

FEATURES

- 5 Digit, High Accuracy
- Multi-range input (T/C, RTD, Volt, mA, Etc)
- High accuracy 16bit A/D converter
- Peak hold function (Exit & Hold)
- RS-485 Communication interface
- 4 points alarm & Dead band set
- Isolation current output (DC 4.00~20.00mA) & Output scaling
- Filter function (4, 8, 16, 32)
- Auto zero function (Exit)
- Sensor power source DC 24V in STD specification



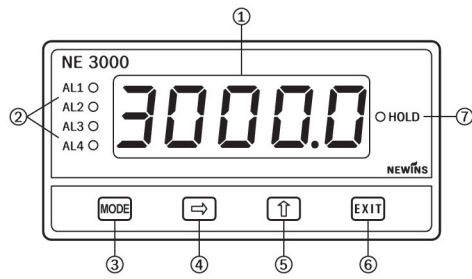
SPECIFICATIONS

- ▶ Measuring and display cycle : 200ms(mV, Volt, mA type)
400ms(TC, RTD type)
- ▶ Input resistance : Volt-400kΩ
Others type-1MΩ
- ▶ Signal source resistance : Pt 100Ω type-30Ω/line
Others type-300Ω/line
- ▶ CMRR(Common Mode Rejection Ratio) : 140dB or more
- ▶ NMRR(Normal Mode Rejection Ratio) : 60dB or more
- ▶ Moving average filter : 4, 8, 16, 32
- ▶ Built-in sensor power source : DC 24V 30mA ±0.5%
- ▶ Accuracy : ±0.15% FS
- ▶ Isolation current output(Option)
 - Current : DC 4.00~20.00mA
 - Maximum load resistance : 600Ω
 - Isolation resistance(Input-Output) : 100MΩ or more
(DC 500V)
- ▶ Ambient temperature & Humidity
 - Operation : -10~50°C, 10~90%
 - Storage : -20~70°C, 5~95%

- ▶ Alarm(Option)
 - Contact output type : Normal open
 - Max switching power : 60W 125VA
 - Max switching voltage : DC 220V, AC 250V
 - Max switching current : DC 2A, AC
 - Max Carrying current : DC 3A, AC
- ▶ Power supply
 - Voltage : AC 85~265V(45~65Hz)
DC 24V(Option)
 - Power consumption : Max 4VA
 - Isolation resistance : 100MΩ, DC 500V
(FG-Input, FG-Power, Power-Input, Input-Output)
- ▶ Communication interface(Option)
 - Type : RS-485
 - Speed : 4800, 9600, 19200bps
 - ID(address) setting : 0~15
- ▶ Etc
 - Weight : 500g
 - Mounting : Panel mount
 - Dimension : 99(W) X 51(H) X 112(D)mm

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PARTS NAME



- ① Measured value display
- ② Alarm condition display
- ③ **MODE** Key : Storage the set data and change the operation menu
- ④ **⇒** Key : Enter into the data setting mode and modify the changed location
- ⑤ **↑** Key : Change the data value
- ⑥ **EXIT** Key : Out of mode
- ⑦ Hold Function

INPUT TYPE

| Sensor Type | Range | Scale | Symbol | |
|-------------|-----------|----------------|-------------|------|
| TC | B(RH) | 0~1800°C | - | tC-b |
| | R(PR 13%) | 0~1750°C | - | tC-r |
| | S | 0~1750°C | - | tC-S |
| | K(CA) | -200~1350°C | - | tC-k |
| | E(CRC) | -200.0~700.0°C | - | tC-E |
| | J(IC) | -200.0~800.0°C | - | tC-J |
| | T(CC) | -200.0~400.0°C | - | tC-t |
| Volt | mV | -100.0~100.0mV | -1999~49999 | v̄u |
| | Volt | -1.0~1.0V | -1999~49999 | vu |
| | Volt | -10.0~10.0V | -1999~49999 | v̄u |
| mA | mA | 4.00~20.00mA | -1999~49999 | m̄R |
| PT | Pt100Ω | -200.0~800.0°C | - | d-Pt |
| | JPt100Ω | -200.0~500.0°C | - | J-Pt |

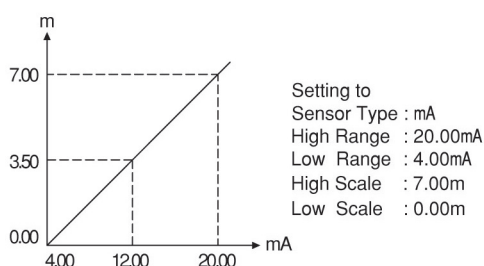
* mA type : External 250Ω(±0.1% 25ppm) resistance is attached

MAJOR FUNCTIONS

▷ Display scaling function(mV, Volt, mA only)

This Function changes and sets the display value according to scale and input range.

