

Differential Pressure Transmitter

Model: TWM11

Feature of Product

- Accuracy up to $\pm 1.0\%$
- Allowed for measuring differential pressure of gas
- LCD backlight digital display can be selected



Left picture:TWM11(with monitor)

Right picture:TWM11(without monitor)

Product Specification

Accuracy

 $\pm 1.0\%$

Pressure units

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

Medium

Air or neutral gas

Voltage

12~30VDC

Power consumption

 $\leq 1.5W$

Reaction speed

0.5s, 1s, 2s, 4s

Zeroing

Manual operation or automatic start

Maximum overpressure

15KPa (type 0)、150KPa (type 2)、
4.5KPa (type 6)

Ambient temperature

-10°C~+60°C

Storage temperature

-10°C~+70°C

Output signal

0~5VDC, 4~20mA, 0~10V, RS485

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

Product Specification

Measuring range

Type 0: -1000~ +1000Pa (Minimum display: 0~+100Pa)

Type 2: -10000~ +10000Pa (Minimum display: 0~+1000Pa)

Type 6: -100~ +100Pa (Minimum display: 0~+10Pa)

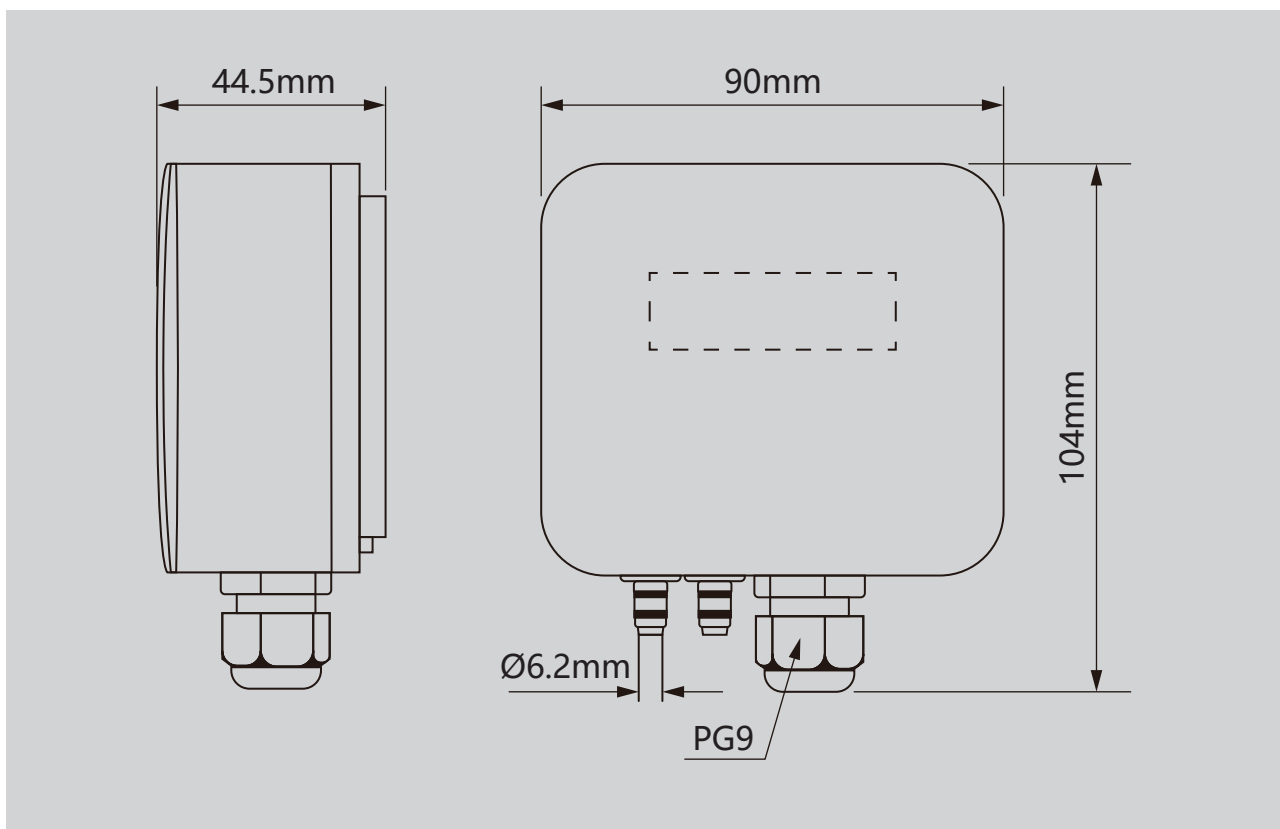
Resolution

Type 0, 2: 1Pa, 0.1mmH₂O, 0.01mbar, 0.004inWG,

0.007mmHg, 0.1daPa, 0.001KPa, 0.001hPa

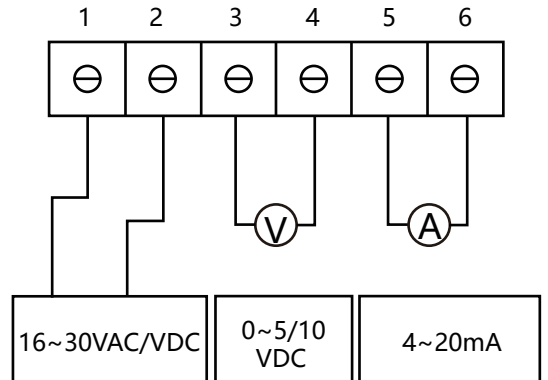
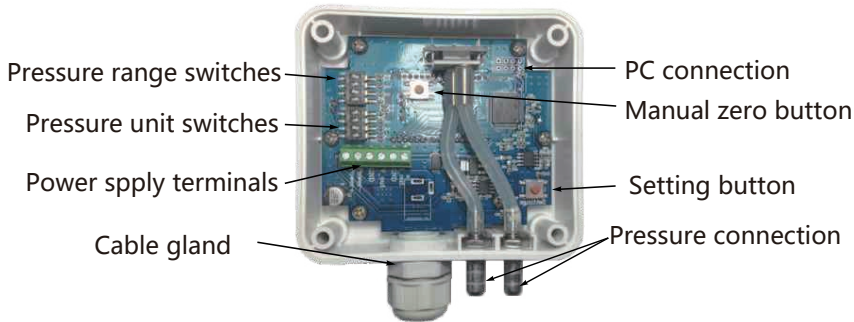
Type 6: 0.1Pa, 0.01mmH₂O, 0.01mbar, 0.01dapa, 0.001hPa

Dimensions



Product wiring schematic diagram

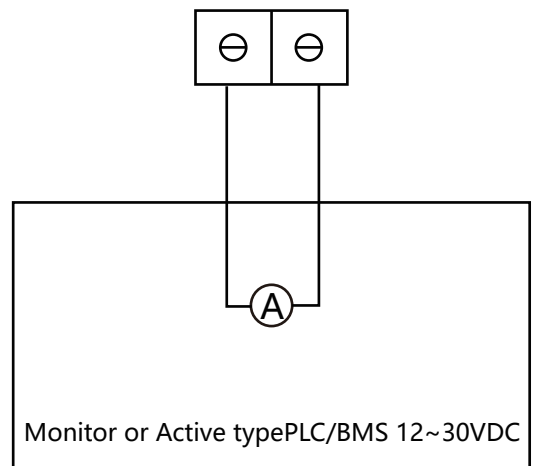
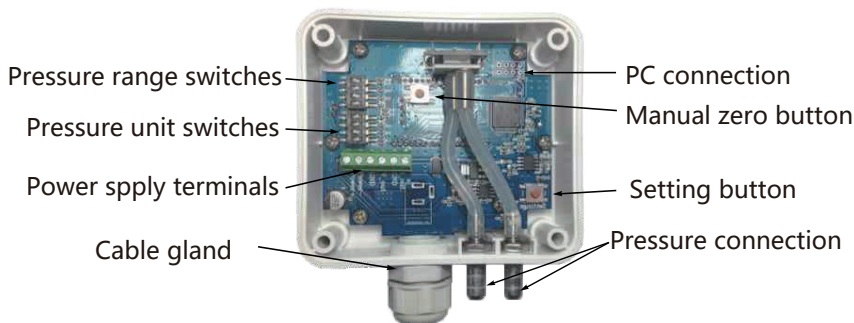
Model A (4~20mA、0~5/10VDC six line type)



- 1、 Positive electrode VAC/VDC L
- 2、 Negative electrode VAC/VDC N
- 3、 Output signal GND
- 4、 Voltage output signal V_{out}
- 5、 Output signal GND
- 6、 Current output signal I_{out}

