KR3000 SERIES GRAPHIC RECORDER



KR3000 Series are network-compatible paperless recorders with high performance and high operating function employed high visibility 12.1" TFT color LCD display and touch panel operation system. High speed of sampling rate 100ms for 48 points and high accuracy of ±0.1% were realized, and measured data is stored into internal memory and maximum 2GB compact flash card (CF card).

As it can be monitored by a web browser display on several computers on intranet or internet, FTP transfer of data file and E-mail notification are also available.



■ FEATURES

●Large sized 12.1" TFT color LCD display

- · Large-sized high visibility display with various display functions. Real time/Historical trend screen, Bar-graph screen, Data screen are selectable for various applications.
- · Combination display for selected 4 screens is available. It is easy to switch to individual screen by touching panel.

Large capacity of data memory and various recording method

- · Compact flash card (CF card) slot is equipped as standard external memory. Large capacity storage of maximum 2GB is available.
- · Various data storing methods are selectable such as schedule programming by time of day and time of date, recording start-up by external signal and event, and data logging of before and after trigger points for alarm.

■Multi points recording with high speed/high accuracy

- · High-speed recording of approximately 100ms for 48 points and high accuracy of ±0.1% were realized. Stable measuring and recording are possible with high speed.
- · High withstand voltage of 1000V AC between input channels.

Easy operating and programming without manuals

- · Easy operating by dedicated keys for each function and touch panel.
- · USB port is prepared in front compartment. Setting file and data file are stored in USB memory stick.

●LAN network capability

· Various networked environment such as remote monitoring by browser. FTP server. FTP client and E-mail notification are applied as Ethernet is equipped as standard.

Analyzing/data acquisition application software

· It is easy to replay and edit the recorded data file. Replay display has functions of vertical/horizontal trend, circular trend, and also wave-analyzing and marking by using the cursor.

■ MODELS

KR31

-Measuring points/sampling rate

20: 12 points/100ms

40: 24 points/100ms

60: 36 points/100ms

80: 48 points/100ms

21: 12 points/1s

41: 24 points/1s

61: 36 points/1s

81: 48 points/1s

Communications interface (option)

N: None

R: High-order (RS232C)

S: High-order (RS422A/RS485)

Digital input/alarm output (option)

0: None

1: Alarm output 12 points (a contact)

2: Alarm output 6 points (c contact)

3: Alarm output 24 points (a contact) 4: Alarm output 12 points (c contact)

5: Alarm output 12 points (a contact)

+ 6 points (c contact)

A: Digital input 8 points

B: Digital input 8 points

+ alarm output 12 points (a contact)

C: Digital input 8 points

+ alarm output 6 points (c contact)

D: Digital input 8 points

+ alarm output 24 points (a contact)

E: Digital input 8 points

+ alarm output 12 points (c contact)

F: Digital input 8 points

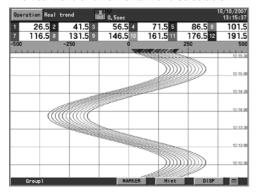
+ alarm output 12 points (a contact)

+ alarm output 6 points (c contact)

■ SCREENS

● Real-time trend screen

Displays data (measured and virtual) of selected group. Vertical trend and horizontal trend selectable.



● Data screen

Displays data (measured and virtual) of selected group. Simultaneous display of alarm status.



●Information screen

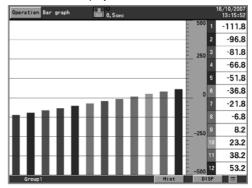
Start date and time	/2007 11:20	16/10/ 13:1		LEU 0.5sec	Operation CF card
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Groupi Real DISP		0.100		20 /00 /0007 40-55-00	

●Channel setting screen

Оре	18/10/200 Real trend Res. 1. 4year 13:09:5					0/2007 :09:50	
CH.	Range	type	Tag		Unit		
1	к	*	TIC-001	•	°C	*	^
2	K	*	TIC-002	•	°C	*	
3	T		TIC-003	•	*c		П
4	Т	*	TIC-004		°C		1
5	5 200mV - mV -						
6	2V	*		•	v	*	
7	7 5V · V						
8	8 10V V -						
9	9 200						
10 Pt100 C -							
11	JPt100	*	i	-	°C	*	
12	200mV	-		•	≡V		
13					#V		
	Return						

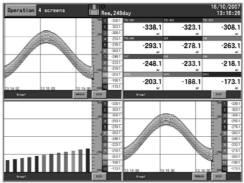
●Bar-graph screen

Displays data (measured and virtual) of selected group. Combination display with real-time trend is available.

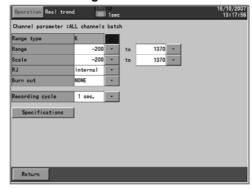


•4 separate screen

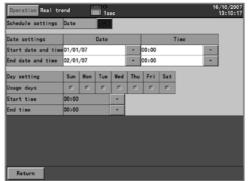
Switchable from displayed 4 screens to individual screen by touch panel.



