KH200B-D Paperless recorder

especialistas en regulación y control de temperatura

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Memory Flash Drive Data Saving

Provides flexibility and variety in the handing of record data

Time Display

Indicate date and time of recorded data

USB port

Allows you to download data from recorder to PC by USB flash drive

Key Panel

Allows you to perform selection of display, setting, data change, and channel no. change

Alarm State

Alarm state display: HH,LL,H,L when alarm

Data Display

Allow you to view data in digital, trend, bargarph form

Trend Display Digital Display Bargraph Dispaly

Long Time Memory

4MB built in memory for long time memory. Record time can be 220year data recorded.

Universal Input, 16 Points Max. Recording

7 types of thermocouples, 3 types of resistance bulb, DC voltage, DC current are available.

Communication

Photoelectrical isolated RS485/RS232 serial communication, standard MODBUS-RTU protocol

USB Download Data Directly

Saved data transferred by USB flash drive directly, plug and play, easy to operation

Printing

Curve or digital data can be printed by connecting mini printer directly or through software

SMT Technology, Modular Output

Modular output, configurable flexibly according to the site requirements.

PC Support Software

Data Analysis Software and DCS Configurable Software supplied in a CD-ROM as part of accessory.

PC Support Software

Display data in digit and trend format, Export data as Excel format for further analysis, Print trend data by office printer

Specifications

General Specification

Accuracy	+-(0.2%FS+1) digit
Power Supply	85-240VAC, 47-63Hz;
Power Consumption	Maximum 5VA(5W)
Keyboard	PR/EN, UP, Down, Move
Materials	ABS for case and bezel
Terminal	M3 screw terminal
Mount Method	Panel Flush Mounted
Size/Mount Size/Mass	160x 80x105mm, 158x158mm, 0.7kg
Operation Temperature	Working Temperature:0-50C Relative humidity; 10%-85%(now dew)
Transport /Storage	Temperature: -20-60℃ Relative humidity : 5%-95%(nodew)
Transport /Storage	Temperature: -20-60℃ Relative humidity : 5%-95%(nodew)
Clock	Clock accuracy: +-5ppm. After power off, Li battery for continual power supply. The validity of battery is 30days.

Input Specification

Number of inputs	1, 2, 3, 4,5,…..16 points
Input Signal	Thermocouple: 7 types (K,S,B,E,J,N,T) RTD-Resistance bulbs: 3 types (Pt100, CU50,CU100) DC Voltage: (0-5VDC, 1-5VDC) DC Current: (4-20mA, 0-10 mA)
Sample Rate	1s/1 channels,

Modular Output Function

Relay Alarm	up to 8 points, 220VAC,0.8A, NO or NC
Retransmission	4-20mA, 0-10Ma,one point
Print	RS232 print port
USB	USB flash drive to download data
Communication	RS485,RS232 serial communication
Auxiliary Power Supply for sensors	5V, 12V,24VDC, 50mA for sensor and transmitters

Display Specification

Display	3.2inch LCD, 128x64 dot-matrix
Life of Backlight	50,000hours
Screensaver Time	0-30000s, settable
Unit	77 , settable and addable per channel
Scaling	-20000 to 20000
Display Contents	• Real time Trend Display In horizontal, selected in the refreshment cycles of 1 to 3600sec Scale display • Digital display Single and multi channels display • Bargraph Display • History Trend Display • Printing Setting Display • System Configuration

Recording Specification

Memory Media	USB memory , FAT16 format
Memory	Flash memory
Memory Capacity	8MB built in for long time record
Record Interval	1 to 3600 seconds, settable flexibly
Record Cycle	22.5 days x record interval time Channels numbers
Recording Method	Start recording when power on. Stop recording when power off.
Data Save Cycle	Oldest data replaced by newest data accordingly when memory is full
Data Format	Binary format or cannot read or write

