

ST800 Paperless Recorder

Product Overview

ST800 Paperless Recorder color-screen paperless recorder has 48-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.

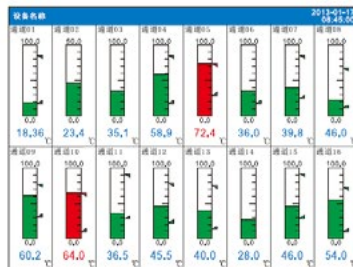


Display Screen



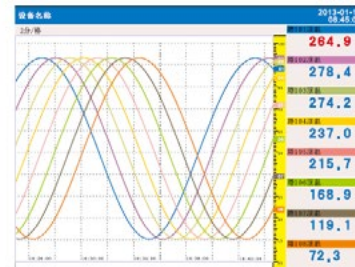
- Digital Display -

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



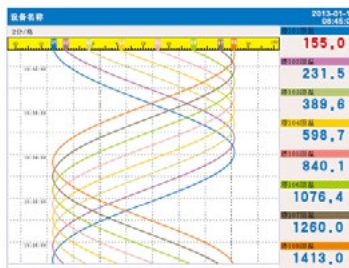
- Bar Graph Display -

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) -

Horizontal trend to display test values, tag number of channels, industrial units, alarm status.



- Trend Display(Vertical) -

Option for vertical trend display and color can be freely closed.



- Historical Trend Display -

It can re-appear the historical data stored in memory. Horizontal and vertical display types can be selected.



- Function Display -

It can display the backup and inquired content.

Main Specifications

Structure

- Installation: Install the embedded instrument panel (vertical instrument panel)
- Installation Angle: It is allowed a maximum 30 degrees tilt back in installation.
- Dashboard thickness: 2-10 mm
- Dimensions: 288 (W) * 288 (H) * 254 (D) mm
- Net Weight: Less than 7.5 kg (exclusive accessories)

Power supply

- Voltage: 220VAC
- Voltage range: 80VAC ~ 240 VAC
- Frequency: 50Hz
- Power consumption: Max 50W (including optional function)

Input section

Input points 8, 16,24,32,40,48 channels
 Measuring period: 1 second
 Input Type Current, Voltage, Resistance, RTD, thermocouple, frequency

Input type and measuring range:

Input Type	Signal Type	Measuring range	Accuracy	Input Impedance
Current	4-20mA	4.00mA-20.00mA	±0.2 %	≤300 Ω
	0-20mA	0.00mA-20.00mA	±0.2 %	≤300 Ω
	0-10mA	0.00mA-10.00mA	± ±0.2 %	≤300 Ω
Voltage	1-5V	1.000-5.000V	±0.2 %	1M Ω
	0-5V	0.000-5.000V	±0.2 %	1M Ω
	0-10V	0.000-10.000V	±0.2 %	1M Ω
	20mV	0.00-20.00 mV	±0.2 %	10M Ω
	100mV	0.00-100 mV	±0.2 %	10M Ω
Resistance	400 Ω	0.0-400.0 Ω	±0.2 %	---
RTD	PT100	-200.0-650.0 °C	±0.4°C	---
	Cu50	-50.0-150.0 °C	±0.4°C	---
	Cu53	-50.0-150.0 °C	±0.4°C	---
	BA1	-200-650.0 °C	±0.4°C	---
	BA2	-200-650.0 °C	±0.4°C	---
Thermocouple	S	-50-1768 °C	±2°C	10M Ω
	R	-50-1768 °C	±2°C	10M Ω
	B	500-1820 °C	±2°C	10M Ω
	K	-200-1372 °C	±1°C	10M Ω
	N	-200-1300 °C	±1°C	10M Ω
	E	-200-1000 °C	±1°C	10M Ω
	J	-200-1200 °C	±1°C	10M Ω
	T	-200-385 °C	±1°C	10M Ω
	WRE5-26	0-2310 °C	±2°C	10M Ω
	WRE3-25	0-2310 °C	±2°C	10M Ω
	F1	700-2000°C	±2°C	10M Ω
	F2	700-2000°C	±2°C	10M Ω
Frequency	FR	0-10000 Hz	±1Hz	---
	FR	0.0-3000.0 Hz	±0.1Hz	---

Input Frequency

Low level: 0-2V
 High level: 4-24 V
 Duty ratio: 10%-90%
 Drive current: Minimum:5mA

Analogy Input Board

Resolution ratio: 12 bit
 sampling rate: 1second
 Signal terminal Withstand Voltage: Min:-24V DC, Max: 24VDC
 Series Mode Rejection
 Voltage(50Hz): 5V Signal: 1.5V
 10V Signal: 1.5V
 20mV Signal: 50mV
 100mV Signal: 150mV
 RTD, Thermocouple open circuit

Sensor Open Circuit Test: 4-20mA input current less than 2mA
Others signals are not applied to.

Display

Display: 10.4-inch TFT color LCD display (800× 600 points)
group Number: 8 groups
Tag No.: 7 letters or 15 numbers
Unit: 3 letters or 7 numbers
Status display: Searching status, Display screen name, card status, alarm status, SD card status, USB device status, circular display status, year, month, day, hour, minute, seconds
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)
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.
Refresh Rate: 1 second

Internal Storage Record Time

Batches record mode, record time and record intervals:

Reduce the channels numbers, the record time can be longer, and the intervals can be max 30 minutes.