●HOME setting screen



Schedule setting screen





■ INPUT SPECIFICATIONS

12 points, 24 points, 36 points and 48 points Universal DC voltage --- ±13.8mV, ±27.6mV, ±69.0mV Measuring points: Input types:

DC voltage --- ±13.8mV, ±27.6mV, ±59.0mV ±200mV, ±500mV, ±2V ±5V*, ±10V*, ±20V*, ±50V* (*with built-in voltage divider) DC current --- With external shunt resistor (sold separately) Thermocouple --- B, R, S, K, E, J, T, N, PtRh40-PtRh20, W-WRe26, WRe5-WRe26, Platinel NiMo-Ni, CR-AuFe, U, L Resistance thermometer --- Pt100, JPt100, Pt50, Pt-Co Refer to the table of measuring range, accuracy ratings and display resolution

Accuracy ratings:

display resolution

Reference junction compensation accuracy:

K, E, J, T, N, Platinel --- ±0.5°C or less
R, S, W-WRe26, WRe5-WRe26, NiMo-Ni, CR-AuFe,
U, L --- ±1.0 °C or less
Sampling rate:

100ms --- Approximately 100ms for all points

u, L --- ±1.0 °C or less
100ms --- Approximately 100ms for all points
1s --- Approximately 300ms for all points
Disconnection of input signal is detected on thermocouple
and resistance thermometer input. UP/DOWN/DISABLE is
selectable for each input
Range/scale is selectable when DC voltage/current is Burnout:

Scaling:

programmed FIR filter Digital filter: Allowable signal source resistance:

tance:
Thermocouple input (burnout disable)/
DC voltage input (±2V or less) --- 1kΩ or less
DC voltage input (±5V or more) --- 100Ω or less
Resistance thermometer --- Per wire 10Ω or less
(same resistance for 3 wires)
DC voltage, thermocouple input --- Approximately 1 MΩ

Input resistance:

Maximum input voltage:

DC voltage input (±2V or less)/
thermocouple input (burnout disable) --- ±10VDC
DC voltage input (±5V to ±50V) --- ±60VDC

Dielectric strength between channels:

1000V AC or more between each channel (High strength semiconductor relay used)

(B terminal of resistance thermometer is shorted inside

between channels.)

Common mode rejection ratio:

. 120dB Series mode rejection ratio: 50dB

■ RECORDING SPECIFICATIONS

Memory for history: Additional memory: Recording cycle:

Logging data:

Storing types: Storing methods:

PECIFICATIONS
136MB
CF card (Up to 2GB)
100, 200, 500ms
1, 2, 3, 5, 10, 15, 20, 30s
1, 2, 3, 5, 10, 15, 20, 30, 60min
Measured data --- File name (group name), time of day, month and year of recording start, tag, measured data, alarm status/types, makertext
Setting parameter
Binary/CSV type
Manual start/stop (dedicated key operation)
Schedule (designation for time of day and date)
Trigger signal (alarm event, digital input)
Data logging of before and after trigger points
* Pre-trigger is selectable
Measuring numbers of pre-trigger --- Max 950 data
6 groups of 56 points/group can be programmed
(Up to Total of 128 points)
in sampling mode (real data).

Recording group:

When 12 channels recorded in sampling mode (real data)

Recording cycle	128MB	256MB	512MB	1GB	2GB
0.1 sec	3.16 days	6.32 days	12.6 days	25.3 days	50.6 days
1sec	31.6 days	63.2 days	126 days	253 days	1.4 yrs
60 sec	5.2 yrs	10 yrs	21 yrs	42 yrs	83 yrs
When 24 channe	ls recorded i	n sampling r	node (real da	ata).	
Recording cycle	128MB	256MB	512MB	1GB	2GB
0.1 sec	1.58 days	3.16 days	6.32 days	12.6 days	25.3 days
1sec	15.8 days	31.6 days	63.2 days	126 days	253 yrs
60 sec	2.6 yrs	5.2 yrs	10 yrs	21 yrs	42 yrs
When 36 channe	ls recorded i	n sampling r	node (real da	ata).	
Recording cycle	128MB	256MB	512MB	1GB	2GB
0.1 sec	1.05 days	2.11 days	4.20 days	8.43 days	16.9 days
1sec	10.5 days	21.1 days	42.0 days	84.3 days	168 days
60 sec	1.7 yrs	3.3 yrs	7 yrs	14 yrs	27 yrs
When 48 channe	ls recorded i	n sampling r	node (real da	ata).	
Recording cycle	128MB	256MB	512MB	1GB	2GB
0.1 sec	18.9 days	1.58 days	3.16 days	6.32 days	12.6 days
1sec	7.9 days	15.8 days	31.6 days	63.2 days	126 yrs
60 sec	1.3 yrs	2.6 yrs	5.2 yrs	10 yrs	21 yrs

■ COMPUTATION SPECIFICATIONS

Maximum 128 points Computation points: Computation cycle:

