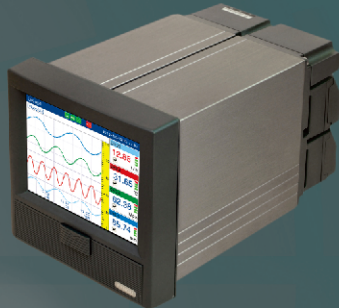


ST600 Color paperless recorder



Product overview
Display
Technical index



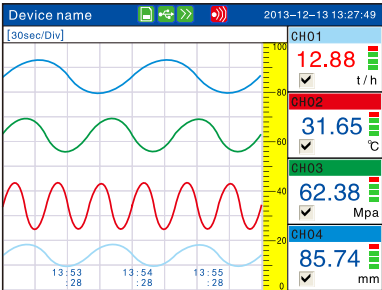
Product overview

Maximum 16 channel universal input color paperless recorder, can input standard current, voltage, frequency standard, MV, thermocouple, thermal resistance and so on many kinds of signal.Has a sensor distribution output, relay alarm output, transmitter output, flow totalizer / reports, historical data storage, on–site printing and serial communication functions.

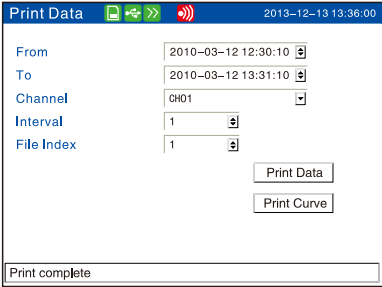
Display



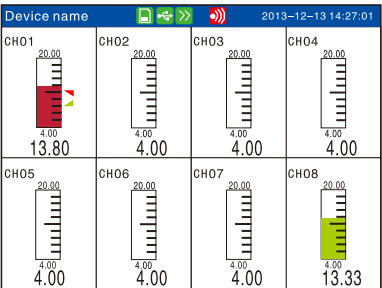
Digital display
Measured values, channel number, engineering unit, alarm status and accumulative message,all of them will be displayed in digital form.



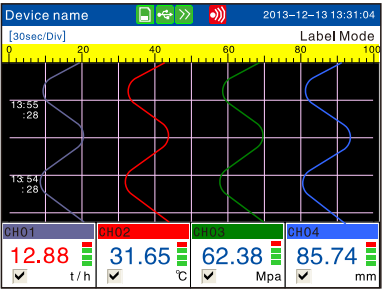
Timing curves (crosswise)
Free choice of vertical and horizontal paper feed and custom curve colors.



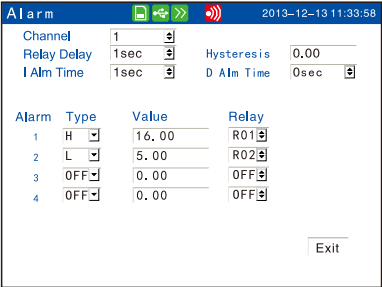
Data printing
Print the chosen period historical data in curves.



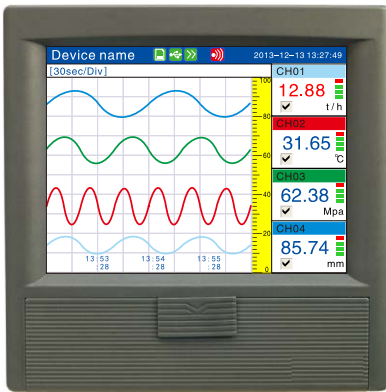
Bar
Measured values, channel number, engineering unit, alarm status and accumulative message,all of them will be displayed in bar chart.



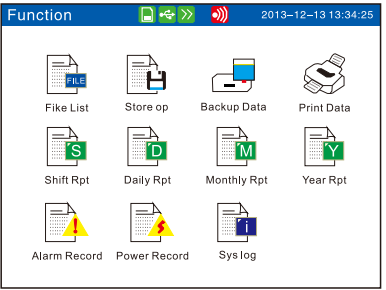
Historical curves
Historical data can be represented in curves.



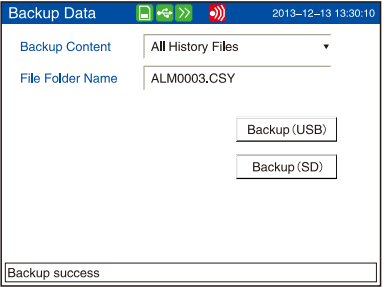
Alarm configuration
Every channel can set four random alarm points.



Timing curves (lengthways)
Measured values, channel number, engineering unit, alarm status and accumulative message,all of them will be displayed in timing curves.



Menu
Present inquiry and backup content.



Data backup
Backup the chosen period historical data to U disk and SD card in files.

