

BK6-M

Multi input digital indicator

- Multi input (thermocouple, RTD, voltage/Current)
- Retransmission output (4 – 20 mA DC)
- Temperature unit selection
- Measured value compensating function



●● Suffix code

Model	Code	Description
B K 6 – M	<input type="checkbox"/>	Multi input digital indication thermometer 72(W) X 36(H) mm
Optional	0	None
	1	RET (Retransmission output 4 – 20 mA DC)

●● Specification

Input

Input	Multi input (select by using the parameter)
Thermocouple	K, J, E, T, R, B, S, L, N, U, W, PL2
RTD	Pt100 Ω (IEC), KPt100 Ω
Input sampling time	500 ms
DC voltage	1 – 5 V (4 – 20 mV), –10 – 20 mV, 0 – 100 mV
Input impedance	Thermocouple and DC voltage input(mV) : 1 MΩ min. DC voltage input(V) : approx 1 MΩ
Allowable signal source resistance	Thermocouple (100 Ω max). DC voltage (2 kΩ max)
Allowable wiring resistance	RTD 10 Ω max (but resistances among 3 wires should be same)
Allowable input voltage	Within ±10 V (thermocouple, RTD, DC voltage(mV)). within ±20 V (DC voltage(V))
Input compensation	Compensation by internal parameter
Standard contact compensation error	±2.0 °C (0 ~ 50 °C)

Performance

Display accuracy	Thermocouple	±0.5 % of FS ±1 Digit)
	RTD	±0.5 % of FS ±1 Digit)
	DC voltage, current	±0.5 % of FS ±1 Digit)
Insulation resistance	20 MΩ min (500 V DC)	
Dielectric strength	2000 V AC 50 / 60 Hz for 1 min, (between the different recharging part from each other)	

※ Please refer to the range and input code chart for detailed display accuracy



General specification

Power Supply Voltage	100 – 240 V AC 50 – 60 Hz
Voltage fluctuation	±10 % of power supply voltage
Power consumption	4 VA max
Ambient temperature	0 ~ 50 °C (without dew condensation)
Ambient humidity	35 ~ 85% RH
Storage temperature	-25 ~ 65 °C (without dew condensation)
Vibration resistance	10 – 55 Hz peak amplitude 0.76 mm for 2 hours each in 3 axis direction
Shock resistance	300 ㎉ to the 6 direction each 3 times
Weight	120 g

Range and input code

Classification	Code	Input	Range (°C)	Accuracy
Thermocouple (TC)	1	K	-200 ~ 1,370 *2	±0.5 % of FS ± 1 digit
	2	K	-199.9 ~ 999.9 *2	
	3	J	-199.9 ~ 999.9 *2	
	4	E	-199.9 ~ 999.9 *2	
	5	T	-199.9 ~ 400.0 *2	
	6	R	0 ~ 1700 *2	
	7	B	0 ~ 1800 *1	
	8	S	0 ~ 1700	
	9	L	-199.9 ~ 900.0 *2	
	10	N	-200 ~ 1300	
	11	U	-199.9 ~ 400.0 *2	±0.5 % of FS ± 1 digit
	12	W	0 ~ 2300	
	13	PL2	0 ~ 1390	
RTD	20*	KPt100 Ω	-199.9 ~ 500.0 *3	±0.5 % of FS ± 1 digit
	21*	Pt100 Ω	-199.9 ~ 640.0 *3	
DC voltage	30	1 – 5 V	Scaling set (-1999 ~ 9999)	±0.5 % of FS ± 1 digit
	32	-10 – 20 mV		
	33	0 – 100 mV		
DC current	30*	4 – 20 mA		

*1 range 0 ~ 400 °C : ±10 % of FS ±1 Digit

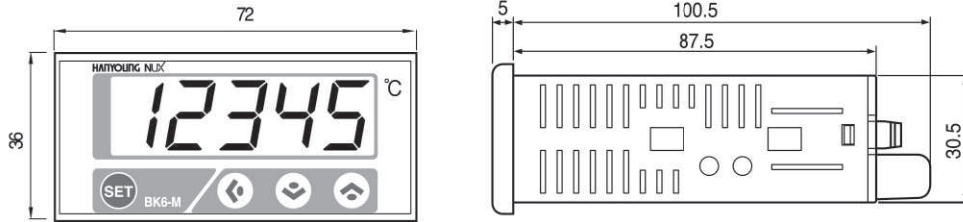
*2 less than 0 °C : ±1.0 % of FS ±1 Digit

