

UNIVERSAL DIGITAL TOUCH SCREEN Color Paperless Recorder

— Max. 32 Channels, 7inch LCD TFT —

Model No.: MPR5000ST



General Specifications

GS 18A16D01-01EN

COLOR PAPERLESS RECORDER TOUCH SCREEN, UNIVERSAL INPUT MPR5000ST

Overview

MPR5000ST is touch screen universal color paperless recorder, max 32 channels, high accuracy, universal use, easy operation, to be aimed to display, measurement the processes parameters such as temperature, humidity, pressure, flow, vibration etc in various industrial application.

Feature

- High accuracy: $\pm(0.2\%FS + 1)$ digit, 7" TFT LCD Touch Screen
- Programmable universal input: T.C., RTD, mA, VDC, mV
- Input channels no.: 1, 2, 3, 4, 5, 6...32 channels, optional
- Built in thermocouple automatic cold junction compensation
- Output: Max. 16 relay, 24VDC feeds, retransmission, optional
- RS485 communication port, standard MODBUS-RTU protocol, Ethernet TCP/IP configurable with HMI, SCADA, OPC serve etc.
- Flow totalizes with temperature, pressure compensation
- Match Function: +, -, x, /, average, max, mini
- Powerful Various curve, barograph, digit for different type display
- Strong PC software to display data in digital curve, Print and export to excel for further analysis
- Wide power supply: 100-240VAC; 24VDC



MPR5000ST

7" color LCD, Touch Screen

Universal Color Paperless Recorder

Installation: 138x138mm, Max.32 channels

Memory Flash Data Saving, Various Screen Display, Easy operation



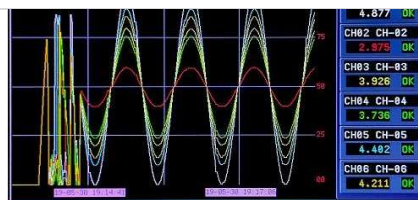
Digital Display 2 channels/screen



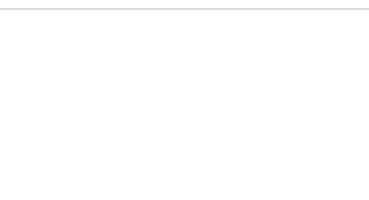
Digital Display 6 Channels/screen



Digital Display 32 Channels/screen



Digital & Curve Display



Digital & Circular Chart Display

Digital & Barograph Display

Memory Flash Drive Data Saving

Provides flexibility and variety in the handling of record data

Universal Input, Isolated



*Each channel is universal input: Thermocouple, RTD, Analog, MV signals, programable, can be configured with various sensor and transmitter in a recorder for different values reading and memory in industrial application.

* Advanced and powerful touch screen designed: easy and user-friendly screen operation configuration.

USB Pen Driver for Data Transfer Play and Plug, Fast and Easy

Configuration with SCADA, PLC, HMI, OP sever, IOT, CLOUD page flexibly

USB Pen Driver for Data Transfer



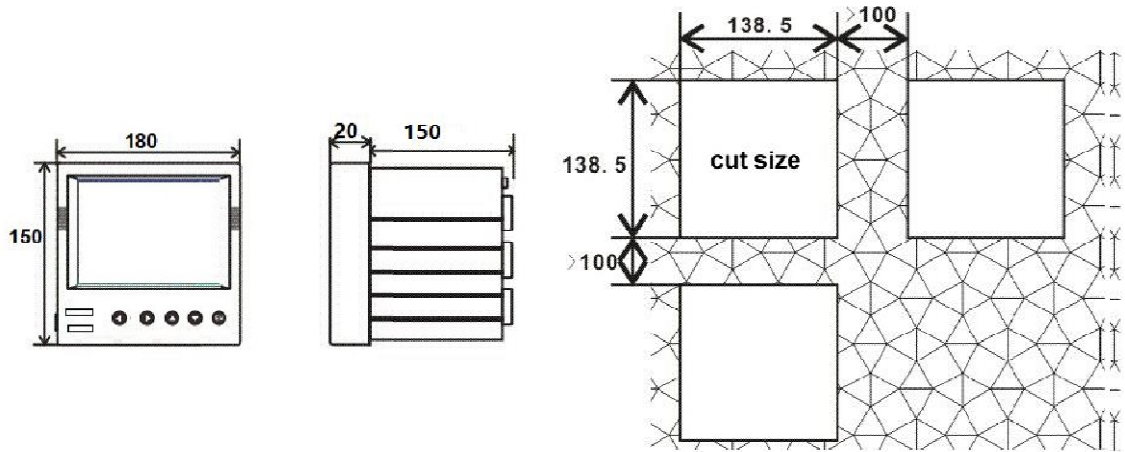
Free 8GB USB pen driver and PC software for data transferring to PC automatically , plug and play, easy to operation, data transferred automatically within some minutes when u need to transfer data and insert pen driver

