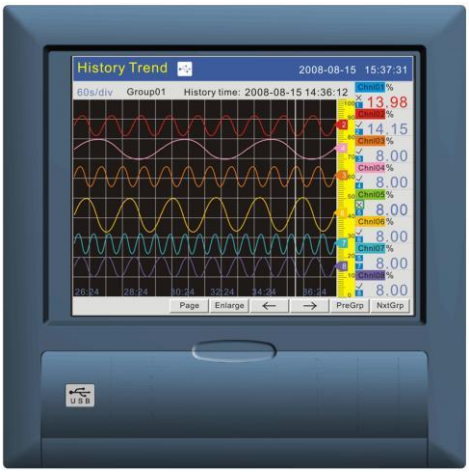
HGPR 8100 Medium-Length Chart Paperless Recorder

Product Overview

HGPR8100 medium-length chart color-screen paperless recorder has 40-channel universal input function. It can input the standard current, standard voltage, frequency, millivolt, thermocouple, thermal resistance and other signals. It also has some other functions, including isolated power distribution output of sensors, relay alarm output, transmitter output, flow accumulation, temperature and pressure compensation, transfer storage of historical data, printing, and remote communication.



Features

● System

◆ Using the latest large-scale integrated circuit.
◆ Using high-speed & high-performance 32-bit ARM microprocessor.
◆ 10.4 inch 640x 480 dot-matrix TFT high brightness and color graphic LCD, CCFL backlight, clear picture, brilliant color, and wide viewing angles.
◆ Fully isolated universal input, which can input a variety of signals. It can be configured by software without jumper.
◆ New switching power supply, which can function properly within the range of 85VAC ~ 265 VAC.
◆ Integrated hardware real -time clock, which can run accurately in case of power down.
◆ Provide isolated 24VDC power distribution for transmitter.
◆ Large capacity storage of FLASH memory chips to store historical data, which will never lose data in case of power-down.
◆ 24-way relay alarm output.

● **Signal**

◆ You can input a variety of standard signals: standard current, standard voltage, frequency, millivolt, thermocouple, thermal resistance.

◆ Signal full- scale accuracy: ± 0.2%.

◆ Optoelectronic devices are used between channels and they are completely isolated.

◆ Providing standard 4-20mA for transmitter output.

● Software

◆ Use password to protect configuration data.

◆ Easy menu configuration. It can configure freely and display the engineering tag number and engineering units.

◆ Engineering quantities display wide range of values. It can show five digits: -9999~ 19999, and it also supports the display of vacuum scientific notation.

◆ Indicate the low low limit alarm, low limit alarm, high limit alarm, high high limit alarm of all channel simultaneously. It can record up to recent 15 alarms.

◆Each channel all supports flow accumulation function, and provides hourly report, 8-hour shift report, 12-hour shift report, daily and monthly reports and other reports.

◆Trend display mode can select horizontal trend or vertical trend.

◆5 groups of trend combination are provided, and each group can be free to choose channel, free and the color of trends.

◆ It has a powerful T6 input method which is easy to operate. It supports numbers, characters, special symbols, subscripts and superscripts input, etc.

● Communication

◆Standard serial communication interface: RS-485 or RS-232C.

◆It supports the standard Modbus-RTU communication protocol, providing a variety of data types, such as the percentage, engineering quantities, accumulation and so on.
In addition to supporting our company's data management software, it also supports some popular professional configuration software, such as the iFIX, MCGS, etc.

◆Use USB2.0 interface for transfer storage and backup of history records. It can support maximum 8G USB flash drives.

