



SJ TWM11



**MULTIFUNCTIONAL
DP TRANSMITTER**

Multi-function Dp Transmitter

Model: TWM11

Product Description

- On site customizable units and range for specific scales
- LCD backlight display, beneficial for long-term monitoring
- Limited to non-flammable and non-corrosive gases
- Usually used in filter, fan and duct pressure monitoring for building automation systems in the HVAC industry



Fig. left: With screen display
Fig. right: Without screen display

Product Specification

Version

With monitor, without monitor

Pressure medium

Gas

Scale ranges

Type	Scale range	Minimum scale range
0	-1000 ... 1000 Pa	0 ... 100 Pa
2	-10000 ... 10000 Pa	0 ... 1000 Pa
6	-100 ... 100 Pa	0 ... 10 Pa

Pressure units

Pa, mmH₂O, mbar, inWC, mmHg, daPa, kPa, hPa

Accuracy

±1.0% F.S.

Resolution

0, 2: 1 Pa, 0.1 mmH₂O, 0.01 mbar, 0.004 inWG, 0.007 mmHg, 0.1 daPa, 0.001 kPa, 0.001 hPa
6: 0.1 Pa, 0.01 mmH₂O, 0.01 mbar, 0.01 daPa, 0.001 hPa

Pressure limitation

0: 15 kPa
2: 150 kPa
6: 4.5 kPa

Medium temperature

-10°C ... 60°C

Product Specification

Ambient temperature

-10°C ... 70°C

Response time

0.5 s, 1 s, 2 s, 4 s

Voltage supply

12-30VDC

Power consumption

≤ 1.5W

Output signal

2-wire: 4-20mA

3-wire: 0-5VDC, 0-10VDC

4-wire: RS485

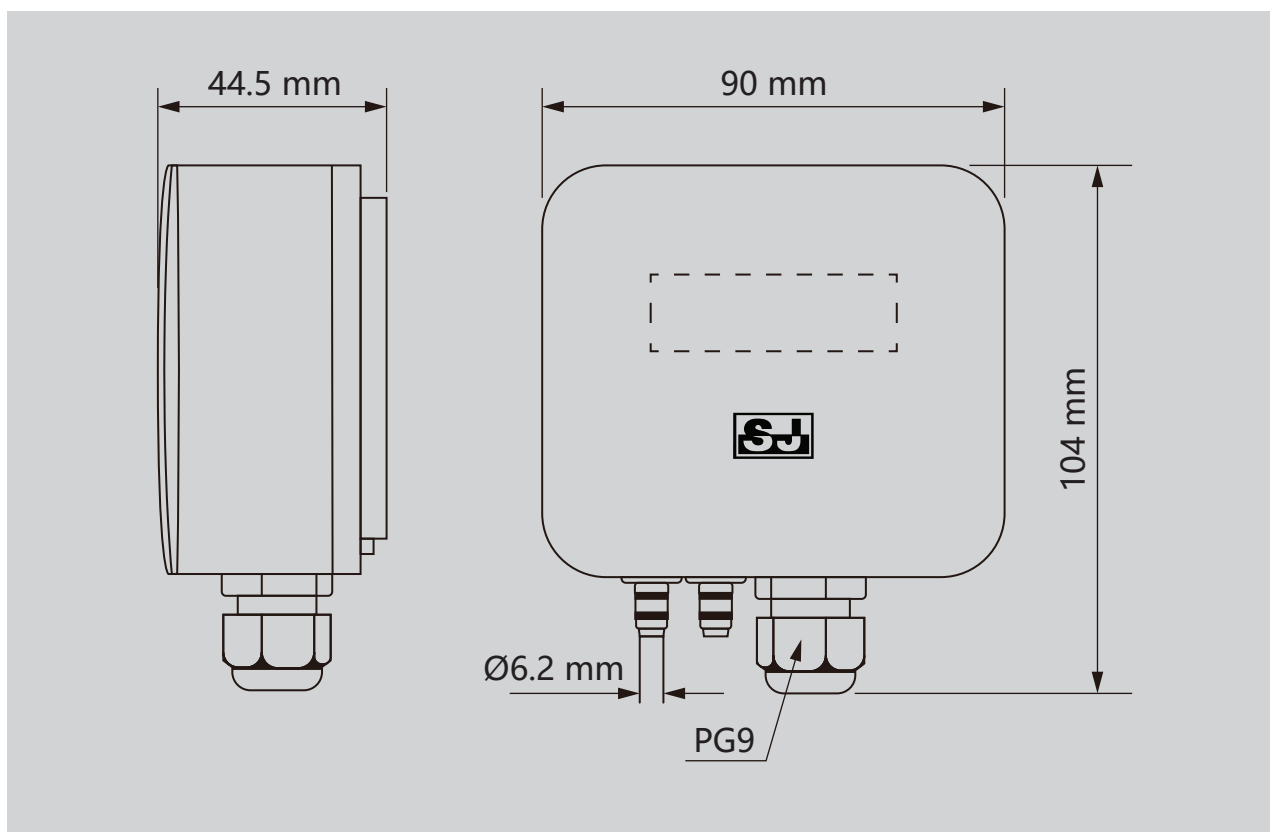
6-wire: 4-20mA & 0-5VDC, 4-20mA

& 0-10VDC

Zero adjustment

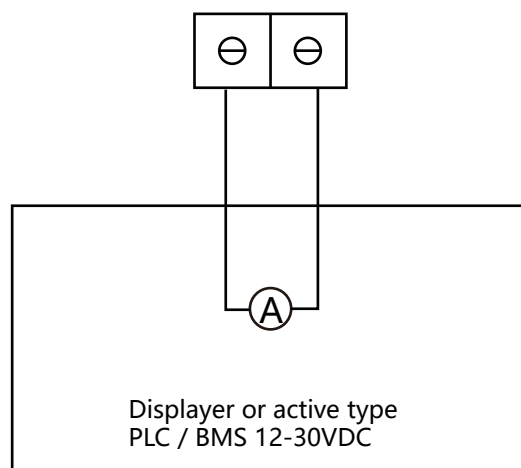
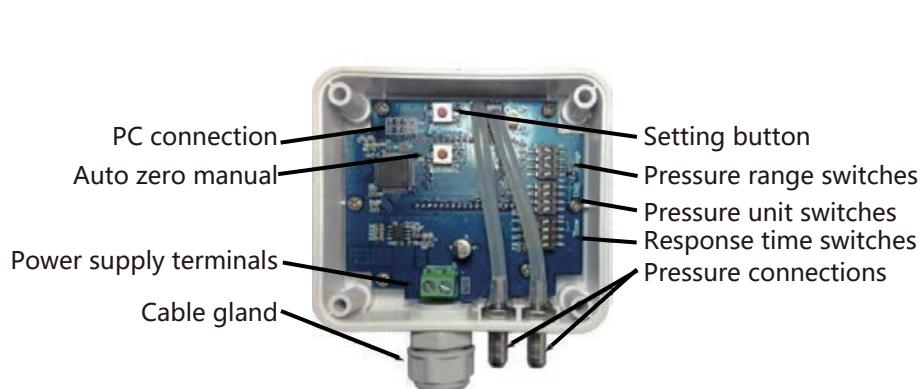
By manual or automatic operation

Dimensions

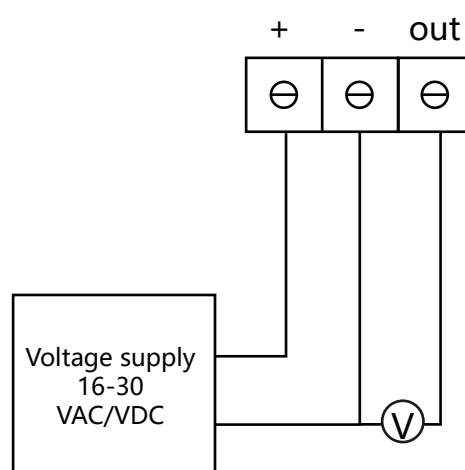
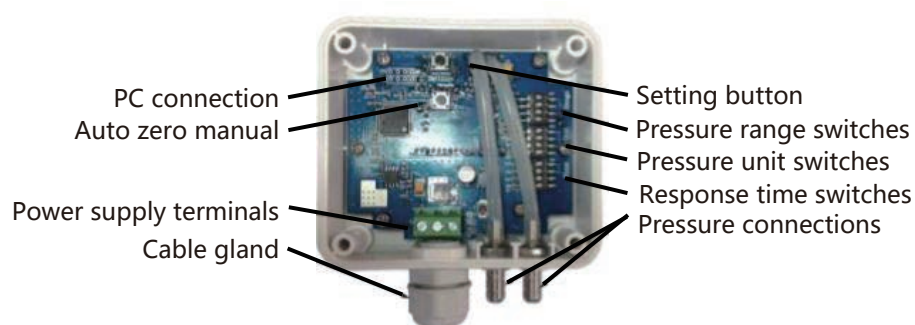