100ms for all points Arithmetic operations Computation types:

etic operations --- Addition, subtraction, multiplication, division, remainder, exponential Comparison operations --- Equality, inequality, great, less, equality/great, equality /less
Logical operations --- AND, OR, XOR, NOT
General functions --- Round-up, round-down, absolute value, square root, exponent of e, natural

logarithm, common logarithm Analog integration, digital integration

Integration operations -

Channel data operations

Others ---

Measured data computation calculated data computation Dew point, relative humidity,

Remaining amount of CFcard

■ ALARM SPECIFICATIONS

Up to 4 alarms can be programmed per channel Upper limit, lower limit, differential upper limit, differential lower limit Setups: Alarm types:

(deadband is selectable), abnormal data

Delay function: Setup range of alarm delay --- 1 to 3600 seconds Alarm settings: AND/OR selectable

Alarm outputs: Refer to option specification

DISPLAY SPECIFICATIONS

12.1" TFT color LCD Display: 12.1" TFT color LCD Display types: Measured data display

(Trend screen, Data screen, Bar-graph screen) Historical trend display

(simultaneous display with Real-time trend is available)

Information display (alarm display, marker list, file list)

Setting screen (alarm, computation, memory, system, maintenance, communication, etc.) 48 colors selectable

Trend screen:

Display screen--- 6 screens (6 groups)
Display points --- Maximum 56 points/screen
Time axis direction --- Vertical or horizontal
Line width --- 1 to 5 dot selectable
Scale display --- 4 scales
Tag/data display --- Show/hide selectable
Marker display

Data screen:

Marker display
Marker display
Display screen --- 6 screens (6 groups)
Display points --- Maximum 56 points/screen
Display contents --- Measured value, channel/tag, unit, alarm status

Bargraph screen

en:
48 colors selectable
Display screen --- 6 screens (6 groups)
Display points --- Waximum 56 points/screen
Display direction --- Vertical or horizontal
Scale display --- 1 scale

Information display:

Alarm display (alarm activation/released history display)

Marker list
File list (group data file list display)
Unit information (Model, serial no., option, etc.)

LCD back light:

Auto/manual OFF function
Brightness --- 4 levels adjustment

*The LCD display may contain some pixels that always or never illuminate, and the brightness of some areas of the display may appear uneven. There are typical LCD performance characteristics and do not

constitute malfunctions

■ COMMUNICATION FUNCTIONS

Network

Communication type:
Ethernet (10BASE-T/100BASE-TX)
FTP server: Data file can be read from the network computer
FTP client: Transfer a data file to a network server

SNTP client :

The time can be synchronized to the time of SNTP server
Conformed to HTTP1.0 --- Display the alarm, information of maintenance
by browser software (InternetExplorer5.0 or later, NetScape6.0 or later, Web server :

Opera7 or later)

E-Mail:

*User's ID and password registration available. E-Mail notification at specified time for alarm activation Report data at specified time is selectable from all registered data Notification address --- Maximum 8 contacts

USB Communications

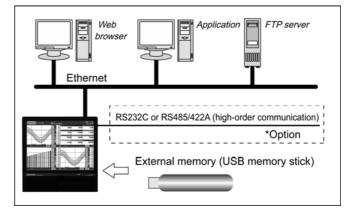
Communication type:

USB2.0 (full speed), host function

USB memory stick is used as external memory

Some USB memory stick can not be used.

CONNECTIVITY



■ PROGRAMING/OPERATION

Operation method: Operation keys:

Touch panel/dedicated key HOME, MENU, DISP, MARKER, SCROLL, CURSOR, START,

STOP, DIRECTION keys, ENTER, ESC
Simple recording settings --- Common setting to all channels
Parameter programming for all channels together, recording HOME settings:

MENU settings:

Parameter programming for all channels together, recording cycle, selection settings Input/computation programming --- Input parameter, computation parameter DISP Settings --- Data channel parameter, group parameter, common parameter (combination display, trend vertical/horizontal)

vertical/norizonial)
Alarm settings
File settings (6 individual files) --- Storing method settings
Marker text settings
System settings --- Communication, clock, maintenance, key lock, password, screen, etc.
Operating screen selection --- Trend, data, bar-graph, historical trend, alarm display, maker list

Pictolay calcation on each screen --- Group 1 to 6 selectable.

DISP operations:

Display selection on each screen --- Group 1 to 6 selectable

■ GENERAL SPECIFICATIONS

Rated power voltage: 100 to 240V AC (universal power supply) 50/60Hz

Maximum power consumption: 65VA Reference operating condition:

Ambient temperature --- 21 to 25°C, Ambient humidity --- 45 to 65%RH Power voltage --- 100V AC±1.0% Power frequency --- 50/60Hz±0.5% Attitude --- Left/right 0°, forward/backward 0° Warm-up time --- Longer than 30 minutes

Normal operating condition:

Normal operating condition:

Ambient temperature --- 0 to 50°C

Ambient humidity --- 20 to 80%RH

Power voltage --- 90 to 264V AC

Power frequency --- 50/60Hz±2%

Attitude --- letf/right 0°, forward tilting 0°, backward tilting 0° to 20°

Transport condition (at the packed condition on shipment from our factory):

Ambient temperature --- 20 to 60 °C

Ambient humidity --- 5 to 90%RH (No dew condensation) Vibration --- 10 to 60Hz 4.9m/ S² (0.5G) or less Impact --- 392m/S² (40G) or less

Storage condition:

Ambient temperature --- 20 to 60°C

Ambient humidity --- 5 to 90%RH (No dew condensation)

Setups and data are backed up by flash memory.

