

FEATURES

- Multi-range 2CH input (T/C, RTD, Volt, mA, etc)
- Two 4Digit FNDs are installed and displayed for each channel.
- High accuracy 16bit A/D converter
- Modbus Communication interface
- 2 points alarm & Dead band set
- Free voltage (AC 85~265V, 45~65Hz)
- 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, 64)**
- ▷ **Built-in Sensor power source :** DC 24V 30mA ±0.5%
- ▷ **Accuracy :** Display ±0.2% FS
- ▷ **Isolation current output(Optional)**
 - Current : DC 4.00~20.00mA
 - Maximum load resistance : 600Ω
 - Isolation resistance(Input-Output) : 100MΩ or more (DC 500V)
- ▷ **Alarm(Optional)**
 - 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
- ▷ **Ambient temperature & Humidity**
 - Operation : -10~50°C, 10~90%
 - Storage : -20~70°C, 5~95%
- ▷ **Power supply**
 - Voltage : AC 85~265V(45~65Hz)
DC 24V(Optional)
 - Power consumption : Max 4VA
 - Isolation resistance : 100MΩ , DC 500V (FG-Input, FG-Power, Power-Input, Input-Output)
- ▷ **Communication interface(Optional)**
 - Type : modbus RTU(485)
 - Speed : 4800, 9600, 19200, 38400, 57600bps
 - ID(address) setting : 0~99
- ▷ **Etc**
 - Weight : 500g
 - Mounting : Panel mount
 - Dimension : 99(W) X 51(H) X 112(D)mm

A

B

C

D

E

F

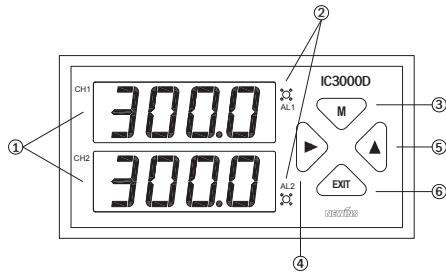
G

H

I

J

PARTS NAME



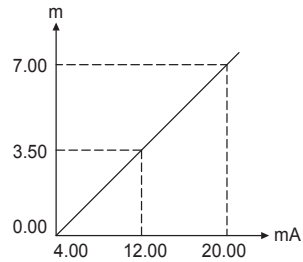
- ① Measured value display : white color
- ② Alarm condition display
- ③ **MODE** Key : Storage the set data and change the operation menu
- ④ **▶** Key : Enter into the data setting mode and modify the changed location
- ⑤ **▲** Key : Change the data value
- ⑥ **EXIT** Key : Out of mode

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



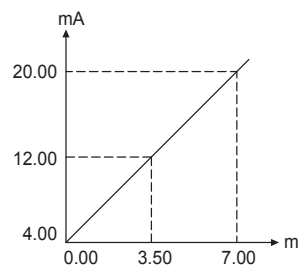
Setting to
 Sensor Type : mA
 High Range : 20.00mA
 Low Range : 4.00mA
 High Scale : 7.00m
 Low Scale : 0.00m

▷ 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



Setting to
 High Out Scale : 7.00m
 Low Out Scale : 0.00m

INPUT TYPE

Sensor Type	Range	Scale	Symbol	
TC	B(PR)	0~1800°C	-	tc-b
	R(PR)	0~1750°C	-	tc-r
	S(PR)	0~1750°C	-	tc-s
	K(CA)	-200~1350°C	-	tc-k
	E(CRC)	-199.9~700.0°C	-	tc-e
	J(IC)	-199.9~800.0°C	-	tc-j
T(CC)	-199.9~400.0°C	-	tc-t	
Volt	mV	-50.0~50.0mV	-1999~9999	v-m
	Volt	-1.000~1.000V	-1999~9999	v
	Volt	-10.0~10.0V	-1999~9999	v10
mA	mA	4.00~20.00mA	-1999~9999	ma
PT	Pt100Ω	-199.9~800.0°C	-	pt
	JPt100Ω	-199.9~500.0°C	-	jp-t

