## Paperless recorder
SUP-RN3000

This product is an industrial paperless recorder with a 3.5-inch TFT true-color full-view LCD display. Various types of current, voltage, thermocouple and thermal resistance, and other industry standard signals can be connected to realize the display, recording, overrun monitoring, report, data communication, signal transmission and Flow accumulation, flow temperature and pressure compensation, and other functions.

Applications

- Metallurgy
- Oil
- Chemical
- Building materials
- Papermaking
- Food
- Prmaceutical
- Heat treatment
- Water treatment
- PID adjustment

SUP-RN3000

Features

- Up to 18 analog signal input channels, 4 relay alarm outputs.
- 150mA power distribution output and 1 RS-485 communication interface.
- 1 USB data dump interface.
- 64Mb, 96Mb, 128Mb memory available.
- Support boot interface custom writing.
- Support display screenshot function.
- The shell is made of flame retardant material.
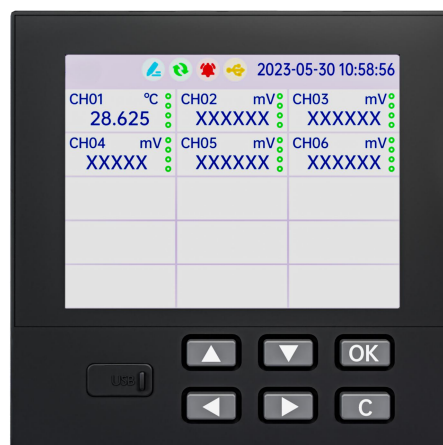
Parameters

Display	3.5-inch TFT true-color LCD display, resolution 320*240, high-definition LED backlight
Dimensions	Dimensions: 96mm×96mm×100mm Hole size: 92mm×92mm
Mounting panel thickness	1.5mm~6.0mm
Weight	0.37kg
Power supply	(85~264)VAC, (47~63)Hz (optional 24VDC power supply)
Internal storage	64M Bytes Flash (optional 96M, 128M)
External dump	Support U disk (standard USB2.0 communication interface)
Maximum power consumption	10W
Relative humidity	(10~85)% (no condensation)
Operating temperature	(0~50)℃
Transport and storage conditions	Temperature(-20~60)℃ Relative humidity (5~95)% (no condensation)
Power distribution specification	150mA, 24 VDC
Power down protection	All data are stored in Flash memory to ensure that all historical data and configuration parameters will not be lost due to power failure. The real-time clock is powered by an internal battery after power failure.
Alarm output	Up to 4 channels, relays are normally open contacts, contact capacity 2A /250VAC (resistive load)
Communication interface	1 way RS-485 communication interface
Protocol	Using Modbus communication protocol
The sampling period	1s

Input Signal

DC Voltage/Current Input	
Signal type	Maximum allowable error (%FS)
（1~5）V	
（0~10）V	
（0~5）V	
（4~20）mA	±0.1
（0~20）mA	
（0~10）mA	
（0~100）mV	
（-20~20）mV	±0.2
（0~20）mV	

Thermocouple Input (Without Cold Junction Error)		
Signal type	Measuring range (°C)	Maximum allowable error (°C)
B	600 ~ 1800	±2.4

Signal type	Measuring range (°C)	Maximum allowable error (°C)
E	-200 ~ 1000	±2.4
J	-200 ~ 1200	±2.4
K	-200 ~ -100	±3.3
	-100 ~ 1300	±2.0
S	-50 ~ 100	±3.7
	100 ~ 300	±2.0
	300 ~ 1600	±1.5
T	-200 ~ -100	±1.9
	-100 ~ 400	±1.6
R	-50 ~ 100	±3.7
	100 ~ 300	±2.0
	300 ~ 1600	±1.5
N	-200 ~ 1300	±3.0
WRe5-26	0~ 2310	±4.0
WRe3-25	0~ 2315	±4.0
RTD Input		
Signal type	Measuring range (°C)	Maximum allowable error (°C)
Cu50	-50 ~ 150	±1.0
Pt100	-200 ~ 650	±1.0
Pt1000	-200 ~ 200	±1.0

Note: special type thermal resistance can be customized.