Clock:Lithium battery backs up RAM

(Minimum 5 years)

Insulation resistance:

Minimum 5 years)
Secondary terminals and protective conductor terminals --20MΩ or more at 500V DC

Primary terminals and protective conductor terminals --- $20 M\Omega$ or more at 500V DC

Primary and secondary terminals -- 20MΩ or more at 500V DC

Primary terminals: power terminals (L,N), alarm output terminals Secondry terminals: measuring input terminals, digital input terminals,

communications terminals

Dielectric strength:

communications terminals
Secondary terminals and protective conductor terminals --1 minute at 500V AC
Primary terminals and protective conductor terminals --1 minute at 1500V AC
Primary and secondary terminals --- 1 minute at 2300V AC
Primary terminals:power terminals (L,N), alarm output tereminals
Secondry terminals measuring input terminals, digital input terminals
communications terminals
Front bezel --- ABS resin
Case --- Steel

Case assembly material:

Color:

Case --- Steel
Front bezel --- Black (equivalent to Mussel N3.0)
Case --- Painting color, gray (equivalent to Mussel N7.0)

Weight: Mounting: Terminal screws:

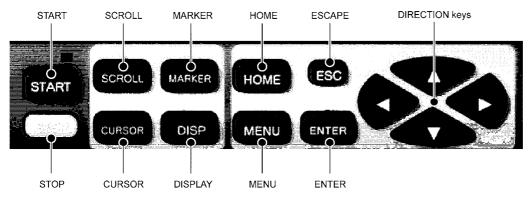
7.2kg
Panel mounting
Power terminals/protective conductor terminals/communications terminals --- M4.0

Measuring input terminals/alarm output terminals/digital input terminals --- M3.5

■ OPTIONS

	1			
Options	Specifications			
Alarm output	ontact output for abnormal input and alarm activation contact), 12 points (a contact, c contact), 6 points (c contact) chanical relay 100V AC 0.5A, 240V AC 0.2A, 30V DC 0.3A			
Communications interface	High-order communications Communications interface for high-order units RS232C,RS422A/RS485 (MODBUS) switchable *Ethernet is standard equipped			
	ON/OFF signal	ON/OFF input recording		
	Pulse input	Maximum 10Hz pulse input Used for flow, operating time and frequency Input system: Photocoupler isolation (Common use for contact and pulse input) Built-in isolated power supply (approx. 5V) Input type: Non-power contact, open collector (TTL or transistor)		
Digital inputs Remote contact Remote contact Rejistere from OFF -Integratio Reset dat Reset dat Registere from Refinere Reset dat Regatere Reset dat		The following operations are available by contact Input 8 points and common signal 4 points (Selectable by parameter). • Data memory triggering Start data recording by conductive signal from OFF to ON Data recording while conductive signal is ON • Marker display Registered makers display by conductive signal from OFF to ON • Integration operations Reset data for integration operations (all channels simultaneously)		
Others	Point indication card			

