



**Start-up**

- Apply voltage
- Display



**1.) Factory settings**

000	Output 1	002	Output 2	5FA	Special functions
HY1	Hysteresis mode	HY2	Hysteresis mode	PU	Pressure unit bar
5FA	4.6 bar	5FA	7.9 bar	UnL	Unlock
H-1	0.7 bar	H-2	0.7 bar		
nc1	NC mode	nc2	NC mode		
EO1	0 sec.	EO2	0 sec.		
EF1	0 sec.	EF2	0 sec.		

The Clear All special function loads the factory settings and cancels all previous settings.

**2.) Settings options**

000	Output 1	002	Output 2	5FA	Special functions
HY1	Hysteresis mode	CP2	Comparator mode	PU	Pressure unit
5FA	Switching threshold	UP2	Upper switching threshold	CLR	Factory settings
H-1	Hysteresis	LP2	Lower switching threshold	UnL	Unlock
nc1	Normally closed	no2	Normally open	180	Rotate display 180°
EO1	Closing delay	ED2	Closing delay		
EF1	Release delay	ER2	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 are general settings which affect 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

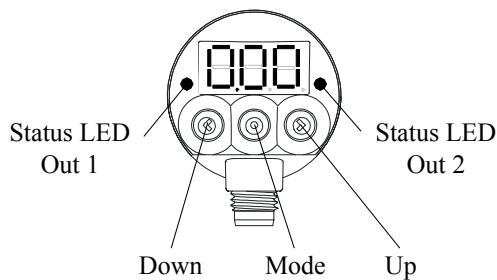
**Special functions settings options**

- Pressure unit => bar, PSI, kgf/cm<sup>2</sup>, MPa
- 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 3.0 bar
  - Upper threshold 5.0 bar
  - Position of normally closed contact
  - Closing delay 0 sec.
  - Release delay 0 sec.
- Procedure: Measure mode output
  - Briefly press Mode button. => OU1 display
  - Briefly press Up button. => OU2 display
  - Briefly press Mode button to enter Menu level. => HY2 display
  - Proceed to desired menu item with Up or Down button and confirm by pressing Mode button.
  - In this case: confirm HY2 with Mode button. => HY2 display flashes
  - Go to the desired setting with the Up or Down button.
  - In this case: CP2. Then confirm setting with Mode button.
  - 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
  - Adjust the desired setting with the Up or Down button.
  - In this case: set U-2 to 5.0 and then confirm setting with Mode button.
  - Proceed in the same way for all other settings.
  - 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 return to 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
6BA	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).
6PA	
6PS	
6kg	

**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.

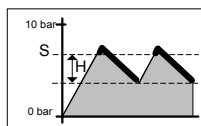
**9.) Error messages**

Error messages	Cause	Remedy	
001	Overcurrent Out1	Output 1 overloaded (current > 250mA)	Increase load impedance
002	Overcurrent Out2	Output 2 overloaded (current > 250mA)	Increase load impedance
1FA	Pressure instead of Vacuum	Pressure instead of vacuum	Apply vacuum
1FB	Applied vacuum > measuring range	Applied vacuum > measuring range	Put the vacuum within the measure range
1FC	EEPROM defective	EEPROM defective, data memory defective	Switch defective, replace
1FD	Distance to zero point > 3%	Vacuum or pressure was higher than +/- 3% of the measuring range	Reset zero point to ambient pressure

