Mr.Signal Smart Generator with Source & Sink

- Multi Function Signal Generator / Calibrator
- Modbus Master + 20000 point Logger
- PT100/CU50
- Thermocouple TC S, B, E, K, R, J, T, N
- Current, Voltage, Passive Current
- Frequency Counting + Quantitative

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Smart function list

Signal expansion function name	Application function (tools)	Communication interface function
Signal conversion range	PID controller	MODBUS RTU master
Range out	20000 point Logger	MODBUS RTU Slave
Real time curve		USB TO RS485
Programming output		USB firmware upgrade
Preset value		
Signal to signal		

Smart structure and product parameters

Overall dimensions

92×70×32mm

Power

Built-in lithium battery: 900mA*2 ma USB or charging and supply

Working temperature

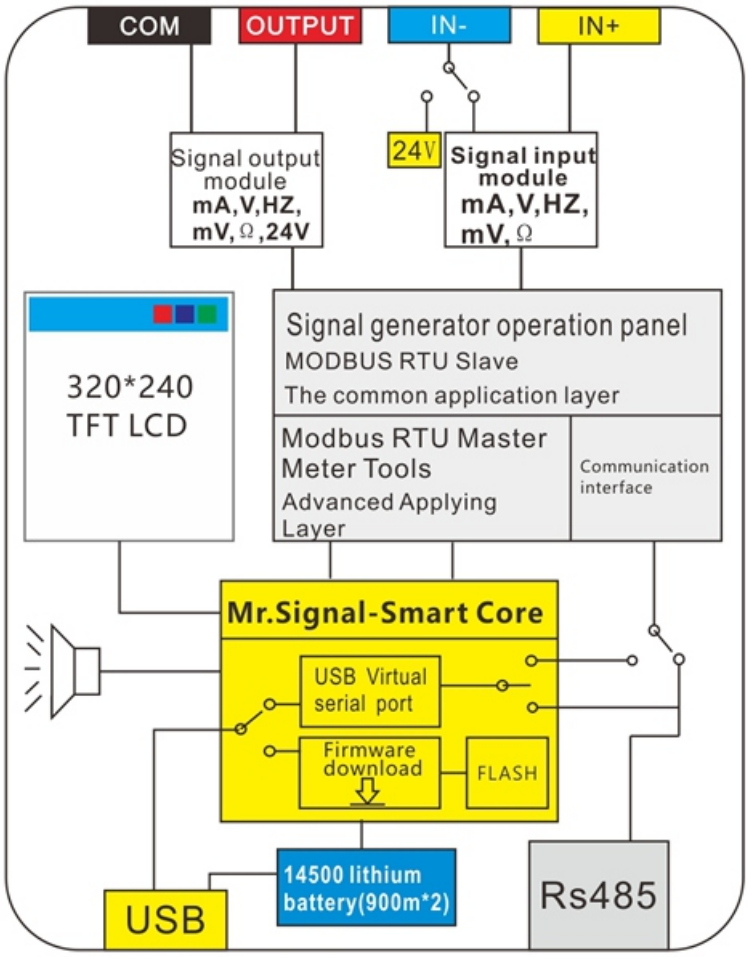
0–50℃

Total weight of all fittings

500g

Battery life

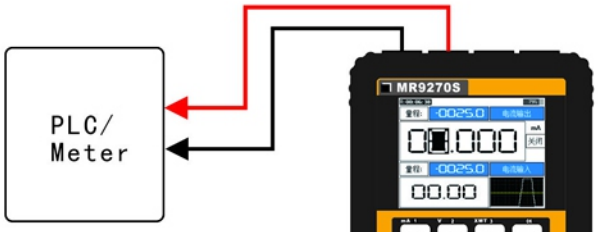
20 ma output can work continuously More than 8 hours