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

▷ Function(mV, Volt, mA type)

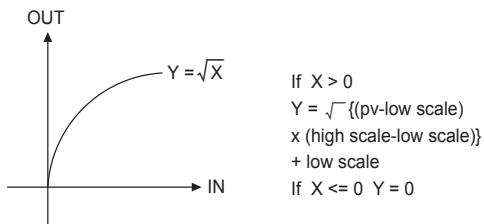
L m

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 mlt

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

▷ Sensor compensation function

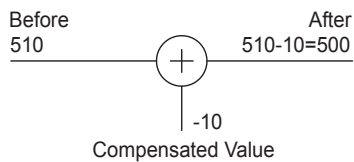
The function is useful for compensating error by long sensor line or changed zero point by aged sensor.

Ex) Before sensor adjust = 510°C

After sensor adjust

= measured value + compensated value

= 510 - 10 = 500°C



▷ Alarm function

Alarm type : High, Low

The alarm consists of 2 relays, and it can output relay contact output individually.

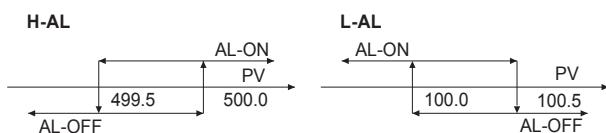
Ex) AL-1 : High alarm value 500.0,

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.



▷ Filter function

Filter is moving average filter and it has 6 kinds of function.

none

It displays the change of input without filter.

AL 4, 8, 16, 32, 64

It displays in recent input No 4, 8, 16, 32, 64 sample average.

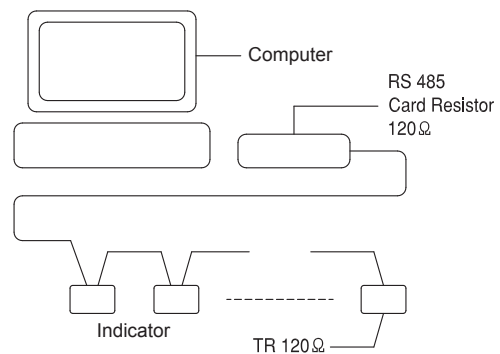
Setting filter function delays response.

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.

▷ Communication interface

It is possible to communicate with computer and to monitor remote by using modbus communication interface.

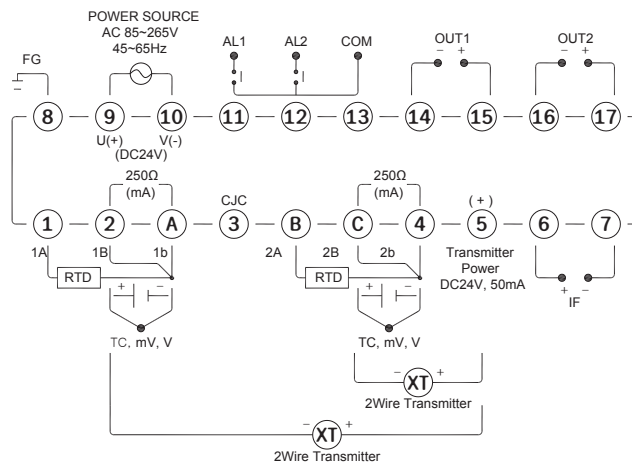


ORDERING CODE

IC 3				D	Description
Type	1				Indicator
	2				Indicator with 2Alarm
Analog output	0				None
	1				DC 4.00~20.00mA
	2				DC 4.00~20.00mA (2output)
	3				Etc
Power	0				AC 85~265V (45~65Hz)
	1				DC 24V
	2				Etc
Interface				0	None
				1	Modbus RTU(485)

* In case of 2AO dual output, interface communication is not available.

TERMINAL DIAGRAM



* mA Input(+ -) Needs 250 OHM 0.05% 25ppm Resistance

DIMENSION & PANEL CUT

