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	☐	Multi input digital indication thermometer 72(W) X 36(H) ㎜
Optional	0	None
	1	RET (Retransmission output 4 ~ 20 ㎃ 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 ㎳
DC voltage	1 ~ 5 V (4 ~ 20 mV), −10 ~ 20 mV, 0 ~ 100 mV
Input impedance	Thermocouple and DC voltage input(㎷) : 1 ㏁ min, DC voltage input(V) : approx 1 ㏁
Allowable signal source resistance	Thermocouple (100 Ω max), DC voltage (2 ㏀ 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(㎷)), within ±20 V (DC voltage(V))
Input compensation	Compensation by internal parameter
Standard contact compensation error	±2.0 ℃ (0 ~ 50 ℃)

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 ㏁ min (500 V DC)
Dielectric strength		2000 V AC 50 / 60 ㎐ for 1 min, (between the different recharging part from each other)

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

A

General specification

Power Supply Voltage	100 – 240 V AC 50 – 60 ㎐
Voltage fluctuation	±10 % of power supply voltage
Power consumption	4 VA max
Ambient temperature	0 ~ 50 ℃ (without dew condensation)
Ambient humidity	35 ~ 85% RH
Storage temperature	−25 ~ 65 ℃ (without dew condensation)
Vibration resistance	10 – 55 ㎐ peak amplitude 0.76 ㎜ 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

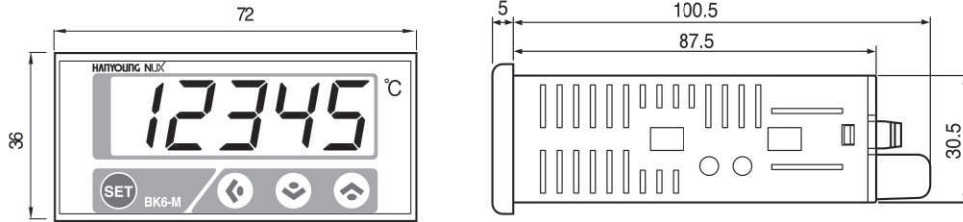| Classification	Code	Input	Range (℃)		Accuracy
Thermocouple (TC)	1	K	−200 ~ 1,370	*2	±0.5 % of FS ± 1 digit
	2	K	−199.9 ~ 999.9	*2	
	3	J	−199.9 ~ 999.9	*2	
	4	E	−199.9 ~ 999.9	*2	
	5	T	−199.9 ~ 400.0	*2	
	6	R	0 ~ 1700	*2	
	7	B	0 ~ 1800	*1	
	8	S	0 ~ 1700		
	9	L	−199.9 ~ 900.0	*2	
	10	N	−200 ~ 1300		±1.0 % of FS ± 1 digit
	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)		
	32	−10 – 20 ㎷			
	33	0 – 100 ㎷			
DC current	30*	4 – 20 ㎃			

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

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

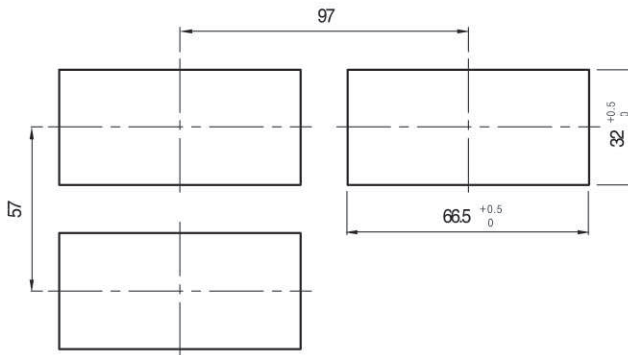*3 −150.0 ~ 150.0 ℃ max : ±1.0 % of FS ±1 Digit

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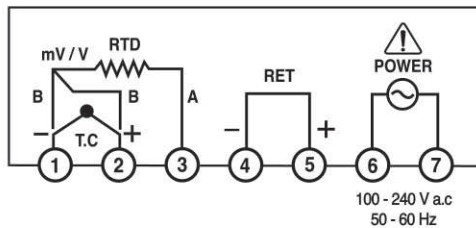
A

Dimension and panel cutout (Unit : ㎜)
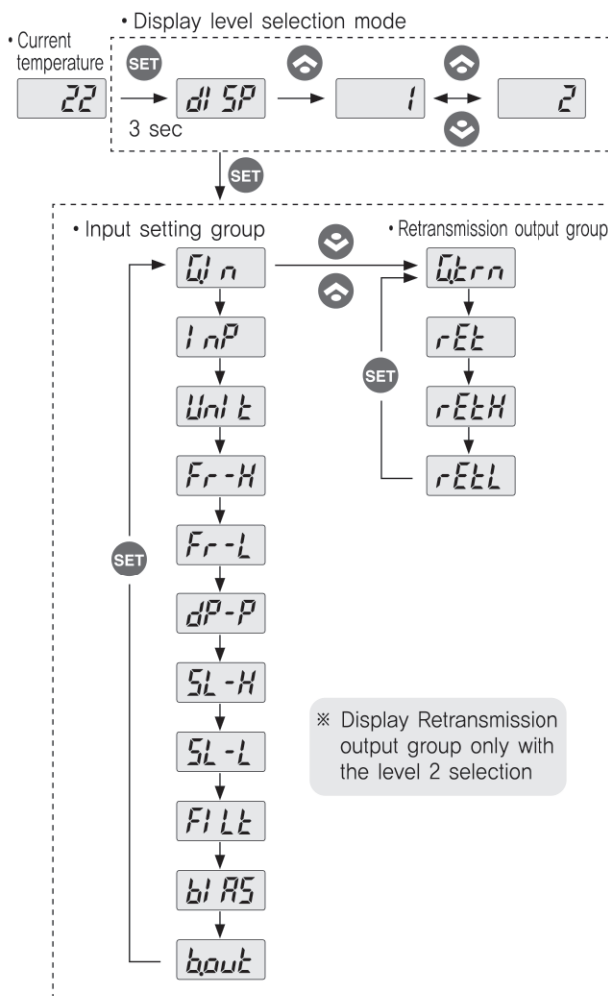
● Dimension

● Panel cutout

Connection diagram

A ‥ Parameter composition and initial setting value

• Display level selection mode

• Current temperature 22 SET → dI SP → 1 ←→ 2
3 sec

• Input setting group   • Retransmission output group

QI n → Gtrn
I nP   rEt
UnI t   rEtH
Fr-H   rEtL
Fr-L
dP-P
SL-H   ※ Display Retransmission output group only with the level 2 selection
SL-L
FI Lt
bI AS
bout

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	℃ / ℉	thermocouple and RTD	℃
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 (㎷, V)	1
⑦ High scale	−1 999 − 9 999 but SL−H 〉 SL−L	with voltage input (㎷, 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