Installation Guide
Air Differential Pressure Transmitter

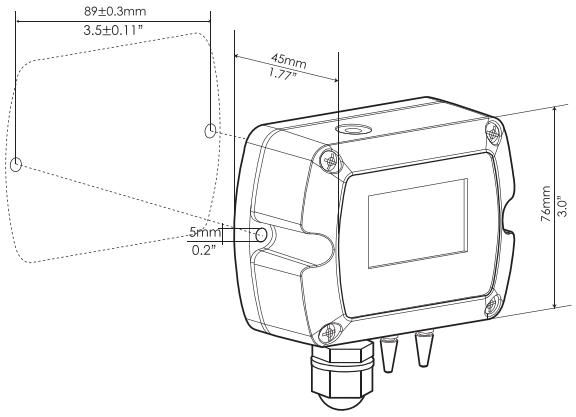
Model KDP210

1.0 GENERAL INFORMATION

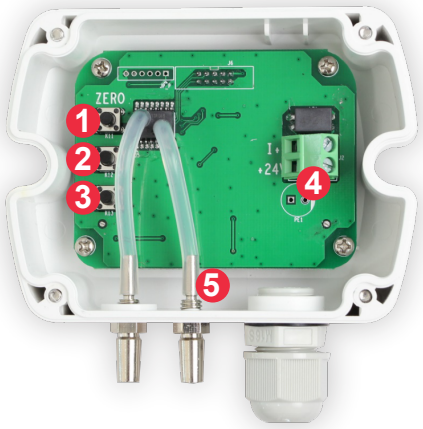
Every model KDP210 has been tested and calibrated before shipment.
The installation guide shall be read before commissioning the equipment, which is part of the scope of supply and serves for ensuring proper handling.

2.0 PRODUCT DESCRIPTION

2.1 Dimensions

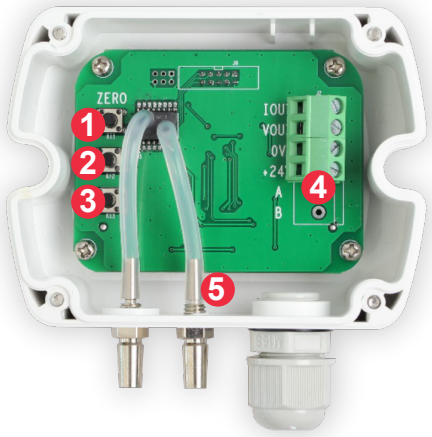


2.2 Components



2 Wires Current Output

Setting button
① SHT: Shift Button
② SET: Confirmation and Change Button
③ INC: Modifier Button
There are special functions in different interface buttons.
④ Terminals
⑤ Pressure connection nipples



3 Wires Voltage Output

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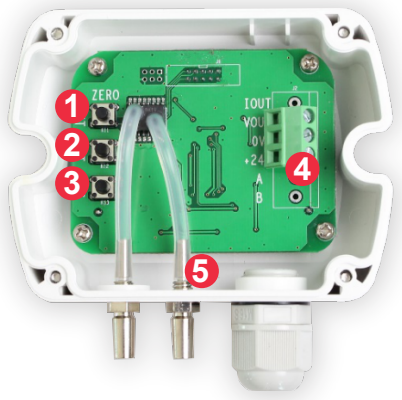

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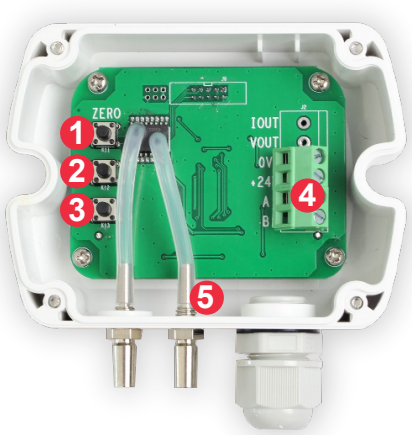
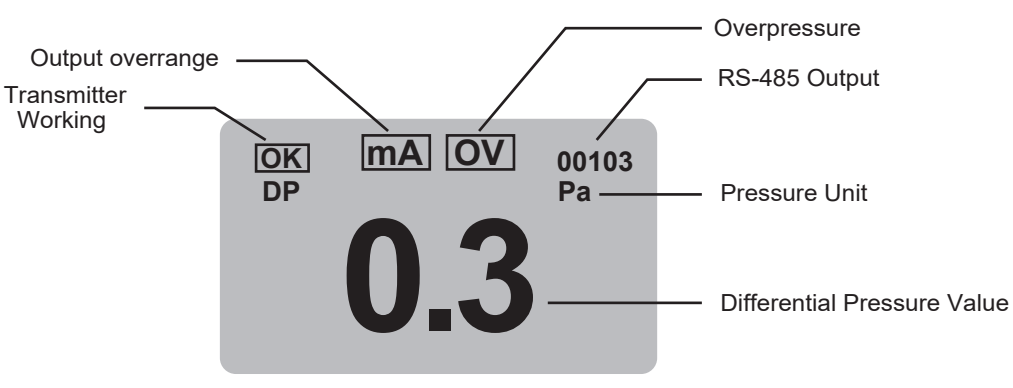


