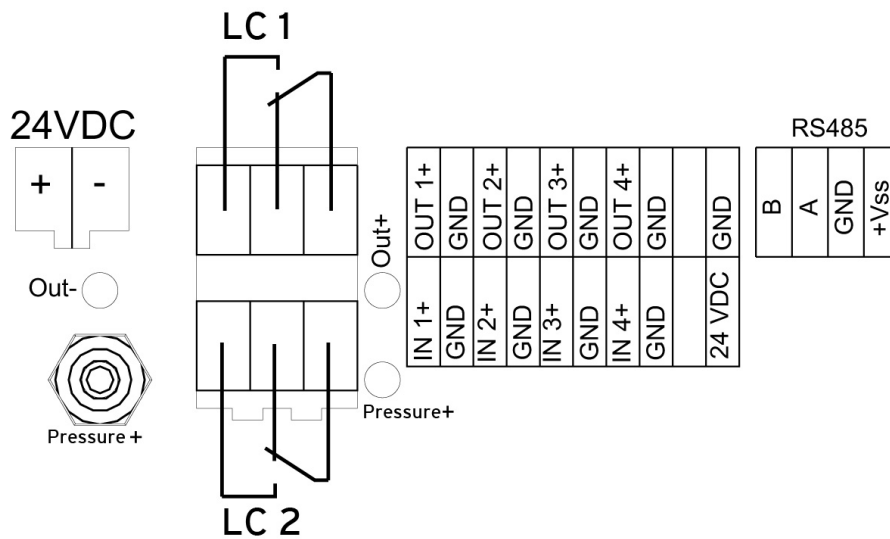


PMDS4 is a pressure gauge suitable for over-pressure and under-pressure monitoring of non-aggressive gases that is equipped with additional interfaces for further sensors (e.g. for temperature or flow measurement), as well as with an internal pressure sensor. The device can be installed directly into the walls of clean rooms.

## Wiring Diagram



## Connections/ Installation Position

### Process connection

Discharge connection  $\varnothing$  6.6 x 11mm for flexible hoses  $\varnothing$  6mm on the rear wall of the housing (next to the electrical terminals).

### Calibration connection

Connection on front panel through discharge connection  $\varnothing$  3 x 4mm for flexible hoses  $\varnothing$  3 after having removed the caps.

### Installation position

The device is installed in a vertical position. Attention: Do not clamp discharge hoses as this may result in failures.

## Assignment Of Buttons

**S button:** Using this button will bring you from the display level directly to the command value level. After having set the required command values you can exit the menu by using the S button again. In addition, the button can be used to navigate within the display (skipping within the display).

**M button:** Using the M button will bring you from the display level to the menu level. By pressing this button several times you can exit the menu and the sub-menu items.

**Arrow buttons:** Using these two buttons, you can move backwards and forwards within a menu item. In addition, the arrow buttons can also be used to set the individual values in the menu items.

**OK button:** Using the OK button will bring you from the menu to the corresponding sub-menu item. You can use this button to save the previously set values within the device.

## Display

The display consists of four rows and displays the current measured value respectively command value on the left-hand side and the corresponding unit on the right-hand side. The values for the internal pressure sensor are displayed in the first row.

## Settings

Using the arrow buttons will bring you to the corresponding menu item (SE1 - SE4), at which you confirm the menu item by using the OK button. SE 1 stands for the internal pressure sensor. Now you have selected the sensor to be displayed using the display. In the following step the sensor will be configured.

### 5.1 Sensor selection

Specify whether the internal pressure sensor and/or further sensors should be displayed using the display.

In order to be able to implement settings on the device, you have to switch from display level to menu level. Press the M button (menu). You will now see the display showing C 1 (code 1). Confirm the aforementioned by using the OK button. At the time of delivery the stored code is 0000.

You are now in menu item "Sensor selection" (SE). Confirm by using OK in order to get to menu level 2. On the second menu level you specify whether the internal sensor or an external device is to be displayed.

### 5.2 Sensor set-up

In this step the following settings for the sensor can be implemented:

- sensor input: zero point and amplitude, as well as current or voltage input signal
- sensor display: activation, zero point, 100% value, unit, and decimal point
- limit contact 1: warning and activation value, switching hysteresis, activation and deactivation delay
- limit contact 2: see limit contact 1

#### 5.2.1 Sensor input

Using this menu item, the sensor input is configured. The arrow buttons can be used to select the menu items and the OK button can be used to confirm the selection. The following settings can be implemented:

- input type (TY): current or voltage signal (1=current; 0=voltage)
- reset minimum measured value (MI/VA): the OK button can be used to reset the minimum measured value.
- reset maximum measured value (MA/VA): the OK button can be used to reset the maximum measured value.
- zeroisation (ZS/ ST): the OK button can be used to zero the internal sensor.
- minimum rated value zero point (ZS): set the zero point at minimum input signal and confirm by using OK (set-up see below).
- maximum rated value amplitude (AM): set the amplitude at maximum input signal and confirm by using OK(set-up see below).