Smart signal parameter list

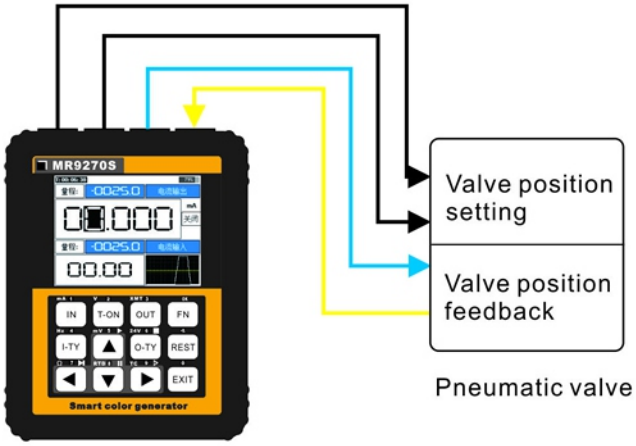
OUTPUT			
Signal type	Range	Accuracy	Resolution
Current	0-24mA	0.05%	0.001mA
Voltage	0-12V	0.05%	0.001V
Passive current	0-24mA	0.05%	0.001mA
PULSE (amplitude adjustable 0-24V)	0-9999Hz/ 0-150K	0.03%/ 0.5%	Range 00.001/000.01/0001
Pulse:PWM	0-100.0%	0.10%	0.10%
Millivolt	-10-110mV	0.10%	0.01mV
TC:S	-50-1760℃	0.10%	1 ℃
TC:B	0-1810℃	0.10%	1 ℃
TC:E	-270-990℃	0.10%	1 ℃
TC:K	-270-1373℃	0.10%	1 ℃
TC:R	-50-1760℃	0.10%	1 ℃
TC:J	-210-1190℃	0.10%	1 ℃
TC:T	-270-390℃	0.10%	1 ℃
TC:N	-270-1290℃	0.10%	1 ℃
TC:WRE/25	0-2300℃	0.10%	1 ℃
TC:WRE/26	0-2300℃	0.10%	1 ℃
resistance	0~400	0.30%	0.3
Pt100	-199-650℃	0.30%	0.4℃
Cu50	-50-150℃	0.10%	1℃
24VLoop current detection	0-24mA	0.10%	0.01mA
INPUT			
Signal type	Range	Accuracy	Resolution
Current	0-24mA	0.10%	0.01mA
Voltage	-4V-30V	0.10%	0.001V
Pulse	0-9999Hz	0.03%	Auto range 00.001/000.01/0001/0 -150Khz
Pulse:PWM	0-100.0%	0.10%	0.20%
Millivolt	-110mV-110mV	0.10%	0.01mV
TC:S	-50-1760℃	0.50%	1 ℃
TC:B	0-1810℃	0.50%	1 ℃
TC:E	-270-990℃	0.30%	1 ℃
TC:K	-270-1373℃	0.30%	1 ℃
TC:R	-50-1760℃	0.30%	1 ℃
TC:J	-210-1190℃	0.30%	1 ℃
TC:T	-270-390℃	0.30%	1 ℃
TC:N	-270-1290℃	0.30%	1 ℃
TC:WRE/25	0-2300℃	0.30%	1 ℃
TC:WRE/26	0-2300℃	0.30%	1 ℃
resistance	0~400	0.20%	0.01Ω
Pt100	-199-650℃	0.20%	0.1℃
Cu50	-50-150℃	0.20%	0.1℃

Signal connection



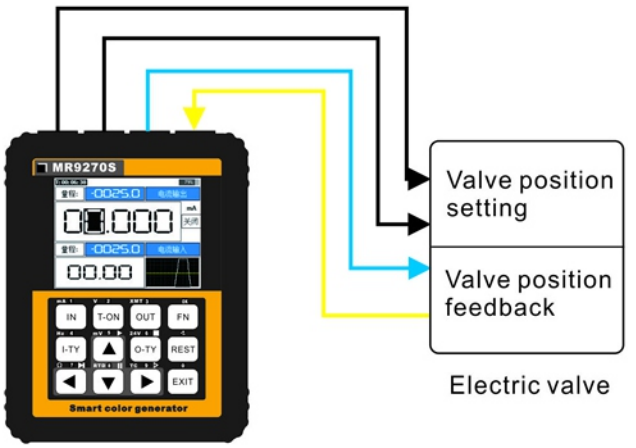
Universal signal output
Current / voltage /
frequency / resistance /
MV /Thermal resistance /
thermocouple signalsAll by electronic switch.

