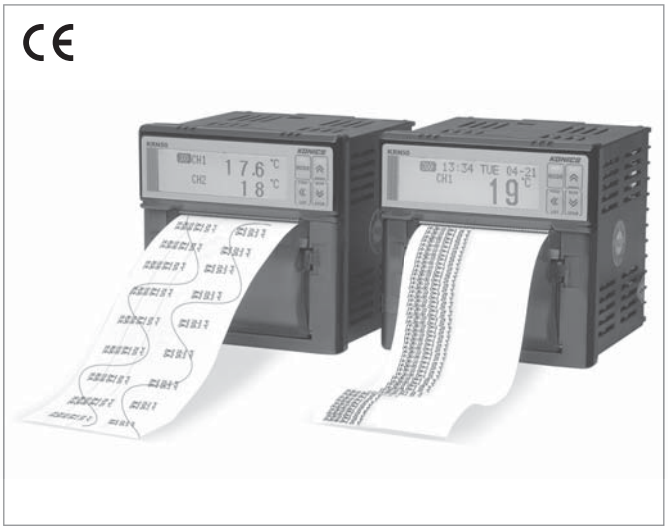
KRN50

Hybrid Small - sized Recorder

Thermal recorder KRN50 measures a various industrial input and prints records clearly to indicate. It is easier to operate character than existing products and it is small, light-weighted.

Features

- Compact and light -weighted
- Easy operation – LCD dot matrix display
- Channel multi input(TC/RTD/mV/V/mA) – individual select
- External digital input 2EA
- Alarm output(2EA/Channel)
- RS485 communication output(Modbus RTU)
- 2EA record mode - graphic mode or digital numeric mode
- Optional function – reservation record, detect a paper-end, record backup data, etc.



Ordering Codes

KRN50 - 2 0 0 4 - 4 0

Power supply	0	100-240VAC, 50~60Hz
	1	24VDC
Option output	0	None
	4	RS485
Alarm output	0	None
	2	Alarm 2 EA ※1
	4	Alarm 4 EA ※2
Ch2 control output	0	None
Ch1 control output	0	None
The number of channel	1	1 Channel
	2	2 Channel
Item/Series	KRN50	KONICS Thermal Line Recorder(50mm)

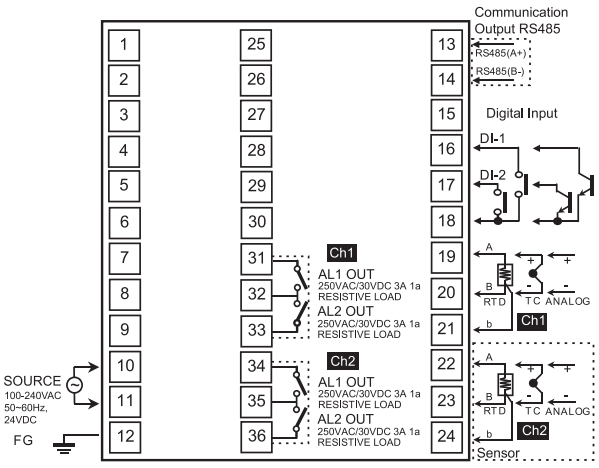
※1. In case of selection of 2 channel model, it is able to use 2 alarm outputs by means of alarm output of ch1. Therefore it is not possible that Ch1 has 1 alarm and Ch2 has 1 alarm separately.

※2. It is able to be selected in case of only 2 channel model.

