



Xiamen Kehao Automation Co., Ltd



KH800G Super-thin Color Paperless Recorder

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Memory Flash Drive Data Saving

Provides flexibility and variety in the handling of record data

The screenshot shows the 'Paperless Recorder' interface. At the top, it displays '实时曲线' (Real-time Curve) and the date/time '08-08-01 15:20:41'. The main area is divided into a trend display on the left and a digital display on the right. The digital display shows six channels (CH01-CH06) with their respective values and 'OK' status. Below the digital display is a 'Key Panel' with buttons for Left, Right, Up, Down, P/E, and a USB Flash Disk icon. A 'CF Card port' is also visible at the bottom left.

- Time Display**: Indicate date and time of recorded data
- Trend Display**: Allow you to view data in trend forms
- Digital Display**: Allow you to view data in digital form
- Alarm State**: Alarm state display: HH,LL,H,L when alarm
- Key Panel**: Allows you to perform selection of display, setting, data change, and channel no. change
- USB Port**: Allows you to download data from recorder to PC by USB flash drive
- CF Card port for extended big memorized data transferring**

Long Time Memory

8MB capacitor built in for long time memory. At least can record up to 440 years data at most.

Universal Input, 8 Points Max. Recording

PHOTOMOS isolated universal input, 10 types of thermocouples, 3 types of resistance bulb, DC voltage, DC current, mV, 0-5Hz frequency input are available.

USB Drive, TF Card Data Transferring

Saved data transferred by USB flash drive directly, plug and play; CF card for extend memory transferring

Math, Flow Totalizer Option

Math: addition: +, subtraction: -; multiplication: *; division: /; average; Max.; Min.

Screensaver

Recorder turns off the backlight of LCD and exit parameter setting screen when non-operation.

MODBUS-RTU Communication

Photoelectrical isolated RS485 serial communication is available. Standard MODBUS-RTU protocol with reading and writing functions.