Output Signal

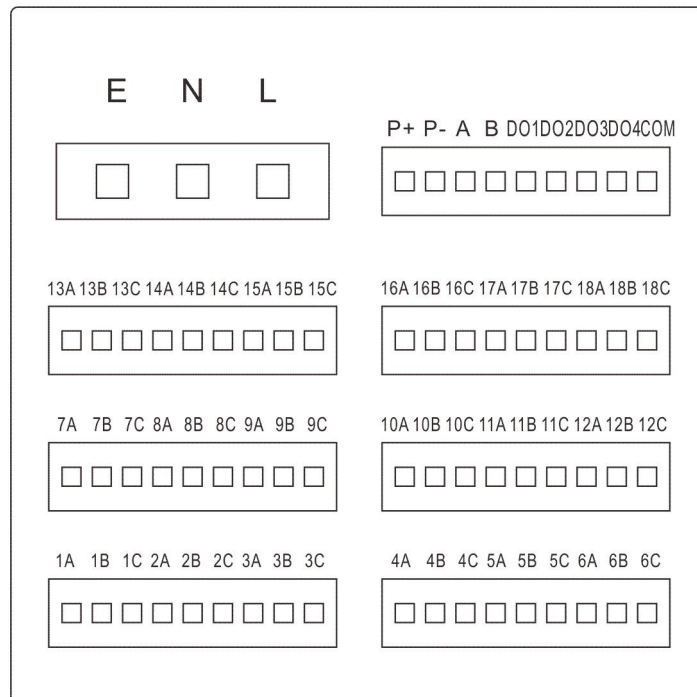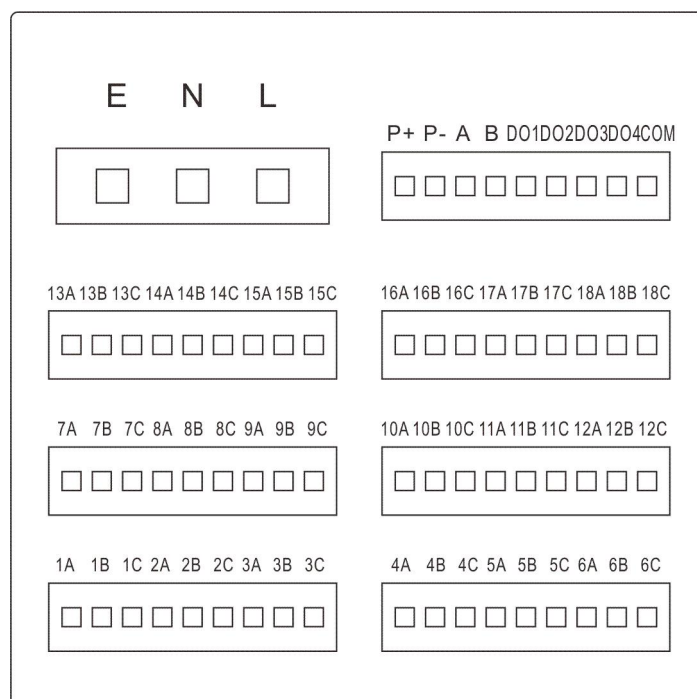| Alarm Output				
Signal type	Measuring range	Contact type	Contact rating	Response cycle
Alarm Output	0/1	Normally open contact	2A /250VAC	1 second
Current Output				
Signal type		Range (mA)		Maximum allowable error (mA)
Current output		4 ~ 20		±0.025
		0~20		±0.025
		0~10		±0.025

