

SEM RAD

NIVOPRESS N

HYDROSTATIC LEVEL TRANSMITTER



- ◆ 4 ... 20 mA output
- ◆ Wide range of measurement
- ◆ Level gauge for wells, basins reservoirs
- ◆ Also for mildly aggressive mediums
- ◆ Internal or flush diaphragm
- ◆ Accuracy 0,25% or 0,5%
- ◆ Surge and polarity protection

ABOUT NIVOPRESS

NIVOPRESS N submersible hydrostatic level transmitter consists of a special breathing cable (containing capillary tube and stress resistant inlet) and a probe. There are two different designs of the stainless steel probe: with ceramic flush diaphragm and stainless steel diaphragm behind a plastic protection cap.

The level metering is based on the measuring of the pressure difference between the hydrostatic pressure of the liquid head over the diaphragm and the actual atmospheric pressure. This pressure difference is converted into 4 ... 20 mA current in the 2-wire version and 0 ... 10 V DC voltage in the 4 - wire version.

Easy installation and wiring is ensured by the use of the complete set of accessories.

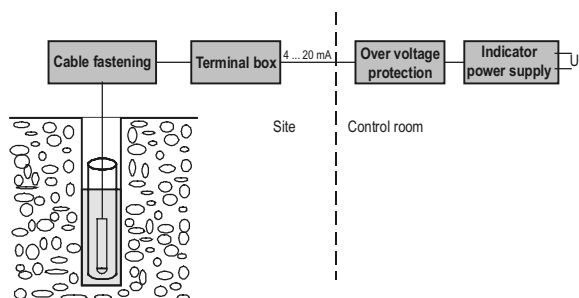
For outdoor measurements the application of over voltage protection (OVP) is suggested.

To ease installation the use of terminal box (with or without OVP) is recommended serving as terminal for the wires and for the breathing tube.

APPLICATION

NIVOPRESS NPK-200 hydrostatic level transmitters are applicable to clean liquids in bore holes and is especially recommended for monitoring and controlling submersible pumps.

NIVOPRESS NMK-300 type units with flush diaphragm are for level measurement of tanks and reservoirs and also suitable for contaminated liquids.



TECHNICAL DATA

TRANSMITTER PROBE

TYPE	NPK-200	NMK-300	NMH-300	NPH-200	
Range	0 ... 200 m water head	0 ... 20 m water head		0 ... 200 m water head	
In accordance with the order code					
Maximum pressure as the multiplied range	3 x	20 x (h ≤ 3 m wh.) 10 x (> 3 m wh.)		3 x	
Output signal	2-wire. 4 ... 20 mA		3-wire 0...10V (OV≤80mV)		
Power supply	9 ... 30 V DC	12 ... 30 V DC		18...30 VDC	
Maximum resistance U _s = voltage of p. source U _{min} = min. voltage	$R_s = \frac{(U_s - U_{min})}{0,02A}$		≥ 5 kOhm		
Power consumption	—		< 6 mA		
Accuracy	± 0,5 %	± 0,25 %		± 0,5 %	
Temperature coefficient	≤ ± 0,1 % / 10K		≤ ± 0,2 % / 10 K		
Temperature range	- 10 °C...+60 °C for special order +75 °C				
Temperature of storage	-10 °C ... +50 °C				
Ingress protection	IP 68				
Electric protection	Class III				
Electric connection	Shielded, breathing cable Ø 7 mm				
Cable cross section	0,34 mm ²				
Cable length	0 ... 300 m in accordance with the order code				
Dimension	Ø22 x145 mm	Ø 40 x 150 mm	Ø 22x145 mm		
Mass	probe: 0,2kg	probe:0,4 kg	Probe: 0,2 kg		
Cable: ~ 0,06 kg/m					
Material of wetted parts	Diaphragm	1.4404	Al ₂ O ₃ ceramic	1.4404	
	Housing	1.4571	1.4404	1.4571	
	Cable coat	Polyurethane	Polyethylene	Polyurethane	
	Gasket	VITON (FKM)			
	Protection cap	ABS	—		ABS

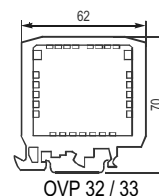
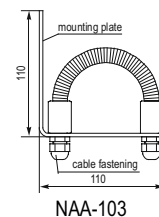
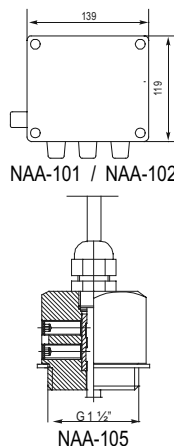
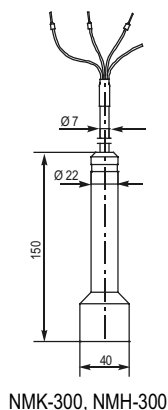
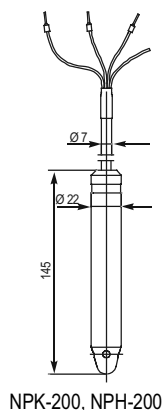
ACCESSORIES

CABLE TERMINAL BOX		NAA-101	
Dimension	139 x 119 x 70 mm		
Ingress protection	IP 65		
Ambient temperature	-40 °C ... +65 °C		
Material	Polycarbonate		
Conduit	ASM 16 (cable outer diameter. Ø5... Ø10 mm)		
Electric connection	Terminal screw (cross section max. 2,5 mm ²)		
CABLE TERMINAL BOX WITH SURGE PROTECTION NAA-102 *			
General data	Same as with NAA-101		
Electric data	Same as with OVP		
CABLE FASTENING		NAA-103 / NAA-105	
Maximum cable length	150 m / 100 m		
Ambient temperature	-10 °C ... + 45 °C		
Dimension	110 x 110 mm		
SURGE PROTECTION		OVP12/33 *	OVP32/33 *
Version	Open air		DIN 35 mm rail mounted
Dimension	72 x 42 x 19 mm		62 x 65 x 18 mm
Ingress protection	IP 54		IP 20
Wire	Cross section max. 2,5 mm ²		
Voltage clipping	33 V		
Pulse power	600 W / 1 ms		
Input resistance	13 ohm		
Leakage current	≤ 10 µA		

* For 4 ... 20 mA loop powered units only

ACCESSORIES

DIMENSIONS



ORDER CODE (Not all combinations possible)

NIVOPRESS N - -

ACCURACY	CODE	OUTPUT	CODE	DIAPHRAGM	CODE	RANGE.*	CODE	CABLE LENGTH	CODE	CABLE LENGTH	CODE
0,25%	M	2-wire	K	Ø 22 mm internal	2	1 m wh.	1	0 m	0	0 m	0
0,5%	P	4 ... 20 mA		Ø 45 mm front	3	2 m wh.	2	10 m	1	1 m	1
		3-wire.	H			5 m wh.	3	20 m	2	2 m	2
		0 ... 10 V DC					10 m wh.	4	30 m	3	3 m
						20 m wh.	5	40 m	4	4 m	4
						50 m wh.	6	50 m	5	5 m	5
						100 m wh.	7	60 m	6	6 m	6
						200 m wh.	8	70 m	7	7 m	7
								80 m	8	8 m	8
								90 m	9	9 m	9
								100 m	A	0 m	0
								200 m	B	10 m	1
								300 m	C	:	:
										90 m	9

* Special ranges or models with engineering unit of bar also available

Technical specification may be changed without notice