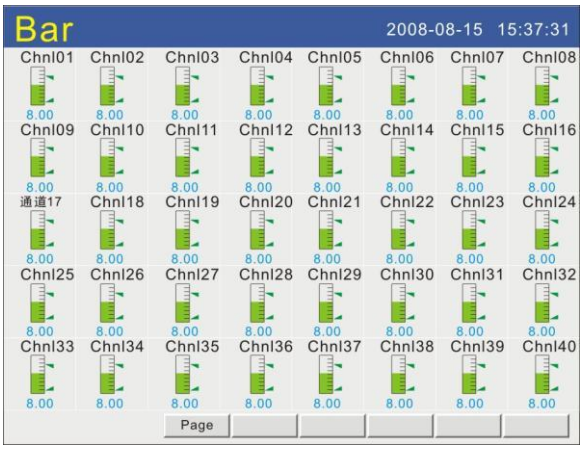
◆It supports the FAT32 file system. Windows can automatically identify the backup data files without format conversion.

◆It can connect with an external micro-printer, so you can manually print data and trends, and automatically print real-time on a regular basis to meet the needs of the user to print on the filed.

Display screen

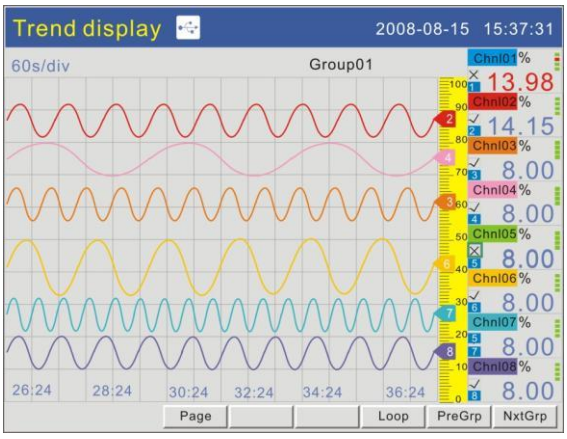
Digital display

In addition to displaying the test values, digital display can also display the tag number of channels, industrial units, alarm status, and accumulation information



Bar graph display

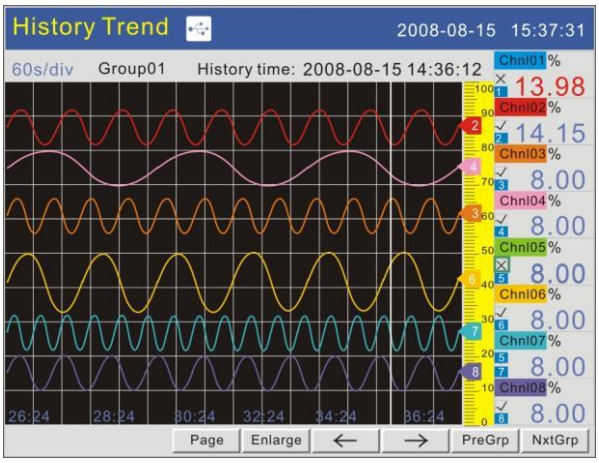
It is convenient and visualized to use bar graph to display the test value.
Meantime, it also displays the tag number of channels, industrial units and alarm state information.



Trend display

Horizontal and vertical display type can be selected.

It can be freely combined for the displayed trends and the trend colors.



Historical trend display

It can reappear the historical data stored in memory.

Horizontal and vertical display types can be selected.

Alarm information display

Display the information of the latest channel alarm time, the cancellation alarm time.

Main Specifications

General Specifications

●Structure

Installation: Install the embedded instrument panel (vertical instrument panel). It is allowed a maximum 30 degrees tilt back in installation.

