

NT 3300E Series
(Explosion Proof Type
2-Wire Pressure Transmitter)



<http://www.newins.co.kr>

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**※ Be sure to observe following warning / cautions and those provided in the text.
In order to secure safety in handling the instrument.**

⚠ WARNING

- | | |
|-------------------------|--|
| General | ▶ In order to prevent electric shock, be sure to disconnected this instrument from the main power source when wiring. |
| Protective Grounding | ▶ In order to prevent electric shock ; be sure to provided protective grounding prior to turning on this instrument.
Do not cut a protective grounding conductor disconnected protective grounding. |
| Power Source | ▶ Make sure that the supply voltage for this instrument conforms to the voltage source.
▶ Attach protective cover prior to turning on this instrument. |
| Fuse | ▶ In order to prevent a fire, use only our specified fuse.
▶ Don't short-circuit a fuse. |
| Working Environment | ▶ Do not operate this instrument in the environment where it is exposed to a combustible, explosive, corrosive gas or water, steam. |
| Input and Output wiring | ▶ Provide input and output wiring after turning off the power. |

⚠ CAUTION

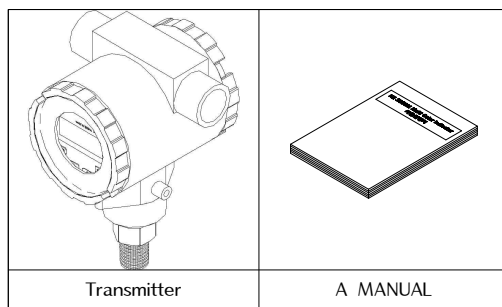
- | | |
|-------------------------|--|
| Inside of instrument | ▶ Do not disassemble the inside of the instrument.
▶ Prevent inflow of dust, water, oil and wiring dregs in to the instrument. |
| Input and Output wiring | ▶ Do not use empty terminals for other purposes such as relaying, etc.
▶ Wire correctly after checking the polarity and purpose of the terminal.
▶ When wiring the instrument, separate from high voltage cables, power lines, and motor lines to prevent inductive noise. |
| Transportation | ▶ When transporting this instrument or the equipment with this instrument incorporated in it, take measures to prevent opening the door and falling out the inner module. |

⚠ NOTE

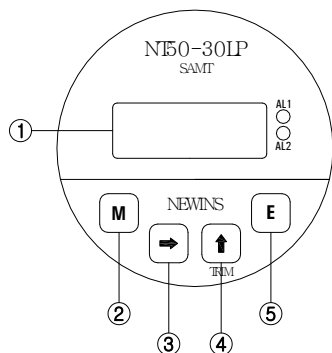
- | | |
|-------------------------------------|--|
| Instruction manual | ▶ Deliver this instruction manual to an end user.
▶ prior to handing the instrument be sure to read this manual.
▶ If you have any question on this manual or fine any errors omissions in this manual, contact our sales representative
▶ After reading this manual, keep it carefully by the instrument.
▶ When the manual, is lost or stained, contact our sales representative.
▶ It is prohibited to copy or reproduce this manual without our permission. |
| Checking the accessories | ▶ Upon delivery instrument, unpack and check its accessories and appearance. if there are missing accessories or damage on the appearance contact our dealer where you purchased the instrument or our sales representative. |
| Installation | ▶ When installing this instrument, put on a protective gear such as safety shoes, helmet, etc. for your safety. |
| Maintenance | ▶ Only our serviceman or persons authorized by NEWINS are allowed to remove and take the inner module, the main unit and printed circuit boards apart. |
| Disposal | ▶ Disposed the used products in a correct way.
▶ Do not incinerate plastics of maintenance parts and replacement parts. A harmful gas mat be produced.
▶ To disposed of this instrument, consign to the special agent as an industrial waste. |
| Cleaning | ▶ Use dry cloth to clean the surface of this instrument
▶ Do not use any organic solvent.
▶ Cleaning the instrument after turning off the power. |
| Revisions | ▶ This instruction manual is subject to change without prior notice. |
| Evasion of responsibility guarantee | ▶ Be sure to observe the caution in operating, maintaining, and repairing this instrument. We will not be responsible for or guarantee the damage resulting from negligence of them. |

1. Checking the Accessory

when you received, please check the Insufficient accessories and defective products shape.
If the lack of parts, please contact the company.