Real Time Data Reading and Monitoring



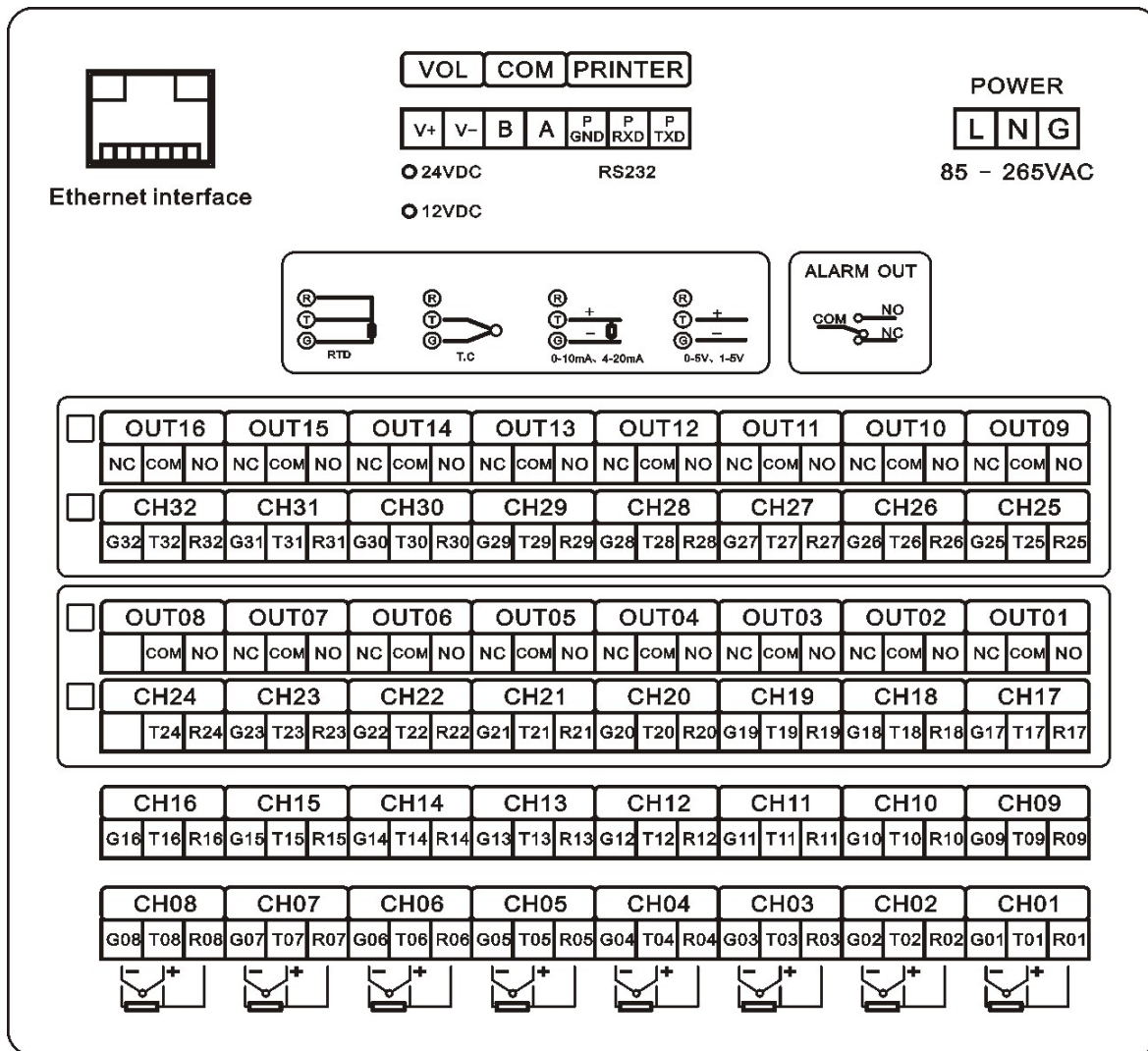
Standard RS485/Ethernet MODBUS protocol, configurable with SCADA, DCS, PLC, HMI, OPC server , IOT, Cloud for real time reading and monitoring in control room remotely, Baud rate: 9600 default,4800,19200; reading and writing functions

