Operating Manual

Model PSM200

with a four digit LED display

Product introduction

PSM200 series electronic pressure sensor is a kind of intelligent digital pressure measurement and control product integrating pressure measurement, display, output and control.

Safety Instructions

Before installing this equipment, please read this document to ensure that the product is suitable for your application without any restrictions;
Failure to follow the operating instructions or technical information may result in personal injury or property damage;
Check that the product material is compatible with the medium to be tested, in all applications;

The responsibility for determining whether a measurement sensor is suitable for the application is the operator. The manufacturer assumes no responsibility for the consequences of improper installation and use by the operator.

Pressure sensors are used to monitor the system pressure of mechanical equipment and devices，Appropriate measures should be taken to avoid static and dynamic pressures exceeding the specified overload pressure. Do not exceed the indicated burst pressure. Even if the burst pressure is exceeded only for a short period of time, the sensor may be damaged.
Note: Beware of personal injury, danger of overpressure!

Installation Notes

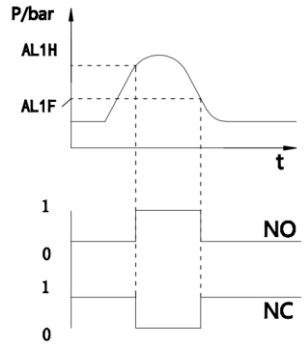
Make sure the system is not under any pressure before installing and removing the sensor.
Connect the sensor device to the optional process interface
Fully tightened, recommended tightening torque range: 25 to 35Nm
In critical applications such as severe vibration or shock, the pressure fitting can be mechanically decoupled via a miniature hose.

Function Description

- 4-digit number shows the current pressure value
- High and low voltage protection
- Remote pressure detection
- Zero correction
- Hysteresis / window mode switching
- Switch normally open / normally closed setting
- Output signal can be generated according to operating mode and parameter settings

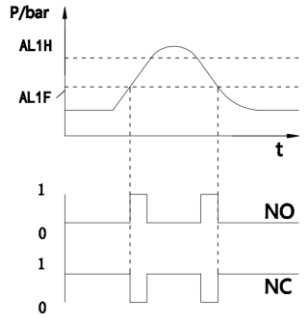
Hysteresis mode

The hysteresis function is mainly to keep the switch output stable when the pressure value fluctuates around the set point.
When the pressure value is greater than AL1H during the pressure rise, the switch outputs the action. The switch output is released when the pressure value is less than AL1F during the pressure drop.

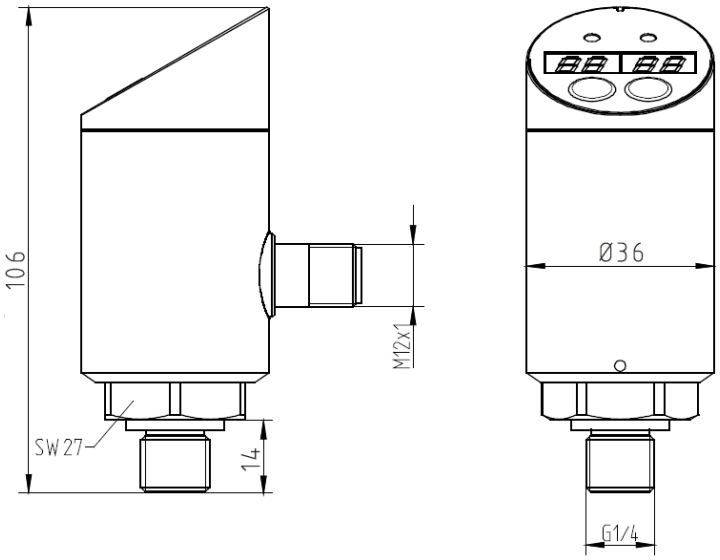


Window mode

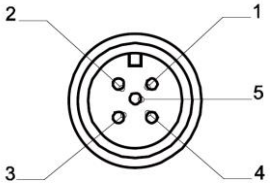
The window function allows the product to monitor whether the pressure value exceeds a specific pressure range. When the pressure value is in AL1H and AL1F, the switch output action,
When the pressure value is outside this range, the switch output is released.。



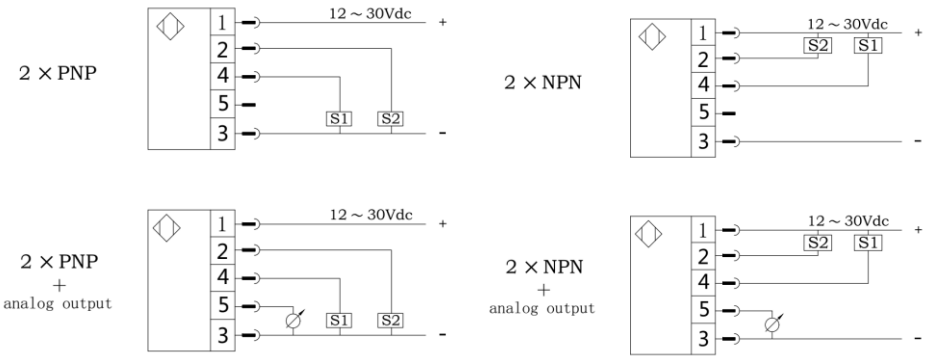
Dimensions (in mm)