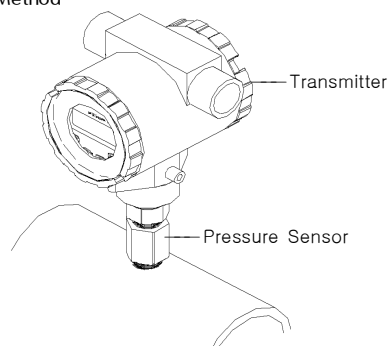
2. Part Name



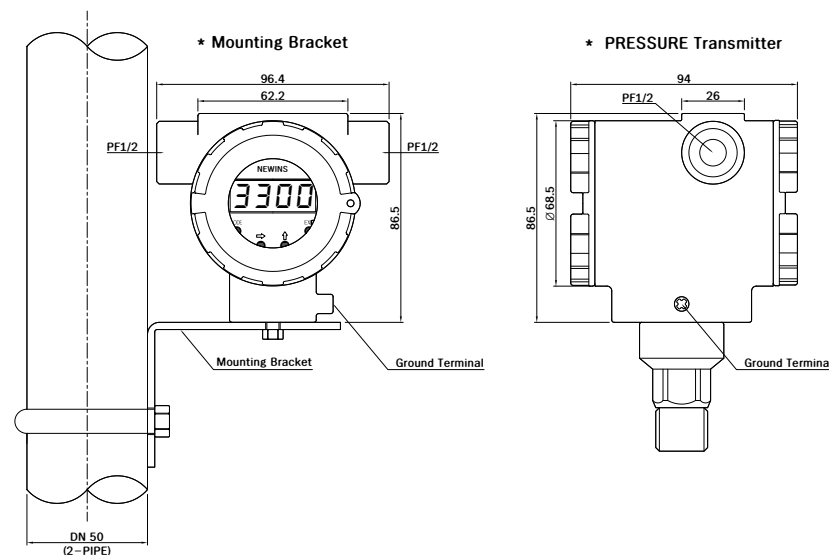
- ① Measured value display
- ② **MODE** KEY
Storage the set data and change the operation menu
- ③ **ENTER** KEY
Enter into the data setting mode and modify the changed location
- ④ **UP** KEY
Change the data value
- ⑤ **EXIT** KEY
Out of mode

3. Installation

1. Establishment Method



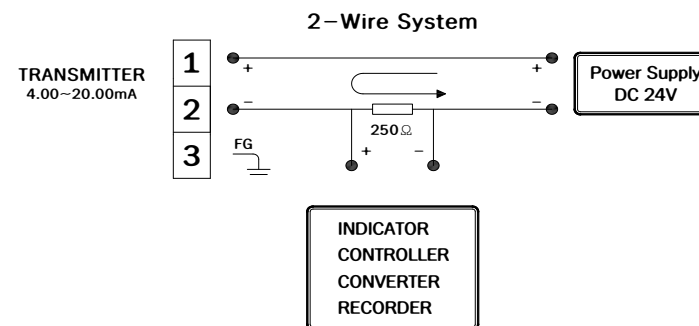
2. Dimension



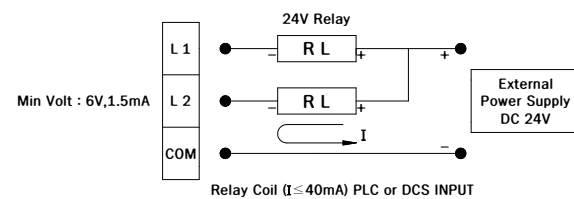
4. Terminal Diagram

1. Terminal wiring

1.1. 2-Wire



1.2. Loop-Powered Switch



2. A power source wiring

⚠ Caution

1. For an electric shock prevention to turn on electricity to the machinery and tools which after one sees a protective ground connection surely.
2. To the electric wire terminal to use the insulation sleeve compression terminal.
3. The device's power supply voltage to match the voltage of the power is in check.
4. For the protection of life to turn on an electric current to the instrument after attaching the cover.

⚠ Attention

1. To all the member front line 600V vinyl insulation front lines (JIS C3307), or to use the front line of above considerable width.
2. To the protective ground terminal to connect above of 3rd type(to connect below earth resistance 100Ω and smallest size 1.6mm).
3. Other protection devices and grounding, the grounding in public may be affected by noise. Accordingly the public are advised not to other devices.

5. Features

- ▶ Sharpness is excellent using FND Display.
- ▶ High accuracy 16bit A/D converter
- ▶ You can select the number of filters, and it can be used for both fast response and slow response.
- ▶ Range Ability of at least 5: 1 is possible.
- ▶ Zero adjustment is easy using the internal Trim function.
- ▶ The display cycle can be extended with Sampling Time setting.

6. General Specification

1. Input Type

Input Range	Over Pressure
0.0 ~ 0.1bar	2.5bar
0.0 ~ 0.2bar	2.5bar
0.0 ~ 0.5bar	2.5bar
0.0 ~ 2.0bar	4.0bar
0.0 ~ 5.0bar	7.0bar
0.0 ~ 20.0bar	30.0bar
0.0 ~ 50.0bar	75.0bar
0.0 ~ 200.0bar	300bar
0.0 ~ 2.0bar(Absolute pressure)	4.0bar
0.0 ~ 5.0bar(Absolute pressure)	7.0bar
0.0 ~ 20.0bar(Absolute pressure)	30.0bar

2. Measuring and displaying interval : 100ms
3. CMRR(Common Mode Rejection Ratio) : 140dB or more
4. NMRR(Normal Mode Rejection Ratio) : 60dB or more
5. Moving average filter (1~99)

