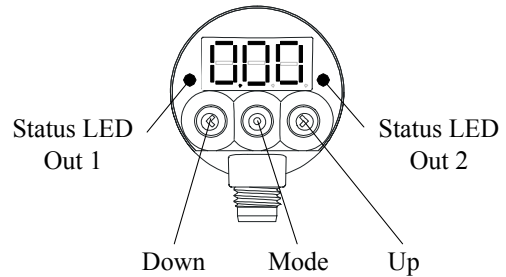




Start-up

- Apply voltage
- Display



1.) Factory settings

OU1	Output 1	OU2	Output 2	SF	Special functions
HY1	Hysteresis mode	HY2	Hysteresis mode	PU	Pressure unit bar
S-1	-0.46 bar	S-2	-0.79 bar	UnL	Unlock
H-1	0.07 bar	H-2	0.07 bar		
nc1	NC mode	nc2	NC mode		
ED1	0 sec.	ED2	0 sec.		
EF1	0 sec.	EF2	0 sec.		

The Clear All special function loads the factory settings, and all previous settings are cancelled.

2.) Settings options

OU1	Output 1	OU2	Output 2	SF	Special functions
HY1	Hysteresis mode	CP2	Comparator mode	PU	Pressure unit
S-1	Switching threshold	U-2	Upper switching threshold	CLR	Factory settings
H-1	Hysteresis	L-2	Lower switching threshold	UnL	Unlock
nc1	Normally closed	NO2	Normally open	DR	Rotate display 180°
ED1	Closing delay	ED2	Closing delay		
EF1	Release delay	EF2	Release delay		

- The menu items listed under OU1 are settings specific to output 1
- The menu items listed under OU2 are settings specific to output 2
- The menu items listed under SF OU2 are general settings which influence both outputs.

Output settings options

- Hysteresis mode
 - Switching threshold
 - Hysteresis
 - Type of contact (normally open, normally closed)
 - Closing delay
 - Release delay
- Comparator mode
 - upper switching threshold
 - lower switching threshold
 - Type of contact (normally open, normally closed)
 - Closing delay
 - Release delay

Special functions settings options

- Pressure unit => bar, mmHg, inHg, Kpa
- Clear All => factory setting loaded
- Key lock activated = BLC, inactive = UnL
- Rotate display 180°

3.) General procedure for adjusting settings

By following the flow diagram, you can move to any menu item you wish using the three buttons (Up, Down and Mode).

- For example: output 2
 - Comparator mode
 - lower threshold -0.3 bar
 - upper threshold -0.5 bar
 - Position of normally closed contact
 - Closing delay 0 sec.
 - Release delay 0 sec.
- Procedure: Measure mode output
 - a) Briefly press Mode button => OU1 display
 - b) Briefly press Up button => OU2 display
 - c) Briefly press Mode button to enter Menu level. => HY2 display
 - d) Proceed to desired menu item with Up or Down button and confirm by pressing Mode button.
 - e) In this case: confirm HY2 with Mode button. => HY2 display flashes
 - f) Go to the desired setting with the Up or Down button
In this case: CP2. Then confirm setting with Mode button.
 - g) To adjust further settings, follow the procedure in d) above.
In this case, set U-2 (lower threshold) and confirm with Mode button. => U-2 display flashes
 - h) Adjust the desired setting with the Up or Down button.
In this case: set U-2 to 0.50 and then confirm setting with Mode button.
 - i) Proceed in the same way for all other settings.
 - j) To enter another setting level, e.g. output 1 (OU1) or special functions (SF), you use the Up or Down button to go to the menu item rEt (Return). If this is confirmed with the Mode button, you arrive at the previous level. In this case you would arrive at the menu item OU2 and now you can switch between the menu items Output 1 or Special functions with the Up or Down button in order to adjust settings.

4.) Activate key lock

The locking function ensures that the switch settings are safeguarded against unintentional changes or manipulation. To activate the locking function, proceed as follows:

- Starting state is Measure => Display: Pressure activated
- Briefly press Mode button (select level) => Display OU1
- Press Up or Down button until SF reached => Display SF
- Briefly press Mode button until menu entered => Display PU
- Press Up or Down button until UnL reached => Display UnL
- Briefly press Mode button until menu entered => Display UnL flashes
- Set BLC with Up or Down button => Display BLC flashes
- Confirm setting with Mode button => Display Measure

5.) Deactivate key lock

- Briefly press Up, Down and Mode buttons simultaneously => Display BLC
- Briefly press Mode button once => Display BLC flashes
- Set UnL with Up or Down button => Display UnL flashes
- Confirm with Mode button => Display UnL static
- Return to Measure state via rEt (Return) menu item

6.) Selectable display units

The following units of measurement are available

Display	Procedure for adjusting settings
-68 bar	Looking at the flow diagram, select the menu item SF (special functions) and briefly press Mode button. PU appears on the display (pressure unit). Select PU with Mode button. Now the desired unit can be selected with the Up or Down button. Confirm the selected unit with the Mode button and exit the menu via the rEt function (Return).
-PA KPa	
-49 mmHg	
-1H inHg	

7.) Setting display to zero

- Operate switch in Measure mode
- Depress Mode button for 3 sec.
- Display is set to zero

8.) Peak values

- Briefly press Down button, the lowest measured value will be displayed for 3 sec.
- Briefly press Up button, the highest measured value will be displayed for 3 sec.

