



Paperless Recorder

Datasheet

SUP-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, ± 5 V, 0 ~ 5 V SQRT, 1 ~ 5 V SQRT, 0 ~ 20 mV, 0 ~ 100 mV, ± 20 mV, ± 100 mV</p> <p>Thermal resistance: Pt100, Cu50, Cu53, Cu100, BA1, BA2</p> <p>Linear resistance: 0 ~ 400 Ω</p> <p>Thermocouple: B, S, K, E, T, J, R, N, F2, Wre3-25, Wre5-26</p>
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Output

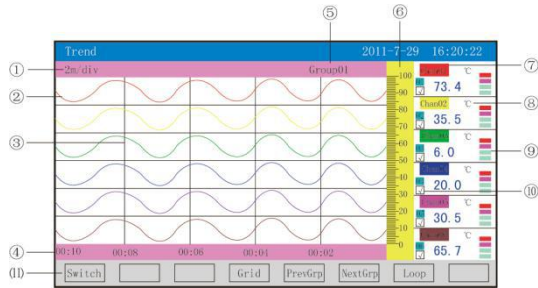
Output signal	<p>Analog output: 4 ~ 20 mA (load resistance $\leq 380 \Omega$), 0 ~ 20 mA (load resistance $\leq 380 \Omega$), 0 ~ 10 mA (load resistance $\leq 760 \Omega$), 1 ~ 5 V (load resistance $\geq 250 K\Omega$), 0 ~ 5 V (load resistance $\geq 250 K\Omega$), 0 ~ 10 V (load resistance $\geq 10 K\Omega$)</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 ± 1, load current ≤ 250 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

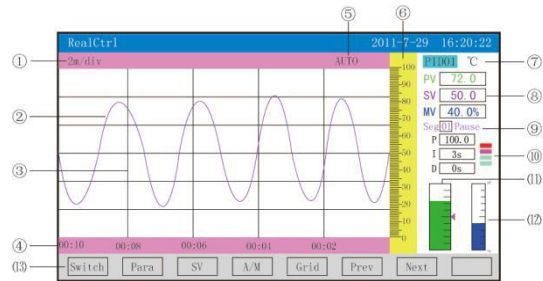
Measurement accuracy	0.2% FS ± 1 d
Sampling period	1 s
Setting mode	The button is set in the form of panel soft touch; set values of parameters are locked with passwords and will be saved permanently in case of outage.
Display method	7-inch 800 * 480 dot-matrix widescreen TFT high brightness color graphics 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

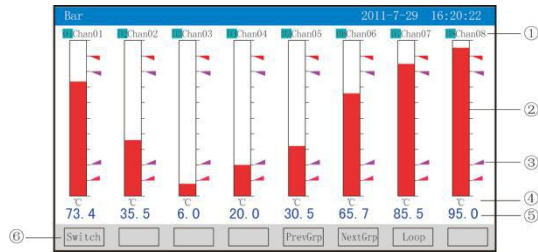
1. Real-time Curve



2. Real-time control



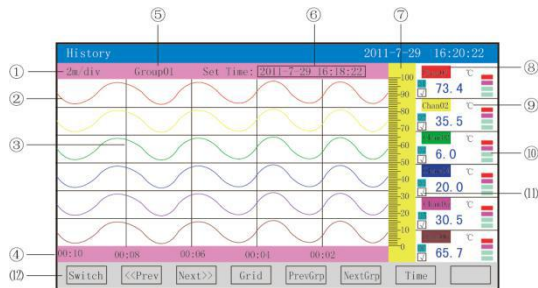
3. Bar Graph



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 16:03:22	2011-7-29 16:03:22	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 interface includes a 'Switch' button and navigation controls like 'Up', 'Down', 'PgUp', and 'PgDn'.

7. File List

No.	Start Time	End Time	Int	Cond	Status
008	2011-7-29 15:04:10	2011-7-29 15:30:30	IS	Pwr	Power 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 15:30:30	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 interface includes a 'Record Time: 00000d-00h:2m:00s' label and a 'Switch' button with navigation controls like 'Up', 'Down', 'PgUp', 'PgDn', 'Curve', and 'Backon'.

8. Menu for Printing

The Menu for Printing display shows a form for printing data. The title is 'Print' and the current time is 2011-7-29 16:20:22. The form includes the following fields: 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 interface includes a 'Switch' button and navigation controls like 'Down', 'Up', 'PrData', 'PrCurve', and 'Enter'.

Storage Function

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>

Alarm Output Function

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.)

Communication Function

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 Paperless recorder								
Model	Form							Specification
SUP-R	60	_C	_	_	_	_	_	No.
		2						2 channel input
		4						4 channel input
		:						:
		48						48 channel input
Alarm output			0					None
			2					2 channel alarm output
			4					4 channel alarm output
			:					:
			18					18 channel alarm output
Communication				T0				None
				T1				RS-232
				T2				RS-485
Power distribution					P0			None
					P1			1 channel
Analog output						A0		None
						A1		1 channel analog output
						A2		2 channel analog output
						A4		4 channel analog output
USB connection							0	None
							1	Yes
Power supply							A	AC85~264V
							D	DC12~36V

Note: Total number of analog output and alarm output channels is less than 18



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