Thank you for choosing NIVELCO instrument.
We are sure that you will be satisfied throughout its use!

NIPRESS

DD□-1□3-□

DIFFERENTIAL PRESSURE TRANSMITTER

User's manual

1. APPLICATION

The **NIPRESS DD** series differential pressure transmitters measure pressure and convert it into voltage or current. DD-100 family uses piezoresistive silicon sensor, has various measuring ranges between 0-1 bar. Wall mountable design, suitable for the measurement of gases and compressed air. This device has short circuit protection and inverse polarity protection.

2. TECHNICAL SPECIFICATION

2.1 GENERAL DATA

TYPE		DD□-1□3-□	
Measurement range		0 – 1000 mbar according to the order code	
Overload capability		According to the order code	
Accuracy (at the full measuring range)		≤ ±1%	
Medium temperature		0 °C … +50 °C	
Ambient temperature			
Sensor type		Piezoresistive	
Materials of the wetted parts	Sensor	Piezoresistive silicon sensor	
	Process connection	Brass nickel plated, PVC / silicone tube (inside the device)	
Housing		ABS	
Output signal		4 – 20 mA / 0 – 10 V	
Power supply	2-wire	4 – 20 mA output: U_{Supply}= 11 – 32 V DC	
	3-wire	0 – 10 V DC output: U_{Supply}= 19 – 32 V DC	
Load resistance		4 – 20 mA 2-wire current output	R_{Max}=[(U_{Supply}-11V) / 0.02 A] Ω
		0 – 10 V DC 3-wire voltage output	R > 10 kΩ
Display		Optional 5 (8 mm size) or 8 (5 mm size) digit display	
Process connection		According to the order code	
Electrical connection		M12x1.5	
Ingress protection		IP54	
Electric protection		SELV Class III	
Mass		~0,165 kg	

2.2 ACCESSORIES

- User's manual
- Warranty Card
- Declaration of Conformity

2.3 ORDER CODE

NIPRESS D D □ - 1 □ 3 - □

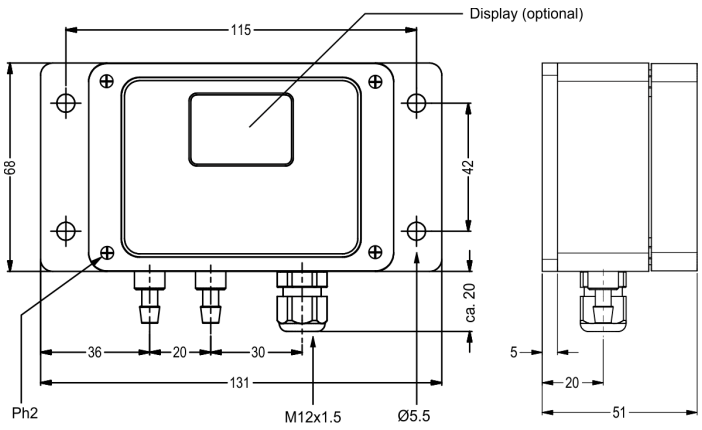
PROCESS CONNECTION	CODE
Ø6.6 x 11; for flex tube Ø6	P
Ø4.45 x 10; for flex tube Ø4	R

MEASURING RANGE / (MAX. STATC PRESSURE) MBAR		Code
0 – 6	(200)	1
0 – 10	(345)	2
0 – 16	(345)	3
0 – 25	(345)	5
0 – 40	(345)	6
0 – 60	(345)	7
0 – 100	(345)	9
0 – 160	(1000)	A
0 – 250	(1000)	C
0 – 400	(3000)	D
0 – 600	(3000)	E
0 – 1000	(3000)	F

OUTPUT	CODE
4 – 20 mA, 2-wire	2
0 – 10 V, 3-wire	3

Manufacturer
NIVELCO Process Control Co.
H-1043 Budapest, Dugonics u. 11.
Phone: (36-1) 889-0100 Fax: (36-1) 889-0200
E-mail: sales@nivelco.com www.nivelco.com

2.4 DIMENSIONS



3. MOUNTING

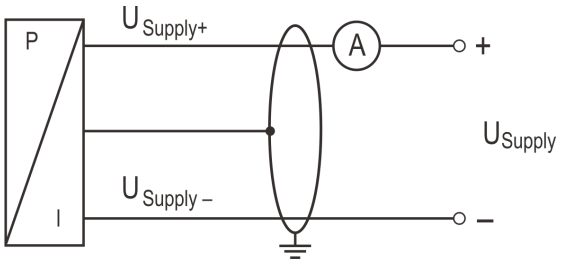
The device has been calibrated in vertical position, when process connections are oriented to down. If it is differently mounted, a tiny deviation can appear at the zero point. This deviation can be fixed with the „A" potentiometer. This setting does not change the calibration of the device. In case of open air installation we suggest to use protective cover against the moisture and splashy water because the improper tight of the screws can result failure.

