# KR2000 SERIES GRAPHIC RECORDER



KR2000 series are network-compatible paperless recorders with high performance and high operating function employed high visibility 5.7" TFT color LCD display. High speed of sampling rate 100ms and high accuracy of ±0.1% were realized, and measured data is stored into internal memory and maximum 8GB 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**

## Employing clear 5.7"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.
- 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 8GB 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/accuracy

- $\cdot$  High-speed recording of approximately 100ms and high accuracy of  $\pm 0.1\%$  were realized. Stable measuring and recording are possible with high speed.
- · High withstand voltage of 1000V AC between input channels. (Except resistance thermometer input)
- Easy operating and programming without manual
- Easy operating by dedicated keys for each function
- USB port prepared in front compartment
- USB port is prepared for connecting maximum 8GB USB memory and PC.
- Readout of data and files are possible by connecting the panel mounted recorder.

#### LAN network capability

- · Various networked environment such as remote monitoring by browser, FTP server and E-mail notification are applied as Ethernet is equipped as standard.
- Safety system and reliability
- No battery backup needed for external memory for recorded data storage.
- Analyzing/data acquisition application software (option)
- · It is easy to replay and edit the recorded data file. Replay display has various mode of vertical/horizontal trend, circular trend, and also has wave-analyzing and marking by using the cursor.
- Custom graphic screen for per each applications (NEW)
- By using optional custom graphic screen function, it can display the graphic screen which the user created by PC software KR Screen Designer (optional). Create letters, rectangle, oval, line, etc by drawing tool and allocate KR measuring data while making the background by JPEG or other images. By lower communication, controller SV, MV, PID can also be changed. Register up to 5 screens and its screens are switchable



# **MODELS**

KR21 — — — — — Measuring points/sampling rate\*1
60 : 6 points/100ms

20 : 12 points/100ms 61 : 6 points/1s 21 : 12 points/1s

USB port

M: USB memory stick (type A)

- : PC (type B)

Communications interface (option)

N : None

R: High-order (RS232C/RS485)

Q: High-order (RS232C/RS485)

+ Low-order (RS485)

# Digital input/ alarm output (option)

0 : None

1 : Mechanical relay output -12 points (a contact)

2 : Mechanical relay output - 6 points (c contact)

7 : Digital input - 8 points

+ MOS relay output 8 points

Carrying handle and feet (option)

A: None

T: With carrying handle and feet \*2

# Others (option)

(Blank) : None

-1NN: Custom graphic screen

<sup>\*1 1</sup> to 4 channels input (4 points) when setting faster than 500ms sampling rate with model of 1sec sampling rate.

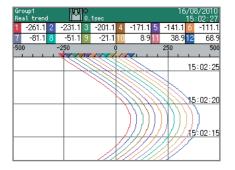
<sup>\*2</sup> Non-conformance to CE

# SCREENS

## Real-time trend screen

Displays data (measured and virtual) of selected group.

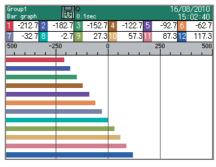
Vertical trend and horizontal trend selectable.



# Bar-graph screen

Displays data (measured and virtual) of selected group.

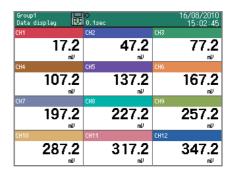
Combination display with real-time trend is available.



#### Data screen

Displays data (measured and virtual) of selected group.

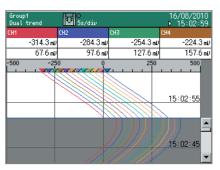
Simultaneous display of alarm status.



# Dual trend screen

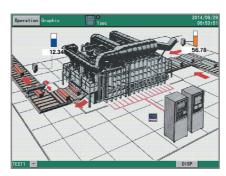
2 split display for real-time trend and historical trend.

Scroll available for historical trend.