Universal signal input
Current / voltage /
frequency / resistance /
MV /Thermal resistance /
thermocouple signalsAll by
electronic switch.



Pneumatic valve

Switch the input (-) port to 24V, as the power supply for the valve feedbackInput and output at the same time.

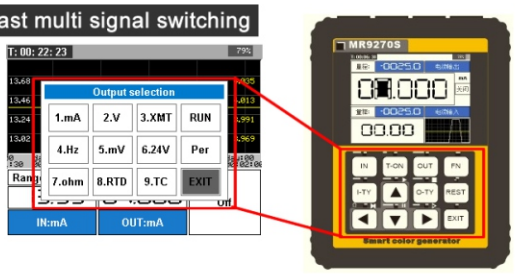


Electric valve

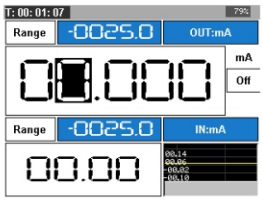
When the input (-) port is closed, the 24V is used as the negative electrode of the input signal. Input and output at the same time.

Smart Basic function introduction

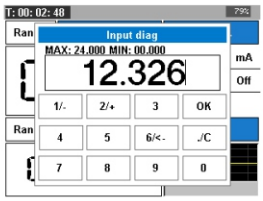
Fast multi signal switching



Two kinds of numerical input method

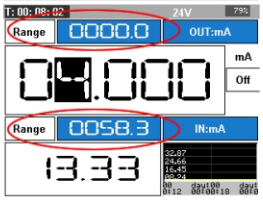


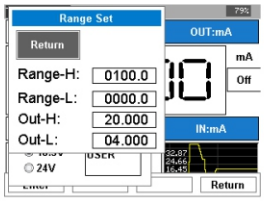
Modify the position by the direction key



Numeric keypad input

Range display or output



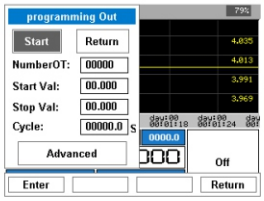


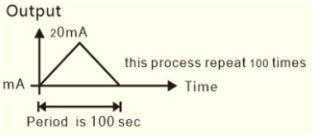
Range and signal linear correspondence.

Real time curve

Input and output display real-time curve Can analyze the device dynamics.

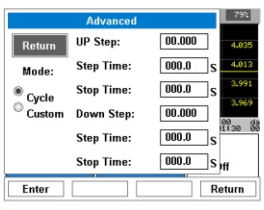
Programming output

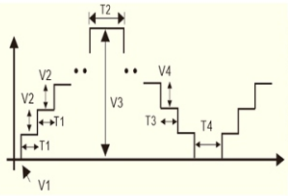




The user can set the parameters to start work

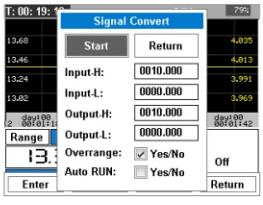
Custom output





V1:Start Val(Previous Menu) : The floor of output
V2:Up Step: Increase amount of every step
T1:Step Time: Increase every step time
T2:Stop Time: Idle time on the ceiling
V3:Stop Val(Previous Menu): The ceiling of output
V4:Down Step: Decrease amount of every step
T3:Step Time(Second One): Decrease every step time
T4:Stop Time(Second One): Idle time on the floor