3.1 INSTALLATION INSTRUCTIONS

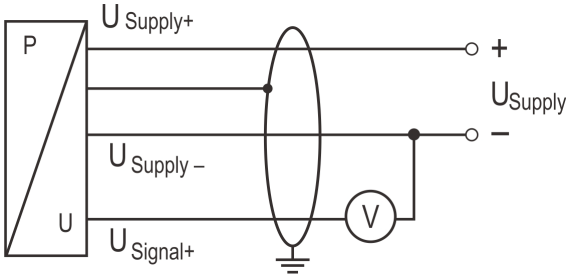
Install the device only in pressureless and currentless (voltageless) state! After front cover removal pull the cable through the gland and connect it to the X1 terminal strip with correct wiring. Tighten the gland screw firmly until proper sealing. Once wires connected, mount back the front cover.

4. WIRING

The unintentional touch of the inner terminal strip may cause electrostatic discharge which may result the failure of the device. To avoid that please touch a grounded point before opening the device.

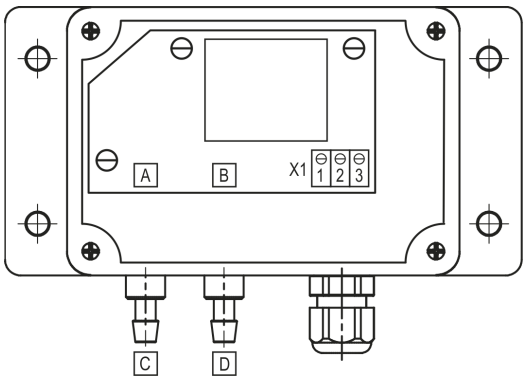


2-wire current output



3-wire voltage output

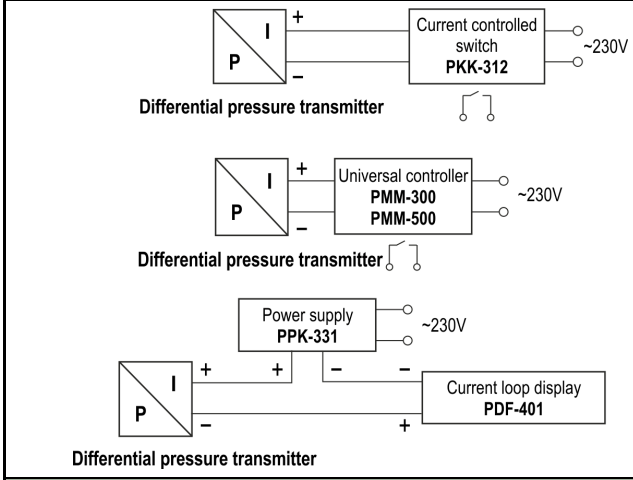
Wiring	X1 terminal strip	
	2-wire 4 – 20 mA	3-wire 0 – 10 V
U_{Supply}+	2	2
U_{Supply} –	3	3
U_{Signal} +	–	1



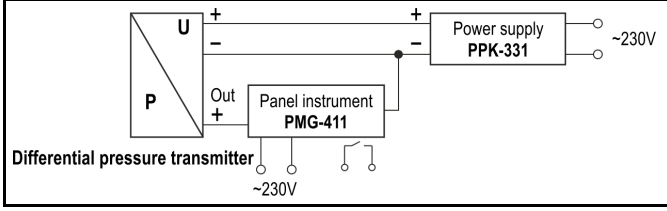
A. Potentiometer for adjusting the offset. Only to set the zero point deviation caused by the mounting!
B. Potentiometer for adjusting the response time between 50 ms - 2.5 s (min. to the left, max. to the right).
C. Negative pressure connection.
D. Positive pressure connection.

4.1 APPLICATION EXAMPLES

WIRING OF 2-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS



WIRING OF 3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS



5. MAINTENANCE AND REPAIR

The instrument does not require regular maintenance. If necessary possible dirt deposited should be cleaned off. Repair will be carried out at the manufacturer' premises only.

6. STORAGE CONDITIONS

Storage temperature: -10 °C … +70 °C

ddr1132a0600h_01
October 2018