Alarm Function

Type of Alarm	High, Low, High-High, Low-Low limit
No. of Setting	Up to 4 alarms are settable per channel
Alarm Indication	Alarm States is displayed in digital, When alarm occurs, state flashing
Alarm output	Up to 2 points, 3A contact
Alarm Setting	Individual or common output

Communication Function

Communication	Photoelectrical isolated RS485 ,RS232 communication port
Protocol	Modbus RTU, can communicate with Scada, OPC servers etc.
Cable	RS485 shielded twisted pair cable

Print Function

Print Port	RS232 Port, Baudrate: 9600
Printer	Dot-matrix mini printer; Ribbon Resolution: 60,120,240dots/line
Data Printed Type	History data, Real time data , history curve data, optional

Specification

PC Support Software (Standard-supplied CD-ROM)

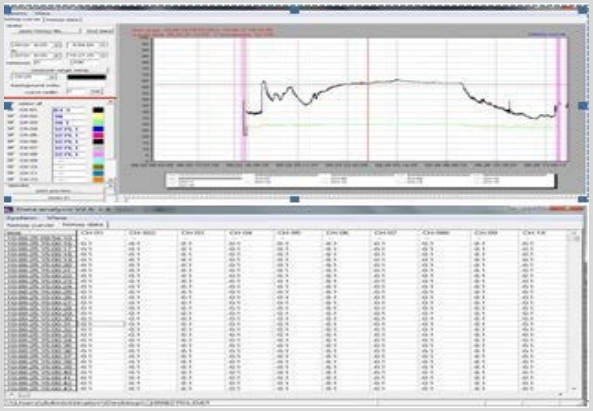
O/S	Window 2000/XP, WISTA
Required Hard Disk Capacity	Free capacity of 30MB or larger required
Required Memory	1GB or larger
Contents	The follows are included as standard: 1) Data Analysis Software • It allows you to view the past recorded data in digit and curve format from data saved in recorder to USB flash drive • It allows you to export the data as Excel format for further analysis • It allows you to print the curve data by office printer 2) DCS configuration Software • It allows you to view real time data in digit, curve format • It can save the past data with same function with data analysis software.

Input Signal (Table)

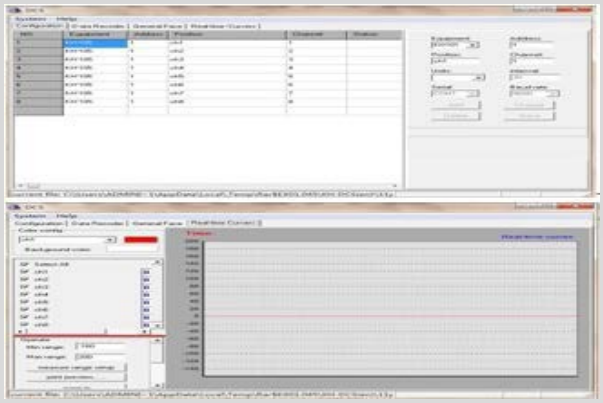
Input Type		Reference Ranges
Thermocouple T.C.	B S K E J T N	300.0 to 1800.0°C -50 to 1700.0°C –50.0 to 1300.0°C 0.0 to 800.0°C 0.0 to 100.0°C -200-350°C 0-1300°C
Resistance bulb RTD	Pt100 Cu50 Cu100	–200.0 to 600.0°C –50.0 to 150.0°C –50.0 to 150.0°C
DC voltage	1-5V 0-5V	1.000 to 5.000V 0.000 to 5.000V
DC Current	0 to 10mA 4 to 20mA	0.000 to 10.000mA 4.000 to 20.000mA

PC Support Software

Data Analysis Software: as standard accessories. Recorded history data transferred to USB flash drive can be viewed to personal computer



DCS Software: Reading, monitoring real time data by RS485 or RS232 can be viewed to personal computer, while recording history data automatically



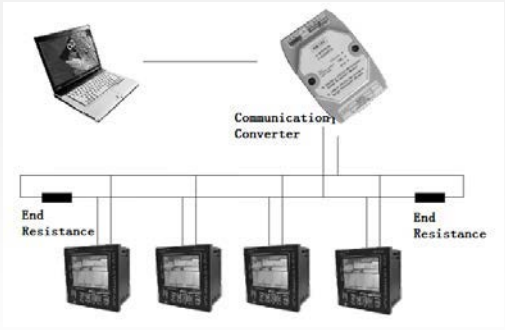
PC Support Software

USB Download Data, Plug and Play

Please install the software in CD and USB flash drive to PC before usage.