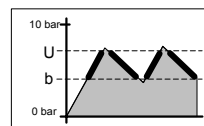
**10.) Selecting the operating mode**

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**

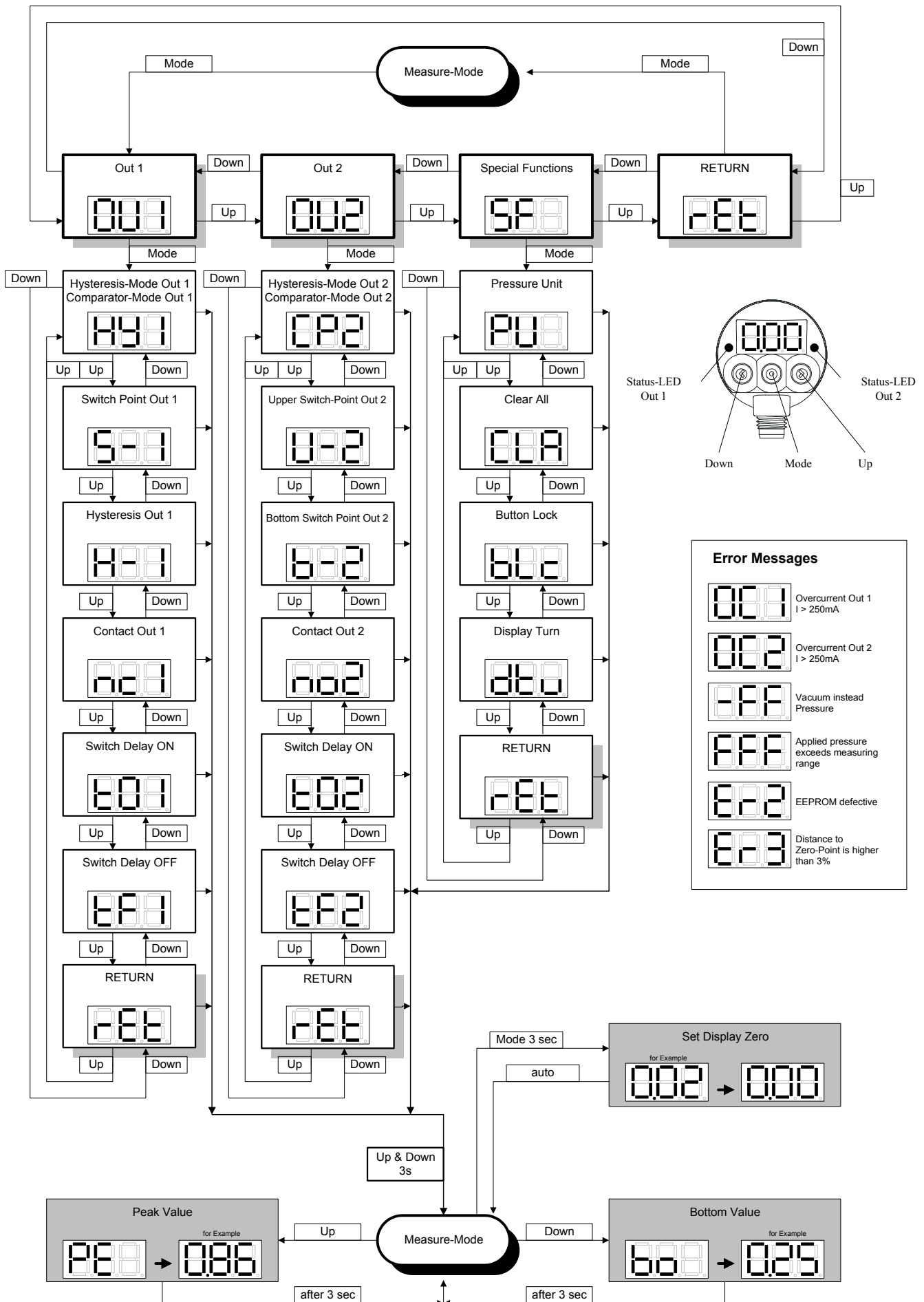


**Window Comparator mode**



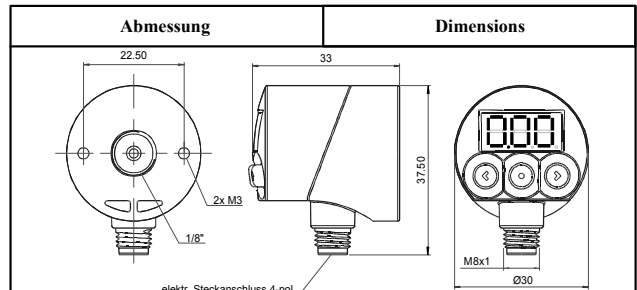
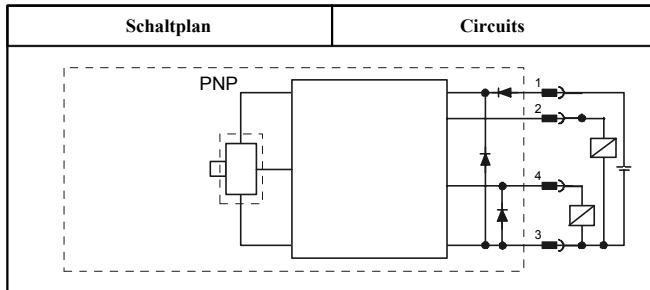
Flussdiagramm der Menüführung

Menu navigation flow diagram

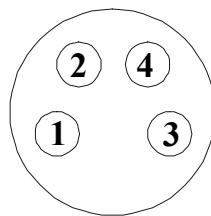


Technische Daten

Technical Data



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



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

Technische Daten nano PSPDD

Technical Data nano PSPDD

Elektrische Daten

Electrical Data

- Ansprechzeit < 2,5 ms
- Schaltfrequenz 400 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...10 bar
- Max. Überdruck 16 bar

- Response time < 2.5 ms
- Operating frequency 400 Hz
- Supply voltage 10.8–30 V, keyed
- Residual ripple 10%
- Natural current input during programming < 55 mA
- Natural current input 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 10 bar
- Max. excess pressure 16 bar

Umweltbedingungen

Environmental Conditions

- 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 > 100M 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

- Class of protection: IP65
- Measuring medium: non-corrosive gases, oil-free air
- Emitted interference to DIN EN 50081-1
- Interference immunity to DIN EN 50082-2
- Proof voltage 1000 VDC 1 min
- Insulation resistance > 100 M at 500 VDC
- Working temperature 0 to +50°C
- Storage temperature -20 to +85°C
- Permissible humidity 10 to 90% RH
- Shock resistance 10G XYZ
- Vibration strength 10 to 55 Hz, 1.5 mm, XYZ 2 hours

Mechanische Daten

Mechanical Data

- Elektrische Anschlussstecker M8-4 Pin
- Anschluß Messmedium IG 1/8"
- Gewicht ca. 25 g
- max. Kabellänge 10 m

- Electrical connector plug M8-4 pin
- Measuring medium connector female thread 1/8"
- Weight ca. 25 g
- max. cable length 10 m