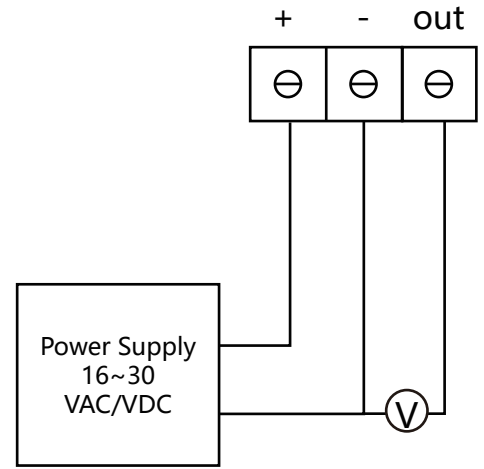
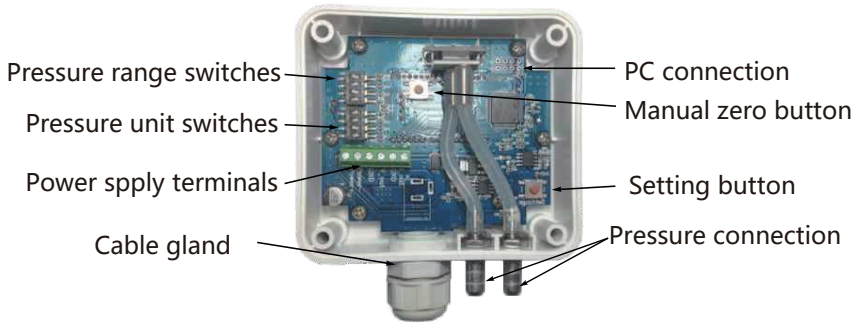
Product wiring schematic diagram

Model B (4~20mA two line type)



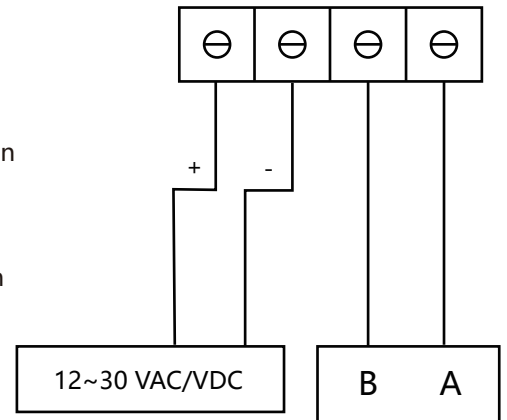
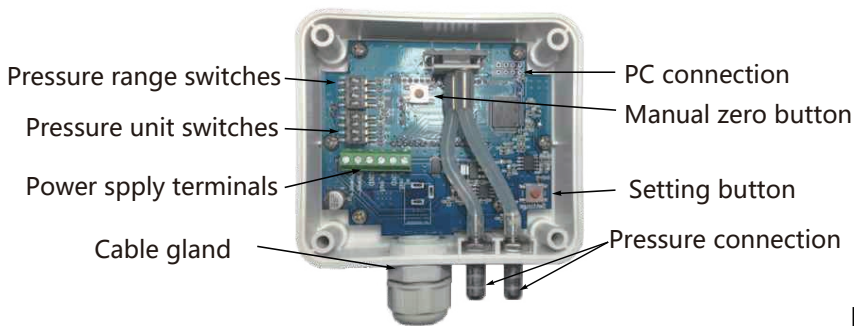
Product wiring schematic diagram

Model C、 Model D(0~5VDC/0~10VDC three line type)



Product wiring schematic diagram

Model E (4 line type RS-485)



Codes for Custom Order Configurations

Ex:	TWM11 -	0	O	A	+A
Measuring range		0			
0	-	-1000~1000Pa			
2	-	-10000~10000Pa			
6	-	-100~100Pa			
Display			O		
O	-	with monitor			
N	-	without monitor			
Output signal				A	
A	-	4~20mA, 0~5/10VDC			
B	-	4~20mA			
C	-	0~10VDC			
D	-	0~5VDC			
E	-	RS485			
Other demands					+A
+A	-	None			
+B	-	Additional order details			

For any changes to the specifications of this catalogue, the latest version shall prevail.
Copyright © 09/2020 by SIN JIA ENTERPRISE COMPANY LIMITED. All rights reserved.

SIN JIA ENTERPRISE COMPANY LIMITED

TEL:+886-2-2550-4512

FAX:+886-2-2550-4510

info@sinjiagauge.com

www.sj-gauge.com

No.3, Ln. 71, Chifeng St., Datong Dist., Taipei City 103, Taiwan





Operation Instructions

1.Display Function: Display pressure unit, available as Pa, mmH₂O, inWG, 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 -1000pa and push the button to save the -1000pa pressure value. 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.

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

Operation Instructions

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

4. Dial-up Switch 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.)

■ Full range / Central zero (take 0~1000pa as an example)

To set the type of measuring range by adjusting the pressure range switch ad indicated below:



Full range:0~1,000Pa



Central zero:-500~500Pa

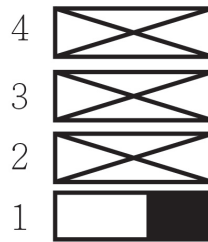
■ Please follow carefully the combinations the Dial-up switch. If the combination is wrongly done, the following message will appear on the display as "Err" . In that case, you have to unplug the transmitter, place the Dial-up switches and then power the transmitter up.