Wiring Diagram

2-wire (4-20mA)

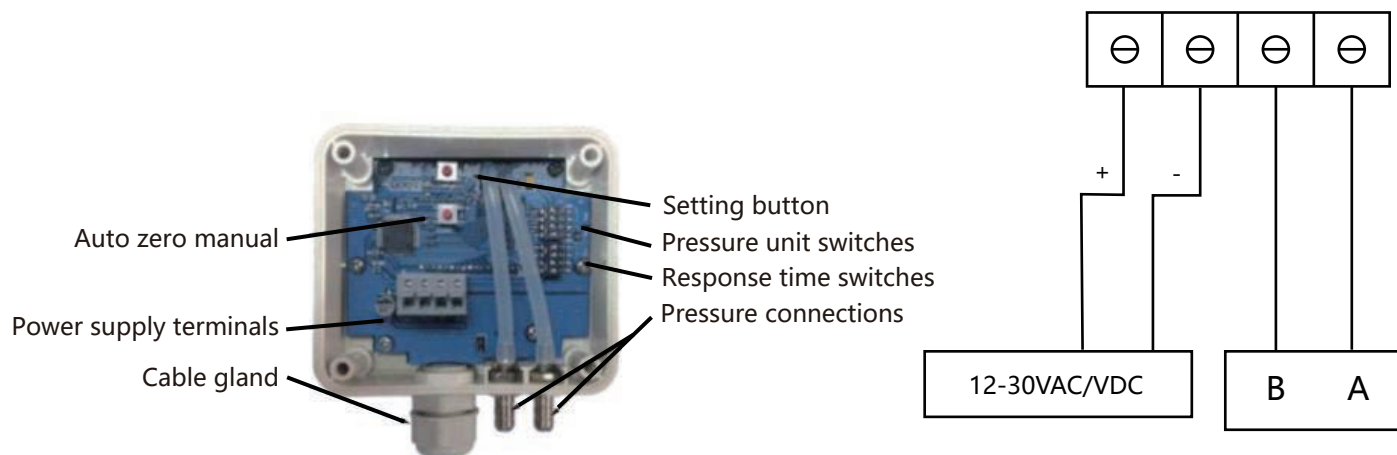


3-wire (0-5VDC, 0-10VDC)

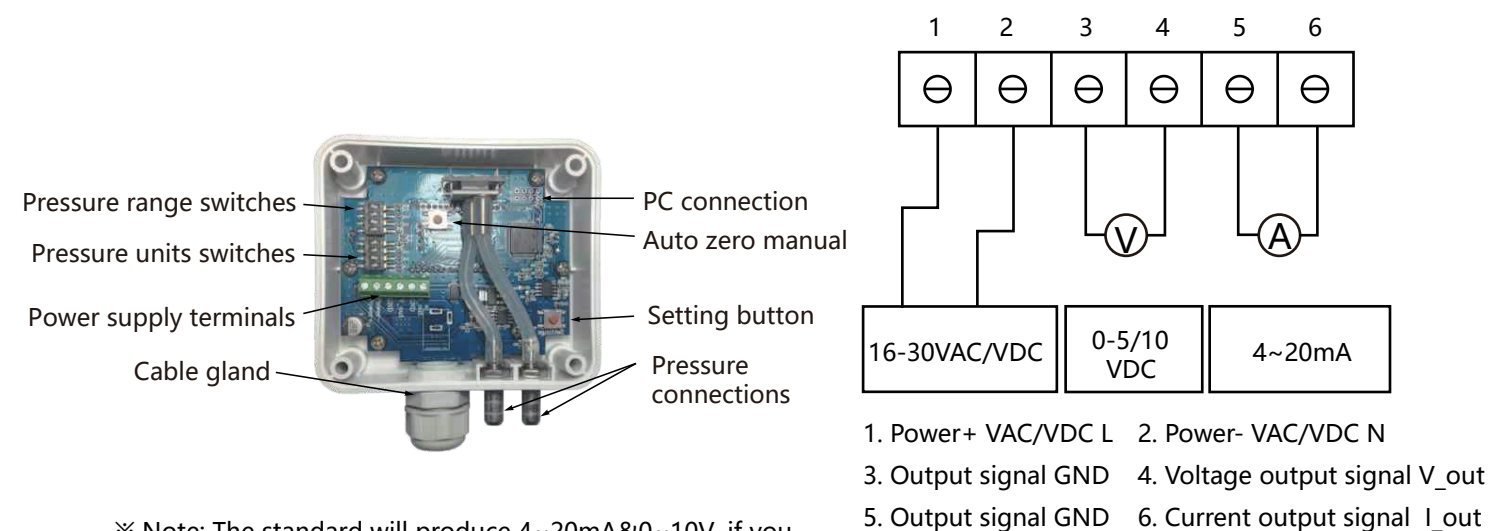


Wiring Diagram

4-wire (RS485)