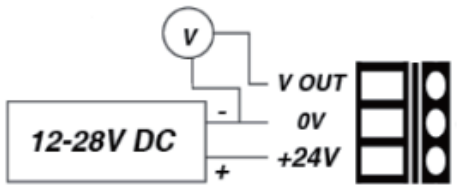
RS-485 Output

2.3 LCD display

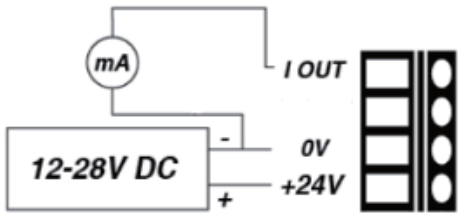


Normal work, screen display OK
Error occurred, screen display ERR
Current or Voltage output overrange screen display mA
Overpressure screen display OV

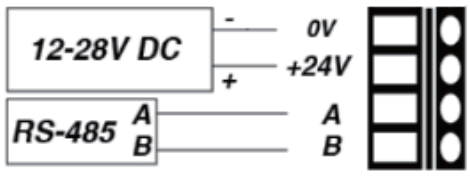
2.4 Diagram



3 Wires Voltage Output



3 Wires Current Output



RS-485 Output

2 Wires Current Output

3.0 INITIAL SETUP

Each KDP210 leaves the Keram Controls with the default setup.
Measurement units: Pa
Response time: 0.1s

3.1Press the "SET" button to enter the main interface selection state.

```
--Main menu--
1.Self-test
2.Setup
3.Calibration
4.Password
```

3.1.1 Self-test information

```
Self-test
Clock √ Memory√
Power √ Sensor√
Param √ None  √
```

3.1.2 User parameter setting

Setup pwd: **0*****	The default password = 000000; Setting the password correctly with the "SHT" and "INC" button, press the "SET" button to confirm. The password is correct, the entry coefficient is modified; Incorrect, the prompt "Password is wrong!".
DP unit: **Pa**	Select Measurement Units:Pa,kPa,hPa,daPa,mbar,mmHg,mmH_20,inHg
DP cut-off: **0000.00**	The absolute value of the differential pressure is less than this value and the differential pressure is displayed as zero.
Sample time: **1.0 s**	Select Response Time: 0.1S,0.5S,1.0S,2.0S
DP current: **4mA: +000000.00** **20mA:+000000.00**	For current output models: 4mA and 20mA respectively correspond to the range to be set. E.g: 4mA: +001000.00 20mA: +001000.00 Range: -1000Pa ~ +1000Pa
Voltage sel: **0-10V**	Select voltage output: 0-5V, 0-10V

DP voltage:
0V: +000000.00
0-10V: +000000.00

For voltage output models:
0V and 10V respectively correspond to the range to be set.
E.g:
0V: +001000.00
10V: +001000.00
Range: -1000Pa ~ +1000P

Device ID: 001
Baud rate: 9600
Parity: NONE

RS-485 setting
RS-485 parameters: The first three digits represent the transmitter number.
The fourth digit represents check odd-even
(0: Non-check, 1: Odd check, 2: Even check)
The fifth digit represents baud rate (0：1200 1：2400 2：4800 3：9600
4：19200 5：38400）

Press “SET” to save and exit, return to the working interface.

3.2 Calibration parameters (factory parameters)

Calibrated pwd:
0***

The default password = 000000;
Setting the password correctly with the "SHT" and "INC" button, press the "SET" button to confirm.
The password is correct, the entry coefficient is modified;
Incorrect, the prompt "Password is wrong!".

DP zero calib:
0.1

Differential pressure zero calibration
Method: put the transmitter in zero differential pressure state, long press "SHT" for more than 3 seconds to complete the zero, the success will prompt "SUCCESS".

DP calib K:
0.0000

Differential pressure coefficient, correct differential pressure display when there is deviation in differential pressure display.
Coefficient = standard value / display value.
The input range is 0.7-1.3.
Exceeded the range without correction

Current calib:
Output: 4mA
Meas: 00.0000

Current calibration:
When the current output is deviated, the current output can be calibrated through this interface.
Calibration is required for calibration. Do not calibrate current without measurement.
Calibration current: select 4mA, input the measured data of the meter to the measured current value.
Move the cursor to 4mA and press the "INC" button to select 20mA. input the measured data of the meter to the measured current value.
Press the "SET" button to calibrate successfully.

Voltage calib:
Output: 0.1V
Meas: 00.0000

Voltage calibration:
When the voltage output is deviated, the voltage output can be calibrated through this interface.
Calibration is required for calibration. Do not calibrate current without measurement.
Calibration voltage: select 0.1V, input the measured data of the meter to the measured voltage value.
Move the cursor to 0.1V and press the "INC" button to select 5V, input the measured data of the meter to the measured voltage value.
Move the cursor to 5V and press the "INC" button to select 10V, input the measured data of the meter to the measured voltage value.

Press the "SET" button to calibrate successfully.

