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# NT 5500 Series (2-Wire Smart Transmitter)



http://www.newins.co.kr

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## <u>\*\* Be sure to observe following warning / cautions and those provided in the text.</u> In order to secure safety in handing the instrument.

opening the door and falling out the inner module.

▲ NOTE

▲ WARNING General Protective Grounding	<ul> <li>ING</li> <li>In order to prevent electric shock, be sure to disconnected this instrument from the main power source when wiring.</li> <li>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.</li> </ul>		<ul> <li>Deliver this instruction manual to an end user.</li> <li>prior to handing the instrument be sure to read this manual.</li> <li>If you have any question on this manual or fine any errors omissions in this manual, contact our sales representative</li> <li>After reading this manual, keep it carefully by the instrument.</li> <li>When the manual, is lost or stained, contact our sales representative.</li> <li>It is prohibited to copy or reproduce this manual without our permission.</li> </ul>			
Power Source	<ul> <li>Make sure that the supply voltage for this instrument conforms to the voltage source.</li> <li>Attach protective cover prior to turning on this instrument.</li> </ul>	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.			
Fuse	<ul> <li>In order to prevent a fire, use only our specified fuse.</li> <li>Don't short-circuit a fuse.</li> </ul>	Installation	<ul> <li>When installing this instrument, put on a protective gear such as safety shoes, helmet, etc. for your safety.</li> </ul>			
Working Environment	<ul> <li>Do not operate this instrument in the environment where it is exposed to a combustible, explosive, corrosive gas or water, steam.</li> </ul>	Maintenance	<ul> <li>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.</li> </ul>			
Input and Output wiring	▶ Provide input and output wiring after turning off the power.	Disposal	<ul> <li>Disposed the used products in a correct way.</li> <li>Do not incinerate plastics of maintenance parts and replacement parts. A harmful gas mat be produced.</li> <li>To disposed of this instrument, consign to the special agent as an industrial waste.</li> </ul>			
A CAUTION		Cleaning	ing • Use dry cloth to clean the surface of this instrument			
Inside of instrument	<ul> <li>Do not disassemble the inside of the instrument.</li> <li>Prevent inflow of dust, water, oil and wiring dregs in to the instrument.</li> </ul>		<ul><li>Do not use any organic solvent.</li><li>Cleaning the instrument after turning off the power.</li></ul>			
Input and	<ul> <li>Do not use empty terminals for other purposes such as relaying, etc.</li> <li>Wire correctly after checking the polarity and purpose of the terminal.</li> <li>When wiring the instrument, separate from high voltage cables, power lines, and motor lines to prevent inductive noise.</li> </ul>	Revisions	<ul> <li>This instruction manual is subject to change without prior notice.</li> </ul>			
Output wiring		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.			
Transportation > When transporting this instrument or the equipment with this instrument incorporated in it, take measures to prevent						

## 1. Checking the Accessory

2. Dimension

► Single Mounting (unit:mm)

when you received, please check the Insufficient accessories and defective products shape.

## If the lack of parts, please contact the company.













DIN RAIL











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#### 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 (IIS 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  $100 \Omega$  and smallest size 1.6 mm)
- 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

- Multi inputs can receive various signals.
- ▶ High reliability is achieved by using 16bit A / D Converter with high performance and high accuracy.
- > You can select the number of moving average filters, which can be used for both fast response and slow response
- > Various Function functions are built in and it can be used for multiple purposes.
- ▶ 4 Digit FND for Parameter alteration and PV output on the spot
- ▶ Isolation current output (2-wire DC 4.00~20.00mA) & output scaling

## 6. General Specification

1. Input Type (standard 입력, 기타입력은 주문 사양임)

Sensor Type		Range	Scale	Symbol	Etc
тс	B(PR 30%)	0∼1800℃	-	ЕС-В	STD
	R(PR 13%)	0∼1750℃	-	۲C-r	
	S(PR 10%)	0∼1750℃	-	FC-2	
	K(CA)	-200 ~ 1350℃	-	FC - R	
	E(CRC)	-200.0∼700.0℃	-	FC-E	
	J(IC)	-199.9∼800.0℃	-	FC-7	
	T(CC)	-199.9∼400.0℃	-	FC-F	
	N	0∼1300.0℃	-	են-ո	
mV	mV	-100.0~100.0mV	-1999~9999	ñu	
РТ	ΡΤ100Ω	-200∼630℃	-	d-PE I	
		-199.9∼630.0℃		d-PE2	-
	JPT100 Ω	-199.9∼800.0℃	-	J-PE	
Volt	Volt	-10.0~10.0V	-1999~9999	U	OPTION
mA	mA	$4.00 \sim 20.00$ mA	-1999~9999	āR	

\* It need the external  $250 \Omega/+0.1\%$  25ppm resistance to use mA input type

2. Measuring and displaying interval : 200ms( mV, Volt ,mA type), 400ms(TC , RTD type)

3. Input resistance : Volt Type 400kQ, Other Type 1MQ

4. Signal source resistance : PT100..  $30 \Omega$ /Line, Other Type  $300 \Omega$ /Line

5. CMRR(Common Mode Rejection Ratio) : 140dB or more

- 6. NMRR(Normal Mode Rejection Ratio) : 60dB or more
- 7. Moving anerage filter : Selectable(None, 4, 8. 16)
- 8. Accuracy : +0.1% FS
- 9. Power : DC 9~35V
- 10. Output
  - ▶ 2-wire DC 4.00 ~ 20.00mA
  - ▶ load limit(Vsp9V)/0.022=RΩ
  - 11. Operation condition
    - ▶ Operating Temp/Humidity :  $-10 \sim 60$  °C,  $10 \sim 90$ %
    - Storage Temp/Humidity :  $-20 \sim 70^{\circ}$ C,  $5 \sim 95^{\circ}$
  - 12. Power supply
  - ▶ Voltage : DC 9~35V
  - ▶ Isolation(FG-INPUT, FG-POWER, POWER-INPUT, INPUT-OUTPUT)
- 13. Etc.
  - ▶ Weight : 180g
  - Case material : ABS
  - ▶ Mounting : Din Rail and Wall mount

#### 7. Maior Function



long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 510°C

= 510 - 10 = 500℃

After sensor adjust -10 Compensated Value = measured value + compensated value

Refor

510



Afto

510-10=500

4. Function (mV, V, mA only) n a

#### 4.1. L m

Pass the input as it is. Used for general input type and linearity input.

### 4.2. 5-rt

Pass the input after  $\sqrt{}$ . Used for flow rate by orifice.

4.3. rot

Pass the input after  $\sqrt{}$ .

Used for flow rate by orifice.

- 5. Filter function( **F**.LE)
  - This function is moving average filter.
    - 0001)~ 0099
  - It displays in recent input No 1~99 sample average.
  - Do not use filter when high speed response is needed.
  - When output and display value are changed by irregular input, it is possible to get regular input and display value by using filter function.

OUT

-Y=√X if X>0

## 8. Operation and Setting Mode

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.

- ► Make flickering the wanted place by ⇒ and setting the value for data setting.
- ▶ Push the  $\widehat{1}$ , the figure repeat to 0,1,2...9,0 and the best position repeat to 0,1,2...,9,-,-1,0
- ► If you want to output the mode, push the EXIT then will go out into the PV value Mode.

#### 1. Input(**E**[, **rE**]) setting method







Burn-Out function

The maximum value is output when "High" and the minimum value when "Low" is output.





2. Transmission output A0 method(Analog Out)

## \* Purchase & A/S

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