■ OPERATION KEYS





■ MEASURING RANGES/ACCURACY RATINGS

Input type		Input type Measuring range Accuracy rating					
DC voltage -27.60 to 27.60mV -69.00 to 69.00mV -500.0 to 500.0mV -500.0 to 500.0mV -2.000 to 500.0mV -2.000 to 50.00V (with built-in voltage divider) -20.00 to 50.00V -50.00 to 50.00V -50.00V -50.00 to 50.00V -50.00V -50.0		Input type				Accuracy rating	
DC voltage			-13.80	to	13.80mV		
DC voltage			-27.60	to	27.60mV		
DC voltage			-69.00	to	69 00m\/		
		DC voltage					
Company Comp							
Company Com			-500.0	to	500.0mV	+0.1%+1digit	
(with built-in voltage divider) -10.00 to 20.00V -20.00 to 50.00V -20.00 to 50.00V -20.00 to 50.00V -20.01 to 50.00V -20.02 to 50.00°C -20.01 to 1370°C -20.02 to 10 200.0°C E -20.01 to 250.0°C -20.02 to 500.0°C J -20.02 to 500.0°C -20.03 to 1200°C According to 1760°C T -20.01 to 250.0°C R 0 to 1760°C S 0 to 1760°C S 0 to 1760°C B 0 to 1760°C D 10 to 400°C: 0.00 to 400°C D 10 to 400°C: 0.00 to 400°C D 150 to 400°C: 0.00 to 400°C D 150 to 1760°C D 150 to 1760°C D 150 to 1760°C D 150 to 400°C: 0.00 to 10 to 400°C: 0.00 to 10 to 100°C D 150 to 1760°C D 150 to 1760°			-2.000	to	2.000V	±0.176±1digit	
(with built-in voltage divider) -10.00 to 20.00V -20.00 to 50.00V -20.00 to 50.00V -20.00 to 50.00V -20.01 to 50.00V -20.02 to 50.00°C -20.01 to 1370°C -20.02 to 10 200.0°C E -20.01 to 250.0°C -20.02 to 500.0°C J -20.02 to 500.0°C -20.03 to 1200°C According to 1760°C T -20.01 to 250.0°C R 0 to 1760°C S 0 to 1760°C S 0 to 1760°C B 0 to 1760°C D 10 to 400°C: 0.00 to 400°C D 10 to 400°C: 0.00 to 400°C D 150 to 400°C: 0.00 to 400°C D 150 to 1760°C D 150 to 1760°C D 150 to 1760°C D 150 to 400°C: 0.00 to 10 to 400°C: 0.00 to 10 to 100°C D 150 to 1760°C D 150 to 1760°			-5.000	to	5.000V		
Divider	(sarith	huilt in voltage					
S		-					
R	divid	ier)	-20.00	to	20.00V		
K			-50.00	to	50.00V		
K			-200.0	to	300.0°C		
Pitho Pith		K					
E -200.0 to 350.0°C		K					
E							
			-200.0	to	200.0°C		
		E	-200.0	to	350.0°C	±0.1%±1digit	
			-200	to	900°C	_	
T/C T							
T -200 to 1200°C T -200.0 to 250.0°C R 0 to 1200°C R 0 to 1760°C S 0 to 1300°C S 0 to 1760°C S 0 to 1760°C S 0 to 1820°C B 0 to 1820°C A 0 to 1820°C D 1 to 400°C: dut of accuracy ratings "400 to 800°C: dut 0.15%±1 digit "0 to 400°C: dut of accuracy ratings "400 to 800°C: dut 0.15%±1 digit "0 to 100°C: dut of accuracy ratings "400 to 800°C: dut 0.15%±1 digit "0 to 100°C: dut of 15%±1 digit "0 to 100°C: dut of 15%±1 digit "0 to 100°C: dut of 100°C: du						±0.2 /6± ruigit	
T		J	-200.0	to	500.0°C		
R			-200	to	1200°C		
R			-200.0	to	250.0°C	1	
R		Т					
R							
S		R	0	to	1200 °C	+0.1%+1digit	
S		1.	0	to	1760 °C	_	
B			0	to	1300°C		
B		S				±0.2%±1digit	
B				10	1700 0	+0.1%+1digit	
B							
*400 to 800°C: ±0.15%±1 digit		D	0	to	192000		
#0.15%±1digit N -200.0 to 400.0°C		ь	U	ıo	1020-0		
T/C N							
T/C W-WRe26 0 to 1300°C ±0.3%±1digit ±0.15%±1digit *0 to 100°C: ±4%±1digit *100 to 400°C: ±4%±1digit *100 to 400°C: ±4%±1digit *100 to 400°C: ±4.5%±1digit *100 to 400°C: ±4.5%±1digit *100 to 300°C: ±1.5%±1digit *0 to 300°C: ±1.5%±1digit *0 to 300°C: ±1.5%±1digit *300 to 800°C: ±0.8%±1digit *0 to 200°C NiMo-Ni -50.0 to 290.0 °C NiMo-Ni -50.0 to 600.0 °C -50 to 1310 °C CR-AuFe 0.0 to 280.0K -50.2%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.5%±1digit *0 to 20K: ±0.5%±1digit *0 to 20K: ±0.5%±1digit *0 to 50 K: ±0.3%±1digit *0 to 50 K: ±0.3%±1digit *0 to 20C ±0.15%±1digit *0 to 20C ±0.15%±1digit *0 to 20C ±0.15%±1digit *0 to 50 C ±0.15%±1digit *0 to 20C ±0.15%±1digit *0 to 500.0°C ±0.15%±1digit *0 to 50C ±0.15%±1digit *10 to 50C *10 to 5			200.0	4-	400.000		