## Graphic screen

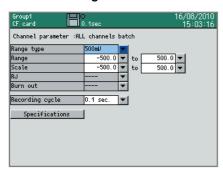
Enable to create custom display for each user\*.



# Information screen

	Group1 CF card	[편]	o Rem. 50. 3day		8/2010 :03:08
Г	Start date	and time	End date and time	Data count	
П	16/08/2010	15:01:52	16/08/2010 15:01:56	43	
П	06/08/2010	16:17:15	06/08/2010 16:17:16	20	
П	06/08/2010	16:17:13	06/08/2010 16:17:13	9	
П	06/08/2010	16:16:59	06/08/2010 16:16:59	5	
П	06/08/2010	15:59:19	06/08/2010 16:00:02	434	
П	06/08/2010	15:59:11	06/08/2010 15:59:16	60	
П	26/07/2010	10:31:45	26/07/2010 10:32:04	40	
П	22/06/2010	17:35:37	22/06/2010 17:35:41	10	
П	22/06/2010	15:33:50	22/06/2010 15:33:54	10	
П	22/06/2010	15:33:28	22/06/2010 15:33:31	4	
П	22/06/2010	15:33:18	22/06/2010 15:33:27	10	
П	22/06/2010		22/06/2010 15:33:17	10	
П	22/06/2010	15:32:30	22/06/2010 15:32:34	10	
П	22/06/2010	15:28:26	22/06/2010 15:28:33	37	
П	22/06/2010		22/06/2010 15:28:25	10	
П	22/06/2010		22/06/2010 14:58:27	10	
L	22 /06 /2040		2070672040 44.70.67	140	

# HOME setting screen



# Channel setting screen

	Group1 16/08/2010 CF card 15:03: <u>22</u>						)10 22
CH.	Range typ	oe -	Tag		Unit		Г
01	500mU	•		~	mU	•	_
02	500mU	₹		₹	ml/	▼	Т
03	500mU	₹		₹	ml/	▾	1
04	500mU	₹		┰	mU	▾	1
05	500mU	₹		₹	mU	▼	L
06	500mU	₹		₹	ml/	▼	i
07	500mU	₹		₹	ml/	•	i
08	500mU	◂		$\blacksquare$	mU	~	1
09	500mU	◂		₹	mU	▼	ı
10	500mU	◂		₹	mV	•	
11	500mU			◛	mV	•	
12	500mU	◂		$\blacksquare$	mU	~	
13		₹		₹	V	•	
14		▼		₹	V	$\overline{}$	

# Schedule setting screen

Date settings	Date		Time	-	
Start date and time	01/09/10	-	00:00	<b>-</b>	
End date and time	02/09/10	Ŧ	00:00	-	
Day setting	Sun Mon Tu	e Ne	d Thu Fri Sa	t	
Usage days		T		1	
Start time	00:00				
End time	00:00	₹			

<sup>\*</sup>Graphic screen feature is provided optionally. BMP image has to be prepared by customer.



#### INPUT SPECIFICATIONS

6 points, 12 points Universal Measuring points: Input types:

Measuring points:
Input types:

6 points, 12 points
Universal
DC voltage — ±13.8mV, ±27.6mV, ±69.0mV
±200mV, ±500mV, ±2V
±5V\*, ±10V\*, ±50V\*
("with built-in voltage divider)
DC current — With external shunt resistor (sold separately)
Thermocouple — B. R. S. K. E. J. T. N. PIRh40-PtRh20,
W-WRe26, WRe5-WRe26, PlatineIII, NiMo-Ni, CR-AuFe, U, L.
Resistance thermometer — Pt100, JPt100, Pt-Co, Pt50
Refer to the table of measuring range and accuracy ratings
Reference junction compensation accuracy:
K, E. J. T. N. PlatineIII— ±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
1s — Approximately 300ms for all points
1s — Approximately 300ms for all points
1s — Approximately 300ms for all points
1s — Approximately 10ms set all points
1s — Approximately 300ms for all points
1s — Approximately 300ms for all points
1s — Approximately 300ms for all points
1s — Approximately 10ms for all points
1s — Approximately 300ms for all points
1s — Approximately 10ms for all points
1s — Appr