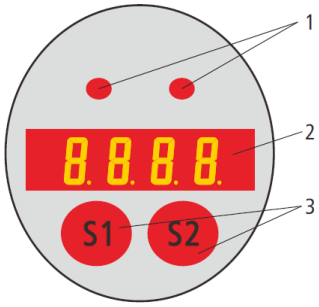
Electrical connections



Signal	Pins
Supply: UB	1
Supply: 0V	3
Switch output : S1	4
Switch output : S2	2
4…20mA	5



Panel description



1- I & II the LEDs display the status
2- 2- 4 digits (-999 ... 9999) display
3- 3- Set key

- S1 up view menu/ increase the number keys
- S2 down view menu/ Decrease numeric keys
- S1+S2 Click on the entry/exit menu at the same time
- S1+S2 Long press 5s clear zero features (Cleared before confirming system without pressure)

Menu and settings

Operation process

Click the S1+S2 button to enter the LOCK password channel. Change the password to enter the menu with the S1 key (0001 is the switch value setting menu / 0066 is the advanced menu),
Click the S1+S2 button to enter the menu settings. Finish setting Click the S1+S2 button to exit the menu settings. After the parameter setting is completed, click the S1+S2 button to save and exit.

0001 switch value setting menu	
AL1H	Switch 1 pull-in value (signal given when pressure reaches this point)
AL1F	Switch 1 release value (signal disappears when pressure returns to this point)
AL1D	Switch 1 action delay (resolution is 0.1 seconds)
AL2H	Switch 2 pull-in value (signal given when pressure reaches this point)
AL2F	Switch 2 release value (signal disappears when pressure returns to this point)
END	Set the completion confirmation to exit (do not save after confirming the exit)

Note: Hysteresis mode (switch factory default hysteresis / normally open): The switch point consists of a pull-in value and a release value.
When the pull-in value is greater than the release value, the normally open function (in this case, AL1H is the action value and AL1F is the reset value).

When the pull-in value is less than the release value, the normally closed function (AL1F is the action value and AL1H is the reset value).
The difference between the pull-in value and the release value is the return difference of the switch point.

0066 advanced menu	
DSAL	The default value is 0, 1 means that the overrange prompt is turned on, the overrange 120% display value flashes, 0 means the shutdown prompt.
BS-L	4mA corresponding output value, default minimum range value
BS-H	20mA corresponding output value, default maximum range value
OFST	Display value compensation, default 0, increase the decrease value, the actual display value corresponds to increase or decrease the corresponding value
FILT	The filter coefficient is adjustable from 0 to 4, the default is 1. In the case of strong interference, the filter coefficient value is increased. The larger the filter value, the more stable the display and the lower the display rate.
SPDL	Display value reaction rate increase/decrease
A-04	4mA output calibration
A-20	20mA output calibration
AL1P	Switch 1 output hysteresis / window mode switching
AL1C	Switch 1 output window mode back difference setting, to prevent the window mode action pressure value from being unstable at the switch zero boundary wave switch output, and can eliminate the oscillation through the window hysteresis
AL2P	Switch 2 output hysteresis / window mode switching
AL2C	Switch 2 output window mode backlash setting, to prevent the window mode action pressure value from being unstable at the switch zero boundary wave switch output, and can eliminate the oscillation through the window hysteresis
BACK	Restore factory settings
END	Set to complete OK to exit

Setting example

To set switch point 1 to the upper limit alarm output (normally open function) Pull in 4Mpa, Less than 3.95Mpa disconnected, The switching delay is 3 seconds;
Switch point 2 is the lower limit alarm output (normally closed function) Disconnected at 10Mpa, Less than 9.95Mpa pull in, The switching delay is 10 seconds.

Enter menu: set

AL1H=4.00 AL1F=3.95 ALID=0.30

AL2H=9.95 AL1F=10.00 ALID=1.00

●Click the "S1+S2 Confirmation" button.

●Show "LOCK" (prompt for password)

●Press ▲S1 or ▼S2 to enter the password “1”.

●Press the "S1+S2 Confirm" button to confirm

●Press ▲S1 or ▼S2 to scroll up or down to make menu selection (AL1H, AL1F, AL1D, AL2H, AL2F, AL2D, END)

●Press the “S1+S2 Confirm” button to enter the selected menu.

●Press ▲S1 or ▼S2 to change the setting

● Press the “S1+S2 Confirm” button to confirm. If necessary, use the ▲S1 or ▼S2 button to select another menu to modify.

● After the modification is completed, select the “END” menu, press the “S1+S2 Confirm” button to confirm the save and exit.

● If no key is pressed for 30 seconds, the setting state will be automatically exited, but the modified data will not be saved.

Flow: Click the S1+S2 button to display “LOCK” to enter the password. Press ▲S1 to enter the password “1”, press the S1+S2 confirmation button to confirm the entry menu, and switch to use ▲S1 or ▼S2 to switch.

The menu is a loop structure, which can be up and down, and loop into the corresponding menu to modify the menu value. After confirming the setting, press the S1+S2 confirmation button to save and exit under the “END” menu.

Fault code and processing

EREP	EEPROM data verification error, mainly detected when the data is read at boot. Need to manually check and reset to recover the error.
ERo1	Switch 1 output is shorted. The error output is turned off and no longer controlled. Action: Eliminate short circuit and power on again
Ero2	Switch 2 output is shorted. The error output is turned off and no longer controlled. Action: Eliminate short circuit and power on again
ER12	The switch 1/2 output is shorted at the same time. The error output is turned off and no longer controlled. Action: Eliminate the short circuit and re-power it.

When the product is in operation, the device will perform measurements according to the set parameters and send out an output signal. The product has several self-diagnostics options that automatically self-monitor at runtime.