NEWINS

고정도 디지탈 지시 경보계

NE 3000 Series

High Accuracy Digital Indicators With Alarm

FEATURES

- 5 Digit, High Accuracy
- Multi-range input (T/C, RTD, Volt, mA, etc)
- High accuracy 16bit A/D converter
- Peak hold function (Highest & Lowest)
- RS-485 communication interface
- 4-points alarm & Dead band set
- Isolation current output(4~20mADC) & Output scaling Filter function
- Sensor power source DC24V STD specification

SPECIFICATIONS

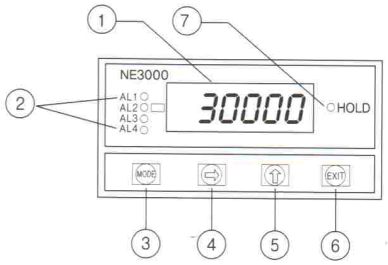
- **Accuracy** : ±0.15%FS
- **Measuring and display cycle** : 200ms(mV, Volt, mA type)
  400ms(TC, RTD type)
- **Input resistance** : Volt - 400kΩ
  Others type-1MΩ
- **Signal source resistance** : Pt100Ω type - 30Ω/line
  Others type-300Ω/line
- **CMRR (Common Mode Rejection Ratio)** : 140dB or more
- **NMRR (Normal Mode Rejection Ratio)** : 60dB or more
- **Moving average filter (4. 8. 16. 32)**
- **Built-in Sensor power source** : DC24V 30mA±0.5%
- **Isolation current output (Option)**
  - Current : 4~20mADC
  - Maximum load resistance : 600Ω
  - Isolation resistance (Input-Output) : 100MΩ or more (500VDC)
- **Alarm (Option)**
  - Contact output type : Normal open
    (Normal close - Order made)
  - Max switching power : 60W 125VA
  - Max switching voltage : 220VDC, 250VAC
  - Max switching Current : 2A DC, AC
  - Max Carrying current : 3A DC, AC
- **Ambient temperature & Humidity**
  - Operation : -10℃~60℃, 10%~90%
  - Storage : -20℃~70℃, 5%~95%
- **Power supply**
  - Voltage: AC90~240V (45~65Hz)
    DC24V (Option)
  - Power consumption : 4VA Max
  - Isolation resistance : 100MΩ 500VDC
    (FG-Input, FG-Power,
    Power-Input, Input-Output)
- **Communication interface (Option)**
  - Type : RS-485, 422
  - Speed : 4800, 9600, 19200bps
  - ID(address) setting : 0~15
- **Etc**
  - Weight : 500g
  - Mounting : Panel mount
  - Dimension : 96(W)×48(H)×112(D)mm

INPUT TYPE

Type		Range	Scale	Simbol
TC	R(PR13%)	0.0 ~ 1750.0		tC-r
	S	0.0 ~ 1750.0		tC-S
	B(RH)	0.0 ~ 1800.0		tC-b
	K(CA)	-200.0 ~1350.0		tC-K
	E(CRC)	-200.0 ~ 700.0		tC-E
	J(IC)	-200.0 ~ 800.0		tC-J
	T(CC)	-200.0 ~ 400.0		tC-t
Volt	mV	-50.00~50.00mV	-19999~49999	mu
	Volt	-1.000~1.000V	-19999~49999	1u
		-10.00~10.00V	-19999~49999	10u
mA	mA	4.00~20.00mA	-19999~49999	mA
PT	Pt 100Ω	-200.0 ~ 800.0		Pt
	JPt 100Ω	-200.0 ~ 500.0		JPt

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

PARTS NAME



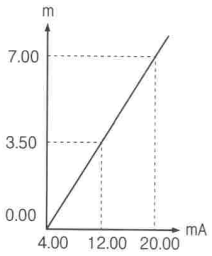
① Measured value display
② Alarm condition display
③ "MODE" key : storage the set data and change the operation menu
④ "⇨"Key : enter into the data setting mode and modify the changed location
⑤ "⇧" Key: change the data value
⑥ "EXIT" Key : out of mode
⑦ unit

MAJOR FUNCTION

• 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 4.0~20.0mA and Level 0.000~7.000m



Setting to
Sensor type : mA
High Range : 20.00mA
Low Range : 4.00mA
High Scale : 7.000
Low Scale : 0.000

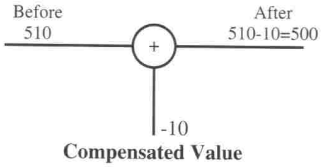
• Sensor compensation function

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

Ex) Before sensor adjust = 510

After sensor adjust = measured value + compensated value

= 510 - 10 = 500



• Function (mV, Volt, mA type only)

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

root Pass the input after √. Used for flow rate by orifice.

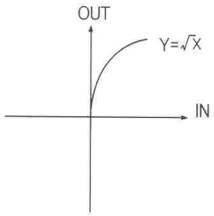
if x > 0

Y=√{(pv-low scale)

X(high scale-low scale)}

+low scale

if x <=0 Y=0



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

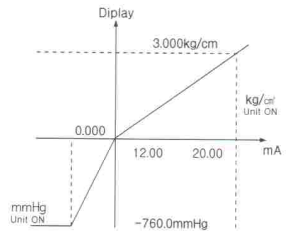
• Filter Function

4 Kinds of avarage tranfer filter function

- AV : Recently, averaging inputting sampl value (4.8.16.32) indication

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

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

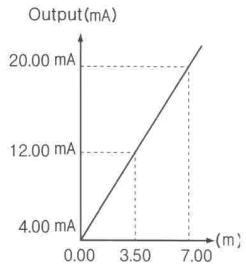


• Output scaling function

This function can change the 4~20mA value as the output scale.

