



## Paperless Recorder

# Datasheet

R6000C



SUP-R6000C is featured with outstanding performance and easy operating Function along with high visibility Color LCD display, universal inputs with high speed of sampling rate and accuracy. Measured data is stored into memory and can be analyzed on PC through communication.

### Basic Functions

- Up to 48 channels of universal input
- UP to 18 Alarm Output Relays
- With 24V Power distribution Output
- Communication type: RS485, RS232C.
- With a USB data transfer interface



### Display & Operation

- Multiple display Function : choose the display your way
- Use date and time calendar search functions to Review historical data .
- 7 inch high brightness color graphics and color LCD (800 \* 480pixels)

### Reliability and Security

- Dust- and splash-proof front panel
- Power Fail Safeguard: All the data stored in Flash memory, make sure that all the historical data and configuration parameters will not lost when power fail. Real time clock power supply by lithium batteries.

### Data Acquisition Software

- Software for varieties of tasks : analysis, settings, and acquisition

### Power supply

- Voltage range: AC 85 ~ 264 V (power supply of the switches), 50/60 Hz;  
DC12 ~ 36 V (power supply of the switches);

### Normal operating condition

- Temperature : -10 ~ 50°C Humidity : 10 ~ 90%%RH(without condensation of moisture)

## Technical Specification

### Input measurement

Input signal	<p>Current: 0 ~ 20 mA, 0 ~ 10 mA, 4 ~ 20 mA, 0 ~ 10 mA SQRT, 4 ~ 20 Ma SQRT</p> <p>Voltage: 0 ~ 5 V, 1 ~ 5 V, 0 ~ 10 V, <math>\pm 5</math> V, 0 ~ 5 V SQRT, 1 ~ 5 V SQRT, 0 ~ 20 mV, 0 ~ 100 mV, <math>\pm 20</math> mV, <math>\pm 100</math> mV</p> <p>Thermal resistance: Pt100, Cu50, Cu53, Cu100, BA1, BA2</p> <p>Linear resistance: 0 ~ 400 <math>\Omega</math></p> <p>Thermocouple: B, S, K, E, T, J, R, N, F2, Wre3-25, Wre5-26</p>
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### Output

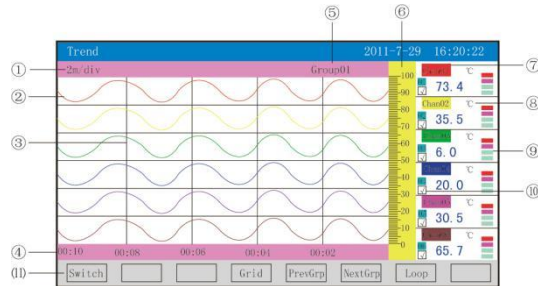
Output signal	<p>Analog output:            4 ~ 20 mA (load resistance <math>\leq 380 \Omega</math>), 0 ~ 20 mA (load resistance <math>\leq 380 \Omega</math>),            0 ~ 10 mA (load resistance <math>\leq 760 \Omega</math>), 1 ~ 5 V (load resistance <math>\geq 250 K\Omega</math>),            0 ~ 5 V (load resistance <math>\geq 250 K\Omega</math>), 0 ~ 10 V (load resistance <math>\geq 10 K\Omega</math>)</p> <p>Alarm output: normally open relay contact output, where the contact capacity is 1 A/250 VAC (resistive load)            (! Note: Please do not carry load directly in case the load exceeds the contact capacity of relay.)</p> <p>Feed output: DC24 V <math>\pm 1</math>, load current <math>\leq 250</math> mA</p> <p>Communication output: RS485/RS232 communication interface, 1,200 ~ 57,600 bps baud rate (able to be set); standard MODBUS RTU communication protocol is adopted; the communication distance of RS-485 can be as long as 1 kilometer; the communication distance of RS-232 can be as long as 15 m; EtherNet communication interface is adopted, where the communication speed is 10 M.</p>
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### Comprehensive parameters