Input resistance: DC voltage, thermocoupro....
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)

Series mode rejection ratio: 50dB or more (50 or 60Hz)

## RECORDING SPECIFICATIONS

Memory for history: Additional memory:

132MB CF card (Up to 8GB) 128MB standard attached, Apacer Technology made recommended

Recording cycle:

Logging data:

Storing types: Storing methods:

128MB shandard attached, Apacer Technology made recommended USB memory stick (Up to 8GB)
Not all USB memory stick allowable 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 and marker text
Setting parameter
Operation result data
Binary/CSV
Manual start/stop (dedicated key operation)
Schedule (designation for time of day and date)
Trigger signal (alarm event, digital input)
\*\*Pre-trigger is selectable
Measuring numbers of pre-trigger — Maximum 950 data
Recording cycle 500ms or faster — up to 3 groups of 12
points/group can be programmed
Recording cycle 1s or slower — up to 5 groups of 44
points/group can be programmed
(Up to total of 100 points)
ecorded in sampling mode (real data) Recording group:

when 6 channels recorded in sampling mode (real data)						
Recording cycle	128MB	256MB	512MB	1GB	2GB	
0.1 sec	6.32 days	12.6 days	25.3 days	50.6 days	101 days	
1sec	63.2 days	126 days	253 days	1.4 yrs	2.8 yrs	
60 sec	10 yrs	21 yrs	42 yrs	83 yrs	166 yrs	

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

# COMPUTATION SPECIFICATIONS

Computation points: Maximum 44 points Computation types: Arithmetic operations --

Addition, subtraction,

Comparison operations

Logical operations ---General functions ---

Addition, subtraction, multiplication, division, remainder, exponential Equality, inequality, great, less, equality /great, equality /less AND, OR, XOR, NOT Round-up, round-down, absolute value, square root, exponent of e, natural logarithm, common logarithm Analog integration, digital integration Measured data computation, calculated data computation, calculated data computation, expension, relative humidity, F-value Remaining amount of CF card, linearization table, data communications input

Integration operations ---Channel data operations ---

communications input

### ALARM SPECIFICATIONS

Others ---

Setups: Alarm types:

Up to 4 alarms can be programmed per channel Upper limit, lower limit, differential upper limit, differential lower limit (deadband is selectable), abnormal data Setup range of alarm delay --- 1 to 3600 seconds AND/OR se

Delay function: Alarm settings:

Refer to option specification Alarm outputs

## DISPLAY SPECIFICATIONS

5 7"TFT color I CD

Display: 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.)
12 colors selectable

Trend screen:

Display screen—5 screens (5 groups)
Display points --- Maximum 44 points/screen
Time axis direction --- Vertical or horizontal
Line width --- 1/3/5 dot selectable
Scale display --- 4 scales
Tag/data display --- Show/hide selectable
Marker display
Display screen --- 5 screens (5 groups)

Data screen:

Display screen --- 5 screens (5 groups)
Display points --- Maximum 44 points/screen
Display contents --- Measured value, channel/tag, unit, alarm

status

12 colors selectable Bargraph screen:

12 colors selectable
Display screen — 5 screens (5 groups)
Display points — Maximum 44 points/screen
Display direction — Vertical or horizontal
Scale display — 1 scale
Alarm display (alarm activation/released history display)
Marker list

Information display:

Marker list

Marker list
File list (group data file list display)
Auto/manual OFF function
Unit information (Model, Serial no., option, etc.)
Brightness — 4 levels adjustment
ntain some pixels that always or never illuminate, and the brightness of some areas
r uneven. There are typical LCD performance characteristics and do not constitute \*The LCD display may cor of the display may appear

# COMMUNICATION FUNCTIONS

#### Network

LCD back light:

Communication type

FTP server

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

Iransfer a data file to a network server
The time can be synchronized to the time of SNTP server
Conformed to HTTP1.0 --- Displays the alarm, information of
maintenance by browser software (InternetExplorer5.0 or later,
NetScape6.0 or later, Opera7 or later)
\*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. Web server:

E-Mail:

Corresponds to SSL and TLS.

