

NED

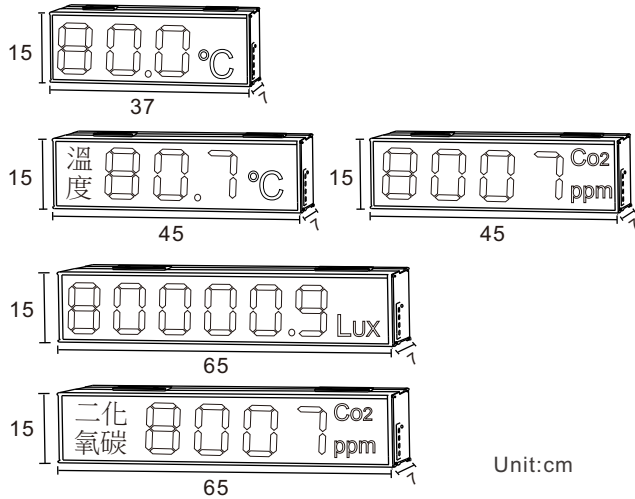
Multifunction Indicator

Operation Manual





Size chart



Unit:cm

Indicator light

AL1-the 1st alarm output
AL2-the 2nd alarm output

Button

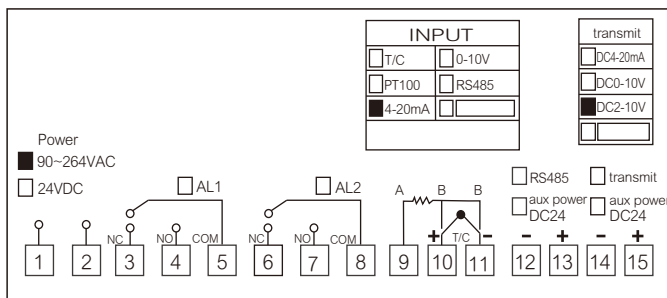
- S** Press to enter the 1st-order parameter
- S** + **▲** Press to enter the 2nd-order parameter
- ▶** Press to increase the number of parameter
- ◀** Press to decrease the number of parameter
- S** + **▲** Press to return to the main menu

Attention: parameter setting& wiring

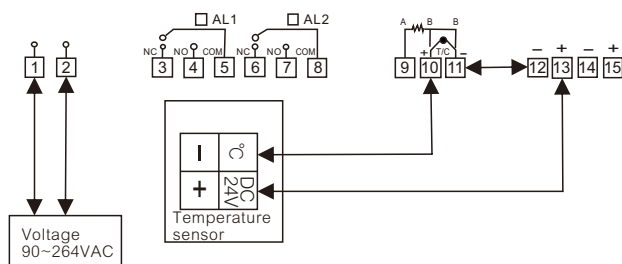
- Please do not change the parameter setting that have been set by the supplier, but contact them for any additional inquiries.
- Please check if the specification of the sensor(voltage, input signal, and output device) is consistent with the indicator before installation.
- Please refer to the wiring diagram before proceeding, and check the positive and negative charges while using thermocouple or analogue input. For thermocouple, please use correct compensating cable to avoid temperature difference.
- Please build isolation between the power line and signal input line to avoid Electromagnetic Interference(EMI).

Wiring diagram:

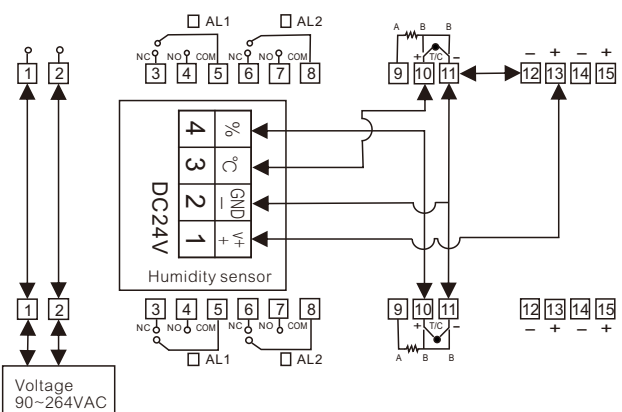
wiring diagram stickers & common specification



