



Specification

General Specification	
Power Supply	100-240VAC, 47-63Hz; 24VDC
Power Consumption	Maximum 5VA(5W)
Insulation	Power to ground > 1500VAC Power to housing > 1500VAC
Keyboard	P/E, Left, Right, UP, Down
Materials	ABS for case and bezel
Terminal	M5 screw terminal
CPU	32bits, high performance and integrated ARM
Mount Method	Panel Flush Mounted
Size/Mount Size/Mass	96x 96x85mm, 92x92mm, 0.5kg
Operation Temperature	Working Temperature:0-50C Relative humidity; 10%-85%(now dew)
Transport /Storage	Temperature: -20-60°C Relative humidity : 5%-95%(nodew)
Life of Backlight	50,000hours
Screensaver Time	0-30000s, settable
Unit	77 , settable and addable each channel
Display Contents	<ul style="list-style-type: none"> Real time Trend Display In horizontal, selected in the refreshment cycles of 1 to 3600sec Scale display Real time Circular Chart Display Digital display Single and multi channels display Bargraph Display History Trend Display History Circular Chart Display Printing Setting Display System Configuration
Optional Output Function	
Relay Alarm	up to 2 points, 250VAC,3A, NO or NC
Retransmission	4-20mA, up to 2 point
Print	RS232 print port
USB	USB flash drive
Auxiliary Power Supply	24VDC, 50mA for sensor and transmitters
Communication	RS485 MODBUS-RTU protocol

Input Specification	
Number of inputs	1, 2, 3, 4,5,6 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) Others: 4 types (0-20mV,0-60mV, 0-100mV, 0-500mV)
Sample Rate	1s/6 channels,
Scaling	-20000 to 20000
CMR Ratio	85-110dB
Temperature Shift	50PPM
Photoelectrical Isolation	1000VAC between channels ground 400VAC between channels
Input Independence	0-5VDC and 1-5VDC input: 500KΩ 4-20mA input: 250 KΩ 0-10mA input: 500KΩ Other signal input :20MΩ
Input Error Action	Max, Min, Hold
Recording Specification	
Memory Media	USB memory (2GB), FAT16 format
Memory	Flash memory
Memory Capacity	8MB built in for long time record
Record Interval	1 to 3600 seconds, settable flexibly
Record Time	45days ÷ Channel no * Record interval 45days per 1s record interval per CH 7years per 1 min. record interval per ch
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 for each channel, configurable flexibly