Specifications

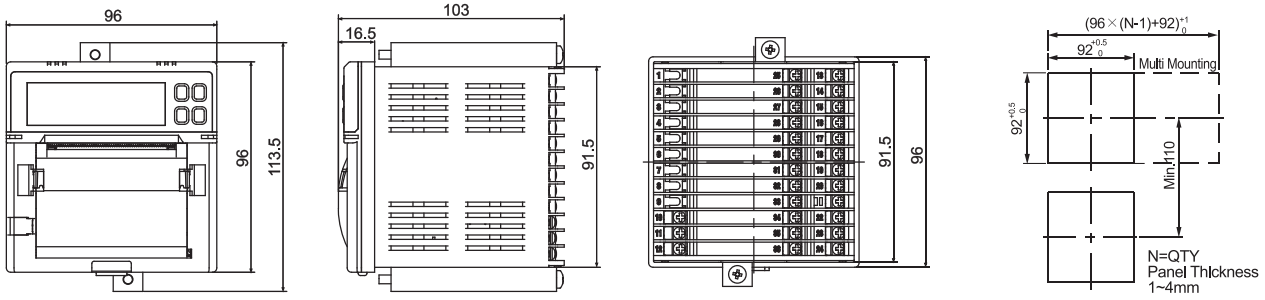
Model		KRN50 Series
Power supply		100-240VAC 50~60Hz, 24VDC
Power consumption		Max. 34VA(264VAC 60Hz)
Display		LCD Dot matrix Display (Resolution 128 X 32 Dot)
Input	RTD	JPt100Ω, DPt100Ω, DPt50Ω, CU100Ω, CU50Ω, Supplying current 420㎂
	T/C	K, J, E, T, B, R, S, N, C, G, L, U, PLII
	Analog	Voltage : -50.0~50.0mV, -199.0~200.0mV, -1.000~1.000V, -1.00~10.00V Current : 0.00~20.00mA, 4.00~20.00mA F class (0.1%) 50Ω high-accuracy resistor outside must be connected in case of current input
Event input	contact input	ON : Max. 1kΩ OFF : Min. 100kΩ
	Non-contact input	Input ON : Remaining 1 voltage Max. 1V OFF : Leakage current Max. 0.05mA
		Short circuit : Approx. 0.3mA
Indicating accuracy	RTD	±0.2% F.S ±1 Digit(25±5℃), ±0.3% F.S ±1 Digit(0~20℃, 30~50℃) ※But, under -100℃ in T/C, ±0.4% F.S ±1 Digit
	T/C	
	Analog	
Recording accuracy		±0.5% F.S
Recording	Speed	10, 30, 60, 120, 240, 480, 960(mm/hour)
	Cycle	Graphic mode : 30sec., 1min., 5min., 10min., 15min., 30min., 1hour, 2hour, 3hour, 4hour, 8hour, 16hour, 24hour / Digital mode : 5sec. ~ 99min. 59sec.
Recording paper		KONICS KRN50 exclusive recording paper (16M/volume)
Alarm output		Relay contacting point capacity 250VAC/30VDC 3A 1a(Resistive load)
Alarm hysteresis		Set ON/OFF interval : within 1~999 Digit
Communication output		RS485 (Protocol : Modbus RTU)
Setting method		Set by key
Sampling cycle		500ms/channel X 2 channels = 1000ms
Internal voltage		2000VAC 50/60Hz for a 1 minute (Rechargeable terminal of another polarity)
Internal vibration		0.75mm amplitude at frequency of 10~55Hz in each of X, Y, Z directions for 2 hours
Life of relay		Electrical Contact Rating 10 x 10^4 operations minimum
Isolation resistance		Min. 100MΩ (500VDC Mega STD.)
Internal noise		±2kV the square wave noise(Pulse width : 1㎲) by the noise simulator
Ambient temperature		0~50℃
Storage temperature		-20~60℃
Ambient humidity		35~85%RH(at non-freezing status)
Terminal bolt		M3 screw Type Terminal
Weight		Approx. 700g(except for packing box)

Connections



Dimension, Panel Cutout

(Unit : mm)



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Multi Range Input

	Type		Message	Selectable temp. range ℃	Selectable temp. range °F
TC	K(CA)	1	TC-K1	-200 ~ 1350	-328 ~ 2462
		0.1	TC-K2	-199.9 ~ 999.9	-199.9 ~ 999.9
	J(IC)	1	TC-J1	-200 ~ 800	-328 ~ 1472
		0.1	TC-J2	-199.9 ~ 800.0	-199.9 ~ 999.9
	E(CR)	1	TC-E1	-200 ~ 800	-328 ~ 1472
		0.1	TC-E2	-199.9 ~ 800.0	-199.9 ~ 999.9
	T(CC)	1	TC-T1	-200 ~ 400	-328 ~ 752
		0.1	TC-T2	-199.9 ~ 400.0	-199.9 ~ 999.9
	B(PR)	1	TC-B	100 ~ 1800	32 ~ 3272
	R(PR)	1	TC-R	0 ~ 1750	32 ~ 3182
	S(PR)	1	TC-S	0 ~ 1750	32 ~ 3182
	N(NN)	1	TC-N	-200 ~ 1300	-328 ~ 2372
	C(TT) *1	1	TC-C	0 ~ 2300	32 ~ 4172
	G(TT) *2	1	TC-G	0 ~ 2300	32 ~ 4172
	L(IC)	1	TC-L1	-200 ~ 900	-328 ~ 1652
		0.1	TC-L2	-199.9 ~ 900.0	-199.9 ~ 999.9
	U(CC)	1	TC-U1	-200 ~ 400	-328 ~ 752
		0.1	TC-U2	-199.9 ~ 400.0	-199.9 ~ 752.0
	Platinel Ⅱ	1	TC-P	0 ~ 1390	32 ~ 2534