T/C W-WRe26 0 to 2315°C W-WRe5-WRe26 0 to 2315°C Depth 100 to 400°C: ±4,4±1 digit *0 to 100°C: ±4,4±1 digit *100 to 400°C: ±4,5%±1 digit *100 to 400°C: ±0.5%±1 digit *10 to 300°C: ±0.2%±1 digit *10 to 300°C: ±1,5%±1 digit *10 to 20K: ±0.8%±1 digit *10 to 20K: ±0.8%±1 digit *10 to 20K: ±0.2%±1 digit *10 to 20K: ±0.2%±1 digit *10 to 20K: ±0.3%±1 digit *10 to 20K: ±0.15%±1 digit ±0.15%±1 dig						-	
T/C W-WRe26 0 to 2315°C #40.15%±1digit *0 to 100°C: ±44%±1digit *100 to 400°C: ±0.5%±1digit *10 to 300°C: ±0.2%±1digit *10 to 300°C: ±1.5%±1digit *300 to 800°C: ±0.8%±1digit *300 to 800°C: ±0.8%±1digit *300 to 800°C: ±0.8%±1digit *10 to 20K: ±0.2%±1digit *10 to 20K: ±0.2%±1digit *10 to 20K: ±0.5%±1digit *10 to 20K: ±0.5%±1digit *10 to 20K: ±0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 C: ±0.15%±1digit *20 to 850°C: ±0.15%±1digit		N	-200.0	to	750.0°C	*-200 to 0°C:	
T/C W-WRe26 0 to 2315°C x44x±1digit x100 to 400°C: ±0.5%±1digit x0 to 300°C: ±1.5%±1digit x0 to 300°C: ±1.5%±1digit x300 to 800°C: ±1.5%±1digit x300 to 800°C: ±0.2%±1digit x300 to 800°C: ±0.2%±1digit x300 to 800°C: ±0.2%±1digit x0 to 20K: ±0.2%±1digit x0 to 20K: ±0.2%±1digit x0 to 20K: ±0.5%±1digit x0 to 50 K: ±0.3%±1digit x0 to 50 K: ±0.3%±1digit x0 to 50 C: ±0.15%±1digit x1 to 20C: ±0.15%±1digit x1 to 50C: ±0.15%±1digit x1 to 50C: ±0.15%±1digit x1 to 50C: ±0.15%±1digit			-200	to	1300°C	±0.3%±1digit	
W-WRe26						±0.15%±1digit	
W-WRe26	T/C						
#100 to 400°C: ±0.5%±1digit WRe5-WRe26	1/0	W-WRe26	0	to	2315°C	±4%±1digit	
WRe5-WRe26							
#0.2%±1digit *0 to 300°C: ±1.5%±1digit *0 to 300°C: ±0.8%±1digit *300 to 800°C: ±0.8%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.5%±1digit *0 to 20K: ±0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *0 to 1395°C ** Platinel 0.0 to 650.0°C ±0.15%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.15%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.15%±1digit ** Pt100						±0.5%±1digit	
#0.2%±1digit *0 to 300°C: ±1.5%±1digit *0 to 300°C: ±0.8%±1digit *300 to 800°C: ±0.8%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.2%±1digit *0 to 20K: ±0.5%±1digit *0 to 20K: ±0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *0 to 1395°C ** Platinel 0.0 to 650.0°C ±0.15%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.15%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.15%±1digit ** Pt100		WRe5-WRe26	0	to	2315°C	±0.2%±1digit	
PtRh40-PtRh20 0 to 1888°C 200 to 290.0 °C NiMo-Ni -50.0 to 290.0 °C NiMo-Ni -50.0 to 600.0 °C -50 to 1310 °C 20 to 280.0K CR-AuFe 0.0 to 280.0K -50 to 1310 °C 20 to 50 K: ±0.5%±1digit *0 to 20K: *0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit U -200.0 to 650.0 °C -200.0 to 500.0 °C -200.0 to 500.0 °C -200.0 to 600.0 °C -200.0 to 600.0 °C -200.0 to 600.0 °C -200.0 to 600.0 °C -200.0 to 500.0 °C -200 to 900 °C ±0.15%±1digit L -200.0 to 500.0 °C ±0.15%±1digit -200.0 to 500.0 °C ±0.1%±1digit -140.0 to 150.0 °C -200 to 900 °C ±0.1%±1digit *-140.0 to 150.0 °C ±0.1%±1digit *-140.0 to 150.0 °C ±0.1%±1digit *-140.0 to 150.0 °C ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit							
PtRh40-PtRh20 0 to 1888°C ±1.5%±1digit *300 to 800°C: ±0.8%±1digit 1-50.0 to 600.0 °C 1310 °C ±0.2%±1digit *0 to 20K: ±0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit 0 to 1395°C Platinel 0.0 to 650.0 °C -200.0 to 500.0 °C -200 to 900 °C -200 to 900 °C -200 to 900 °C -200 to 900 °C -200 to 150.0 °C -200 to 900 °C -200 to 900 °C -200 to 900 °C -200 to 150.0 °C -200 to 850°C: -200 to 850°C: ±0.1%±1digit *-140.0 to 150.0 °C -200 to 850°C: ±0.15%±1digit *-140.0 to 150.0 °C -200 to 649.0 °C ±0.1%±1digit *-140.0 to 150.0 °C ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit							