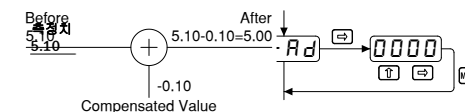
6. Power : DC 9~35V
7. Accuracy : $\pm 0.25\%$ FS
8. Output : DC 4.00~20.00mA
9. Load limit : (Vsp9V) $0.022=R\Omega$
10. Vibration(20..5000Hz) : 20Hz
11. Diaphragm : SUS316L
12. Oil Filling : Silicon Oil
13. Dead Volum change @25℃ < 0.1mm \geq /FS
14. Sensor Operating Temperature : -30~100℃
15. Operating condition
 - ▶ Operating Temp/Humidity : -30~70℃, 10~90%
 - ▶ Storage Temp/Humidity : -30~70℃, 10~90%
16. etc
 - ▶ Weight : 1.7kg
 - ▶ Body material : SUS 304 (Ex d II C T6)
 - ▶ Degree of protection : IP-65
 - ▶ Process Connection : PT 1/2

7. Major Function

1. Sensor compensation function(**S-Ad**)

- The function is useful for compensating error by long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 5.10bar
 After sensor adjust
 = measured value + compensated value
 = 5.10 - 0.10
 = 5.00bar



2. Filter function(**FLt**)

- The filter function is a moving average filter, from Av4 to Av64.

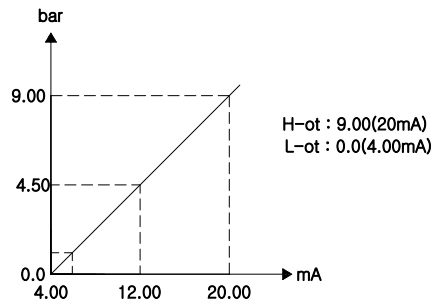
Av4 ~ **Av64**

If you need a quick response, do not use the filter because selecting the filter function will slow down the response speed.

If the input comes in irregularly and the output and display values change, the filter function can be used to obtain stable output and display values

3. Output scaling function

-This function is used when you want to set the pressure Range to any user and use it.



ex) At a maximum pressure of 10.00 bar at 0.00 to 9.00 bar
When trying to use with 4.0 mA to 20.00 mA

4. Sensor zero trim

- In case you need to do that are instructed the current value to zero key current pressure is zero, by when they have tapping trim for three seconds.

8. Operation and Setting Mode

⚠ CAUTION Initialization of the data (All Reset)

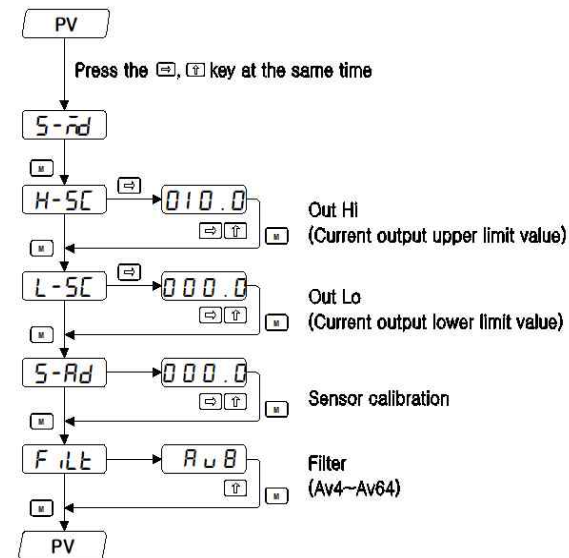
It is All reset when ship the goods from factory. If you want initialize all parameter, please reset the instrument. Push the **MODE** key and **EXIT** key at the same time and ON the power. It is initialized and operation by new setting value.

-It is MODE that purchases a machine and sets it according to the purpose of use by the user. This machine has three MODE
It is composed.

Setting Mode

- Change the setting push at the same time to move setting mode.
- Press **E** key to save the data and proceed to the previous step.
- key DIGIT Change (blink)
- Key Change the DIGITAL number. (Blinking)

8-1. Transmission output method (for example, 0 to 10 bar)



9. Ordering Code

NT 33			E				Description(Basic)
INDICATOR	1						FND Indicator
	2						LCD Indicator
RANGE bar	0						0 ~ 0.5bar
	1						0 ~ 10.0bar
	2						0 ~ 20.0bar
	3						0 ~ 50.0bar
	4						0 ~ 100.0bar
	5						0 ~ 200.0bar
	6						(-)760mmHg ~ 5.0bar
	7						(-)760mmHg ~ 10.0bar
Explosion proof			E				EX d II C T6
Pressure Type			G				Gauge Pressure
			A				Absolute Pressure
Process Connection				0			PT(1/2")
				1			PT(1/4")
				2			PF(3/8")
				3			OTHERS
OPTION TYPE				0			None
				1			Loop Type

※ Purchase & A/S

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