	Type			Message	Selectable temp. range ℃	Selectable temp. range °F
RTD	CU 50Ω		0.1	CU50	-199.9 ~ 200.0	-199.9 ~392.0
	CU 100Ω		0.1	CU100	-199.9 ~ 200.0	-199.9 ~ 392.0
	JIS standard	JPt 100	1	JPT1	-200 ~ 600	-328 ~ 1112
		JPt 100Ω	0.1	JPT2	-199.9 ~ 600.0	-199.9 ~ 999.9
	DIN standard	DPt 50Ω	0.1	DPT50	-199.9 ~ 600.0	-199.9 ~ 999.9
		DPt 100Ω	1	DPT1	-200 ~ 600	-328 ~ 1112
		DPt 100Ω	0.1	DPT2	-199.9 ~ 600.0	-199.9 ~ 999.9
Analog	Voltage	-50.0 ~ 50.0mV		50mV	-1999 ~ 9999 (Display range is different according to the decimal point)	-1999 ~ 9999 (Display range is different according to the decimal point)
		199.9 ~ 200.0mV		200mV		
		-1.000 ~ 1.000V		1V		
		-1.00 ~ 10.00V		10V		
	Current	0.00 ~ 20.00mA		0-20		
		4.00 ~ 20.00mA		4-20		

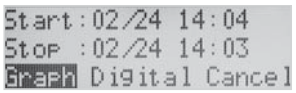
*1 C(TT) : Same temp. sensor as previous W5(TT)
*2 G(TT) : Same temp. sensor as previous W(TT)
* Exceptional section of measuring accuracy for each sensor
· J : -200≤T≤-100 : ±2.7℃
· B : No accuracy regulation under 400℃
· R, S, C, G : 0≤T≤100 : ±5.2℃
· U, T : -200≤T≤-100 : ±3.5℃
-100≤T≤400 : ±2.5℃

Functions

▶LCD dot matrix display

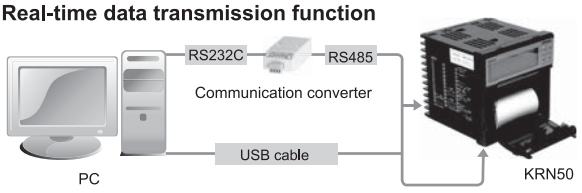
Easy measuring data check and parameter setting

▶Data logger function



It makes possible collective and repetitive print regardless of recording paper shortage due to real-time measuring data saving in internal memory (EEPROM)
※In case of recording speed 10mm/h (Graphic mode) STD, saving the data for 6 days.

▶Real-time data transmission function



Parameter setting and data monitoring in real-time by PC

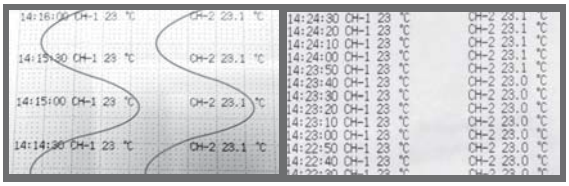
▶2 channel synchronous display

2 channel display type

1 channel display type

Easy to select display type using front key

▶Graphic mode / Digital mode



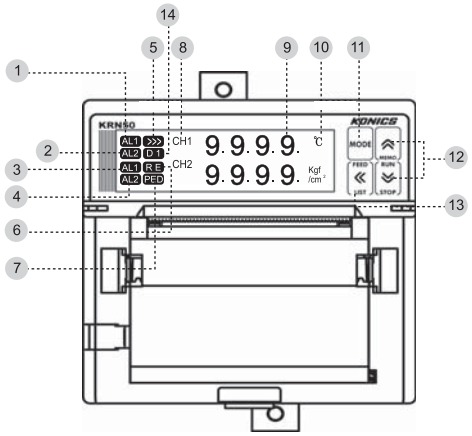
Graphic mode

Digital mode

· Recording speed : 10 ~ 960mm/h
· Real-time recording function
· Digital memo function

· Recording speed
: 5 sec. ~ 99 min. 59 sec.

Front Panel Identification



1	CH1-AL1 alarm output indicating lamp
2	CH1-AL2 alarm output indicating lamp
3	CH2-AL1 alarm output indicating lamp
4	CH2-AL2 alarm output indicating lamp
5	Recording start(>>>) / Recording stop(■) indicating lamp
6	Reservation recording(RE) indicating lamp
7	Recording paper status(P.ED) indicating lamp
8	Channel(CH) display
9	Measuring value(PV) display
10	Unit display
11	Mode(MODE) key
12	Up / down control key
13	Shift and special function key
14	Display for digital input setting

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