Dashboard thickness: 2-26mm

Dimensions: 288 (W) * 288 (H) * 168 (D) mm

Weight: 5kg

●Input section

Input points: 8, 16,24,32,40 channels

Measuring period: 1 second

Input Type:

Input	**Type**	**Measuring range**
Current	10m A	0.00～10.00m A
	20m A	4.00～20.00m A
Voltage	20m V	0.00～20.00m V
	100m V	0.00～100.00m V
	5V	0.000～5.000V
	10V	0.000～10.000V
Resistance	350Ω	0.0～350.0Ω
RTD	Cu50	-50.0～140.0^{0}C
	Cu53	-50.0～140.0^{0}C
	BA1	-100.0～600.0^{0}C
	BA2	-100.0～600.0^{0}C
	Pt100	-200.0～650.0^{0}C
Thermocouple	B	500～1800
	S	0～1600
	K	0～1300
	E	0～1000
	J	0～1000
	R	0～1600
	N	0～1300
	T	0～380
	Wre5-26	0～1800
High Temperature Radiometer	F1	700～2000
	F2	700～2000
Frequency	Voltage	0～10000Hz

● Display section

Displayer: 10.4 inch TFT color LCD (640 * 480 points)

Note: Because some LCD displayers display or do not work for a long time, there will be changes in brightness. This is caused by the liquid crystal characteristics, and the displayer is not damaged.

Display Group:

Display groups: 5 groups

The number of channels which can be set: 8 channels

Display color: 256 colors

Channel tag number: 10 letters (numbers)
Channel Unit: 7 letters (numbers)
Status display: Display the screen name, card status, alarm status, USB device identification, recycling display signs.

Display screen: Measuring data display(overview, digital display, bar graph display, the trend display), the historical trend display, the information display (alarm information, the accumulative reports), functional screen (data backup, printing)
Overview: Display data and alarm status in all of the measuring channel.
Digital Display Update rate: 2 seconds
Trend display: vertical or horizontal
History trend: it can reproduce the data stored in memory 1/2/4/8/16/32 times can be magnified.
Alarm Information: it can totally display 187 records

●Storage function

External storage

Media: USB flash drives
Format: FAT32
Mode: File
Capacity: Maximum 8G

Internal storage

Media: Flash Memory
Format: Binary save
Mode: Continuous recording
Capacity:

Recording interval	**Storage time**
1 second	3 days
2 seconds	6 days
5 seconds	15 days
10 seconds	30 days
15 seconds	45 days
30 seconds	90 days
1 minute	180 days
2 minutes	360 days
4 minutes	720 days

● Alarm function

Set numbers: it can be set up to 4 alarms per channel.
Alarm types: high upper limit alarm, upper limit alarm, lower limit alarm and low lower limit alarm.
Delay Alarm: it can be set in the parameter settings, and all alarms use the same setting.
Setting range: 0 ~ 10 seconds
Display: when an alarm occurs, the display screens of measuring data display alarm status.

●About the clock

Clock: Hardware clock. It can keep running in case of power-down.
Operating Range: 2001 ~ 2099
Clock Accuracy: ± 10ppm (0 ~ 50 ℃), not including the delayed error (1 sec) caused by turning on the power.

●Power supply

Voltage: 220VAC
Voltage range: 85VAC ~ 265VAC
Frequency: 50Hz
Power consumption: Max 30W (including optional function)

●Normal operating conditions

Power Supply Voltage: 220VAC
Power frequency: 50Hz
Ambient temperature:0-50 ℃
Humidity: 0% -85% (non-condensing)
Installation location: indoor

Additional Specifications

●Alarm output relay (/ A2, / A24)

Output points: it can be selected from 12 and 24 points.

●Communication function (/ C2, / C3)

Media: RS-232 (/ C2) or RS-485 (/ C3)
Protocol: Modbus-RTU (slave) protocol
Communication rate: 1200/2400/4800/9600/19200/38400/57600

●Print function (/ C4)

Printer: Panel-type micro printer
Print content: real-time data, historical data, accumulative reports
Printing method: manual print, regular print

●Analog output (/ T4, / T8)

Signal type:4-20mA
Output points: it can be selected from the 4 and 8 points.
Output type: transmission output of the measuring channels.
Maximum load: 750Ω

●24VDC transmitter power output (/ TP8)