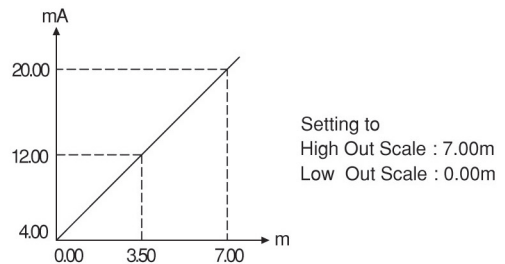
Ex) In case of input range 4.00~20.00mA and Level 0.00~7.00m



▷ Output scaling function

This function can change the 4.00~20.00mA value as the output scale.

Ex) In case of display value 0.00~7.00m, Output 4.00~20.00mA



▷ Sensor compensation function

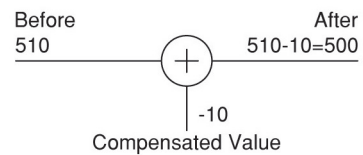
The function is useful for compensating error by long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 510°C

After sensor adjust

$$= \text{measured value} + \text{compensated value}$$

$$= 510 - 10 = 500\text{°C}$$



▷ Function(mV, Volt, mA type only)

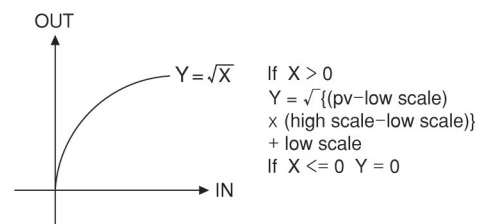
L in

Pass the input as it is.

Used for general input type and linearity input.

root

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



L int

Like level measuring, when it does not display measuring under zero, it always can display zero by using limit function.

▷ Filter function

4-Kinds of average transfer filter function.

-AV : Recently, averaging inputting sample value(4,8,16,32) indication.

* 1) Because input is irregular use when output and display are unstable.

2) When need high speed reply, if use filter, response is slow.

▶ Alarm function

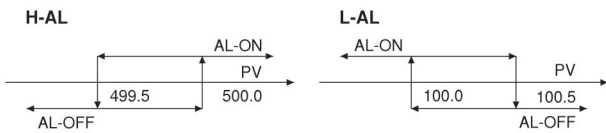
Alarm type : High, Low

The alarm consists of 4 relays, and it can output relay contact output individually.

Ex) AL-1 : High alarm value 500.0,
 AL-2 : Low alarm value 100.0,
 Alarm dead band setting 0.5

The high alarm(AL-1) is ON when the present value(PV) is 500.0 or more, and OFF when 499.5 or less.

The low alarm(AL-2) is OFF when the present value(PV) is 100.5 or more, and ON when 100.0 or less.



▶ Exit Hold function

If dry contact is imposed to external termination present value holding(Transmission output holding).

▶ Auto zero(only mV, V)

▶ If dry contact is imposed to external termination present value Data Zero become.

▶ If establish by Zero in S-AD that is return

▶ Communication interface

It is possible to communicate with computer and to monitor remote by using RS-485 communication.

▶ Peak hold function

Peak mode 0 High peak mode

Remember the highest input value and display the highest value when pressing the key.

Peak mode 1 Low peak mode

Remember the lowest input value and display the lowest value when pressing the key.