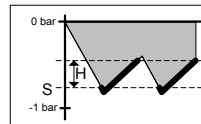
9.) Error messages

Error messages	Cause	Remedy
OU1 Overcurrent Out1	Output 1 overloaded (current > 125 mA)	Increase load impedance
OU2 Overcurrent Out2	Output 2 overloaded (current > 125 mA)	Increase load impedance
-FF Pressure instead of Vacuum	Pressure instead of vacuum	Apply vacuum
FFF Applied vacuum > measuring range	Applied vacuum > measuring range	Put the vacuum within the measuring range
EE2 EEPROM defective	EEPROM defective, data memory defective	Switch defective, replace
EE3 Distance to zero point > 3%	Vacuum or pressure was higher than +/- 3% of the measuring range	Reset zero point to ambient pressure

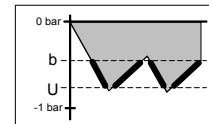
10.) Selecting the operating mode

Each output needs to be programmed individually, as they are completely independent and can work in different operating modes and under various settings.

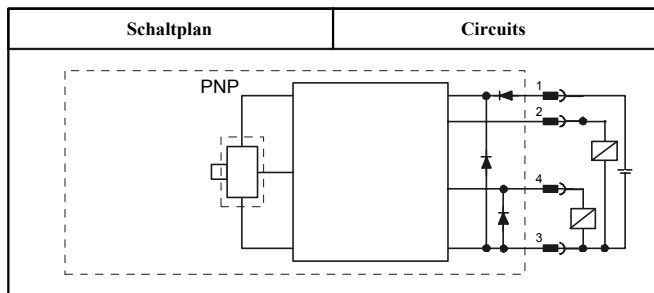
Hysteresis mode



Window Comparator mode

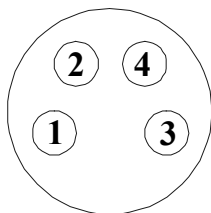
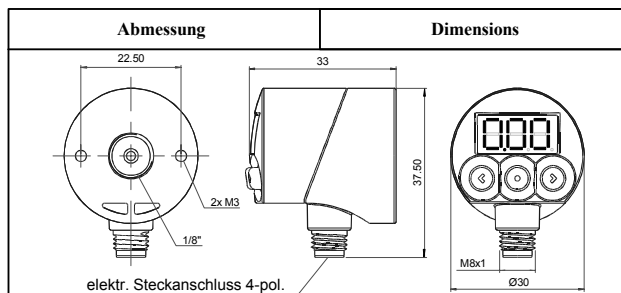


Technische Daten



Pinbelegung	Pin Connection
1. V +	1. V +
2. Schaltausgang 2	2. Switch Output 2
3. V -	3. V -
4. Schaltausgang 1	4. Switch Output 1

Technical Data



Colour of Wire
 11026300
 11026310
 Pin 1 = brown
 Pin 2 = white
 Pin 3 = blue
 Pin 4 = black

Technische Daten nano PSVDD

Elektrische Daten

- Ansprechzeit < 2,5 ms
- Schaltfrequenz 200 Hz
- Versorgungsspannung 10,8–30 V, verpolsicher Restwelligkeit 10 %
- Eigenstromaufnahme bei Programmierung < 55 mA
- Eigenstromaufnahme im Normalbetrieb < 35 mA
- Schaltausgänge 2x PNP 125 mA kurzschlussfest
- Anzeige 3 digit 7 segment Anzeige
- Temperatureinfluss 3 % v. Messwert bei 0....50°C
- Wiederholgenauigkeit 0,2 % v. Messwert
- Hysterese einstellbar 0....100 %
- Messbereich 0....-1 bar
- Max.Überdruck 5 bar

Umweltbedingungen

- Schutzklasse: IP65
- Messmedium: nicht aggressive Gase, ölfreie Luft
- Störaussendung nach DIN EN 50081-1
- Störfestigkeit nach DIN EN 50082-2
- Prüfspannung 1000V DC 1 min
- Isolationswiderstand > 100MΩ bei 500 V DC
- Arbeitstemperatur 0....+50°C
- Lagertemperatur -20...+85°C
- Zulässige Luftfeuchtigkeit 10....90 % RH
- Schockfestigkeit 10G XYZ
- Schwingungsfestigkeit 10 bis 55Hz 1,5 mm, XYZ 2 Std

Mechanische Daten

- Elektrische Anschlussstecker M8-4 Pin
- Anschluß Messmedium IG 1/8"
- Gewicht ca. 45 g
- max. Kabellänge 10 m

Technical Data nano PSVDD

Electrical Data

- Response time <2.5 ms
- Operating frequency 200 Hz
- Supply voltage 10.8–30 V, keyed Residual ripple 10%, Power supply must be limited to 150 VA max
- Input current during programming <55 mA
- Input current in normal operation <35 mA
- Switchable outputs 2x PNP 125 mA short-circuit-proof
- Display 3 digit 7 segment display
- Ambient temperature influence 3% of measured value at 0 to 50°C
- Repeat accuracy 0.2% of measured value
- Hysteresis adjustable 0 to 100%
- Measuring range 0 to -1 bar (0 ... -14,5 PSI)
- Max. excess pressure 5 bar (72,5 PSI)

Environmental Conditions

- Class of protection: IP65 ; conditions for IP65 correctly fastening the cable connector
- Measuring medium: non-corrosive gases, oil-free air
- Emitted interference adheres to DIN EN 50081-1
- Interference immunity adheres to DIN EN 50082-2
- Highvoltage test 1000 VDC 1 min
- Insulation resistance >100 MΩ at 500 VDC
- Operating temperature 0 to +50°C
- Storage temperature -20 to +85°C
- Permissible humidity 10 to 90% RH
- Shock resistance 10G XYZ
- Vibration resistance 10 to 55 Hz, 1.5 mm, XYZ 2 hours

Mechanical Data

- Electrical connector plug M8-4 pin
- Measuring medium connector female thread 1/8"
- Weight ca. 45 g
- max. cable length 10 m