Output points: 8 loops

Output Voltage: 24VDC
Rated output current: 4 ~ 20mADC

Maximum output current: 65mADC (over -current of protection operation current: about 90mA)

●USB Interface (/ U)

USB interface specification: it meets the Rev2.0 standards, host function
Interface Number: 1 (front)
The device which can be connected: USB Disk

● Accumulative / reporting (/ L)

Accumulated points: same as the number of input channels, and each input channel can be accumulative.
Accumulative range: 0 ~ 999,999,999
Report Type: hourly, 8-hour shift report, 12-hour shift report, daily and monthly report

Report Length:

Report Type	**The length of time**
Hour report	16 days
8 –hour shift report	128 days
12 –hour shift report	192 days
Daily and Monthly report	1 year

Selection Table

Type	**Function Code**	**Specification Code**	**Specification**
HGPR8108			Signal input 8*1
HGPR8116			Signal input 16*1
HGPR8124			Signal input 24*1
HGPR8132			Signal input 32*1
HGPR8140			Signal input 40*1
Function type	R		Common recording function
Additional Specifications		/F8	Frequency input 8*3
		/F16	Frequency input 16*3
		/F24	Frequency input 24*3
		/F32	Frequency input 32*3
		/F40	Frequency input 40*3
		/FB8	Frequency input 8,12VDC isolated power distribution per channel *3
		/FB16	Frequency input 16, 12VDC isolated power distribution per channel *3
		/FB24	Frequency input 24, 12VDC isolated power distribution per channel *3
		/FB32	Frequency input 32, 12VDC isolated

		power distribution per channel *3
	/FB40	Frequency input 40, 12VDC isolated power distribution per channel *3
	/FC8	Frequency input 8, 12VDC isolated power distribution per channel *3
	/FC16	Frequency input 16, 24VDC isolated power distribution per channel *3
	/FC24	Frequency input 24, 24VDC isolated power distribution per channel *3
	/FC32	Frequency input 32, 24VDC isolated power distribution per channel *3
	/FC40	Frequency input 40, 24 VDC isolated power distribution per channel *3
	/T4	Analog output 4*4
	/T8	Analog output 8*4
	/A12	Alarm output relay 12 points *5
	/A24	Alarm output 24 points *5
	/C2	RS232 communication *6
	/C3	RS485 communication *6
	/C4	RS232 communication / print *6*7
	/U	USB interface
	/L	Accumulation/ report
	/TP8	24VDC transmitter power output
	E	Ethernet communication

* 1 The Number of signal channels is the total number of channels for the analog input and frequency input.

* 2 / F8, / F16, / F24, / F32, / F40, / FB8, / FB16, / FB24, / FB32, / FB40,/ FC8, / FC16, / FC24, / FC32, / FC40 can not be specified at the same time.
  It can not specify / F32, / FB32, / FC32 for HGPR8132C.
  It can not specify / F24, / FB24, / FC24 for HGPR8124C.
  It can not specify / F16, / FB16, / FC16 for HGPR8116C.
  It can not specify / F8, / FB8, / FC8 for HGPR8108C.

* 3 / T4, / T8 can not be specified at the same time.
  Only specify / T4 on the HGPR8108, HGPR8116, HGPR8124, HGPR8132.
  Only specify / T8 on the HGPR8108, HGPR8116, HGPR8124.
  Analog output only supports 4-20mA signal output.

* 4 / A12, / A24 can not be specified at the same time.

*5 / C2, / C3, / C4 can not be specified at the same time.

*6 only supports for HG-specific micro-printer.

Accessories (sold separately)

Product	Type	Specification
U disk	860204	1GB
	860205	2GB
	860206	4GB
Communication cable	862003	RS232communication connection cable (1.5m)
Communication converter module	862101	RS232/RS485 conversion module
Power Filter	863101	220VAC/1:1/50W
Software	864004	DataManagement 4 data management software
Software	864801	MDMR multi-machine data management software

Installation size (unit: mm)