Intervals	1 second	2 seconds	10 seconds	1 minute	2 minutes	5 minutes
8 Channels	36 days	72 days	1 year	6 years	12 years	30 years
48 Channels	6 days	12 days	2 months	1 year	2 years	5 years

24VDC Transmitter Power Supply

Loop: 6 (3 groups isolation)
Output voltage: 24V ± 5%
Output current for each channel: 65mA(over-loading protect current: about 90mADC)

Alarm

The number of alarms: Each channel has 4 alarm
alarm type: High alarm type , high alarm, I alarm , D alarm
Alarm delay time: 0-10s
Alarm output: Alarm outputs to the internal relay Internal relay number: 36 Or 24 (If the channel number is more than 36, it is 24, otherwise, it is 36)
Internal relay operations: OR operation
Display: When alarm occurs, the corresponding screen displays the alarm status; the status display section displays the alarm icon.
Alarm information: Display alarm log in the alarm

Transportation and Storage Condition

Temperature: -10℃ ~ 60℃
Humidity: 0% ~ 95%(non-condensing)

Additional Specification

Analog Output (/T4, T8)

Output Channels: 4 channels, 8 channels.
Signal type: 4-20mA
Measuring channels: Maximum load: 750Ω

Alarm output relay (/A12, /A24,/A36)

Output points: it can be selected from 12 and 24 points.
Output points: 12 points,24 points,36 points

Relay electric shock rating: 250VAC/3A, 30VDC/3A((load resistance))
 Output Type: Normal open
 Relay Operation: Or operation (channels shared)

Communication RS232C/RS485 (/C2./C3)

Physic level: RS-232、RS485(option)
 Protocol: MODBUS-RTU
 Communication rate: 1200/2400/4800/9600/19200/38400/57600/115400
 Bytes wap: 2-1 4-3,1-2 3-4,4-3 2-1,3-4 1-2

Print function (/ MP)

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

USB Interface (/ U)

USB interface specification: it meets the Rev2.0 standards, host function
 Interface Number: 1

SD Card (/S)

SD Card port: Compatible with SD protocol(NOT SDHC)
 Number of ports: 1

Model Selection

Model	Function Code	Specification Code	Description
ST808			Signal Input 8 channels *1
ST816			Signal Input 16 channels *1
ST824			Signal Input 24 channels *1
ST832			Signal Input 32 channels *1
Function code	R		Record Function
	F		Temperature & Pressure compensation
Additional Specification	/T	4	4-20mA output 4 channels
		8	4-20mA output 8 channels
	/A	12	Normal open contact output relays 12 channels *2
		24	Normal open contact output relays 24 channels *2
	/C	2	RS232
		3	RS485
	/MP		Mini-Printer port *3
	/U		USB interface
/S		SD Card interface	
/L		Accumulation/ report	

Model	Function Code	Specification Code	Description
ST840			Signal Input 40 channels *1
Function code	R		Record Function
	F		Temperature & Pressure compensation
Additional Specification	/T	4	4-20mA output 4 channels
		12	Normal open contact output relays 12 channels *2
	24	Normal open contact output relays 24 channels *2	
	/C	2	RS232
		3	RS485

	/MP	Mini-Printer port *3
	/U	USB interface
	/S	SD Card interface
	/L	Accumulation/ report

Model	Function Code	Specification Code	Description
ST848			Signal Input 48 channels *1
Function code	R		Record Function
	F		Temperature & Pressure compensation
Additional Specification	/A	12	Normal open contact output relays 12 channels *2
		24	Normal open contact output relays 24 channels *2
	/C	2	RS232
		3	RS485
	/MP		Mini-Printer port *3
	/U		USB interface
	/S		SD Card interface
	/L		Accumulation/ report

Customization Function

Specification	Description
/M1	Extended storage 1GB
/E	Ethernet communication
/H2	Plug signal terminals

*1 Default input is analog universal input; please contact us if frequency input is needed.

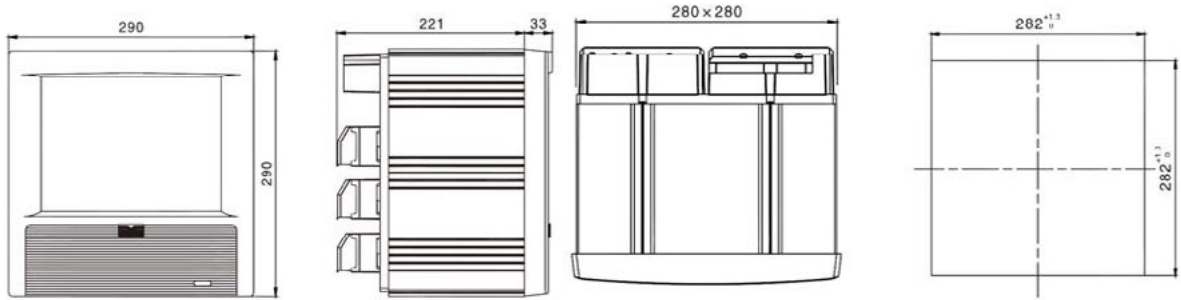
*2 Please contact us if 36 channels alarm are needed.

*3 Dedicated to Mini-Printer

Accessories (sold separately)

Product	Model	Specification
USB Flash disk	860207	8 GB
SD Card Reader	860301	USB interface
SD Card	860307	8 GB
Communication cable	862007	RS 232 communication cable (1.5m)
	862006	RS 485 communication cable (1.5m)
Power filter	863101	220VAC/1:1/50W
Software	864801	MDMR multi-machine data management software

Installation Dimensions (Unit: mm)



Terminal Wiring