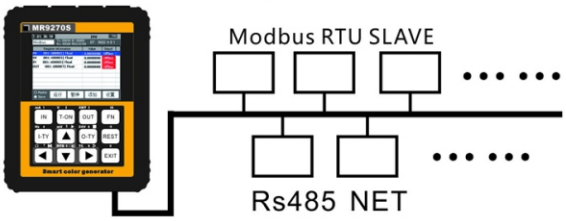
Signal converter



Set the range of the input and output signals,
The output can follow the change of the input.
For example:
Input 0-1000Hz conversion
Output 4-20mA

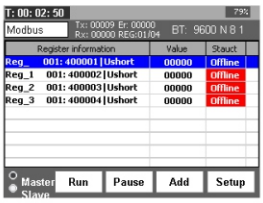
Smart advanced applications

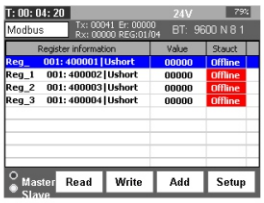
MODBUS RTU Master



Can access up to 30 RTU MODBUS from the stationTotal number of not more than 30 registers

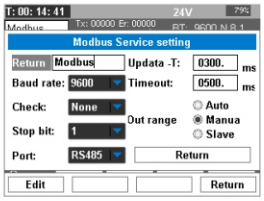
Can be monitored or online with RTU MODBUS protocol.
Modify parameters and other operations, create a list of various variables.



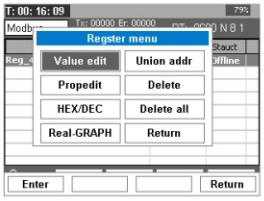


Have two modes:
Auto: reading or writing is done automatically by the software.
Manual: read or write by the button to complete the trigger.

Can create a variety of types of variables

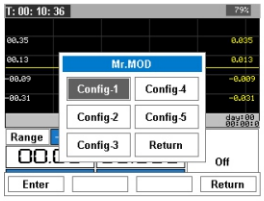


Modify master settings

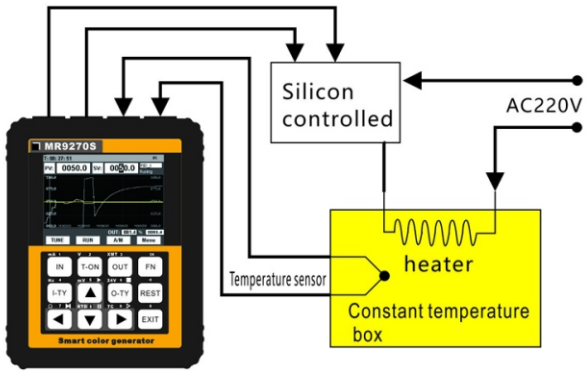


Register menu

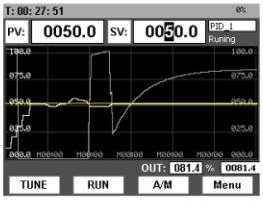
Register value online Edit



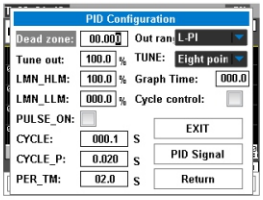
5 configurations for users to use

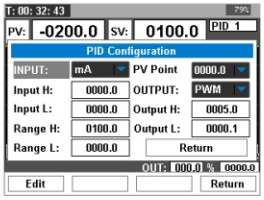


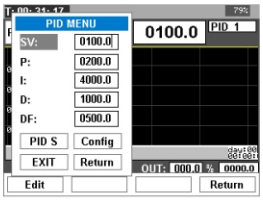
PID control constant temperature box test wiring

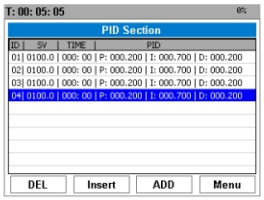


Position type PID control panel, up to 32 control points can be set



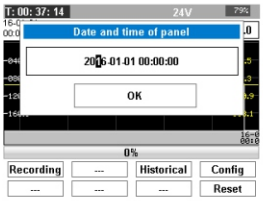






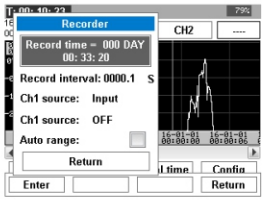
Logger

20000 recording points, two recording channels. The signal source can be recorded from within Smart. Part of the input and output signals can also be read Modbus data from station equipment Line record.