- O/S: Window 2000/XP, WISTA
- Required hard disk capacity :Free capacity of 30MB or larger required
- Recommend USB flash driver: Kingston
- FAT16 format.

Communication

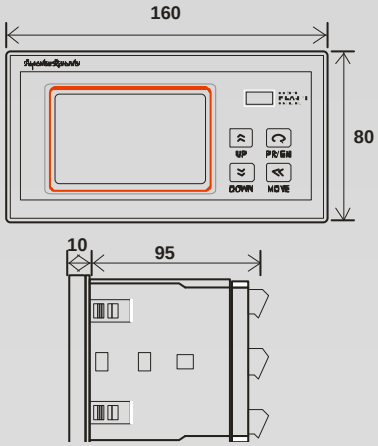


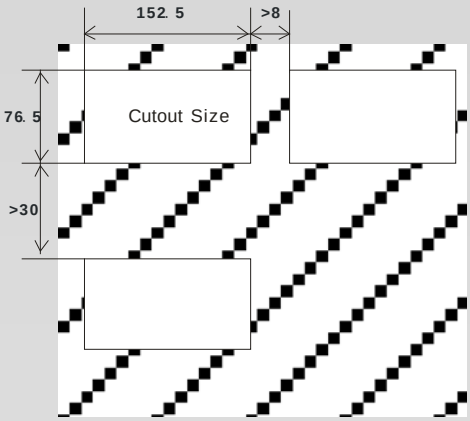
Please install the software in CD before usage.

- O/S: Window 2000/XP, WISTA
- Required hard disk capacity :Free capacity of 30MB or larger required
- Recommend cable: RS485 shielded twisted pair cable
- Repeater is needed when more than 100m communication distance.

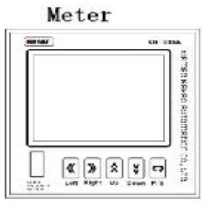
Size & Installation (Unit: mm)

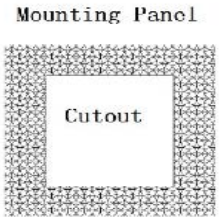
Dimension (Unit: mm)