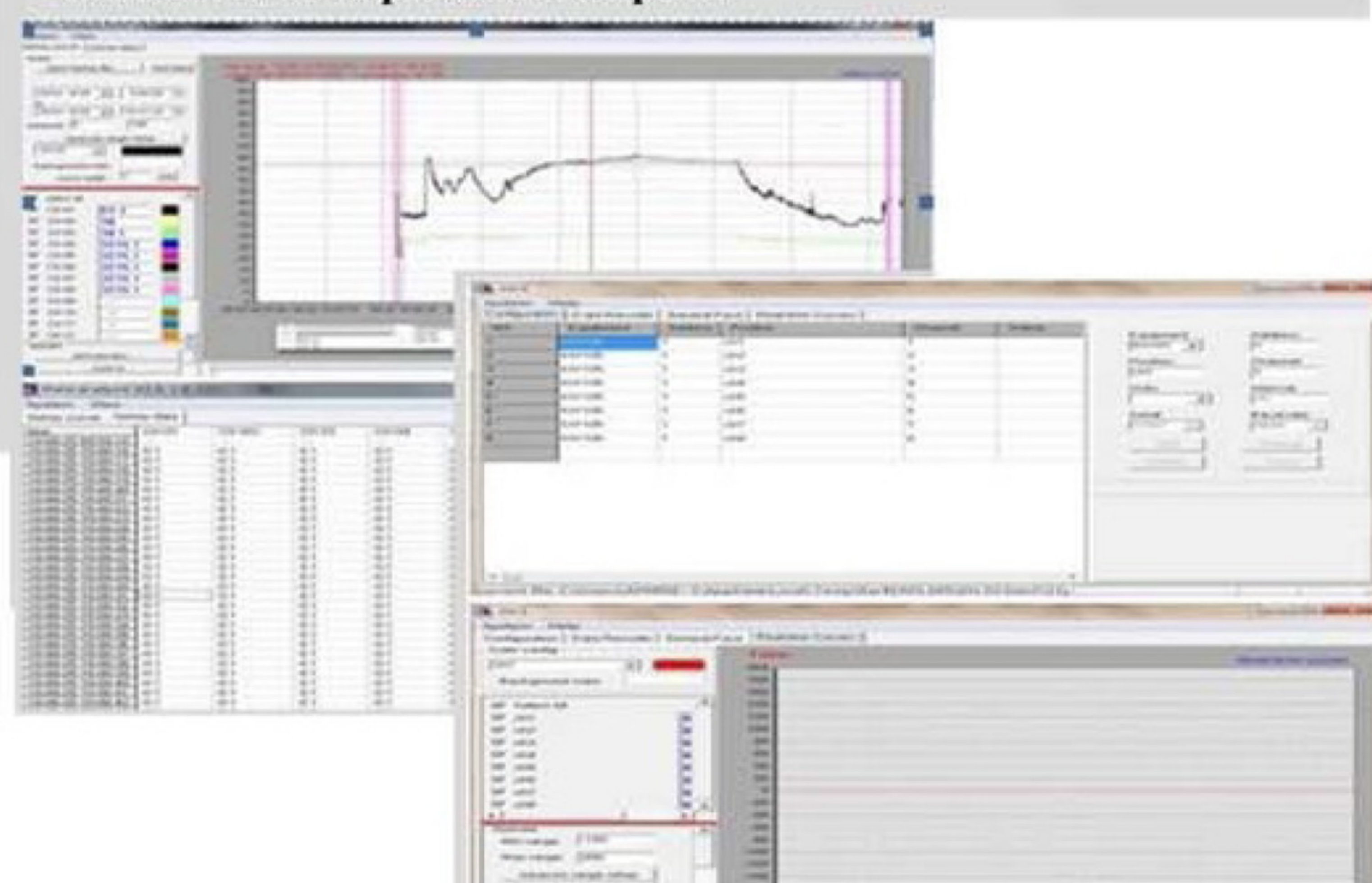
Specification

Display Specification	
Display	3.2 inch, 320X240 TFT, color LCD display
Alarm Function	
Alarm Indication	Alarm States is displayed in digital, trend, bargraph, circular chart. 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 communication port, read and write
Protocol	Modbus RTU, can communicate with modern PLC and HMI directly
Cable	RS485 shielded twisted pair cable
Print Function	
Print Port	RS232C comm. 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
Reference Performance	
Accuracy	<ul style="list-style-type: none"> 0.2 grade when RTD, linear voltage, linear current and T.C input 0.2%FS±2.0°C when T.C input with cold junction compensation by internal part of recorder
Indication Resolution	0.1°C
Input Resistance	RTD: Current 2.5mA, three wire, max.10ohm per each wire. Thermocouple: not more than 1000Ω.
Clock	Clock accuracy: +-5ppm. After power off, Li battery for continual power supply. The validity of battery is 30days.

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	<p>The follows types are included as standard:</p> <ol style="list-style-type: none"> 1) Data Analysis Software <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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.

PC Support Software

History data transferred to USB flash drive can be viewed to personal computer





Order Code

Function	Code and Description										
Basic Code	KH 3	A						U-			KH300 Paperless Recorder
Channel No.	01										One Channel
	02										Two Channels

	06										Six Channels
Size	A										96*96*85mm(L*W)
LCD color		G									Color
OUT1											-N None
											-R2A Relay alarm: NO ,30VDC/3A, 220VAC/3A
											-R2B Relay alarm: NC ,30VDC/3A, 220VAC/3A
											-U3 Isolated auxiliary 24VDC power supply for transmitter, sensor and other device, max.50mA
											-I1 Isolated 4-20mA retransmission output
OUT2											-N None
											-R2A Relay alarm: NO ,30VDC/3A, 220VAC/3A
											-R2B Relay alarm: NC ,30VDC/3A, 220VAC/3A
											-U3 Isolated auxiliary 24VDC power supply for transmitter, sensor and other device, max.100mA
											-P RS232 printing port for mini printer, WH-A5 mini printer as default.
											-I1 Isolated 4-20mA retransmission output
Communication											-N None
											-S1 RS485 communication port
USB											-U USB flash drive for download data
Frequency Input											-N None
											-Q One channel, 0-5KHZ frequency input
Power Supply											-N 220VAC, 50HZ ,85-240VAC
											-A 110VAC, 60HZ,85-240VAC
											-D 24VDC
PC Support Software											-N Free data analysis software for USB to PC, no communication application
											-E Extensive DCS software RS485 communication
Mini Printer											-N None
											-W Yes, Kehao mini dot-matrix printer