KR-100N

Intelligent Hybrid Recorder

KR-100N intelligent recorder is able to input measurement range of maximum 12 channels and a high accuracy as measurement range can be freely controlled individually.

Features

· **Easy operation**
· **Clear printing**
· **Multi input per channel(TC, RTD, mV, V, mA)**
· **12 channel input in 100mm**
· **6 point alarm relay output**
· **RS485 communication**
· **Diverse filter selection**
· $C\epsilon$

Ordering Codes

MODEL	TYPE	ALARM (OPTION)	COMMUNICATION (OPTION)	CONTENT
KR-100N	01			1 Channel
	02			2 Channel
	03			3 Channel
	06			6 Point
	12			12 Point
		0		Without Alarm
		1		6 Point normal open
			0	Without communication
			1	RS485

Specifications

· **Input**
· Measuring interval : 1sec(1, 2, 3 channel type)
　　　　　　　　　　　　6sec(6, 12 dot type)
· Input resistance : TC, mV, RTD ··· over 1MΩ
　　　　　　　　　　　VOLT ··· over 200kΩ
　　　　　　　　　　　mA ··· external resistance, 250kΩ
· Insulation resistance
　- Between channels ··· Over 10MΩ(500VAC) only for channel type
　　　　　　　　　　In case of dot type, none isolation
　- Between power and input : Over 100MΩ(500VAC)
· Isolation internal voltage : Between channels, Between case(FG)
　　　　　　　　　　　input ··· 500VAC for a minute
· Input table

KIND OF INPUT	RANGE	SCALE
TC_B		0~1800℃
TC_R		0~1750℃
TC_S		0~1750℃
TC_K		-200~1350℃
TC_E		-200.0~800.0℃
TC_J		-200.0~800.0℃
TC_T		-200.0~400.0℃
JPt100		-200.0~600.0℃
DPt100		-200.0~600.0℃
mV	-500.0~+500.0mV	-9.999~+9.999(-9999~+9999)
VOLT	-50.0~+50.0mV	-9.999~+9.999(-9999~+9999)
mA	-100.0~+100.0mV	-9.999~+9.999(-9999~+9999)

>> AS for mA type, external 250Ω 0.05% 25PPM precise resistance is attached.