Notification address --- Maximum 8 contacts
Read and write the data of compatibles units.

MODBUS TCP

## USB Communications

USB

Communication type --- USB1.1 Transfer systems --- Bulk transfer, control transfer File transfer by connecting as removable disk drive





TYPE B

**TYPE A** 

CONNECTIVITY Web FTP server Application browser Ethernet USB port for USB memory stick Data storing in **USB** memory USB port for PC File readout RS485(Low-order communication) \*Option DR ΚE Ethernet \*RS422A/RS485 cannot be parallel used. MODBUS TCP KR3000 compatible unit

#### PROGRAMMING/OPERATION SPECIFICATIONS

HOME, MENU, DISP, MARKER, SCROLL, CURSOR, Operation key:

START, STOP, DIRECTION keys, ENTER, ESC
Simple recording settings --- Common setting to all channels HOME settings:

Parameter programming for all channels together, recording

cycle, selection settings MENU settings:

Input/computation programming --- Input parameter,

computation parameter
DISP settings --- Data channel parameter, group parameter, common parameter (combination display, trend vertical/horizontal)

Alarm settings

Alarm settings
File settings (5 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,

DISP operations:

maker list
Display selection on each screen --- Group 1 to 5 selectable

## GENERAL SPECIFICATIONS

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

Maximum power consumption: Reference operating condition:

Ambient temperature --- 21 to 25℃, 

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 --- left/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 0.5G (4.9m/S²) or less
Impact --- 40G (392m/ S2) or less
Storage condition:
Ambient temperature --- 20 to 60°C
Ambient humidity --- 5 to 90%RH (No dew condensation)
Power failure protection:

Power failure protection:

Setups and data are backed up by flash memory

Insulation resistance:

Setups and data are backed up by flash memory
Clock --- Lithium battery backs up RAM
(Minimum 5 years)
Secondary terminals and protective conductor terminals --20MΩ or more at 500V DC

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

Primary and secondary terminals ---  $20 M\Omega$  or more at 500 V DC Primary terminals: power terminals (L,N), alarm output

terminals Secondary terminals: measuring input terminals, digital

input terminals, communications terminals

Secondary terminals and protective conductor terminals --- 1 minute at 500V AC Dielectric strength:

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

terminals

Secondary terminals: measuring input terminals, digital input terminals, communications terminals

Case assembly material:

Front bezel --- ABS resin
Case --- Steel
Front bezel --- Black (equivalent to Munsell N3.0)
Case --- Painting color, gray (equivalent to Munsell N7.0) Color:

2.2kg Weight:

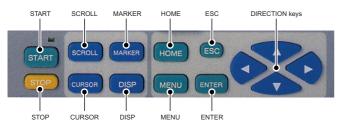
Panel mounting Mounting:

Power terminals/protective conductor terminals/communications Terminal screws:

terminals --- M4 0

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

## **OPERATION KEYS**



## STANDARDS

EMC directive ---EN61326-1: 2006 Class A

EN61000-3-2 EN61000-3-3

Low voltage directive --- EN61010-1(2001) Conformed to IEC60529 IP65 (recorder front bezel) Protection:

