

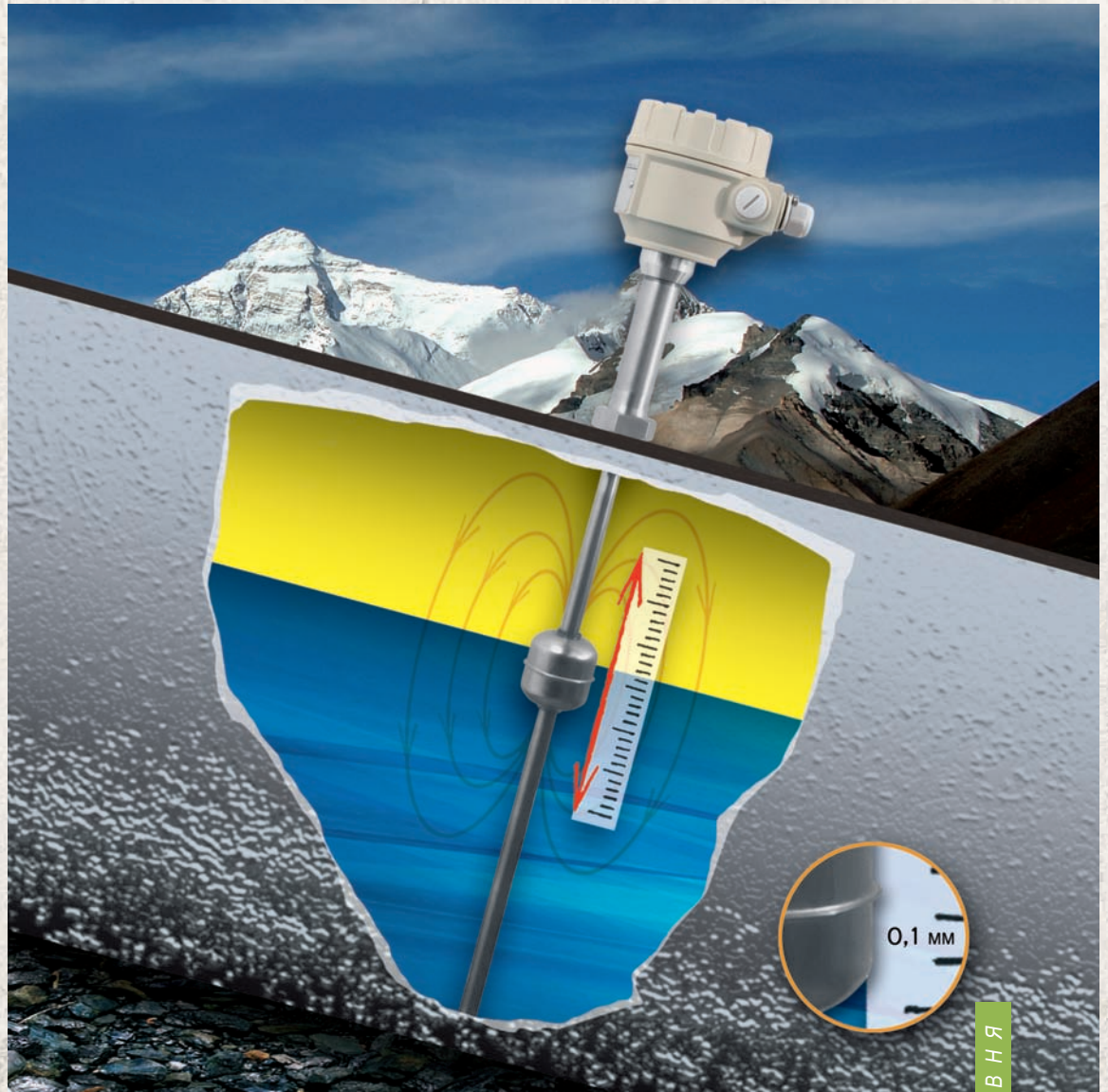
Разрешение 0,1 мм



RusAutomation

NIVOTRACK

МАГНИТОСТРИКЦИОННЫЕ ПРЕОБРАЗОВАТЕЛИ
И ДАТЧИКИ УРОВНЯ ВОДЫ



30 YEARS

П И В Е Л

В С Е Г Д А Н А В Ы С Ш Е М У Р О В Н Е

ПРЕОБРАЗОВАТЕЛЬ УРОВНЯ

GENERAL DESCRIPTION

NIVOTRACK magnetostrictive level transmitters are an ideal solution for high accuracy measurement of clean fluids. Its high precision renders the NIVOTRACK suitable for custody transfer measurement of liquids such as fuels, solvents, alcohol derivatives etc. Units with flexible tube do not only make this accurate measurement for higher tanks possible, but offer a more convenient way for shipment and installation. Plastic coated versions of the NIVOTRACK substantially expand the field of application by a wide range of aggressive materials. 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.

MAIN FEATURES

- 0.1 mm or 1 mm resolution
- Insertion length maximum 15 m
- OIML R 85 international certification
- Compact type
- Rigid or flexible guide tube
- Plastic coated version for chemicals