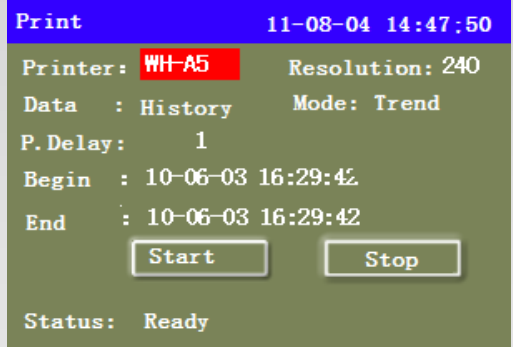
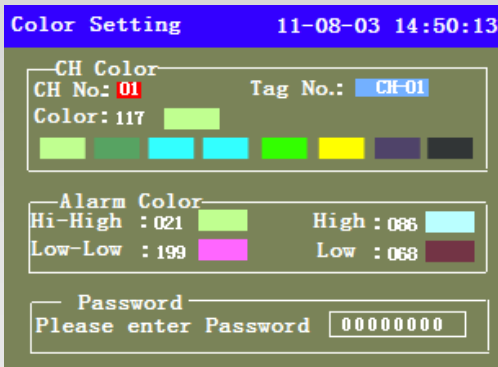
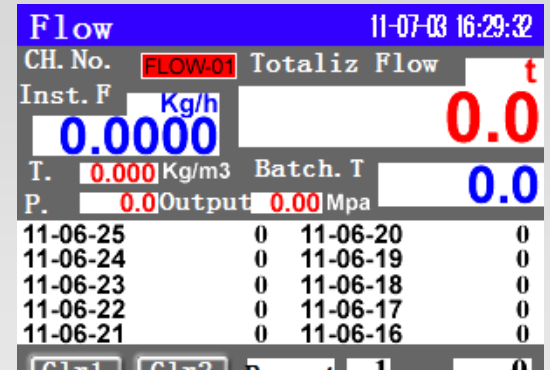
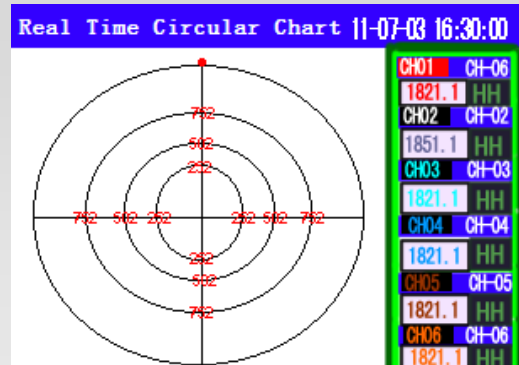
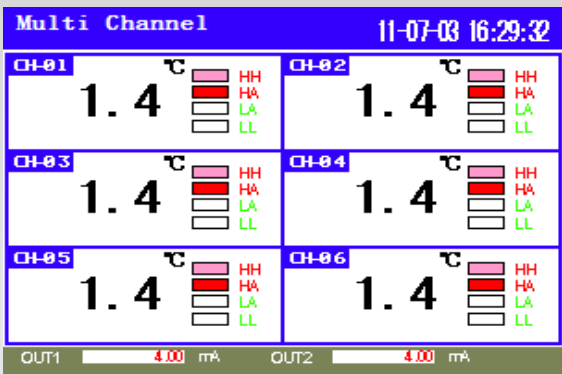
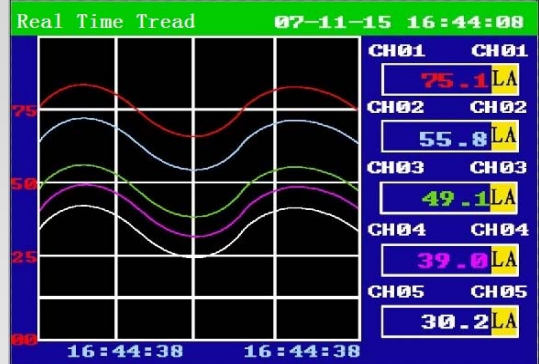
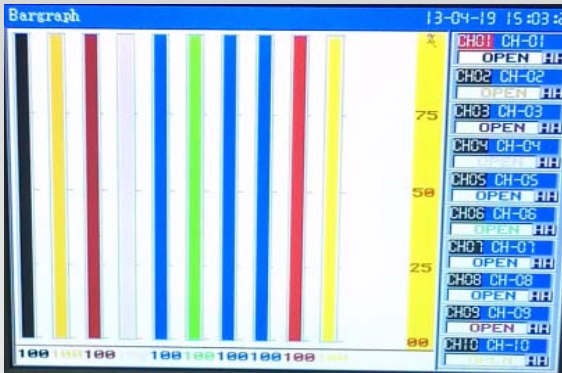
MODBUS-TCP/IP Ethernet

10/100M Ethernet port, support MODBUS-TCP/IP protocol, can be configurable with HMI, DCS etc