# OPTION SPECIFICATIONS

OPTION	SPECIFICATIONS			
Options	Specifications			
Mechanical relay alarm output	Mechanical relay contact output for abnormal input and alarm activation Output: 12 points (a contact), 6 points (c contact)  Contact ratings: Mechanical relay 100V AC 0.5A, 240V AC 0.2A, 30V DC 0.3A			
MOS relay alarm output	Output: 8	t output for abnormal input and alarm activation points OS relay 240V (DC, AC) 50mA		
	High-order communications	Communications interface for high-order units RS232C/RS485 (MODBUS) switchable Ethernet is standard equipped		
Communications interface	Low-order communications	Communications interface for low-order units Input data storing of units connected to low-order RS485 (MODBUS) Recording points: 6 points recorder 24 points 12 points recorder 24 points Sampling rate: 1s per connected unit Models: KE, SE3000, KR2000, KR3000, LE5000, AL3000, AH3000, AL4000, AH4000 LT230, 830, 350, 450, 470, DB1000, 2000, KP1000/KP2000/DP-G (data acquisition only), JU, JW Transfer input data of KR2000 to PLC. The input data can be written on PLC only. Data writing points: 44 points Connectable PLC: Mitsubishi Electric Corporation MELSEC AnA, QnA, QnAS, FX series OMRON Corporation SYSMAC series Note) Separate purchase of protocol converter SC8-10 (optional) is required for		
	ON/OFF days	connection to OMRON PLC.		
	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	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)		
Custom Graphic Screen		isigner (optional), create graphic screen by KR screen via CF card. KR measuring value the screen.		
Others	Handle and feet, w	hite front bezel, point indication card		

# KR SCREEN DESIGNER (sold separately) (NEW)



Model: KS3200-000 OS: Windows Vista/7/8 Others: Your OS recommended requirements or better



## MEASURING RANGES

Input type		Measuring range			Accuracy ratings
	DC voltage	-13.80 -27.60 -69.00 -200.0 -500.0 -2.000	to to to to to	13.80mV 27.60mV 69.00mV 200.0mV 500.0mV 2.000V	±0.1%±1digit
\	(with built-in voltage divider)	-5.000 -10.00 -20.00 -50.00	to to to	5.000V 10.00V 20.00V 50.00V	
	К	-200.0 -200.0 -200	to to to	300.0℃ 600.0℃ 1370℃	
	E	-200.0 -200.0 -200	to to to	200.0℃ 350.0℃ 900℃	±0.1%±1digit *-200 to 0°C:
	J	-200.0 -200.0 -200	to to to	250.0°C 500.0°C 1200°C	±0.2%±1digit
	Т	-200.0 -200.0	to to	250.0℃ 400.0℃	
	R	0 0	to to	1200℃ 1760℃	±0.1%±1digit *0 to 400°C∶
	S	0	to to	1300℃ 1760℃	±0.2%±1digit
	В	0	to	1820℃	±0.1%±1digit *0 to 400°C:Out of accuracy ratings *400 to 800°C: 0.15%±1digit
	N	-200.0 -200.0 -200	to to to	400.0℃ 750.0℃ 1300℃	±0.15%±1digit *-200 to 0°C: ±0.3%±1digit
T/C	W-WRe26	0	to	2315°C	±0.15%±1digit *0 to 100°C: ±4%±1digit *100 to 400°C: ±0.5%±1digit
	WRe5-WRe26	0	to	2315°C	±0.2%±1digit
	PtRh40-PtRh20	0	to	1888℃	±0.2%±1digit *0 to 300°C: ±1.5%±1digit *300 to 800°C: ±0.8%±1digit
	NiMo-Ni	-50.0 -50.0 -50	to to to	290.0°C 600.0°C 1310°C	±0.2%±1digit
	CR-AuFe	0.0	to	280.0K	±0.2%±1digit *0 to 20K: ±0.5%±1digit *20 to 50K: ±0.3%±1digit
	PlatinelII	0.0 0.0 0	to to to	350.0℃ 650.0℃ 1395℃	±0.15%±1digit
	U	-200.0 -200.0 -200.0	to to to	250.0℃ 500.0℃ 600.0℃	±0.15%±1digit *-200 to 0°C: ±0.3%±1digit
	L	-200.0 -200.0 -200	to to to	250.0℃ 500.0℃ 900℃	±0.1%±1digit *—200 to 0°C: ±0.2%±1digit
	Pt100	-140.0 -200.0 -200.0	to to to	150.0°C 300.0°C 850.0°C	±0.1%±1digit *-140.0 to 150.0°C 700 to 850°C: ±0.15%±1digit
RTD	JPt100	-140.0 -200.0 -200.0	to to to	150.0℃ 300.0℃ 649.0℃	±0.1%±1digit *-140.0 to 150.0°C: ±0.15%±1digit
	Pt50	-200.0	to	649.0°C	±0.1%±1digit
	Pt-Co	4.0	to	374.0K	±0.15%±1digit *4 to 50K: ±0.3%±1digit ring range under reference