History curve online view:
Time axis can be used for recording curve Narrow view, can also be free to modify the light Time step size.

Modify record time interval, program Will automatically calculate the length of the record time. Signal source can be selected through the MODBUS Master station to read data from the station to record.



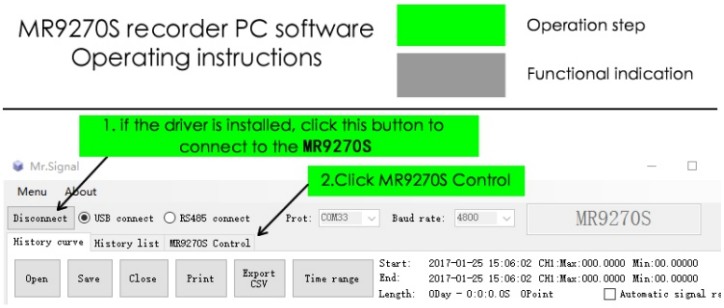
MR9270S Paperless Recorder Software

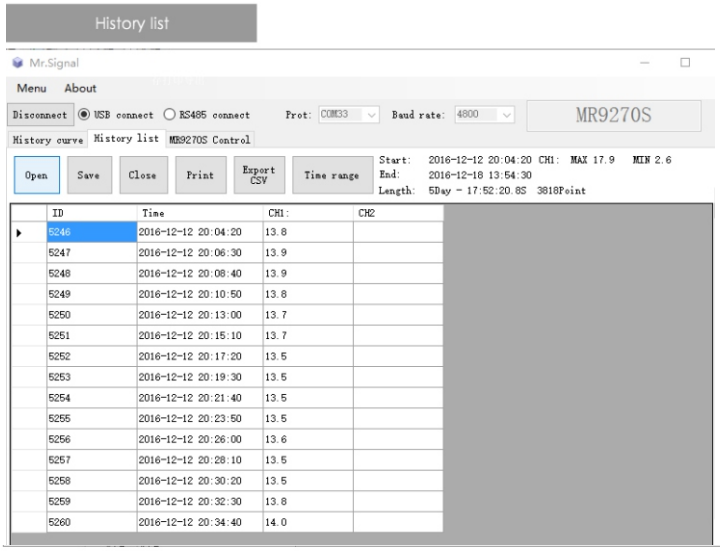
Before using this software, please set as follows:

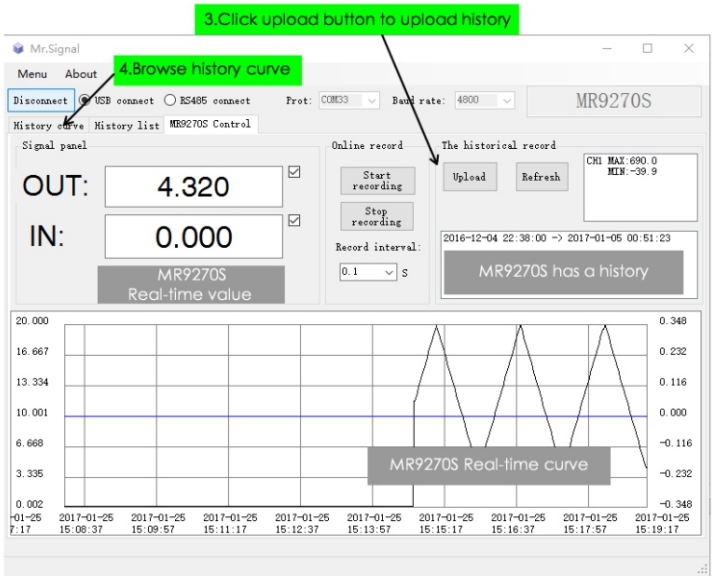
FN key -> Function menu -> Port settings -> change the mode to “USB MODBUS”,Slave address =001,