PC Support Software

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

Various Screen Display Modes



Specifications

General Specification		Recording Specification	
Power Supply	100-240VAC, 47-63Hz;	Life of Backlight	50,000hours
Power Consumption	Maximum 25VA	Screensaver Time	0-30000s, settable
Insulation	Power to ground > 1500VAC Power to housing > 1500VAC	Unit	77 , settable and addable each channel
Keyboard	P/E, Left, Right, UP, Down	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
Materials	ABS for case and bezel		<ul style="list-style-type: none"> • Real time Circular Chart Display • Digital display Single and multi channels display
Terminal	M5 screw terminal		<ul style="list-style-type: none"> • Bargraph Display • History Trend Display • History Circular Chart Display • Printing Setting Display • System Configuration
CPU	32bits, high performance and integrated ARM	Recording Specification	
Mount Method	Panel Flush Mounted	Memory Media	USB memory , FAT16 format
Size/Mount Size/Mass	195x145x60.5mm/lkg		TF card for extended data transferring
Operation Temperature	Working Temperature:0-50degC Relative humidity; 10%-85%(now dew)	Memory	Flash memory
Transport /Storage	Temperature: -20-60°C Relative humidity : 5%-95%(nodew)	Memory Capacity	8MB built in for long time record
Input Specification		Record Interval	1 to 3600 seconds, settable flexibly
Number of inputs	1, 2, 3, 4,5,6,7,8 points	Record Time	Record time =45daysx record interval÷ channel numbers . Can record 1 day data at least, also for 440 years at most
Input Signal	Thermocouple: 10 types (K,S,B,E,J,N,R,T,WRe526,WRe325) RTD-Resistance bulbs: 3 types (Pt100, CU50,CU100) Linear DC Voltage: (0-5VDC, 1-5VDC,0-10VDC) DC Current: (4-20mA, 0-10 mA) mV:0-20mV,0-60mV, 0-100mV, 0-500mV	Recording Method	Start recording when power on. Stop recording when power off.
Sample Rate	1 second for all channels	Data Save Cycle	Oldest data replaced by newest data accordingly when memory is full
Scaling	-20000 to 20000	Data Format	Binary format or cannot read or write
CMR Ratio	85-110dB	Optional Output Function	
Temperature Shift	50PPM	Relay Alarm	up to 8 points, 220VAC/30VDC/3A, NO
Photoelectrical Isolation	1000VAC between channels ground 400VAC between channels	Print	RS232 print port
Input Independence	0-5VDC and 1-5VDC input: 500KΩ 4-20mA input: 250 KΩ 0-10mA input: 500KΩ Other signal input :20MΩ	USB	USB flash drive for data transferring
Input Error Action	Max, Min, Hold	TF	TF card for extend data transferring
Display Specification		Auxiliary Power Supply	24VDC, max.40mA for sensor and transmitters, up to 8 points built in
Display	7.0 inch, 320X240 TFT, Color LCD display	Communication	RS485,RS232 serial port, standard MODBUS-RTU Protocol
		Flow Totalize	Flow totalize and batch totalize
		Alarm Function	
		Type of Alarm	High, Low, High-High, Low-Low limit
		No. of Setting	Up to 4 alarms are settable for each

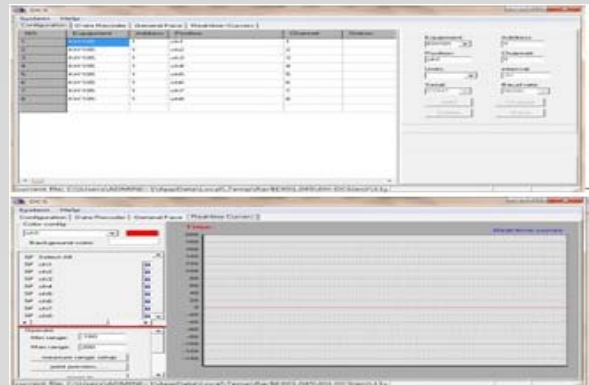
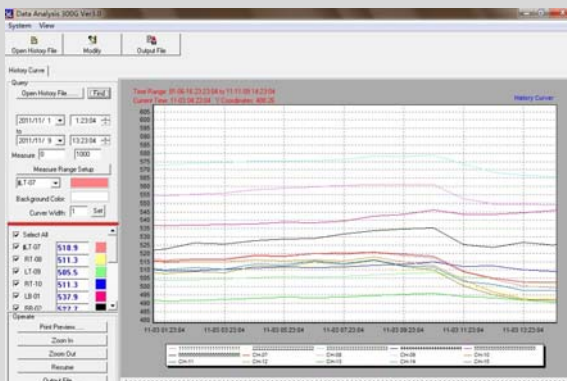
Specification

Alarm Indication	Alarm States is displayed in digital, trend, bargraph, circular chart. When alarm occurs, state flashing	Clock	Clock accuracy: +-5ppm. After power off, Li battery for continual power supply. The validity of battery is 30days.
Alarm output	Up to 48 points, 3A contact		
Alarm Setting	Individual or common output	PC Support Software (Standard-supplied CD-ROM)	
Communication Function		O/S	Window 2000/XP, VISTA
Serial Communication	Photoelectrical isolated RS485 , communication port, read and write data and parameter, MODBUS-RTU	Required Hard Disk Capacity	Free capacity of 30MB or larger required
Ethernet	10/100M Ethernet port communication, MODBUS-TCP/IP	Required Memory	1GB or larger
Cable	RS485 shielded twisted pair cable	Contents	The follows types are included as standard: <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.
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.		