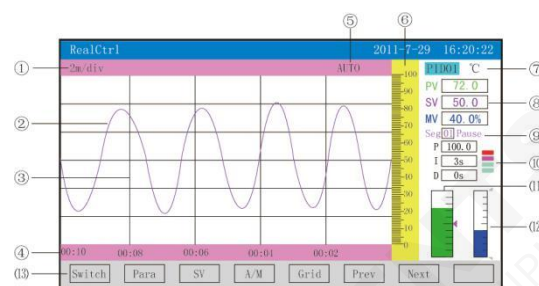
Measurement accuracy	0.2% FS $\pm 1d$
Sampling period	1 s
Setting mode	The button is set in the form of panel soft touch; set values of parameters are locked with passwords and will be saved permanently in case of outage.
Display method	7-inch 800 * 480 dot-matrix widescreen TFT high brightness color graphics and LCD display; LED backlight; with clear pictures and wide visual angle. Display contents can be composed of characters, figures, conditional curves, bar graphs, etc.; through panel button, page turning, forward and backward search of historical data, time scale change of curves, etc. can be realized.
Data backup	Data backup and conversion storage of USB flash disk and SD card are support, where the maximum capacity is 8 GB; FAT and FAT32 formats are supported.
Storage capacity	The capacity of the internal Flash memory is 64 M Byte.
Recording interval	Nine options including 1, 2, 4, 6, 15, 30, 60, 120 and 240 s can be selected.

# Display

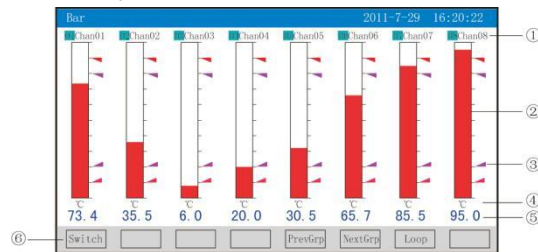
## 1. Real-time Curve



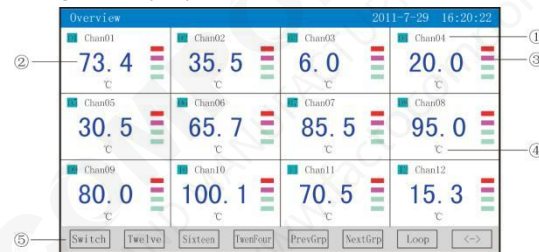
## 2. Real-time control



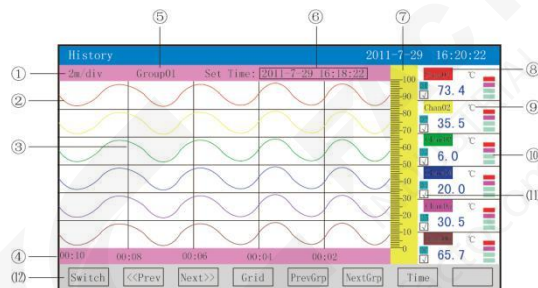
## 3. Bar Graph



## 4. Digital Display



## 5. Historical Curve



## 6. Alarm List

No.	Chan	Name	Alarm Time	Clear Time	Type
013	01	Chan01	2011-7-29 16:00:22	2011-7-29 16:00:22	HI
012	01	Chan01	2011-7-29 16:01:22	2011-7-29 16:01:22	HI
011	01	Chan01	2011-7-29 16:02:22	2011-7-29 16:02:22	HI
010	01	Chan01	2011-7-29 16:03:22	2011-7-29 16:03:22	HI
009	01	Chan01	2011-7-29 16:04:22	2011-7-29 16:04:22	HI
008	01	Chan01	2011-7-29 16:05:22	2011-7-29 16:05:22	HI
007	01	Chan01	2011-7-29 16:06:22	2011-7-29 16:06:22	HI
006	01	Chan01	2011-7-29 16:07:22	2011-7-29 16:07:22	HI
005	01	Chan01	2011-7-29 16:08:22	2011-7-29 16:08:22	HI
004	01	Chan01	2011-7-29 16:09:22	2011-7-29 16:09:22	HI
003	01	Chan01	2011-7-29 16:10:22	2011-7-29 16:10:22	HI
002	01	Chan01	2011-7-29 16:11:22	2011-7-29 16:11:22	HI
001	01	Chan01	2011-7-29 16:12:22	2011-7-29 16:12:22	HI

The bottom control bar includes buttons for Switch, Up, Down, PgUp, and PgDn.

