
- Chemical industry
- Power plants
- Oil industry
- Water industry



MIA-513

TECHNICAL DATA

Туре		Rigid probe version – standard (MI□)	Rigid probe version – mini (MY□)	
Measured process value		Liquid level, distance		
Nominal length (L)		0.3 m – 3.5 m		
Material of the tube		1.4571 (316Ti) stainless steel		
Max. medium pressure ⁽¹⁾		2.5 MPa (25 bar)	1.6 MPa (16 bar)	
Medium temperature ⁽¹⁾		-40 °C +90 °C		
Standard float diameter / material ⁽¹⁾		Ø54 x 60 mm cylindrical / 1.4404	Ø28 x 29 mm / 1.4404	
Medium density		Ø54 mm float min. 0.8 g/cm³; Ø54 mm titanium float min. 0.55 g/cm³ Ø95 mm float min. 0.55 g/cm³ Ø124 mm or Ø95 mm titanium float min. 0.4 g/cm³		
Material of wetted parts		Stainless steel: 1.4571 (316Ti), floats: see "Float Selection"		
Ambient temperature		-40 °C +70 °C		
	Analogue	4 – 20 mA (limit values: 3.9 – 20.5 mA)		
Output	Digital communication	HART® (minimum loop resistance: 250 Ω)		
Error indication		Output signal = 22 mA or 3.8 mA		
Output lo	pad	Rt = (Ut - 12.5 V) / 0.02 A, $Ut = power supply voltage$		
Power su	ıpply	12.5 V – 36 V DC		
Electrical	protection	Class III		
Ingress protection		IP65		
Process connection		As per order code		
Electric connection (M□□-5□□-M types)		Hirschmann EN 175 301-803-A (DIN 43650)		
Mass		2.9 kg + measuring probe: 0.6 kg/m	2.9 kg + measuring probe: 0.3 kg/m	

⁽¹⁾ Details of non-standard floats can be found under "Float Selection".

MEASUREMENT DATA

Туре	M□□-5□□-□
Resolution (on HART® transmitted value)	1 mm
Nonlinearity (on HART® transmitted value)	± 2 mm or $\pm 0.085\%$ F.S. whichever is greater
Hysteresis (under reference conditions)	±0.25 mm
Zero span (in LEVEL measurement mode)	Anywhere within the active range
Measurement range (reducing)*	Minimal range: 32 mm; Maximum range: see "Dimensions"
Temperature error	0.04 mm / 10 °C (between -25 °C +50 °C)
Current output resolution	0.4 µA
Current output accuracy	33 µА
Current output temperature error	6 ppm / °C
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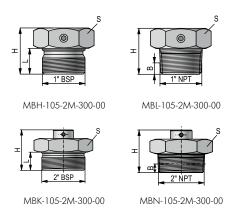
^{*}The accuracy data is only valid for factory default settings!

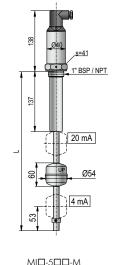
FLOAT SELECTION

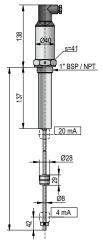
Туре	MBA-505- 2M-600-00 ⁽¹⁾⁽⁴⁾	MBA-505- 2M-800-00 ⁽¹⁾⁽⁴⁾	MBA-505- 2M-200-00 ⁽¹⁾⁽⁴⁾	MBK- 2M-400-00 ⁽²⁾⁽⁴⁾	530- 2M-800-00 ⁽²⁾⁽⁴⁾	MBA-505- 2M-900-00 ⁽²⁾⁽⁴⁾	4w34bs- 1 6yyyyy ⁽³⁾⁽⁵⁾
Dimensions	050 UP	88	UP	66	UP	UP 0124	9.5 80 UP 028
Medium density (min.)	0.45 kg/dm ³	0.55 kg/dm ³	0.8 kg/dm ³	0.55 kg/dm³	0.4 kg/dm³	0.4 kg/dm³	0.8 kg/dm³
Material	Titar	nium	1.4404	1.4435	Titanium	1.4401	1.4404
Medium pressure	2 MPa (20 bar)			2.5 MPa (25 bar)			1 MPa (10 bar)

⁽¹⁾ Designed for min. 2" process connection, only order with rigid probe. (2) Flange to be ordered separately. (3) Designed for min. 1" process connection, only order with mini type. (4) Not available for MYIII type. ⁽⁵⁾ Only available for MY□ type.

DIMENSIONS



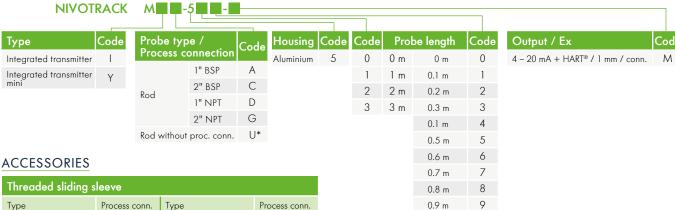




 $MI\square$ -5 $\square\square$ -M

 $MY \square -5 \square \square -M$

ORDER CODES (NOT ALL COMBINATION AVAILABLE)



Threaded sliding sleeve				
Туре	Process conn.	Туре	Process conn.	
MBL-105-2M-300-00	1" NPT	MBH-105-2M-300-00	1" BSP	
MBN-105-2M-300-00	2" NPT	MBK-105-2M-300-00	2" BSP	

Minimal probe	length: 300 mm.
*With optional p	process connection.