Pressure gauge

KVDDD890

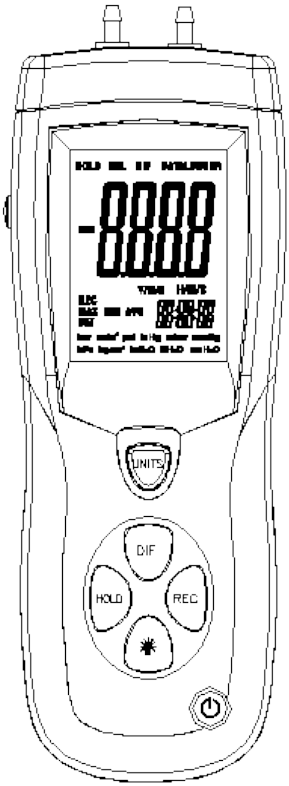


TABLE OF CONTENTS

TITLE PAGE

1. Preface

Instrument KVDDD890 can measure pressure in range -200 mbar and +200 mbar. Value can displayed in 11 different units: inH20, psi, bar, mbar, kPa, inHg, mmHg, ozin², ftH20, cmH20, kgcm²
Another functions are the value holding (Hold), and the Auto-OFF function, as well as real-time measuring via USB-port by PC software.

2. Technical data

Function	Display	Resolution	Function	Display	Resolution
inH2O	80.29	0.01	Ozin²	46.41	0.01
Psi	2.901	0.001	ftH20	6.690	0.001
mbar *	200.0	0.01/0.1	cmH20	203.9	0.1
kPa	20.00	0.01	Kgcm²	0.204	0.001
inHg	5.906	0.001	bar	0.200	0.001
mmHg	150.0	0.1			

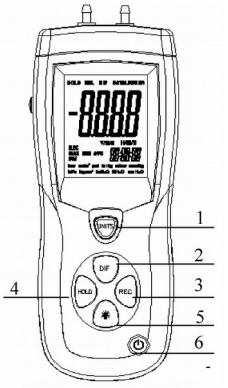
* Resolution: 0.01 mbar < 100 mbar, 0.1 mbar > 100 mbar

Display:	2-line LCD
Accuracy:	±0.3 % FS (25 °C)
Repeatibility:	±0.2 % (Max. +/- 0.5 % FS)
Linearity / Histeresys:	±0.29 % RDG
Measuring range:	±200 mbar
Maximum pressure:	500 mbar
Measuring interval:	0.5 ms
Battery status display:	Yes
Too high pressure:	Err.1
Too low pressure:	Err.2
Operational condition:	0 ... 50 °C
Storage condition:	-10 ... 60 °C
Power supply:	1×9 V battery or external 9 V DC CP2102 USB UART Bridge Controller
Data format:	Baud rate: 9600 Baud, 8 data bits

3. Buttons

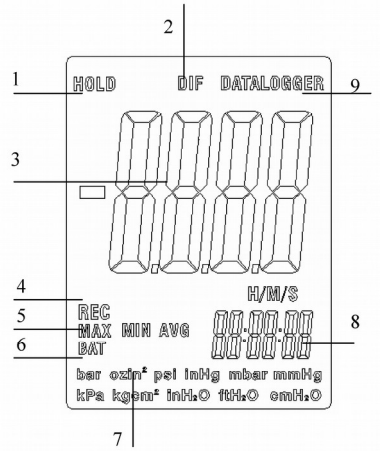
Instrument has six buttons:

1. Units (inH2O, psi, mbar, kPa, inHg, mmHg, Ozin², ftH2O, cmH2O, Kgcm², bar)
2. DIF
3. REC
4. HOLD
5. Backlight
6. ON/OFF



4. Display

1. Hold-function
2. Difference pressure
3. Measured value
4. Datalogging
5. MAX/MIN/Average
6. Battery status
7. Unit
8. Period
9. USB connection



5. Operation

1. Switching on

Push the ON/OFF button for switching on/off the instrument.
After the switching on the instrument runs a quick self-test.
The instrument uses the unit which was selected on the last measuring.

2. Zero function and the zero offset

Before using the instrument push the HOLD-button more, than 2 seconds, for zeroing the display. Instrument will be zeroed and show 0.000 on the display.

If you like to measure differential pressure, push the DIF button during measurement. The diplayed value is difference between the actual value and a value on pushing the DIF button.

3. Hold function

Push the HOLD button shortly for holding the displayed value.
The HOLD mark is showed on top left corner of the display.
If pressure reaches the limit, display shows an alarm message.
Push the HOLD button again for return to normal mode.

4. Datalogging

MAX/MIN button allows measuring maximum, minimum and average value for a specified time period.

1. Push the REC button (all function will be deactivated except backlight and on/off button).
   The time period is showed on the second display the measurement starts.

2. Push the REC again and MAX text is showed on the display.
   Display will show the MAXIMUM pressure value.

3. Push the REC button again to display MINIMUM value.

4. Push the REC button again to display AVERAGE value.

5. Push the REC button again to continue measuring MAX/MIN/AVERAGE.

6. For finishing the MAX/MIN/AVERAGE measurement push the REC button for 3 seconds, then the instrument will return to normál mode.

5. Backlight

Push the backlight button to switch on the lighting.
It will be active for 40 seconds.

6. Auto-OFF

The instrument is automatically switched off after 20 seconds for longer battery lifetime. For disabling this functions push the HOLD button and switch on the instrument. An „n" letter is showed on the display, it marks deactivated automatic swiching off.
The instrument returns back to normal operation after switching off.

7. Units

Push UNIT button for selecting one of 11 units.

USB

Instrument has a USB-port. A software can send the data to a PC.

Error messages

An error message is showed on the display, if the self-test is detected an error. All button will be blocked.

1. Err.1: Too high pressure value
2. Err.2: Too low pressure value
3. Err.3: DIF function, differential pressure is over the limit
4. Err.4: DIF function, differential pressure is lower the limit

Battery exchange

If power of battery will be decreased, the BAT text is showed on the display. Then replace the 9 V battery.