5.Unit Setting: Set the pressure unit by adjusting the dial-up switches referring to the following combination.

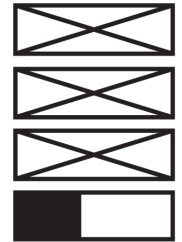
	Pa	mmH ₂ O	mbar	inWG
Combination				
	mmHG	daPa	kPa	hPa
Combination				

Operation Instructions

6.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 active this switch)



Deactivate auto zero switch

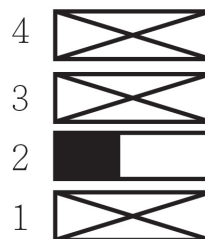


Activate auto zero switch

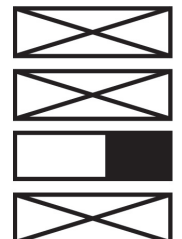
7.Response Time Setting: Set the response time by adjusting the time response dial up switches referring to the following combination.

	0.5s	1s	2s	4s
Combination				

8.RS-485 Model Setting: We included 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)

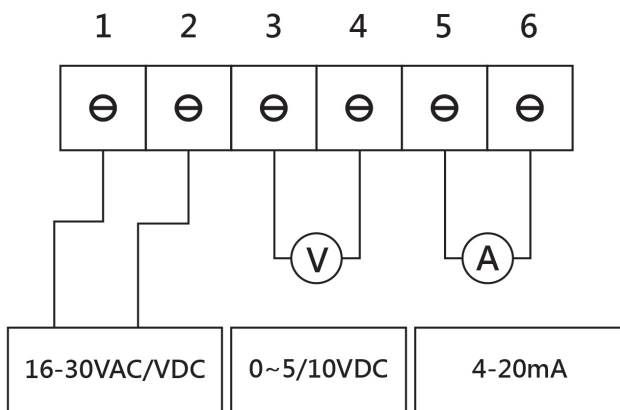


Baud rate:19200



Baud rate:9600

Electrical Connection



- 1.PowerPositive: VAC/VDCL
- 2.PowerNegative: VAC/V
- 3.Output Singal: GND
- 4.Voltage Output Signal: V_out
- 5.Output Singal: GND
- 6.Current Output Signal: I_out

Maintenance

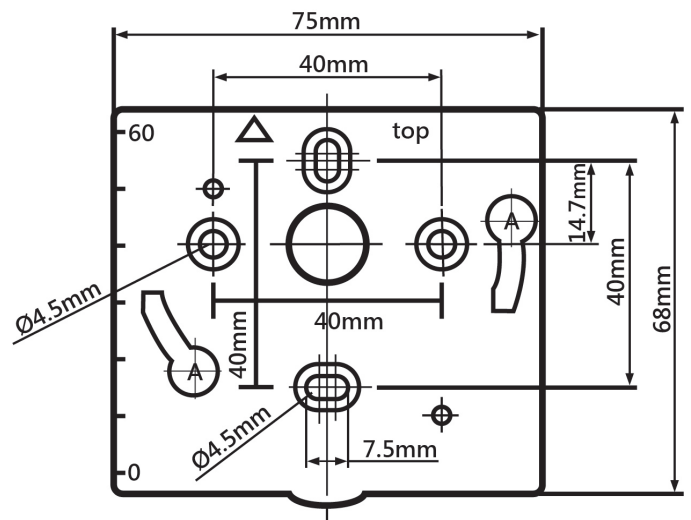
Please avoid any aggressive solvent and protect the transmitter and its probes from any cleaning product containing formalin, that may be used for cleaning rooms and ducts.

Chargeable Accessories

Power adapter, Connection tube

Mounting

To mount the transmitter, mount the ABS plate on the wall (drilling: $\varnothing 6\text{mm}$, depth 30mm, screws, and pins are supplied) 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.



Remark : Unscrew the 4 screws from the back cover, then take out the rubber cap, then connect the terminal and cable through the cable gland, the tighten the cable gland and cover the back cover.

Common problem and solutions

1.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.

2. Pressure showed no change or output value (display of 0 or FULL), or changes 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°C ~60°C)

⑤ With a 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 setting button of wrong operation (setting button to prevent wrong operation mechanism, namely the set point pressure value must be increasing from small to big to finally set up successfully, 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).

3.Pressure normal value, no output analog output is not allowed

① Check the output line connections is normal

② Three wire system output is to detect transducer with control instrument is normal (ground wire must be connected)

③ Check the load resistance to choose proper.

4.The zero pressure value drift slightly.

① Clear operation after drift stability.

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