<example 1> wiring diagram for single layer



<example 2> wiring diagram for double layers



1st-order parameter(press to proceed)

Parameter table		Description	setting range	default value
RISP	A1SP	The 1st set of alarm setting(additional purchase)	-1999~9999	10.00
R1HY	A1HY	The 1st set of selected temperature range with alarm turning off. Please note that it needs to proceed with A1FU and A1SP(additional purchase)	-1999~9999	000.0
R2SP	A2SP	The 2nd set of alarm setting(additional purchase)	-1000~2000 (-100.0~200.0)	10.00
R2HY	A2HY	The 2nd set of selected temperature range with alarm turning off. Please note that it needs to proceed with A2FU and A2SP(additional purchase)	-1999~9999	000.0
PVOF	PVOF	PV-temperature adjustment : controlled by PV+PVOF that can replace present display value, and correct the temperature difference	-1999~9999	000.0

2nd-order parameter(press + to proceed)

Parameter table		Description	setting range	default value			
TYPE	TYPE	Input type: thermocouple, platinum resistance, and analogue input The input setting range is as below	Please refer to the chart (on the left side)	The factory will set the value according to the requirement			
		TYPE			RANGE(°C)	RANGE(°F)	
		r.SP.			RSP	input signal of PLC/DDC/PC	
		mA			MA	-1999~9999	
		V			V	-1999~9999	
		mV			MV	-1999~9999	
		d-PT			D-PT	-200~850	-328~1652
		℃			C	-50~1800	-58~3272
		℉			N	-50~1300	-58~3272
		℉			S	0~1750	32~3182
		℉			R	0~1750	32~3182
		℉			B	0~1800	32~3272
		℉			E	-50~750	-58~1382
		℉			T	-270~400	-454~752
		℉			K	-50~1370	-58~2498
		℉			J	-50~1000	-58~1832
UNIT	UNIT	Please do not change the factory setting	factory setting	ENG			
DP	DP	Decimal Place Setting for thermocouple/platinum resistance: 0000/000.0 Setting for analogue input: 0000/000.0/00.00/0.000 Please check all parameter setting once the setting of decimal place is done	0000 000.0 00.00 0.000	0000			
LOLT	LOLT	temperature reaches low set point	user-defined	0000			
HILT	HILT	temperature reaches high set point	user-defined	9999			
A1FU	A1FU	The 1st set of alarm (1)OFF: turn off the alarm (2)H: alarm goes off when the temperature exceeds high alarm set point (3)L: alarm goes off when the temperature exceeds low alarm set point	Please refer to the column (on the left)	H L			
A1MD	A1MD	Please do not change the factory setting	factory setting	nonE			
A2FU	A2FU	The 2nd set of alarm (1)OFF: turn off the alarm (2)H: alarm goes off when the temperature exceeds high alarm set point (3)L: alarm goes off when the temperature exceeds low alarm set point	Please refer to the column on the left	L O			
A2MD	A2MD	Please do not change the factory setting	factory setting	nonE			
DIR	DIR	Transmission parameter: 4.20 means positive; 20.4 means reverse(additional purchase)	factory setting	4.20			
MAL	MAL	Please do not change the factory setting	factory setting	04.00			
MAH	MAH	Please do not change the factory setting	factory setting	20.00			
SCAL	SCAL	Analogue input voltage/current at a low set point	9999~-1999	user-defined			
SCAH	SCAH	Analogue input voltage/current at a high set point	9999~-1999	user-defined			

Parameter table		Description	setting range	default value
CUŁ	CUT	Analogue voltage/ current nonE : no default value Lo : It shows 4mA when an input value reaches 4mA or goes under low limit set value Hi : It shows 20mA when an input signal reaches 20mA or goes above high limit set value hilo: Have two modes set at the same time	factory setting	nonE
FİŁ	FILT	Digital filter: average value of temperature Larger sample sizes set by the filter will show a stable present value(PV) that runs slowly; while smaller sample sizes set by the filter will show unstable present value(PV) that runs quickly.	factory setting	0
BAUD	BAUD	Please select the required baud rates(Bit/Sec) while proceeding RS485 serial communication. The parameter is invalid without setting.	2.4K, 4.8K 9.6K, 19.2K	9.6K
ADDR	ADDR	Can be defined as the address of the remote when RS485 serial communication is working. Please note that each device only has single slave address(1 byte). The parameter is invalid without setting.	1~255	1
RTU	RTU	Remote terminal unit	n8 1,n82 E8 1,o8 1	n82
LOCK	LOCK	Please do not change the factory setting	factory setting	100