*3 -150.0 ~ 150.0 °C max : ±1.0 % of FS ±1 Digit

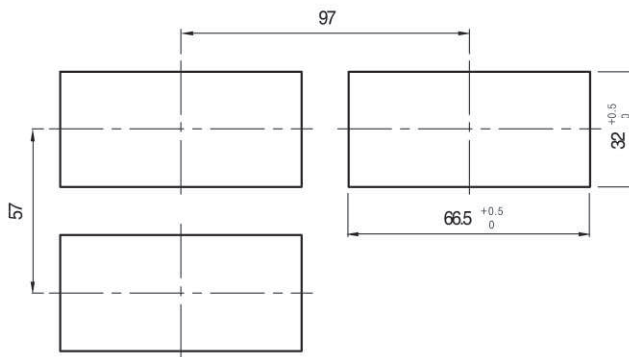
※ When using DC current input, please attach 0.1 % of 250 Ω resistance in between the input terminals after selecting the code number "30".

●● Dimension and panel cutout (Unit : mm)

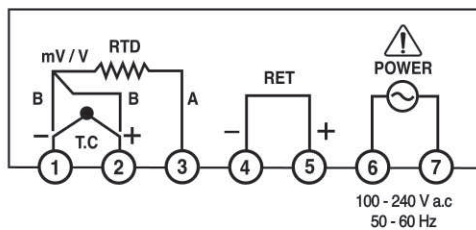
● Dimension



● Panel cutout

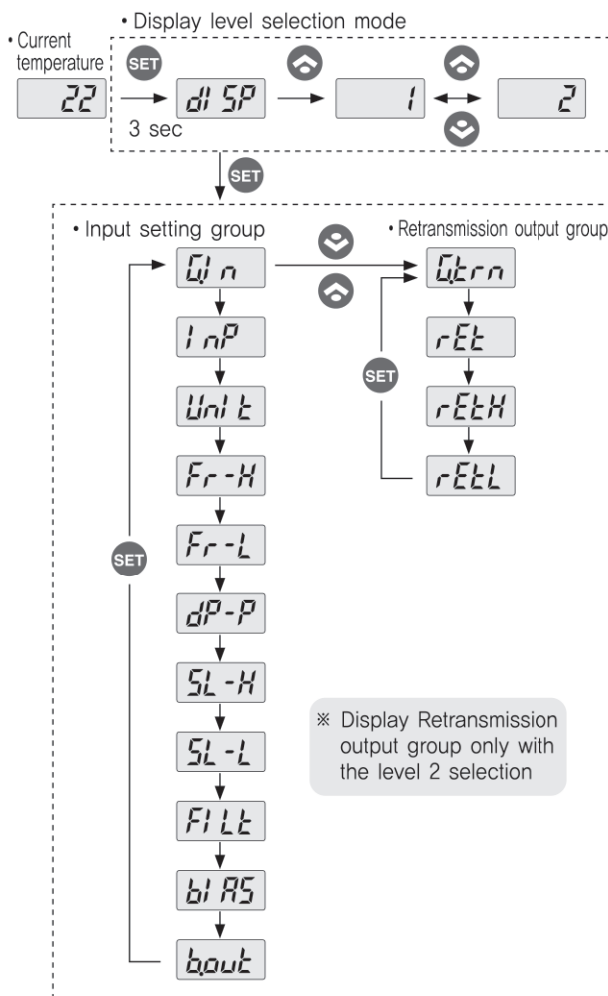


●● Connection diagram





Parameter composition and initial setting value



Meaning	Set information	Display condition	Default value
① Input group display	select the input types and set the mode that is related to the inputs.	–	–
② Input type selection	select the input signal and measurement range number (refer)	display at all times	selection number 1
③ Unit selection	°C / °F	thermocouple and RTD	°C
④ High range	Within the range limit	display at all times	1370
⑤ Low range	(refer to the input types and range) FR-H > FR-L		– 200
⑥ Position of decimal point selection (with voltage input)	DC voltage : 0 – 3 select the position with 0–3 setting	with voltage input (mV, V)	1
⑦ High scale	–1 999 – 9 999 but SL-H > SL-L	with voltage input (mV, V)	100.0
⑧ Low range	position of decimal point is selected by DP-P		0.0
⑨ Process value filter setting	Select the Process value filter	display at all times	OFF
⑩ Process value compensation setting	Measured value compensation setting	display at all times	EUS(0.0 %)
⑪ Burn-out	Burn-out	display at all times	ON