Ex) In case of display value 0.000~7.000m, Output 4~20mA setting to

High out scale : 7.000 Low out scale : 0.000



Setting to

High out Scale : 7.000

Low out Scale : 0.000

• Alarm function

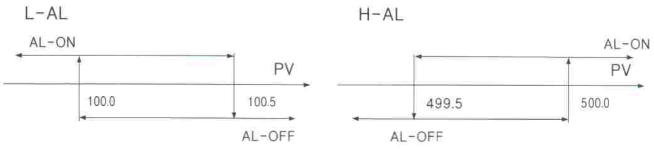
Alarm type : High, Low

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 low 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.



• 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

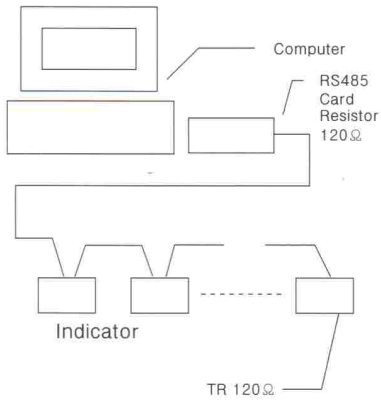
Remember the highest input value, display the highest value in ordinary times, and output the highest transmit output.

Peak mode 3: Low peak & Display mode

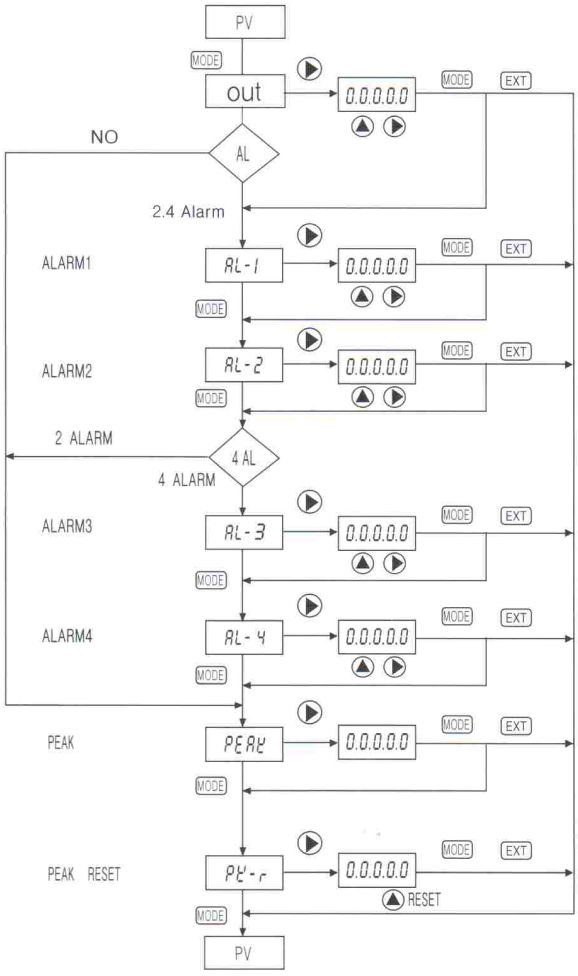
Remember the lowest input value, display the lowest value in ordinary times, and output the lowest transmit output.

• Communication interface

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



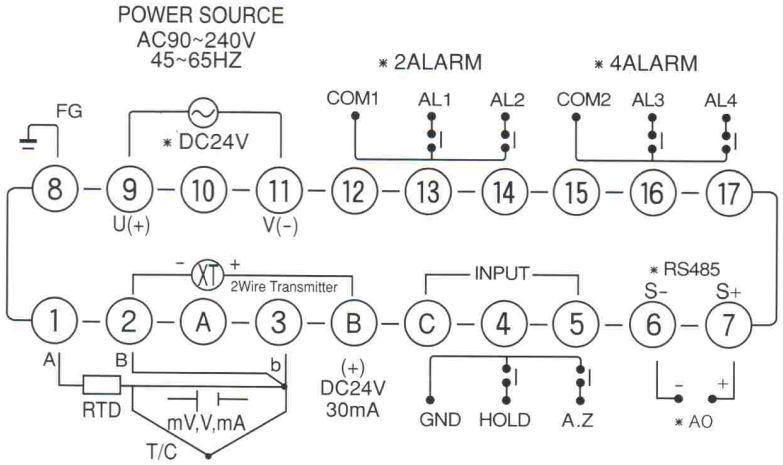
OPERATION MODE



ORDERING CODE

MODEL	TYPE	ANALOG OUTPUT	POWER	INTER FACE	DESCRIPTION
NE3	1				INDICATOR
	2				WITH 2ALARM
	3				WITH 4ALARM
		0			NONE
		1			OUTPUT 4~20mA DC
		2			ETC(CONSULT TO THE FACTORY)
			0		AC 90~240V (45~65Hz)
			1		DC 24 VOLT
				0	NONE
				1	RS-485
				2	ETC

TERMINAL DIAGRAM



* OPTION

DIMENSION & PANEL CUT