- 4 – 20 mA and HART® output
- Graphic display
- 99 point linearization table
- Measurement optimisation
- Volume measurement
- ATEX certified versions
- IP67 protection

APPLICATIONS

- Custody transfer measurement
- Oil and gas industry
- Fuels and gasoline products
- Pharmaceutical industry
- Chemical industry
- Food industry
- Alcohols and beverages
- Installation in bypass tubes feasible
- Supplementary level transmitter for NIVOFLIP magnetic flip indicator

CERTIFICATIONS

- ATEX (Ex ia)
- ATEX (Ex d)
- ATEX (Ex d ia)
- OIML R 85 international certification
- EAC
- IEC (Ex ia)
- IEC (Ex d)
- IEC (Ex d ia)
- FM



FLOATS

Type	MBA-505-2M-800-00 ⁽¹⁾	MBA-505-2M-200-00 ⁽¹⁾	MBK-530-2M-400-00 ⁽²⁾	MBA-505-2M-900-00 ⁽²⁾	MGU-505-2M-200-00 ⁽²⁾	MGU-505-1M-200-00 ⁽²⁾	4w34bs-16yyyyy ⁽³⁾
Dimensions							
Medium density (min.)	0.55 kg/dm ³	0.8 kg/dm ³	0.55 kg/dm ³	0.4 kg/dm ³	0.7 kg/dm ³	0.4 kg/dm ³	0.8 kg/dm ³
Material	Titan	1.4404	1.4435	1.4401	PVDF	PP	1.4404
Medium pressure	2.5 MPa (25 bar)				0.6 MPa (6 bar)	0.3 MPa (3 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