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,PlatinelII,NiMo-Ni,

Cr-AuFe:ASTM Vol14.03

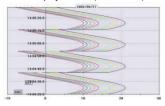
U(Cu-CuNi),L(Fe-CuNi):DIN43710 Pt100:IEC751(1995),JIS C1604-1997 JPt100:JIS C1606-1989

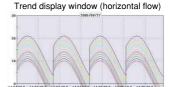
# APPLICATION SOFTWARE ZAILA (sold separately)

The software is applied for replay display/wave editing operation of recorded data in KR2000 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.

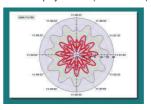
# Display examples

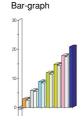
Trend display window (vertical flow)





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.

# Settings

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.

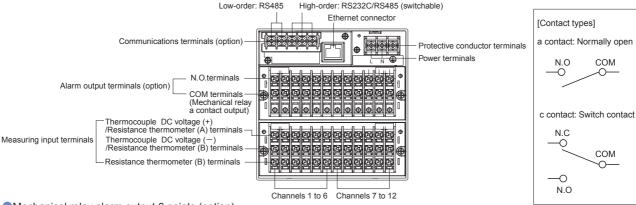
# ENVIRONMENT

CPU	Your OS recommended CPU and/or upper grade
OS	Windows VISTA / 7 / 8 *Internet Explorer 6.0 or later
Others Your OS recommended memory or larger	
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

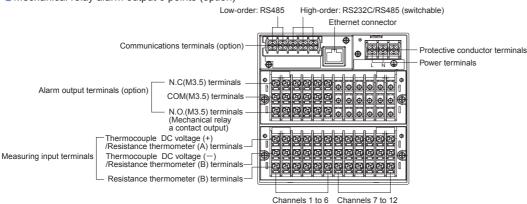


# ■ TERMINAL ARRANGEMENT

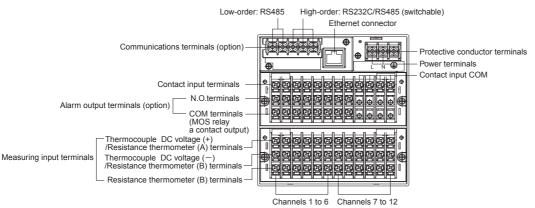
Alarm mechanical relay alarm output 12 points (option)



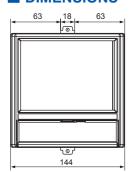
Mechanical relay alarm output 6 points (option)

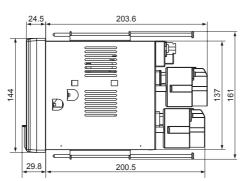


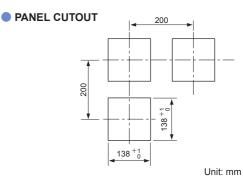
Digital input 8 points + MOS relay alarm output 8points (option)



# DIMENSIONS







Specifications subject to change without notice. Printed in Japan (I) 2020. 3

# CHINO CORPORATION

32-8 KUMANO-CHO,ITABASHI-KU,TOKYO 173-8632

Telephone: +81-3-3956-2171 Facsimile: +81-3-3956-0915 E-mail: inter@chino.co.jp Website: www.chino.co.jp/