PC Support Software

History Data Transferred to USB flash drive or TF card can be viewed to personal computer (Data analysis software)

History and real time data by RS485 /RS232 can be viewed to personal computer (DCS software)



PC Support Software

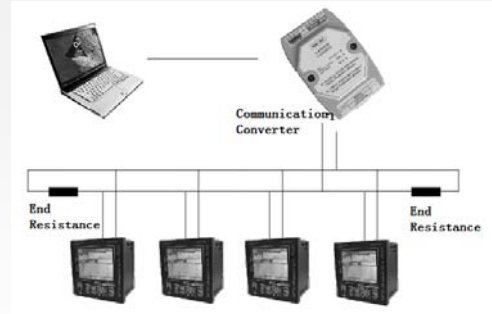
USB /TF card Download Data automatically



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

- O/S: Window 2000/XP, VSTA
- Required hard disk capacity :Free capacity of 30MB or larger required
- Software functions:
 - .reading recording data and display the data in digital and curve type
 - .Printing the curve data in software through office printer
 - .Export the data as Excel format for further analysis.

MODBUS-RTU /MODBUS-TCP/IP communication



Please install DCS software for RS485 communication in CD before usage.

- O/S: Window 2000/XP, VSTA
- Required hard disk capacity :Free capacity of 30MB or larger required
- Repeater is needed when more than 100m communication distance.
- Software functions:
 - .Real time reading and monitoring the data digital and curve type in PC.
 - .Meanwhile, recording the recording data automatically, whose data also can be exported as Excel format for further analysis.

Size & Installation (Unit: mm)

Dimension

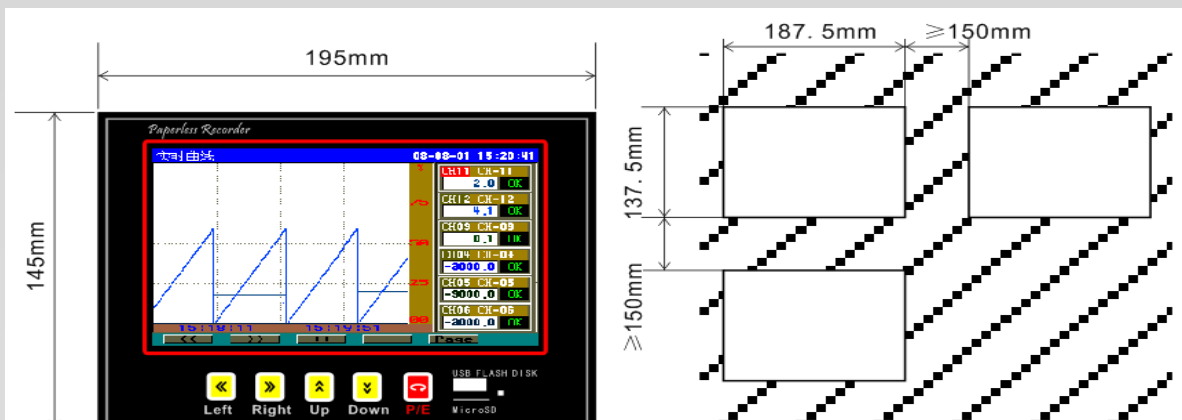
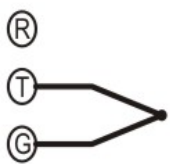
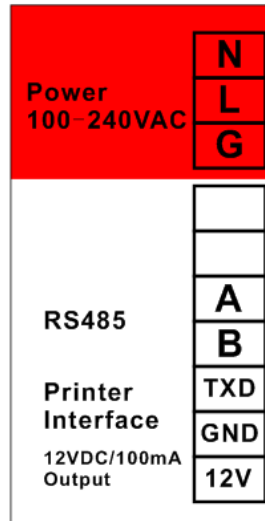
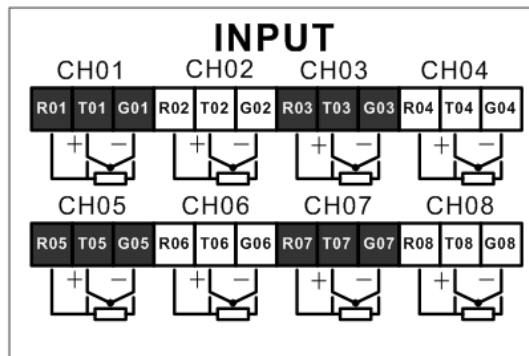
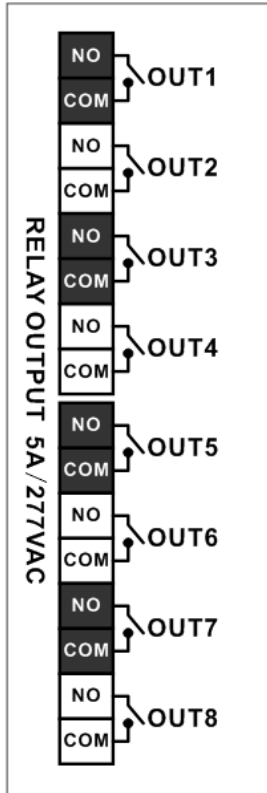
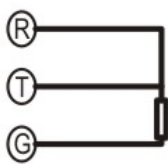