· **Accuracy**
· Indicating accuracy : (±)0.25% of Full scale
· Recording accuracy : (±)0.5% of Full scale
· **Recording**
· Responding time : Over 3 seconds, subject to chart speed
· Recording type : Pseudo-thread line recording type by 6 color pen
· Recording speed : 10, 20, 40, 60, 120, 240 mm/H
· Recording paper : Konics KR-100N exclusive recording paper
　　　　　　　　　　　(length : 9M/1 volume)
· **Environment**
· Using temperature : -10~60℃
· Using humidity : 10~80%
· Storing temperature : -20~70℃
· Storing humidity : 5~90%
· **Battery for Clock**
· Over 3 years in power-off state
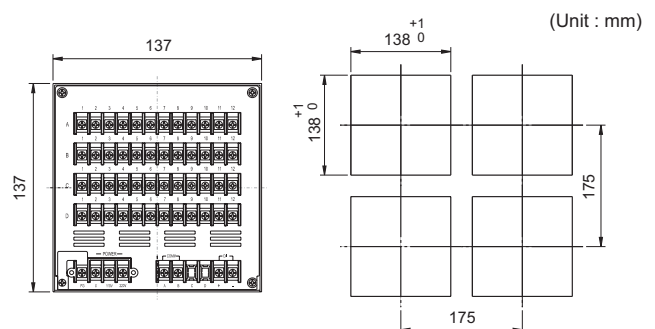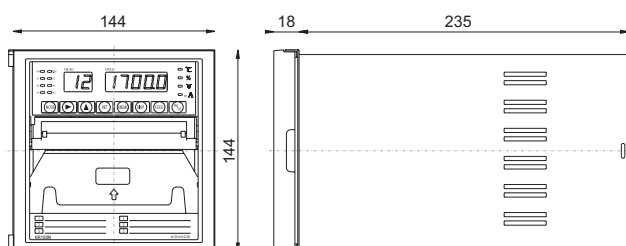· Type : TL-5101(3.6volt) Lithium battery
· **Power supply**
· Supplied voltage : 110/220VAC(±10%), transformed by
　　　　　　　　　　　external terminal
· Capacity : Max. 20VA
· Frequency : Combined use for 50/60Hz
· Isolation resistance : Over 5MΩ FG-Power terminal(500VAC)
· Isolation internal voltage : 1500VAC FG-Power terminal fot a minute
· **Contact point output of alarm relay (Option)**
· Capacity of contact point : 5A 30VDC or 250VAC,
　　　　　　　　　　　　1/10HP 120VAC(UL Rating)
· Max swiching voltage : 150VDC or 250VAC
· Dielectric strength : 750Vrms contact to contact,
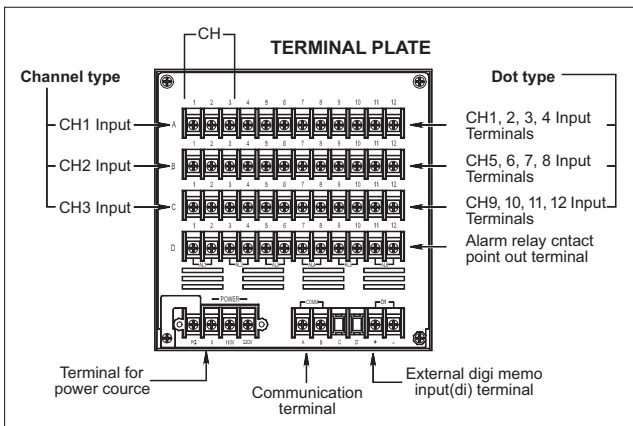　　　　　　　　　　　3000Vrms contact to coil
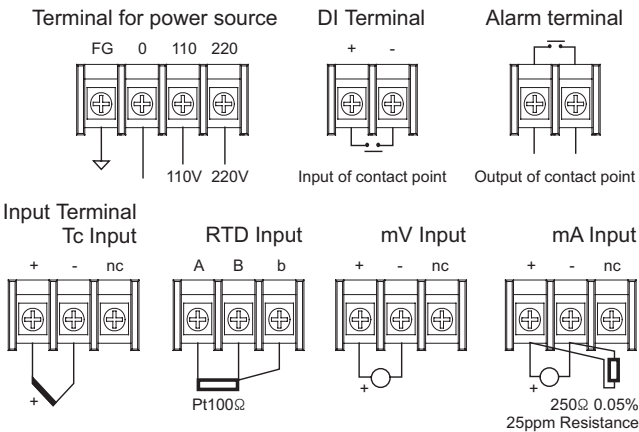
Dimension, Panel Cutout

(Unit : mm)

KONICS

A

Recorders

B

Data Loggers

C

Indicators

D

Converters

E

Controllers

F

Thyristor Units

G

Transmitters

H

Temp. Sensors

I

Thermo Meters

J

Pressure Gauges

K

Others

Specifications

· **RS485vcommunication port (Option)**
  · Connecting wire type : 2-wire multi drop method
  · Communication type : 1: N
  · Maximum number of instrument per 1 port : Max. 16
  · Protocol : Konics standard protocol
  · Max line length : 1km
  · Wire type : Twisted shield 2c 0.75SQ over
· **Outward shape**
  · Size : 144(W) X 144(H) X 235(D)mm
  · Panel cutting : 138 X 138mm(+1/-0mm)
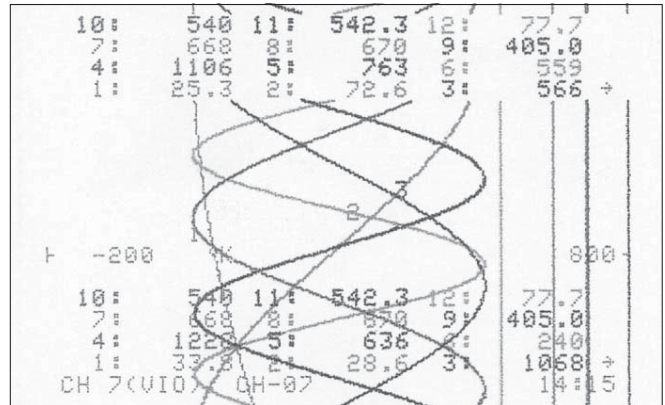 · Weight : Approx. 4kg