6-wire (4-20mA & 0-5VDC, 4-20mA & 0-10VDC)



※ Note: The standard will produce 4~20mA&0~10V, if you need to produce 4~20Ma&0~5V, please specify in the order.

※ **Ordering information**

Model / Version / Scale range / Output signal / Options

For any changes to the specifications of this catalogue, the latest version shall prevail.





Basic functions

1. Display function:

Display pressure and pressure unit, available as Pa, mmH₂O, inWC, mmHG, daPa, kPa, hPa, mbar.

2. Function settings:

Precision calibration is through the circuit board by pushing the button. Taking -1000pa to 1000pa as an example, when the button activated, the sensor will enter into the precision calibration status. Input the pressure supply to -1000 Pa and push the button to save the -1000Pa pressure value. Then validating the setting for each additional 500pa. If the next value smaller than the previous one, the validation is invalid and will display "Err" without saving the value. Usually, we set the pressure range with professional machines and workers before shipment, customers are not encouraged to set the pressure.

3, Manual zeroing:

Push the auto zero manual button for resetting. (If any deviation of pressure value or output, please reset the transmitter parallel with the installation)

Dial-up switch swtting

1. Range setting:

Set the pressure range by the pressure range switch. (The range is correlated to the output. For example, 0~100pa carries with the corresponding 4 ~ 20mA and 0 ~ 5VDC/0 ~ 10VDC.)

	Model	Unit	Pa	mmH ₂ O	mbar	inWG	mmHG	daPa	kPa	hPa
4	TWM116		10.0	1.00	0.100	/	/	1.00	/	0.100
3	TWM110		100	10.0	1.00	0.40	0.75	10.0	0.100	1.00
2	TWM112		1,000	100.0	10.00	4.00	7.50	100	1.000	10.00
1										
4	TWM116		25.0	2.50	0.250	/	/	2.50	/	0.250
3	TWM110		250	25.0	2.50	1.00	1.87	25.0	0.250	2.50
2	TWM112		2,500	250.0	25.00	10.00	18.75	250.0	2.500	25.00
1										
4	TWM116		50.0	5.00	0.500	/	/	5.00	/	0.500
3	TWM110		500	50.0	5.00	2.00	3.750	50.0	0.500	5.00
2	TWM112		5,000	500.0	50.00	20.00	37.50	500.0	5.000	50.00
1										
4	TWM116		75.0	7.50	0.750	/	/	7.50	/	0.750
3	TWM110		750	75.0	7.50	3.00	5.62	75.0	0.750	7.50
2	TWM112		7,500	750.0	75.00	30.00	56.20	750.0	7.500	75.00
1										
4	TWM116		100.0	10.00	1.000	/	/	10.00	/	1.000
3	TWM110		1,000	100.0	10.0	4.00	7.50	100.0	1.000	10.00
2	TWM112		10,000	1,000.0	100.00	40.00	75.00	1,000.0	10.000	100.00
1										



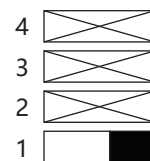
■ Full range/Central zero (take 0~1,000 Pa as an example)

To set the type of measuring range by adjusting the pressure range switch as indicated.

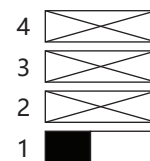
※ Note:

Please follow carefully the combinations above the Dial-up switch.

If the combination is wrongly done, the following message will appear on the display as "Err". In that case, you have to unplug the transmitter, place the Dial-up switches correctly and then power the transmitter up.