*300 to 800°C: ±0.8%±1digit NiMo-Ni		PtRh40-PtRh20	0	to	1888°C		
NiMo-Ni		1 (((140) (((120					
NiMo-Ni						±0.8%±1digit	
NiMo-Ni			-50.0	to	290.0 ℃	_	
CR-AuFe		NiMo-Ni				10.29/ 11digit	
CR-AuFe 0.0 to 280.0K ±0.2%±1digit *0 to 20K: ±0.5%±1digit *20 to 50 K: ±0.3%±1digit *20 to 50 K: ±0.3%±1digit 0 to 650.0°C Platinel 0.0 to 650.0°C -200.0 to 250.0°C -200.0 to 500.0°C -200 to 900 °C -200 to 900 °C -200 to 900 °C +0.1%±1digit *-140.0 to 150.0°C *-200 to 850°C: 700 to 850°C: 700 to 850°C: -200.0 to 850.0°C +0.1%±1digit *-140.0 to 150.0°C *-140.						±0.2 %±Talgit	
CR-AuFe CR			-50	to	1310 °C		
CR-AuFe O.0 to 280.0K ±0.5%±1digit *20 to 50 K: ±0.3%±1digit 0.0 to 350.0°C Platinel O.0 to 650.0°C ±0.15%±1digit 0 to 1395°C -200.0 to 250.0°C ±0.15%±1digit U -200.0 to 500.0°C -200.0 to 600.0°C -200.0 to 600.0°C -200.0 to 500.0°C ±0.15%±1digit -200.0 to 500.0°C ±0.15%±1digit -200.0 to 500.0°C ±0.1%±1digit -200.0 to 500.0°C ±0.1%±1digit -200 to 900 °C ±0.2%±1digit *-140.0 to 150.0°C *-200 to 300.0°C -200.0 to 850.0°C ±0.1%±1digit *-140.0 to 150.0°C *-100 to 850°C: ±0.15%±1digit *-140.0 to 150.0°C ±0.15%±1digit +0.15%±1digit +0.15%±1digit ±0.15%±1digit +0.15%±1digit ±0.15%±1digit							
#20 to 50 K: ±0.3%±1digit Description		CR-AuFe				*0 to 20K:	
#0.3%±1digit Description			0.0	to	280.0K		
Platinel 0.0 to 350.0°C 1.0 to 1395°C 2.00.0 to 250.0°C 2.00.0 to 500.0°C 2.00.0 to 500.0°C 2.00.0 to 600.0°C 2.00.0 to 600.0°C 2.00.0 to 500.0°C 2.00 to 850.0°C 2.015%±1digit							
Platinel 0.0 to 650.0°C ±0.15%±1digit 0 to 1395°C -200.0 to 250.0°C ±0.15%±1digit U -200.0 to 500.0°C ±0.15%±1digit -200.0 to 600.0°C ±0.3%±1digit -200.0 to 600.0°C ±0.3%±1digit L -200.0 to 500.0°C ±0.1%±1digit -200 to 900 °C ±0.2%±1digit -140.0 to 150.0°C ±0.1%±1digit -140.0 to 150.0°C ±0.1%±1digit -200.0 to 300.0°C 700 to 850°C: -200.0 to 850.0°C ±0.15%±1digit -140.0 to 150.0°C ±0.15%±1digit -140.0 to 150.0°C ±0.15%±1digit -140.0 to 150.0°C ±0.15%±1digit -140.0 to 150.0°C ±0.15%±1digit -140.0 to 649.0°C ±0.15%±1digit -200.0 to 649.0°C ±0.15%±1digit -200.0 to 649.0°C ±0.15%±1digit +0.15%±1digit -201.0 to 649.0°C ±0.15%±1digit						±0.3%±1digit	
0 to 1395°C 3			0.0	to	350.0°C		
0 to 1395°C		Platinel	0.0	to	650.0°C	±0.15%±1digit	
Company Com			0	to	13950€		
U -200.0 to 500.0°C						.0.450/ 4.855	
Comparison						_	
Color		U	-200.0	to	500.0°C	*-200 to 0°C:	
Comparison			-200.0	to	600.0°C	±0.3%±1digit	
L						-	
Pt100						_	
Pt100		L					
Pt100		Pt100	-200	to	900 °C		
Pt100			-140.0	to	150.0°C		
-200.0 to 850.0°C	RTD			to			
Pt-Co -140.0 to 150.0 C ±0.1%±1digit -200.0 to 300.0 C *-140.0 to 150.0 C: ±0.1%±1digit -200.0 to 649.0 C ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.15%±1digit ±0.3%±1digit		1 1100					
RTD JPt100 -200.0 to 300.0°C *-140.0 to 150.0°C: -200.0 to 649.0°C ±0.15%±1digit Pt50 -200.0 to 649.0°C ±0.1%±1digit +0.15%±1digit ±0.15%±1digit ±0.15%±1digit +0.15%±1digit ±0.3%±1digit ±0.3%±1digit			-200.0	to	850.0°C	±0.15%±1digit	
RTD JPt100 -200.0 to 300.0°C *-140.0 to 150.0°C: -200.0 to 649.0°C ±0.15%±1digit Pt50 -200.0 to 649.0°C ±0.1%±1digit +0.15%±1digit ±0.15%±1digit ±0.15%±1digit +0.15%±1digit ±0.3%±1digit ±0.3%±1digit			-140.0	to	150.0°C	±0.1%±1digit	
-200.0 to 649.0°C ±0.15%±1digit Pt50 -200.0 to 649.0°C ±0.1%±1digit ±0.15%±1digit ±0.15%±1digit Pt-Co 4.0 to 374.0K *4 to 50K: ±0.3%±1digit		JPt100				_	
Pt50 -200.0 to 649.0 C ±0.1%±1digit ±0.15%±1digit Pt-Co 4.0 to 374.0 K *4 to 50 K: ±0.3%±1digit		200					
#0.15%±1digit Pt-Co 4.0 to 374.0K *4 to 50K: ±0.3%±1digit						, , ,	
Pt-Co 4.0 to 374.0K *4 to 50K: ±0.3%±1digit		Pt50	-200.0	to	649.0°C	•	
±0.3%±1digit		_					
		Pt-Co	4.0	to	374.0K		
						±0.3%±1digit	