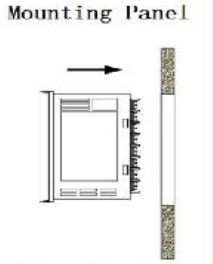


Installation

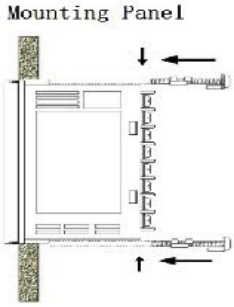




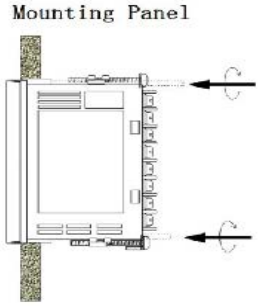
1. Cutout



2. Mounting Meter



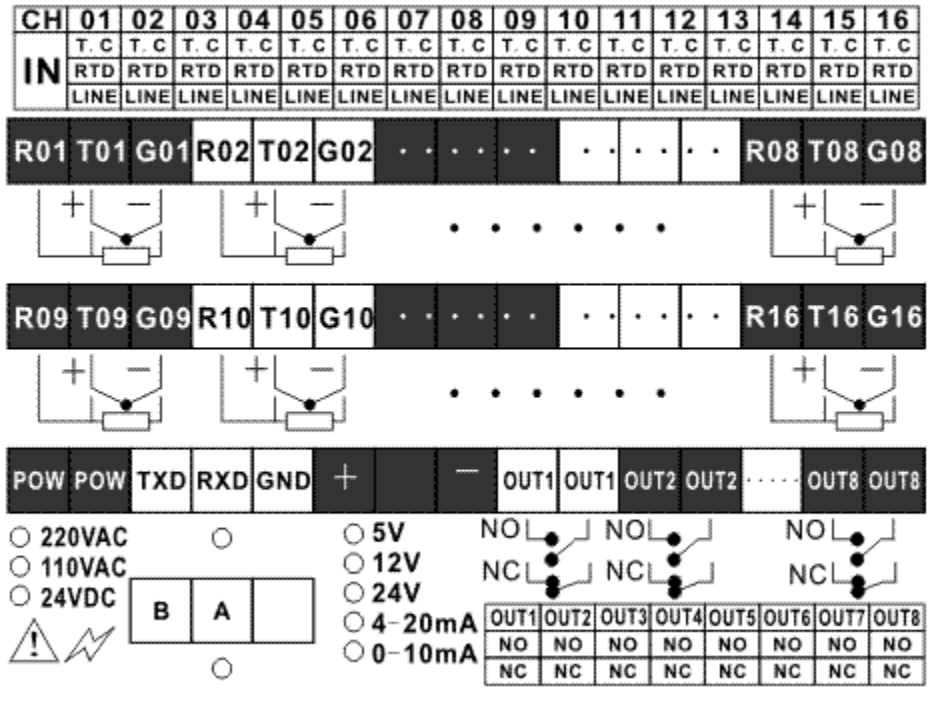
3. Mounting Bracket



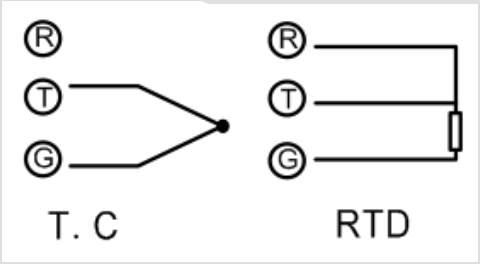
4. Fix Bracket

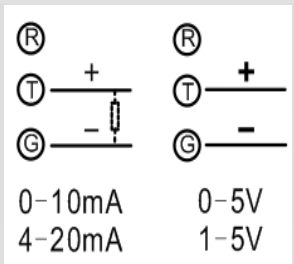
Diagram & Connection (Unit: mm)

Diagram



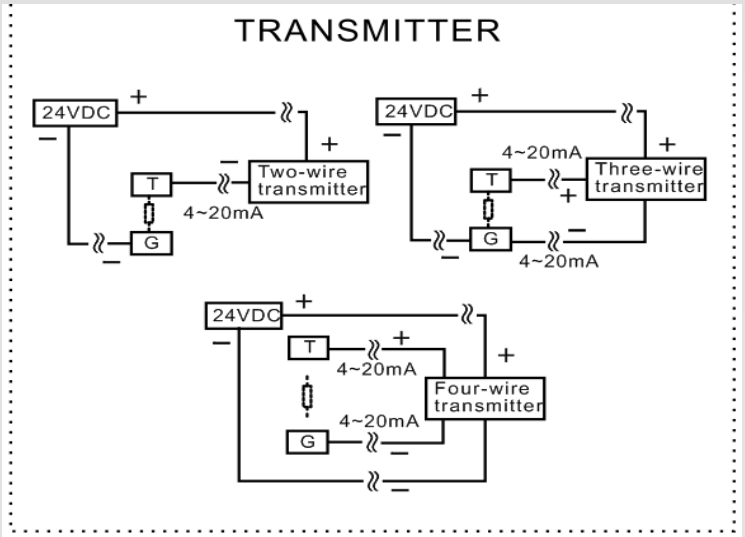
Connection with sensor input





Note: 250ohm resistance will be needed when 4-20mA input; 500ohm resistance will be needed when 0-10mA input;