3.3 Password editon

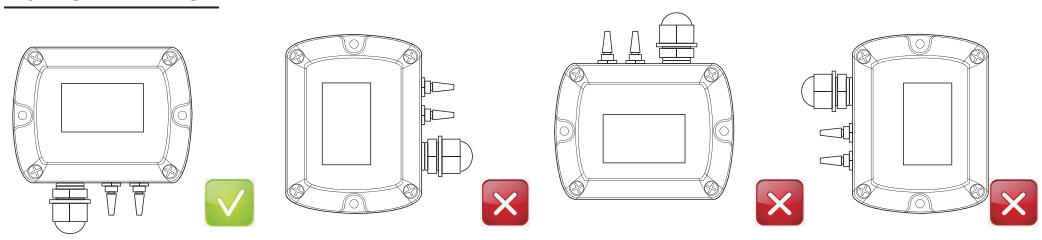
Setup pwd
Calibration pwd

Select the password you want to modify and press the “SET” button to enter the setting state.

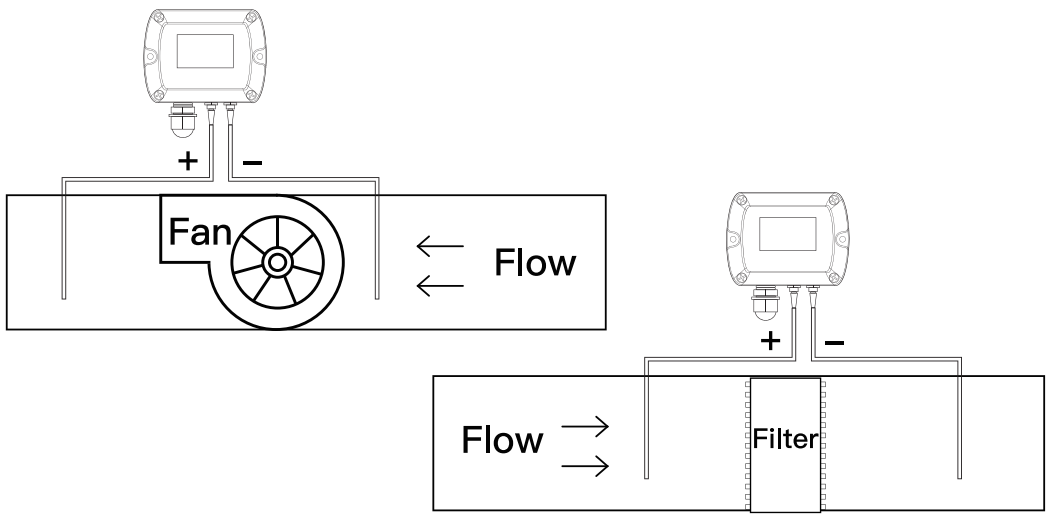
Setup pwd:
Old pwd:0***

Enter the old password and the new password to be modified, press the “SET” button to complete the modification.
If the old password is incorrect, the prompt modification fails.

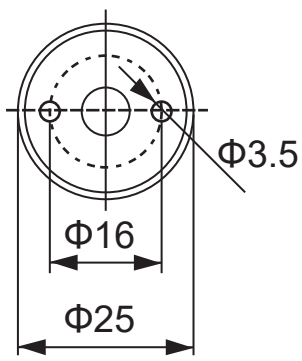
4.0 INSTALLATION

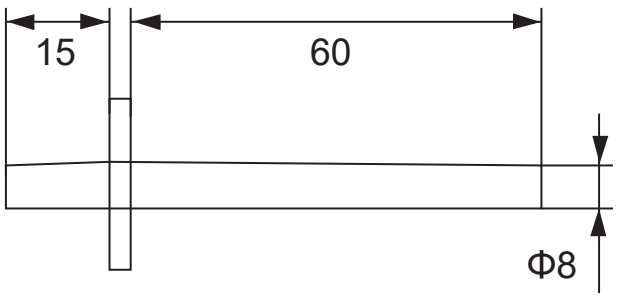


4.1 Pressure connection



4.2 Connection nipples





5.0 TECHNICAL DATA

Model	KDP210
Measurement units	Pa, mmH$_2$O, inWG, mmHG, kPa, mbar
Accuracy	<±1% FS@ -5 to +65℃
Response time	0.1s; 0.5s; 1s; 2s
Repeatbality	±0.01 % at FS / year
Resolution	1 Pa; 1 mmH$_2$O; 0.01 mbar; 0.04 inWG; 0.01 mmHG; 0.001 kPa
Media	Air and neutral gases
Operating temperature	-20 to +80° C
Storage temperature	-40 to +80° C
Power consumption	<3 W
Tolerated overpressure	×15
Power Supply	16~30VAC/DC (3 wires) 18~30V DC (2 wires)
Output signal	4-20mA (2 wires)
	4-20mA (3 wires)
	0-5 / 0-10VDC (3 wires)
	RS485
	Customized
Auto zero	Manual calibration
Housing material	Polycarbonate & ABS, UL94V-0
Protection class	IP65 / NEMA4
Display	Backlight LCD display
Cable Gland	M16*1.5
Certification	CE approval