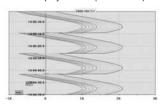
Note: The accuracy ratings are converted into the measuring range under reference operating condition. Thermocouple input does not contain reference junction compensation accuracy.
K,E,J,T,R,S,B,N:IEC584,JIS C1602-1995
W-WRe26,WRe5-WRe26,PtRh40-PtRh20,Platinel ,NiMo-Ni, Cr-AuFe:ASTM Vol14.03
U/Cu-CuNi),L(Fe-CuNi):DIN43710
Pt100:IEC751(1995),JIS C1604-1997,
JPt100:JIS C1606-1989

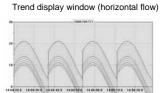
■ APPLICATION SOFTWARE ZAILA (sold separately)

The software is applied for replay display/wave editing operation of recorded data in KR3000 series. It has replay display of vertical/horizontal trend and circular trend function, and also analyzing function such as magnify/reduce/partially magnify of graphs and message insert.

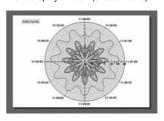
Display examples

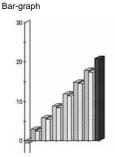
Trend display window (vertical flow)





Trend display window (circular trend)





Main functions

■ Trend display

Selectable from trend display window (vertical flow, horizontal flow) and circular trend display window.

■ Continuous replay display window

Trend is scrolled continuously (automatically).

Scroll changes by speed and renewal data no.

■ Data list display window

Displays registered data as list display

■ Bar-graph

Displays by bar. Message can be inserted into bar-graph.

■ Data between markers

Displays date/time, time difference between 2 data, data difference, maximum, minimum, average, standard deviation and median among all data.

■ Alarm display

Points for alarm activation at each level are displayed on a trend graph.

Cursor, trend line, scale axis, time axis, title input on the graph, graph assistant and magnify/reduce/rotation of graphs

■ Data conversion

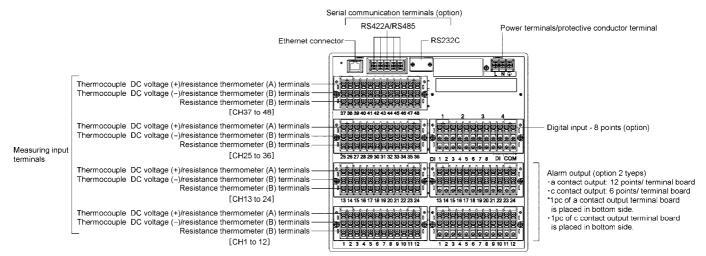
Exporting to Excel, and converting to CSV file or TEXT file are available.

■ ENVIRONMENT

CPU	1GHz or faster
os	Windows 98/Me Windows 2000/XP Home/XP Pro *Internet Explorer 4.0 or later
Memory	256MB or more (512MB or more recommended)
Disk drive	CD-ROM drive: 1 drive or more Hard disk drive: Disk space of 1 drive or more for 100MB or more
Language	Japanese, English, Chinese (simplified and traditional characters), Korean

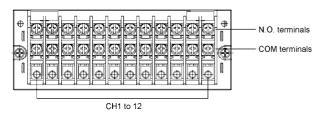


■ TERMINAL ARRANGEMENT

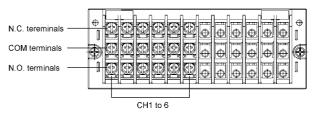


Alarm/Digital input terminals

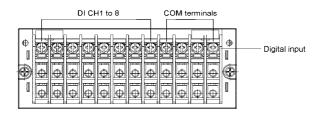
Alarm output (a contact output 12 points)

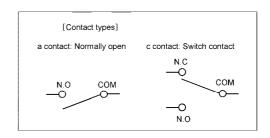


Alarm output (c contact output 6 points)

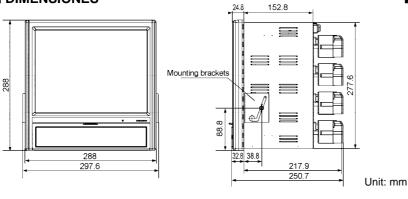


Digital input

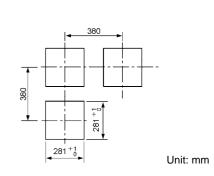




■ DIMENSIONES



■ Panel cutout and minimum clearance



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