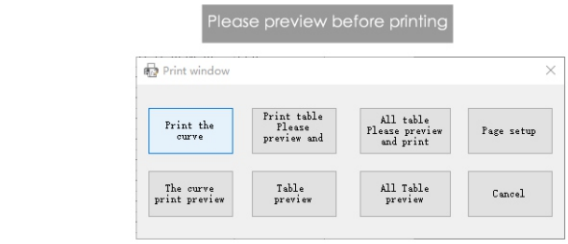
Other settings can be any value

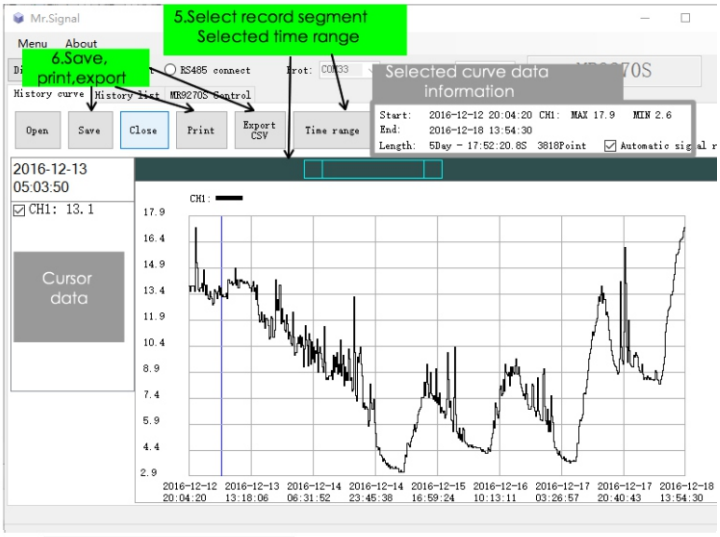
Otherwise the MR9270S will not be able to communicate with the host computer

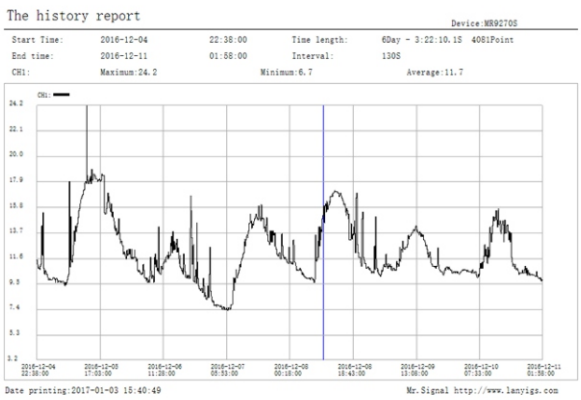


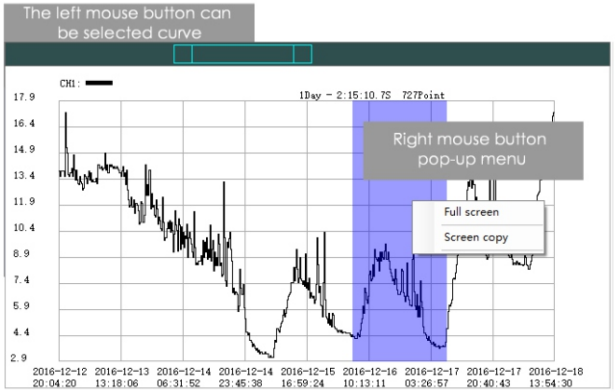












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