Connection with transmitter



Order Code

Function	Code and Description									
Basic Code	KH2	B-	D-							KH200B-D Monochrome Paperless Recorder
Channel No.	01									One Channel
	02									Two Channels
	…									……
	16									Six Channels
LCD color		B-								Blue
Size			D-							160*80*105mm(L*W*D)
Relay Output No.				N-						None
				1						One relay alarm output
				2						Two relay alarm output
				3						Three relay alarm output
				…						…….
				8						Eight relay alarm output
Relay Output Type					N-					None
					R1A-					NO ,30VDC/0.8A, 220VAC/0.8A
					R1B-					NC ,30VDC/0.8A, 220VAC/0.8A
Auxiliary power supply for sensor or transmitter (only for one sensor or transmitter)						N-				None
						U1-				Isolated auxiliary 5VDC power supply for transmitter, sensor and other device, max.100mA
						U2-				Isolated auxiliary 12VDC power supply for transmitter, sensor and other device, max.10mA
						U3-				Isolated auxiliary 24VDC power supply for transmitter, sensor and other device, max.100mA
Communication or Printing							N-			None
							S1-			RS485 communication port Modbus-RTU
							S2-			RS232 communication port, Modbus-RTU
							P-			RS232 printing port for mini printer
USB								U-		USB flash drive for download data
Power Supply									N-	220VAC, 50HZ ,85-240VAC
									D-	24VDC

Note:

1) Code “P” is RS232 printing port, used for WH-E20 mini printing to print data. If mini printer is needed, please advise.

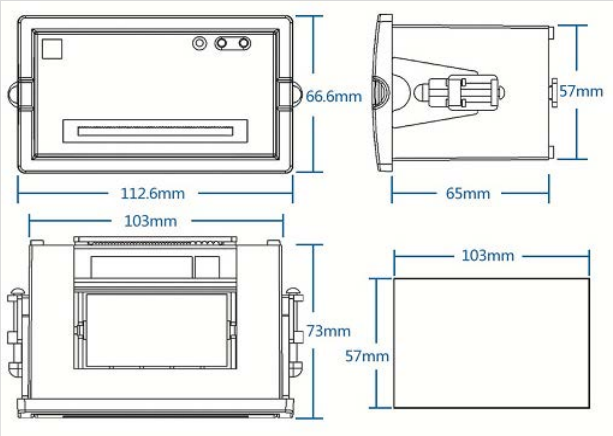
2) Code “S1” “S2” is serial communication port, based on standard MODBUS-RTU protocol, which can be configurable with SCADA, OPC server etc flexibly. Meanwhile, we have PC DCS software for it. If DCS software required, please advice.

Eg.: Order Code: KH216B-D-2R1A-U3-S1-U-N, functions as follows: KH200B-D monochrome paperless recorder, 16 channels, 2 relay alarm output, a 24VDC auxiliary power supply, a RS485 communication port, USB data transferring function., 85-240VAC power supply.

Optional-Mini Printer

Printer-WH-E20

Size



Printing Method	Dot Matrix, Ribbon Type
Paper Width	44mm/57mm
Print Width	32mm/48mm
Resolution	96dots/line, 144dots/line,240dots/line
Character per line	16/24/40
Printing Speed	1line/sec, 0.7 line/sec, 0.4line/sec.
Character Size	6x8dots, 8x16dots,6x 12dots
Paper Type	Plain, 44mm/57mm wide, 30mmΦ

Power Supply	5VDC,1.5A
Outline Size:	122.6x66.6x73mm
Cut Size	103mm(W)x57mm(H)x65mm(D)
Interface	Serial RS232port
Operate Temperature	0-5C
Storage Temperature	-20 to 60C
Operating Humidity	10%-85%
Storage Humidity	10%-90%

Caution on Safety
Read instruction manual before using the product

Information in the catalog is subject to change without notice.