

Autonics Bar Graph Digital Indicator KN-1000B SERIES



Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

Caution for your safety

- Please keep these instructions and review them before using this unit.
- Please observe the cautions that follow;
 - Warning** Serious injury may result if instructions are not followed.
 - Caution** Product may be damaged, or injury may result if instructions are not followed.
- The following is an explanation of the symbols used in the operation manual.
 - Caution:** Injury or danger may occur under special conditions.

Warning

- In case of using this unit with machinery (Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device. It may cause a fire, human injury or damage to property.
- Install this unit on a panel. It may cause electric shock.
- Do not connect, repair, or inspect this unit when power is ON. It may cause electric shock.
- Do not disassemble the case. Please contact us if it is required. It may cause electric shock or a fire.
- Wire properly after checking terminal numbers. It may cause a fire.

Caution

- This unit shall not be used outdoors. It might shorten the life cycle of the product or cause electric shock.
- Please observe the rated specifications. It might shorten the life cycle of the product or cause a fire.
- In cleaning this unit, do not use water or organic solvent. And use dry cloth. It may cause electric shock or a fire.
- Do not use this unit where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration and impact etc. It may cause a fire or explosion.
- Do not inflow dust or wire dregs into the unit. It may cause a fire or malfunction.
- Wire it properly after checking terminal numbers when connecting power cable and measuring input. It may cause a fire or explosion.

Ordering information

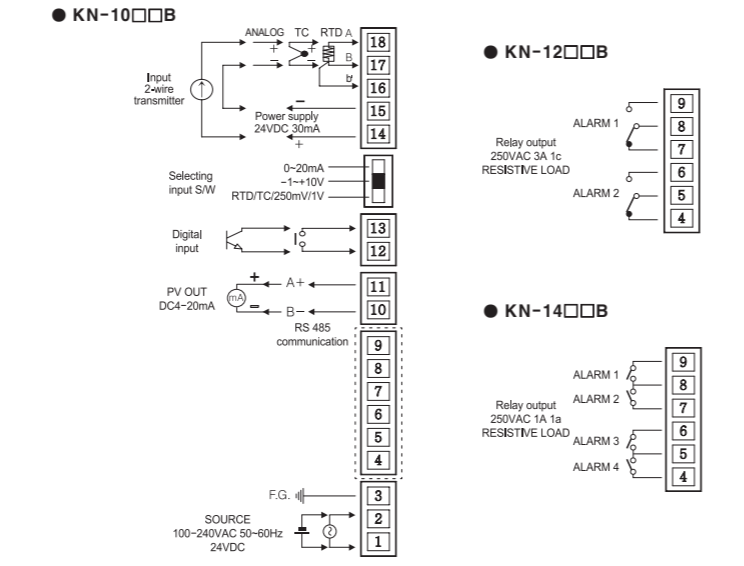
KN-1000B	Size	B	DIN W36×H144 mm
	Power supply	0	100-240 VAC 50 to 60 Hz
		1	24 VDC
	Option output	0	No option
		1	Transmission output (4-20 mA)
		4	RS485 communication output
	Alarm output	0	No alarm output
		2	2EA alarm output
		4	4EA alarm output
	Item	KN-1	Bar Graph Indicator

Part descriptions

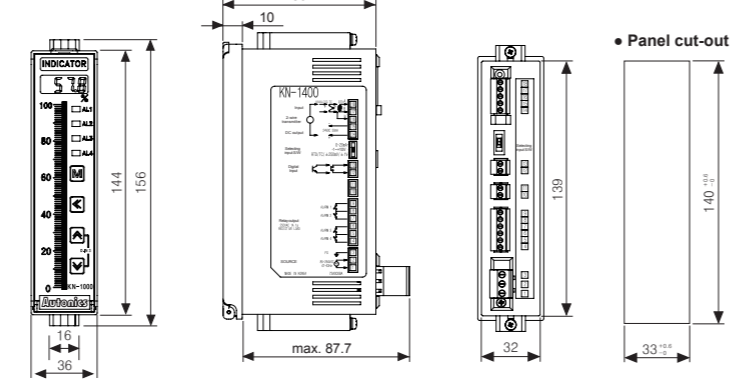
- Display part (red)
 - Run mode: Displays current measurement value.
 - Parameter set mode: Displays parameter and SV.
- Unit sticker part (unit sticker is an accessory)
- Alarm output indicator: Turns ON when the alarm is ON.
- [M] key: Used to enter parameter set mode, move to parameters, save SV and return to RUN mode.
- [F], [G], [H] key: Used to enter and change parameter SV.
- D.IN3: Press the [F] and [G] keys for 3 sec. at the same time, it operates the set function (alarm clear, display hold, zero-point adjustment) at di-t at program mode.
- Bar Graph (with 101 bar LEDs, green)
 - Displays measured value as bar graph.
- Space for recognizing device by user

* The above specifications are subject to change without notice.

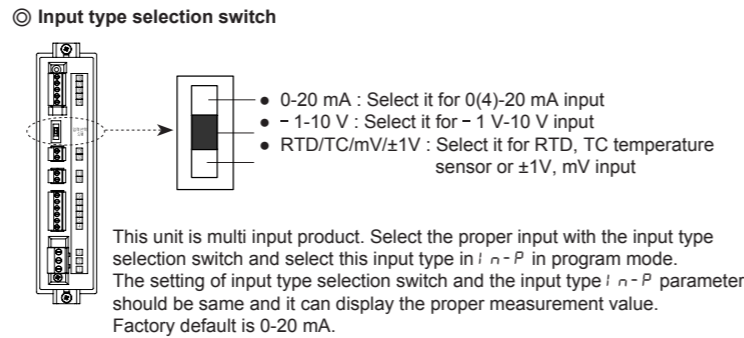
Connections



Dimensions



Input type and range



This unit is multi input product. Select the proper input with the input type selection switch and select this input type in i-n-P in program mode. The setting of input type selection switch and the input type i-n-P parameter should be same and it can display the proper measurement value. Factory default is 0-20 mA.