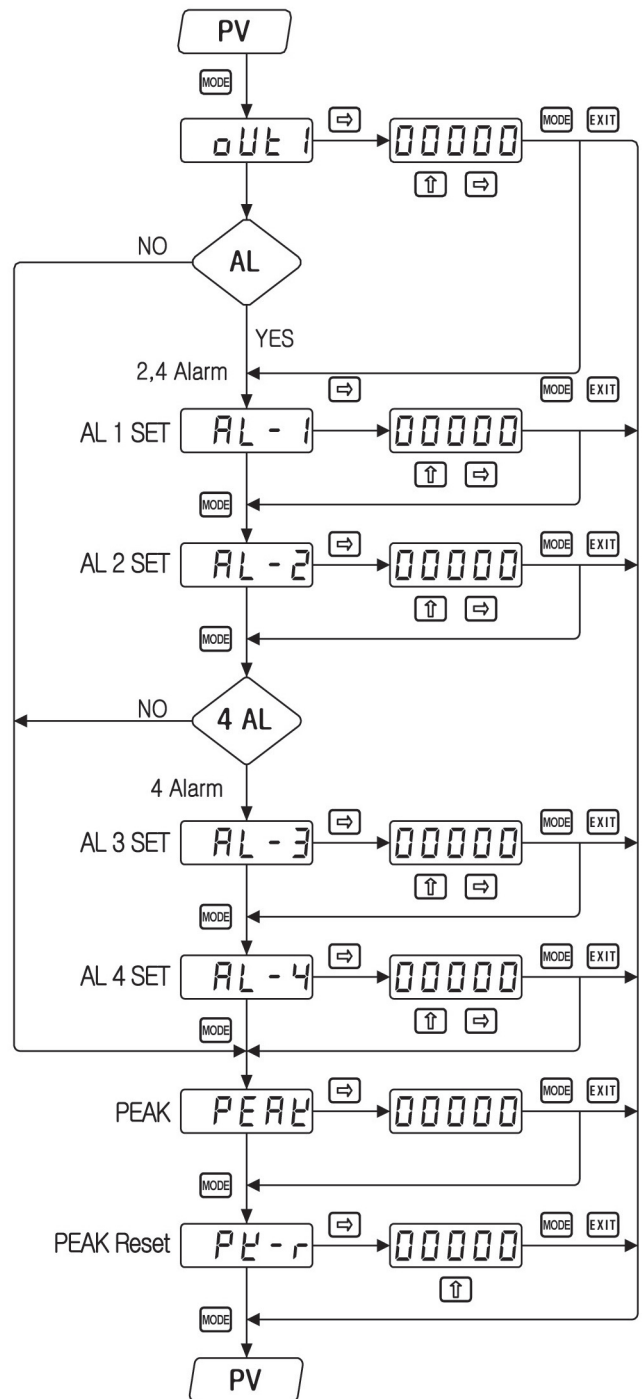
Peak mode 2 High peak & Display mode

Remember the highest input value, display the highest value in ordinary times, and output the highest transmit output.

Peak mode 3 Low peak & Display mode

Remember the lowest input value, display the lowest value in ordinary times, and output the lowest transmit output.

OPERATION MODE



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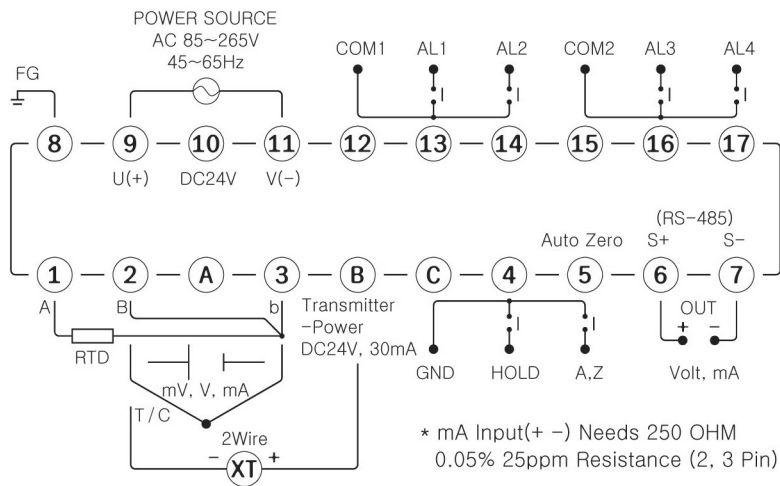
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ORDERING CODE

| | | | | | | |
|---------------|---|---|--|---|--|-----------------------|
| NE 3 | | | | - | | Description |
| Type | 1 | | | | | Indicator |
| | 2 | | | | | Indicator with 2Alarm |
| | 3 | | | | | Indicator with 4Alarm |
| Analog output | 0 | | | | | None |
| | 1 | | | | | DC 4.00~20.00mA |
| | 2 | | | | | Etc |
| Power | | 0 | | | | AC 85~265V (45~65Hz) |
| | | 1 | | | | DC 24V |
| Interface | | | | 0 | | None |
| | | | | 1 | | RS-485 |
| | | | | 2 | | Etc |

TERMINAL DIAGRAM



DIMENSION & PANEL CUT