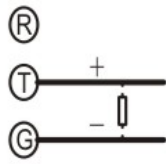
Diagram & Connection



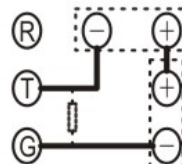
T.C. Input



RTD Input



Linear Analog Input



Two wire

COM	
NO	
NC	

DB9-232-S

PIN	Rs232-S
2	TXD
3	RXD
5	GND

Linear analog input: 4-20mA, 0-10mA, 0-5VDC, 1-5VDC, 0-10VDC; 250ohm resistor for 4-20mA, 500ohm for 0-10mA

Order Code

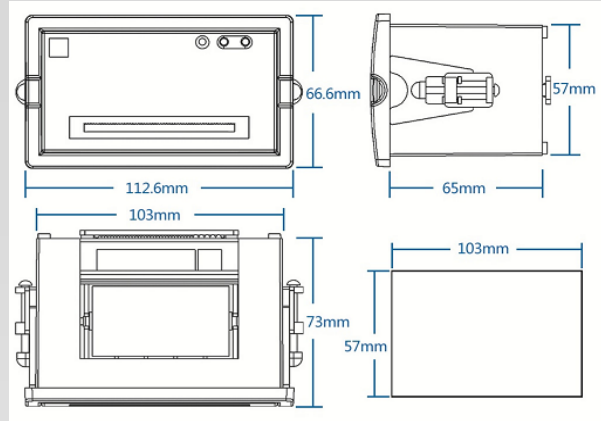
Function	Code and Description															
KH4									U-					KH800G suppler-thin Color Paperless Recorder		
Channel No.	01													One Channel		
	02													Two Channels		
		
	08													Weight Channels		
LCD Color	GG-													Color TFT display		
Relay Alarm Output	N-													None		
	1-													1 alarm: NO , 30VDC/3A, 220VAC/3A		
	2-													2 alarm: NO ,30VDC/3A, 220VAC/3A		
		
	8-													48 alarm: NO ,30VDC/3A, 220VAC/3A		
Communication port	N-													None		
	S1-													RS485 communication. Port, MODBUS-RTU		
	S3-													Ethernet communication. Port, MODBUS-TCP/IP		
Printing	N-													None		
	P-													RS232 printing port for mini printer, WH-E20 mini printer as default. Please advise the printer no. if the mini printer is customized.		
USB function								N-							USB flash drive to download data to PC, free PC data analysis software offered	
TF function									N-							None
									T-							
Flow totalizer with Temperature and Pressure compensation; Math									N-							None
									F-							
Power supply									N							100-240VAC, 47-63HZ

Optional-Mini Printer

Printer



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