Figure 1 Schematic diagram of basic terminal

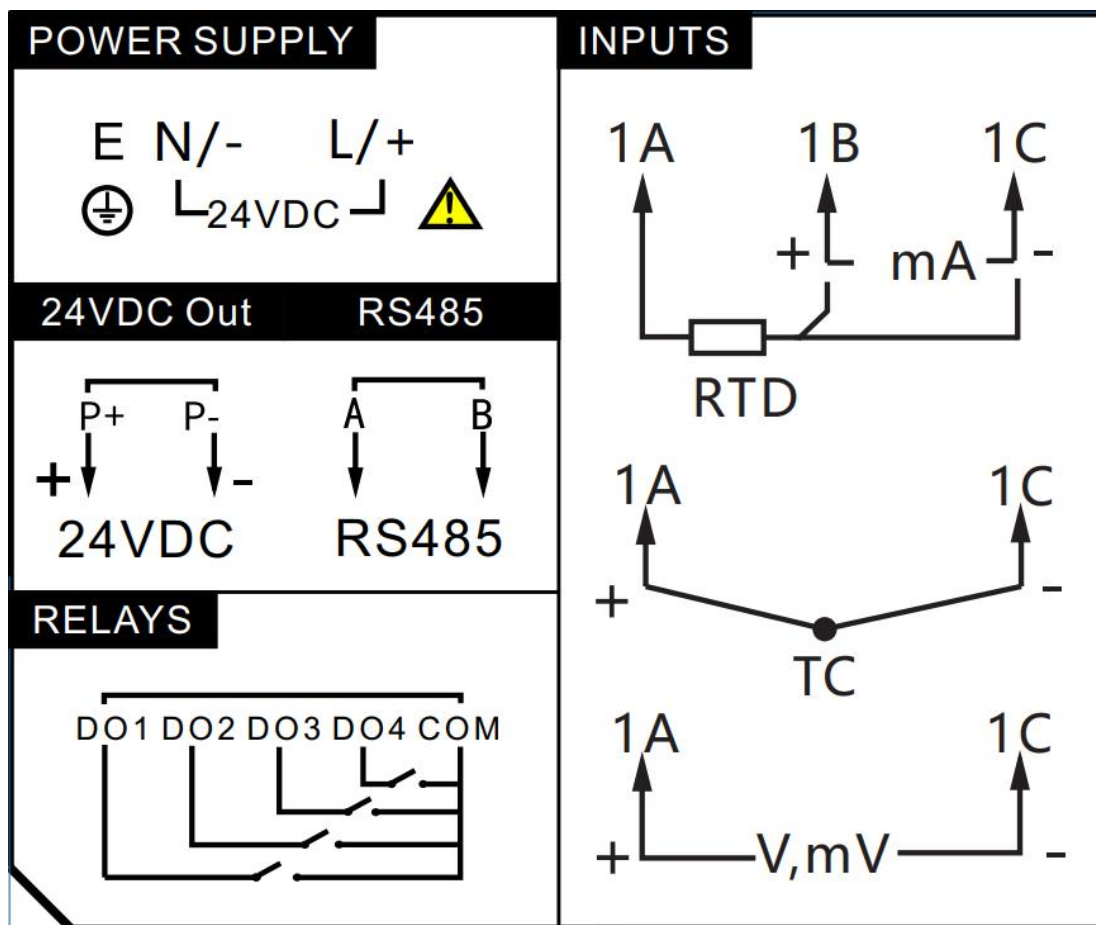Figure 2 Schematic diagram of enhanced terminals
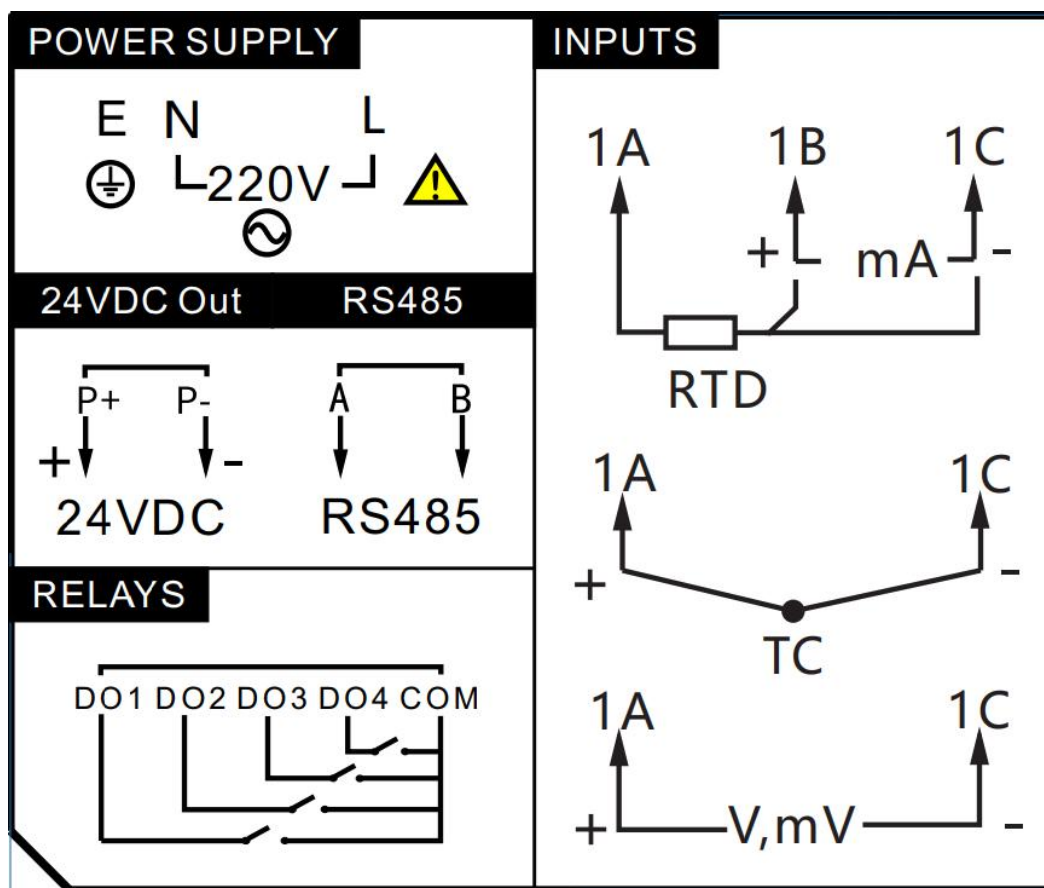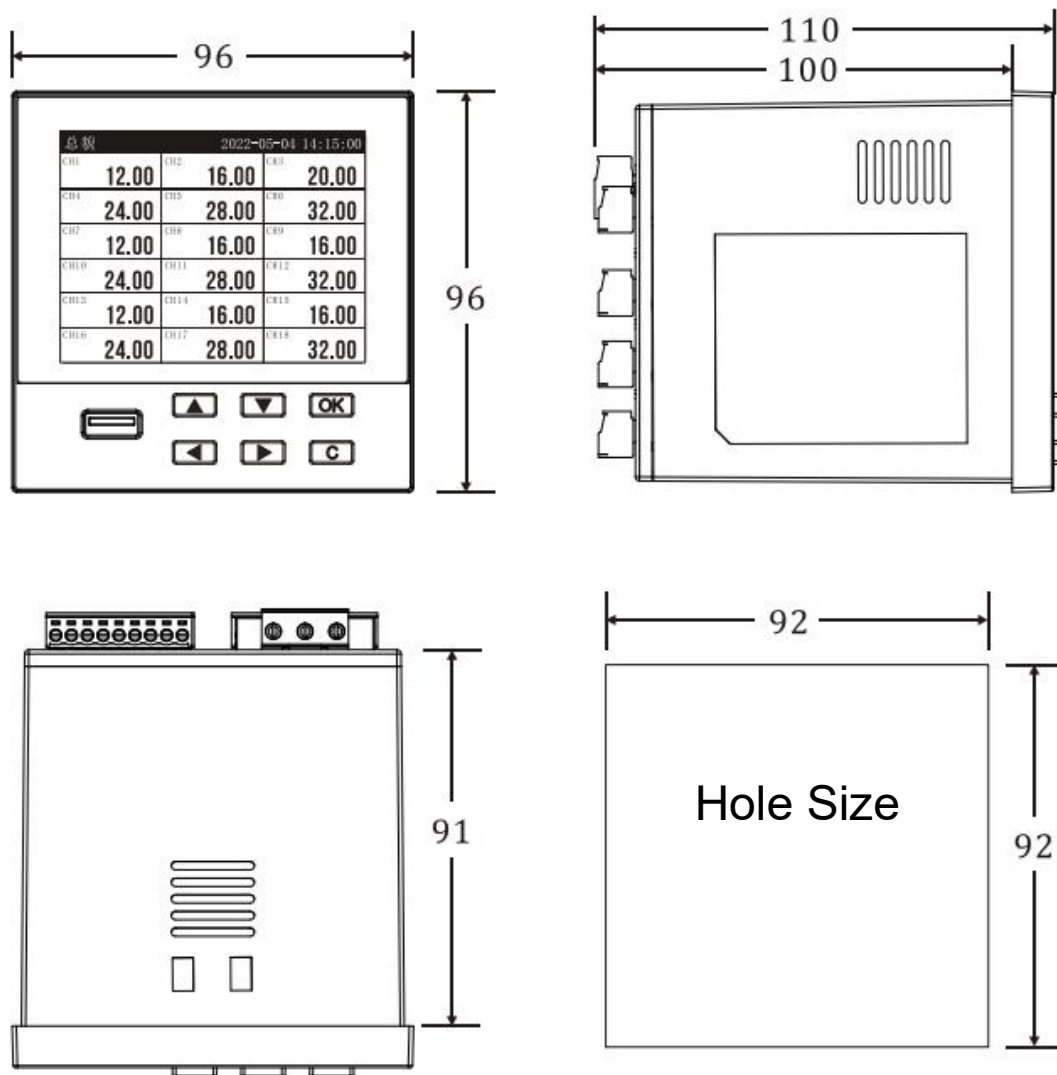
Figure 3 24V wiring diagram

Figure 4 220V wiring diagram

Note:

The analog output board needs an external 24V power supply, which can be powered by the power distribution provided by this product. Due to the high power, try to avoid power distribution to other transmitters at this time.

Dimension

Unit:mm

Ordering code

SUP-RN3000-X0XX02N2N4E11201XUSB1V1V2															Description
SUP-RN3000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Input channel	X														1≤X≤18
Transmission output		0													No transmission output
		XX													XX channel 4-20mA transmission output (1≤XX≤4)
Communication			0												No
			2												RS485
Relay output				N2											2 relay outputs
				N4											4 relay output (1≤XX≤4)
Distribution output					E1										1 channel power distribution output (standard)
Storage size						1									64Mb storage
						2									128Mb storage
Compensation type							0								No temperature and pressure compensation
							1								temperature and pressure compensation
Traffic accumulation								X							X channel traffic accumulation (0≤X≤4)
U disk									USB1						USB transfer function (standard)
Power supply										V1					24VDC
										V2					220VAC（85～264）VAC