## 7. File List

No.	Start Time	End Time	Int	Cond	Status
008	2011-7-29 15:30:10	2011-7-29 15:30:30	IS	Pwr	Poff stop
005	2011-7-29 15:30:10	2011-7-29 15:30:30	IS	Pwr	Poff stop
004	2011-7-29 15:29:40	2011-7-29 15:30:00	IS	Pwr	Man stop
003	2011-7-29 15:29:10	2011-7-29 15:29:30	IS	Pwr	Poff stop
002	2011-7-29 15:28:40	2011-7-29 15:29:00	IS	Pwr	Poff stop
001	2011-7-29 15:28:10	2011-7-29 15:28:30	IS	Pwr	Poff stop

The bottom control bar includes buttons for Switch, Up, Down, PgUp, PgDn, Curve, and Backon.

## 8. Menu for Printing

The Menu for Printing display shows settings for printing data. The top bar indicates the date and time: 2011-7-29 16:20:22. The title is 'Print'. The settings are: Print: RealData, File No.: 001, Start Time: 2011-7-29 16:10:22, End Time: 2011-7-29 16:20:22, Channel: Chan01, and Interval: 001. The bottom control bar includes buttons for Switch, Down, Up, PrData, PrCurve, and Enter.



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## Storage Function

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Data backup	Data backup and conversion storage of USB flash disk and SD card are support, where the maximum capacity is 8 GB; FAT and FAT32 formats are supported.
Storage capacity	The capacity of the internal Flash memory is 64 M Byte.
Recording interval	Nine options including 1, 2, 4, 6, 15, 30, 60, 120 and 240 s can be selected.
Storage length (continuous record without power-off)	<p>24 days (1 s interval) – 5825 days (240 s interval)</p> <p>Calculation formula: recorded time (day)</p> $\frac{64 * 1,024 * 1,024 * \text{recording interval (S)}}{\text{channel number} * 2 * 24 * 3,600}$ <p>(! Note: For calculation of channel number, the program divides the channel number into five options, namely 4, 8, 16, 32 and 64, and the bigger figure should be regarded as the channel number for calculation in case the channel number of the instrument is between the said two options. For example: If the channel number of the instrument is 12, then 16 should be adopted in the formula.)</p>

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## Alarm Output Function

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Max 18 channel alarm output, normally open relay contact output, where the contact capacity is 1 A/250 VAC (resistive load)

(! Note: Please do not carry load directly in case the load exceeds the contact capacity of relay.)

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## Communication Function

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RS485/RS232 communication interface, 1,200 ~ 57,600 bps baud rate (able to be set); standard MODBUS RTU communication protocol is adopted;

## Ordering code

SUP-R6000C-01-1A-00-02-R1-0-E0													Description
SUP-R6000C	-	-	-	-	-	-	-	-	-	-	-	-	
	01												1
	02												2
	04												4
	06												6
	08												8
	10												10
	12												12
	16												16
Input Channel	20												20
	24												24
	28												28
	32												32
	36												36
	40												40
	44												44
	48												48
	XX												Other
	00												None
Transmitter Output	1A												1 Channel 4-20mA
	2A												2 Channels 4-20mA
	4A												4 Channels 4-20mA
	6A												6 Channels 4-20mA
	8A												8 Channels 4-20mA
	AA												10 Channels 4-20mA
	BA												12 Channels 4-20mA
	XX												Other
	00												None
	1A												1 Channel 4-20mA
	2A												2 Channels 4-20mA
	4A												4 Channels 4-20mA
	6A												6 Channels 4-20mA
	8A												8 Channels 4-20mA
PID	2S												2 Channels Relay
	4S												4 Channels Relay
	6S												6 Channels Relay
	8S												8 Channels Relay

PID	XX	Other
SPST Relay Output	00	None
	01	1 Channel
	02	2 Channels
	04	4 Channels
	06	6 Channels
	08	8 Channels
	10	10 Channels
	12	12 Channels
	14	14 Channels
	16	16 Channels
	18	18 Channels
Communication Output	XX	Other
	00	None
	R1	RS485
	R2	RS232
	R4	RS232 + Printer
	Y0	Ethernet
	Y1	RS485+Ethernet
	Y2	RS232+Ethernet
	Y4	RS232+Printer+Ethernet
Operational Function	0	None
	C	Temperature-Pressure Compensation + Flow Accumulation
Power Supply and Distribution Output	E1	220VAC, 1 Channel 24VDC
	E0	220VAC, None
	C1	24VDC, 1 Channel 24VDC
	C0	24VDC, None

**Note:**

1. Isolated Universal Input, 185mm×154mm, 16GB USB Disk
2. Selecting PID function, flow accumulation, or temperature-pressure compensation allows for a maximum of 24 channels
3. PID + Transmitter Output + Relay Output ≤ 18 Channels