Set-up of the minimum rated value (ZS):

Use the arrow buttons to open menu item ZS. Apply the minimum rated value to the device and confirm this value using the OK button. The value has now been saved to the device.

Set-up of the maximum rated value (AM):

Use the arrow buttons to open menu item AM. Apply the maximum rated value to the device and confirm this value using the OK button. The value has now been saved to the device.

#### 5.2.2 Sensor display

The menu item sensor display is designed to configure the display. The arrow buttons can be used to select the menu items and the OK button is used for confirmation purposes. The decimal point is positioned separately.

The following settings can be implemented:

- display activation (AC): is only applicable to the internal pressure sensor (1=active; 0= inactive).
- zero point (ZS): the zero point can be set with the help of the arrow buttons and the S button.
- 100% value (AM): the arrow buttons can be used to set the amplitude displayed.
- unit (UN): determination of the unit to be displayed

### 5.2.3 Limit contacts 1 and 2

The two limit contacts of the device are configured using this item. The arrow buttons can be used to determine the values and the OK button can be used for confirmation purposes. The following settings can be implemented:

- warning value (WA/ VA): set-up of the warning value, the display starts flashing.
- activation value (ON/ VA): value where the limit contact is actuated. The diode indicates which of the limit contacts has switched.
- switching hysteresis (HY): determination of the percentage switching hysteresis

### 5.3 Settings of the command values

This setting can be used to display any measuring range (-999... +9999) using the device. This range may deviate significantly from actual values and can be set individually.

#### 5.3.1 Display activation

In order to have the command values displayed, the display has to be activated for the aforementioned beforehand (0=ON; 1=OFF).

#### 5.3.2 Set-up zero point

This menu item can be used to set the lower command value of the range to be displayed by means of the arrow buttons.

#### 5.3.3 Set-up 100% value

The arrow buttons can be used to set the upper end value of the range to be displayed. The OK button can be used to confirm the set values.

#### 5.3.4 Position of the decimal point

Here you can specify where the decimal point is to be displayed in the display. You can use the arrow buttons to specify the position and the OK button to confirm the selection.

#### 5.3.5 Selection of the unit

You can use the arrow buttons to specify which unit is to be displayed on the display. You can confirm your selection by using the OK button.

### 5.4 Configuration of the outputs

This menu item is used to configure (signal source and output type) the sensor outputs.

#### 5.4.1 Signal source

The arrow buttons can be used to determine whether the output signal of the sensor is accepted or a command value is specified by the user (0=internal; 1=external; 2=command value). Confirm your selection by using the OK button.

#### 5.4.2 Output type

You can use the arrow buttons to determine which output type is issued by the device (0=0...10 V; 1=4... 20 mA; 2=0... 20 mA). Confirm your selection by using the OK button.

### 5.5 Set-up of the limit contacts

The arrow buttons can be used to determine whether the limit contacts are to work as normally closed or normally open contact (0=normally open contact; 1=normally closed contact). Confirm your selection by using the OK button.

### 5.6 System settings

Here you can implement basic settings of the device. This includes reset times and MODBUS settings.

#### 5.6.1 Set-up the reset times

##### 5.6.1.1 Automatic menu exits

Upon expiration of which time (seconds) should the menu switch back to display level if the user does not implement any further entries. Use the arrow buttons to enter the corresponding value and confirm by using the OK button.

##### 5.6.1.2 Reset the code

Select code reset and confirm your selection by using the OK button, in order to reset the code to factory settings (0000).

##### 5.6.2 Setting the display brightness

The display brightness can be set individually in a range between 30... 100% by using the arrow buttons. Confirm the corresponding value by using the OK button.

### **5.6.3 MODBUS address**

This sub-menu can be used to configure the device for being used with MODBUS. Use the arrow buttons to set the corresponding MODBUS address and confirm your selection by using the OK button.

### **5.7 Code**

Here you can specify a new code for the device. The arrow buttons can be used for entry purposes. Confirm the new code by using the OK button.

### **5.8 Programme version**

Confirm by using the OK button, in order to have the current software version displayed.

### **5.9 Device version**

Confirm by using the OK button, in order to have the current device version displayed.

## **6. Command value level**

Pressing the S button will bring you to the command value level. Here the current command value of the device is displayed (output signal). The arrow buttons can be used to get access the corresponding command value allowing you to change it.

### **6.1 Changing the command value**

Before being able to enter a command value a second code has to be entered into the device. At the time of delivery confirm the displayed code by using the OK button.

### **6.2 Entering the command value**

The arrow buttons can be used to enter the corresponding command value now. This command value simultaneously constitutes the output signal of the sensor (current or voltage). Confirm the set value by using the OK button.