Connections

TERMINAL PLATE

Channel type

CH1 Input
CH2 Input
CH3 Input

Dot type

CH1, 2, 3, 4 Input Terminals
CH5, 6, 7, 8 Input Terminals
CH9, 10, 11, 12 Input Terminals
Alarm relay cntact point out terminal

Terminal for power cource
Communication terminal
External digi memo input(di) terminal

· **Wiring method per kinds**

Terminal for power source

FG 0 110 220

110V 220V

DI Terminal

+ -

Input of contact point

Alarm terminal

Output of contact point

Input Terminal

Tc Input

+ - nc

+

RTD Input

A B b

Pt100Ω

mV Input

+ - nc

+

mA Input

+ - nc

+ 250Ω 0.05%
25ppm Resistance

Functions

· **Example of list out functioning recording paper**

Functions

· **Example of digital memo functioning recording paper**

· **Multi Input and User Scaling Function**
  User can select B,R,S,K,E,J,T of thermocouple. RTD, JPT 100, DPT 100 and DC voltage mV, Volt DC current mA by inputting key. The input range of DC voltage mV, Volt DC current mA can be set up in the fixed range by user, to all inputs, it can be set up in full scale by the scale-extension user wants.
· **Sensor Deviation Compensating Function per Channel**
  Deviated value can be compensated by setting up the sensor compensation value in required channel.
· **Digital Memo Function**
  This recorder can record the input values of all channels into numbers by pushing key or inputting external DI at the fixed intervals.
· **Print Mode Setting Function**
  The recorder can record analog continuous line and make a digital print at a fixed period.
· **Printing Function in Recording Paper when Alarm brings forth**
  When alarm occurs, the recorder indicates ↑ (HI-alarm), ↓ (LO-alarm) beside the trend of channel concerned.
· **Listing Out Function**
  The recorder can print out the set parameters per channel.
· **Channel No Printing Function**
  The number of input channels is over 6 dots. It is difficult to read as same color is doubly printed. So this record or can record the channel numbers from 1 to 6 at the same color as the trend beside it.
· **Digital Filter Function**
  The recorder can select and use the most proper filter for the spot condition among 5 kinds of filters.
  · None filter : Recording mode to record the input thing as it is.
  · Record feature per various filter types.

Clear DISPLAY and convenient KEY BOARD

Key Functions

· Status LED : 8 LED indicate the condition of recorder and alarm output
· Data : 7 segment LED indicate input value, message of setting parameter
　　　　and data
· CH No : Input channel number of data indicated on data display at
　　　　present
· Unit LED : LED indicates setting unit per channel

(MODE)　　>> Mode Key : Converting mode and storing data when setting
　　　　　　　　　　up parameter

(▶)　　>> Shift Key : Moving the number of digits of setting data

(▲)　　>> Up Key : Increasing setting data

(RET)　　>> Ret Key : Storing data when getting out of setting parameter
　　　　　　　　　mode

(MEMO)　　>> Memo Key : Digital memo and list out

(DISP)　　>> Disp Key : Selecting Manual / Automatic for converting
　　　　　　　　　channel

(FEED)　　>> Feed Key : Transmitting channel paper manually

(RU/ST)　　>> RU/ST Key : Starting or stopping redord

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KONICS