RS485 communication

Communications Protocol: ModbusRTU
Baud rates: 9600, 19200 bps
Address: 1~255
Parity: N81,N82,O81,E81

Example

1. Reading present value(PV)
Send command:(16 bit)

Address	Command	positional parameters		Read length		CRC	
01	04	10	02	00	01	94	CA

Return command:(16 bit)

Address	Command	Length(returned)	Temperature value(returned)		CRC	
01	04	02	01	09		

The returned value below are the 1st set of temperature value

01	09	It will be 26.5C as a demical
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2. Input TYPE
Send command:(16 bit): Set TYPE as DPT

Address	Command	Positional parameters		Input value		CRC	
01	06	00	00	00	09	49	CC

Debug

1. Check the setting of USB/RS 232 port on PC
2. Check the setting of address, baud rate, and parity(N81, N82, O81, E81)
3. Check the positive/negative connection of RS485 port

Read command:04 / Send command:06

Positional parameters(16 bit)	Name	Description
1002	present value(PV)	It shows value when TYPE=RSP setting range:-1999~9999
1006	alarm	Bit 0= the 1st alarm output Bit 1= the 2d alarm output

Read command:03 / Send command:06

Positional parameters(16 bit)	Parameter	Description
0000	Input signal(TYPE) If input signal is mV, mA, V: 1.The range of the value around the low set point of LOLT/LnLo should be the same 2. The range of the value around the high set point of HILT/LnHi should be the same	0000(16 bit)=J 0001(16 bit)=K 0002(16 bit)=T 0003(16 bit)=E 0004(16 bit)=B 0005(16 bit)=R 0006(16 bit)=S 0007(16 bit)=N 0008(16 bit)=C 0009(16 bit)=D-PT 000A(16 bit)=mV 000B(16 bit)=V 000C(16 bit)=mA 000D(16 bit)=RSP
0001	Unit: °C / °F	0000(16 bit)=C 0001(16 bit)=F
0002	Decimal Place(Dp)	0000(16 bit)=0000 0001(16 bit)=000.0 0002(16 bit)=00.00 0003(16 bit)=0.000
0003	Range: low set point of LOLT	J(-50~1000) K(-50~1370) T(-270~400) E(-50~700) B(0~1750) R(-50~1750) S(-50~1750) N(-50~1300) C(-50~1800) DPT(-200~850) mV(-1999~9999) V(-1999~9999) mA(-1999~9999) RSP(-1999~9999)
0004	Range: high set point of HILT	As above
0005	Offset	Setting range:-1999~9999
0006	Range: low set point of LnLo Note: The setting range should be the same as LOLT if the input signal is mV, mA, V	Setting range:-1999~9999
0007	Range: low set point of LnHi Note: The setting range should be the same as HILT if the input signal is mV, mA, V	Setting range:-1999~9999
0008	Digital filter(FILT)	Setting range:0~999
000A	CUT	0000(16bit)=no limit 0001(16bit)=low point limit 0002(16bit)=high point limit 0003(16bit)=have low & high limit set

Positional parameters(16 bit)	Parameter	Description
000D	Address(ID)	range:1~255
000E	Baud rates	0000(16bit)=2400 0001(16bit)=4800 0002(16bit)=9600 0003(16bit)=19200
000F	A1FU: the 1st set of alarm type	0000(16bit)=none 0001(16bit)=HI 0002(16bit)=LO
0011	A1SP: the 1st set of alarm	setting range:-1999~9999
0012	A1HY: the 1st set of alarm turning off	setting range:-1999~9999
0013	A2FU: the 2nd set of alarm type	0000(16bit)=none 0001(16bit)=HI 0002(16bit)=LO
0015	A2SP: the 2nd set of alarm	setting range:-1999~9999
0016	A2HY: the 2nd set of alarm turning off	setting range:-1999~9999