Full range:
0 ... 1000 Pa



Central zero
(compound):
-500 Pa ... 500 Pa

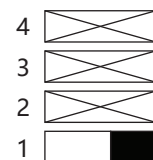
2. Unit setting

Set the pressure unit by adjusting the dial up switches referring to following combination

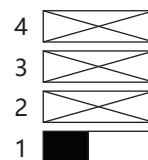
Pressure unit	Pa	mmH ₂ O	mbar	inWG
Combination	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1
Pressure unit	mmHG	daPa	kPa	hPa
Combination	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1

3. Auto zero function setting

Dial the switch 1 to activate or deactivate the auto zero function when powering up(the transmitter will be auto zeroed when activate this switch and vise versa)



Deactivate auto
zero switch



Active auto
zero switch



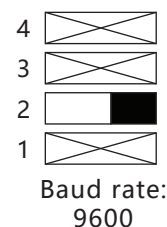
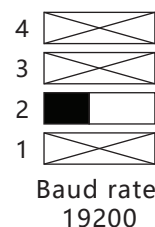
4. Response time

Set the response time by adjusting the time response dial up switches referring to following combination

Response time	0.5 s	1 s	2 s	4 s
Combination	4	4	4	4
	3	3	3	3
	2	2	2	2
	1	1	1	1

5. RS485 model setting:

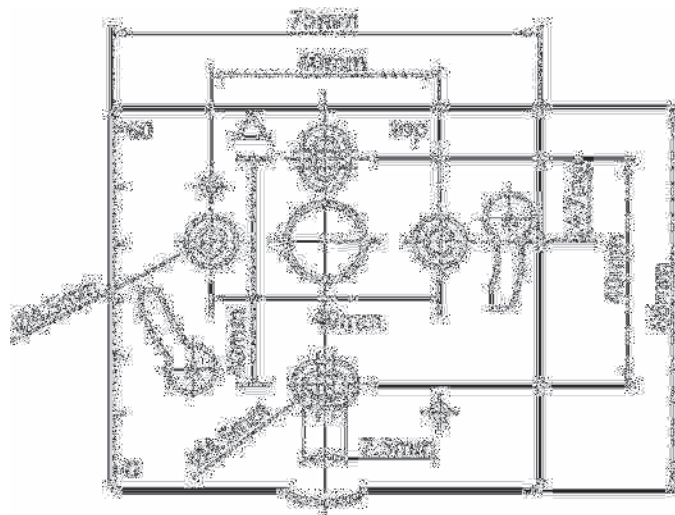
We included the RS-485 communication function in time response dial up switches. By dial up the switch 1 and 2 in following combination to change the baud rate either in 19200 or 9600(Only workable for RS485 differential transmitter)



※ In the Figure 4 there are a set of resistor jump which could be connected for reducing signal interference when the communication distance above 300 meters.

Mounting

To mount the transmitter, mount the ABS plate on the wall (drilling: Ø 6mm, depth 30 mm, screws and pins a resupplied) Insert the transmitter on the fixing plate (see A on the drawing) Rotate the housing in clockwise direction until you hear a 'click' which confirms that the transmitter is correctly installed.



Maintenance

Please avoid any aggressive solvent and protect the transmitter and its probes from any cleaning product containing formalin, that may be used for cleaning rooms and ducts.



Accessories

PVC tube, 2 pressure connectors, ABS mounting plate

FAQs

■ The display range or units do not tally with the Settings.

- ① dial the code switch is not in place, the electricity to restart the redial later.

■ Pressure pressure showed no change or the output value (display of 0 or FULL), or change is not allowed.

- ① whether the load pressure over blasting pressure directly blunt bad core body;
- ② whether there is corrosive or use media. And the purchased product applicable medium exist discrepancy (existing micro differential pressure transmitter are for no corrosive gas);
- ③ check whether there is any foreign bodies blocked on inlet hose (particulate matter or water) or leakage;
- ④ using the environment temperature is beyond compensation temperature range (micro differential pressure transmitter temperature compensation range -10 ... 60°C);
- ⑤ with and without the pressure to zero wrong operation, such as there is no input in determining the state of stress under the reset again;
- ⑥ have corrosive Settings button of wrong operation (Settings button to prevent wrong operation mechanism, namely the set point pressure value must be increasing from small to big to finally set up successful, needs to be in high precision pressure source under the calibration set, don't recommend customer to calibration, such as the deviation caused by the calibration operation, must be returned to the factory heavy school).

■ Pressure normal value, no output analog or analog output is not allowed.

- ① check the output line connection is normal;
- ② three wire system output is to detect transducer with control instrument is normal (i.e., ground wire must be connected to);
- ③ check the load resistance to choose proper.

■ The zero pressure value drift slightly.

- ① clear operation after drift stability.

If the above method cannot eliminate the fault, contact the manufacturer!

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