*Above input types which have the * mark are not displayed. To display the above input types, supply the power with pressing the [M] key.

Specification

Series	KN-1000B
Power supply	AC voltage 100-240 VAC 50 to 60 Hz DC voltage 24 VDC
Allowable voltage range	90 to 110% of rated voltage
Power consumption	AC voltage Max. 6 VA DC voltage Max. 4 W
Display method	4digit: 7Segment LED Display (red), Bar LED: 101EA (green)
Input type	RTD JPT100Ω, DPT100Ω, DPT50Ω, Cu500, Cu1000 (5 types) K, J, E, T, R, B, S, N, C (W5), L, U, PLII (12 types) Analog • Voltage: ±1.000 V, ±50.00 mV, -199.9-200.0 mV, -1.00 V-10.00 V (4 types) • Current: 4.00-20.00 mA, 0.00-20.00 mA (2 types) • Contact input: Max. 2 kΩ in ON, Max. 90 kΩ in OFF • Non-contact input: Residual voltage max. 1.0 V in ON, Leakage current max. 0.03 mA in OFF • Outflow current: Approx. 0.2mA
Digital input	
Sub output	Alarm output 2-point: Relay contact capacity 250 VAC 3 A 1c, 4-point: Relay contact capacity 250 VAC 1 A 1a Trans. output ISOLATED DC 4-20 mA (PV transmission) load resistance max. 600 Ω (accuracy: ±0.2%F.S., resolution: 8000) Com. output RS485 (Modbus RTU)
Display accuracy	±0.2% F.S. ±1digit (25 °C±5 °C) ±0.3% F.S. ±1digit (-10 °C to 20 °C, 30 °C to 50 °C) In case of thermocouple and below -100 °C input, [±0.4%F.S.]±1digit *TC-T, TC-U is min. ±2.0 °C
Setting method	Set by front keys, or RS485 communication
Alarm output hysteresis	Set ON/OFF interval (1 to 999 digit)
Sampling cycle	Analog input: 100 ms, Temperature sensor input: 250 ms
Dielectric voltage	2000 VAC 50/60 Hz for 1 min. (between input terminal and power terminal)
Vibration	0.75 mm amplitude at frequency of 5 to 55 Hz (for 1 min.) in each of X, Y, Z directions for 2 hours
Relay life cycle	2-point Mechanical: Min. 10,000,000, Electrical: Min. 100,000 (250 VAC 3 A resistance load) 4-point Mechanical: Min. 20,000,000, Electrical: Min. 500,000 (250 VAC 1 A resistance load)
Insulation resistance	Min. 100 MΩ (at 500VDC megger)
Noise resistance	Square shaped noise by noise simulator (pulse width 1 μs) ±2 kV
Memory retention	Approx. 10 years (non-volatile semiconductor memory type)
Environment	Ambient temperature -10 to 50 °C, storage: -20 to 60 °C Ambient humidity 35 to 85%RH, storage: 35 to 85%RH
Approval	CE
Unit weight	Approx. 200 g

*Environment resistance is rated at no freezing or condensation.

Factory default

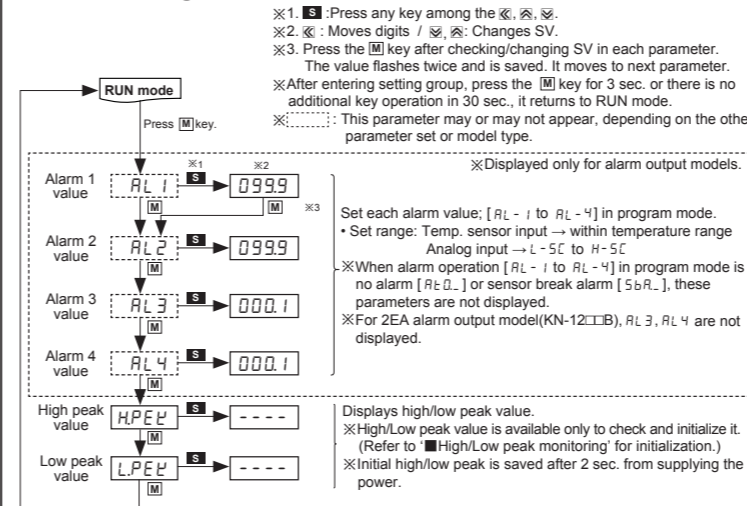
Monitoring mode

Parameter	Default	Parameter	Default	Parameter	Default
AL1	0999	AL3	000.1	HPEL	----
AL2	0999	AL4	000.1	LPEL	----

Program mode

Parameter	Default	Parameter	Default	Parameter	Default	Parameter	Default
i-n-P	RnR1	i-n-b	0000	AL-1	ALt1A	di-t	Hold
Unit	°C	L-b5	0000	AL-2	ALt1A	di-e	Hold
L-rG	0000	H-b5	1000	AL-3	ALt2A	bUr-n	oFF
H-rG	2000	bAr	FbAr	AL-4	ALt2A	Addr	01
dP	00	LoUt	0000	A-HY	001	bAUd	9600
L-5C	0000	HoUt	1000	i-n5F	Lin	LoCk	oFF
H-5C	1000	E~10	5P	nAUf	04		

Monitoring mode



Program mode