Technical index

Structure	
Installation method	Embedded installation (vertical)
Installation angle	Uppermost 30 degrees of backward inclination
Mounting plate thickness	1–10mm
External size	144(W) × 144(H)x249(D)
Net weight	<2.6Kg (Optional component not included)

Power	
Nominal voltage:	220VAC
Voltage range:	100VAC ~ 240VAC
Rated frequency:	50Hz
Consumption:	≤20W(Optional function included)

Input	
Input channel:	1–16channel
Measurement period:	1sec
Signal type:	Direct current(I)、Direct voltage(V)、TC、RTD、FR

Input signal type and measurable range:				
Signal type	Signal type	Measurable range	Accuracy(25℃)	Input resistance
I	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
V	1–5V	1.000V–5.000V	± 0.2%	1M Ω
	0–5V	0.000V–5.000V	± 0.2%	1M Ω
	0–10V	0.000V–10.000V	± 0.2%	1M Ω
	20mV	0.00mV–20.00mV	± 0.2%	10M Ω
	100mV	0.00mV–100.00mV	± 0.2%	10M Ω
R	400 Ω	0.0 Ω–400.0 Ω	± 0.2%	---
	PT100	–200.0℃–650.0℃	± 0.4℃	---
	Cu50	–50.0℃–150.0℃	± 0.4℃	---
	Cu53	–50.0℃–150.0℃	± 0.4℃	---
	BA1	–200℃–650℃	± 0.4℃	---
TC	BA2	–200℃–650℃	± 0.4℃	---
	S	–50℃–1768℃	± 2℃	10M Ω
	R	–50℃–1768℃	± 2℃	10M Ω
	B	500℃–1820℃	± 2℃	10M Ω
	K	–200℃–1372℃	± 1℃	10M Ω
	N	–200℃–1300℃	± 1℃	10M Ω
	E	–200℃–1000℃	± 1℃	10M Ω
	J	–200℃–1200℃	± 1℃	10M Ω
	T	–200℃–385℃	± 1℃	10M Ω
	WRE5–26	0℃–2310℃	± 2℃	10M Ω
	WRE3–25	0℃–2310℃	± 2℃	10M Ω
	F1	700℃–2000℃	± 2℃	10M Ω
	F2	700℃–2000℃	± 2℃	10M Ω
FR	FR	0Hz–10000Hz	± 1Hz	---
	FR	0.0Hz–3000.0Hz	± 0.1Hz	---

Frequency input	
Low level:	0–2V
High level:	4–24V
Duty cycle:	10%–90%
Drive current:	Min 5mA

Analog input board card	
Resolution ratio:	16 bite
Sample rate:	1 per second
Signal terminal pressure:	Min –24VDC,Max +24VDC
Series of common mode voltage(50Hz):	5V: 1.5V 10V: 1.5V 20mV: 50mV 100mV:150mV

Sensor break line detection:
Thermocouple, thermal resistance sensor disconnection.
4–20mA, input current lower than 2mA.
Does no adapt to other signals.

Display

Displayer: 5.6 inches TFT color LCD display (320×234Point) .
Display unit : 8 units.
Bit number: 7 characters or 15 letters(numbers).
Unit: 3 characters or 7 letters(or numbers).
Status display: picture name, board card status, alarm status, SD card status, USB status, circular display status, time.
Picture: measuring data(showed in digital, bar or curve), historical curve, function menu (file list, storage manipulation ,data backup, print, cumulative statement).
Curve : presented in crosswise or vertical curves, costume color function available.
Historical curve: shows the storage data, which can be magnified 1/2/4/8 /16/32 times.
Frame rate: 1 second.

Memory recording time

Batch record mode, see the relation between time length and inter–record gap in below:If channel numbers are reduced, the recording time will become longer. The upmost recording gap setting is 30 minutes.

Record gap	1s	2s	10s	1min	2min	5min
1channel	80d	160d	2.2y	13.2y	26.4y	66y
16channel	5d	10d	50d	300d	1.6y	4y

24VDC transmitter power output

Circuit : 4channel
Output voltage: 24V ± 5%
Output current: 65mA (over current protection: about 90m A)

Alarm

Alarm number: Each channel can be set up to 4 alarm.
Alarm type: HIAL(H), LOAL(L), Incremental alarm(I) , Decrement alarm(D).
Alarm delaying time: 0–10 seconds.
Alarm output: the alarm will be output to the internal relay.
Display: when alarming, the corresponding picture will show the alarming status, and the alarm logo will be present in status bar.
Alarm log: the alarm history will be showed in alarming list.