TECHNICAL DATA

Type	Rigid probe version	Flexible probe version	Plastic coated rigid probe version	Mini version with rigid probe
Measured process value	Liquid level, distance, volume			
Nominal length (L)	0.5 m – 4.5 m	2 m – 15 m	0.5 m – 3 m	0.5 m – 1.5 m
Material of the tube	1.4571 (316Ti) stainless steel		PFA coated stainless steel	1.4571 stainless steel
Max. process pressure ⁽¹⁾	2.5 MPa (25 bar)	1.6 MPa (16 bar)	0.3 MPa (3 bar g)	1 MPa (10 bar)
Medium temperature	-40 °C ... +90 °C, see: temperature diagram			
Standard float diameter / material ⁽²⁾	Ø53.5 x 60 mm cylindrical / 1.4404 (316L)	Ø96 mm ball / 1.4435 (316L)	Ø76 x 87 mm cylindrical / PVDF / PP	Ø28 x 28 mm cylindrical 1.4404 (316L)
Medium density	Depends on the applied float			
Material of wetted parts	Stainless steel: 1.4571, 1.4404 (316 Ti, 316 L)		PFA, PVDF, PP	St. steel: 1.4571, 1.4404
Ambient temperature	-40 °C ... +70 °C, plastic housing: -25 °C ... +70 °C, with display: -25 °C ... +70 °C, Ex type: see temperature diagram in the user's manual			
Output	Analogue	4 – 20 mA (limit values: 3.9 – 20.5 mA)		
	Digital	4 – 20 mA + HART®		
	Display	SAP-300 graphic display		
Damping time	Adjustable 0 s – 99 s			
Error indication	22 mA or 3.8 mA or holding			
Output load	$R_i = (U_i - 12.5V) / 0.02 A$, $U_i =$ power supply voltage			
Power supply	12.5 V – 36 V DC			
Electrical protection	Class III			
Ingress protection	IP67			
Process connection	As per order code			
Electric connection	2x M20 x1.5 plastic cable glands for 6 – 12 mm cable + 2x NPT ½" internal thread for cable protective pipe terminal block for 0.5 – 1.5 mm ² wire cross section Ex type: see „Special data for Ex certified models” table			
Housing	Plastic (PBT) or paint coated aluminum or stainless steel			
Mass	1.7 kg + m. probe: 0.6 kg/m	2.9 kg + m. probe: 0.3 kg/m + counter weight 3.5 kg	1.7 kg + m. probe: 0.7 kg/m	1.7 kg + m. probe: 0.6 kg/m

⁽¹⁾ Depends on selected float, with sliding sleeve connection the max. process pressure is 0.3 MPa (3 bar)

⁽²⁾ Requested float type should be specified when placing an order

MEASUREMENT DATA

Type	1 mm resolution	0.1 mm resolution
Nonlinearity (of the displayed and the transmitted value on the HART line) ⁽³⁾	±2 mm or ± 0.02% F.S. whichever is greater	±1 mm or ±0.01% F.S. whichever is greater
Hysteresis ⁽³⁾	< ±1 mm	< ±0.25 mm
Zero span (in LEVEL measurement mode)	Anywhere within the active range	
Measurement range (reducing)	Min. range: 200 mm; Max. range: as per probe length	
Temperature error	0.04 mm / 10 °C between (-25 °C ... +50 °C)	
Current output data	Resolution: 2 µA, Accuracy: 10 µA, Temperature error: 200 ppm/ °C	

⁽³⁾ Under reference conditions

SPECIAL DATA FOR Ex CERTIFIED MODELS

Type	M□□-5□□-□ Ex M□□-7□□-□ Ex	M□□-5□□-E Ex M□□-5□□-F Ex	
Housing	Construction	Single compartment	Dual compartment
	Material	Paint coated aluminium or stainless steel	
Protection type	Intrinsically safe	Flameproof enclosure	Intrinsically safe with flameproof enclosure
Ex marking	ATEX, IEC Ex		FM
	⊕ II 1 G Ex ia IIB T6...T5 Ga 0.5 ... 15 m; Ex ia IIB T6...T5 Ga 0.5 ... 15 m	⊕ II 2 G Ex d IIB T6...T5 Gb 0.5 ... 10 m; Ex d IIB T6...T5 Gb 0.5 ... 10 m	⊕ II ½ G Ex d ia IIB T6...T5 Ga/Gb 0.5 ... 10 m; Ex d ia IIB T6...T5 Ga 0.5 ... 10 m
Ex power supply, Intrinsically safe data	U _{imax} = 30 V, I _{imax} = 140 mA, P _{imax} = 1 W, C _i < 15 nF, L _i < 200 µH	U _i : 12.5 V DC...36 V DC, I _{imax} = 140 mA	U _i : 12.5V DC...35V DC, I _{imax} = 22 mA, U _{im} = 250 V
Cable gland	M20x1.5 cable gland	Metal M20x1.5 cable gland Ex d certification	
Cable outer diameter	Ø7 – 13 mm	Ø9 – 11 mm	

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