Transportation and storage conditions

Temperature: –10℃ ~ 60℃
Humidity: 0% ~ 95%(no dew formation)

Additional specification

Analog output (/T1,/T2,/T3)

Output channel: 1–4 channels
Output type: 4 –20mA
Load: ≤750 Ω

Alarm output relay (/A6,/A8,/A12)

Output points: 6、8、12
Contact capacity: 250VAC/3A, 30VDC/3A(resistive load)
Contact type: normally open contact
Relay sharing: operable (shared by multi channels)

Communication (/C2,/C3)

Connection: RS232C(/C2) or RS485(/C3)
Protocol: Modbus–RTU protocol
Transmission speed:1200/2400/4800/9600/19200/38400/57600/115200
Byte swap: 2–1 4–3、1–2 3–4、4–3 2–1、3–4 1–2

Print function (/C4)

Printer: penal micro printer
Printing content: real time data, historical data, accumulative report
Printing method: manual print, time print

Ethernet(/E)

Protocol:Modbus–TCP
Port number: 1

USB function (/U)

Protocol: compatible USB 2.0 protocol
Port number: 1

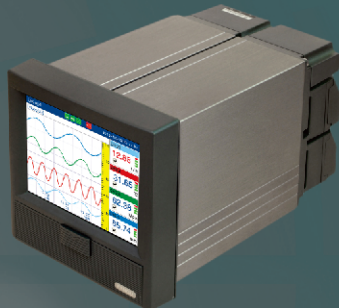
SD card function (/S)

Protocol: compatible SD protocol
Port number: 1

ST600 Color paperless recorder



Selective table
Installation dimension
Terminal connection chart



Selective table

Type	Function code	Specification code	Instruction
ST601			1 channel input
ST602			2 channel input
ST603			3 channel input
ST604			4 channel input
ST605			5 channel input
ST606			6 channel input
ST607			7 channel input
ST608			8 channel input
Function Type	R		Recording function
	F		Temperature and pressure compensation
Additional specification	/T□	1-4	1-4 channel 4-20mA signal output
		6	6 normally open contact output
		8	8 normally open contact output
	/A□	12	12 normally open contact output
		2	RS232 communication
		3	RS485 communication
		4	Micro printer terminal *1
	/C□		
	/U		USB function
	/S		SD card function
	/L		Accumulate/ report

Type	Function code	Specification code	Instruction
ST609			9 channel input
ST610			10 channel input
ST611			11 channel input
ST612			12 channel input
Function Type	R		Recording function
	F		Temperature and pressure compensation
Additional specification	/T□	6	6 normally open contact output
		8	8 normally open contact output
		12	12 normally open contact output
	/A□	2	RS232 communication
		3	RS485 communication
		4	Micro printer terminal *1
	/C□		
	/U		USB function
	/S		SD card function
	/L		Accumulate/ report

Type	Function code	Specification code	Instruction
ST613			13 channel input
ST614			14 channel input
ST615			15 channel input
ST616			16 channel input
Function Type	R		Recording function
	F		Temperature and pressure compensation
Additional specification	/A□	6	6 normally open contact output
		8	8 normally open contact output
		12	12 normally open contact output
	/C□	2	RS232 communication
		3	RS485 communication
		4	Micro printer terminal *1
	/U		
	/S		SD card function
	/L		Accumulate/ report

Customized function

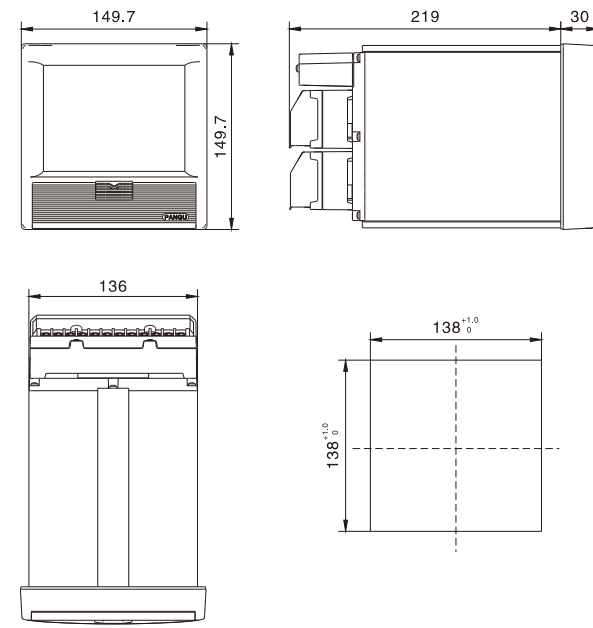
Specification code	Instruction
/A□	1-12 1-12 Channel Frequency input, with 12V power*2
/FC□	1-12 1-12 Channel Frequency input, with 24V power*2
/PT	Anti-corrosion paint protection
/P1	24VDC power supply
/E	Ethernet communication

*1 Only support special micro printer.
*2 Please contact to the manufacture to custom frequency input channel.

Product accessories (sold separately)

Product	Type	Specification
U disk	860207	8GB
SD card reader	860301	USB connection
SD card	860307	8GB
Communication circuit	862007	RS232 communication connect(1.5m)
	862006	RS485 communication connect(1.5m)
Power filter	863101	220VAC/1:1/50W
Software	864801	MDMR Machine data management software

Installation dimension(mm)



Terminal connection diagram