■ Dimension (mm)



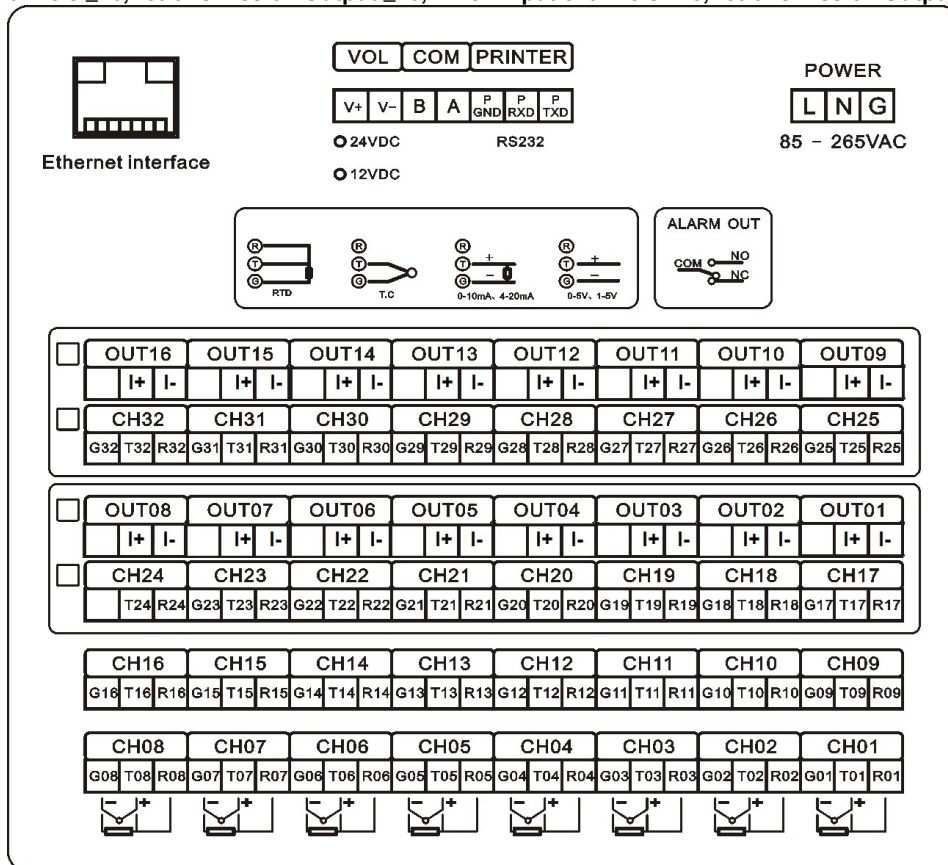
■ Diagram

a. When input channels ≤ 16 , Relay Output ≤ 16 ; When input channels > 16 , Relay Output ≤ 8 ;

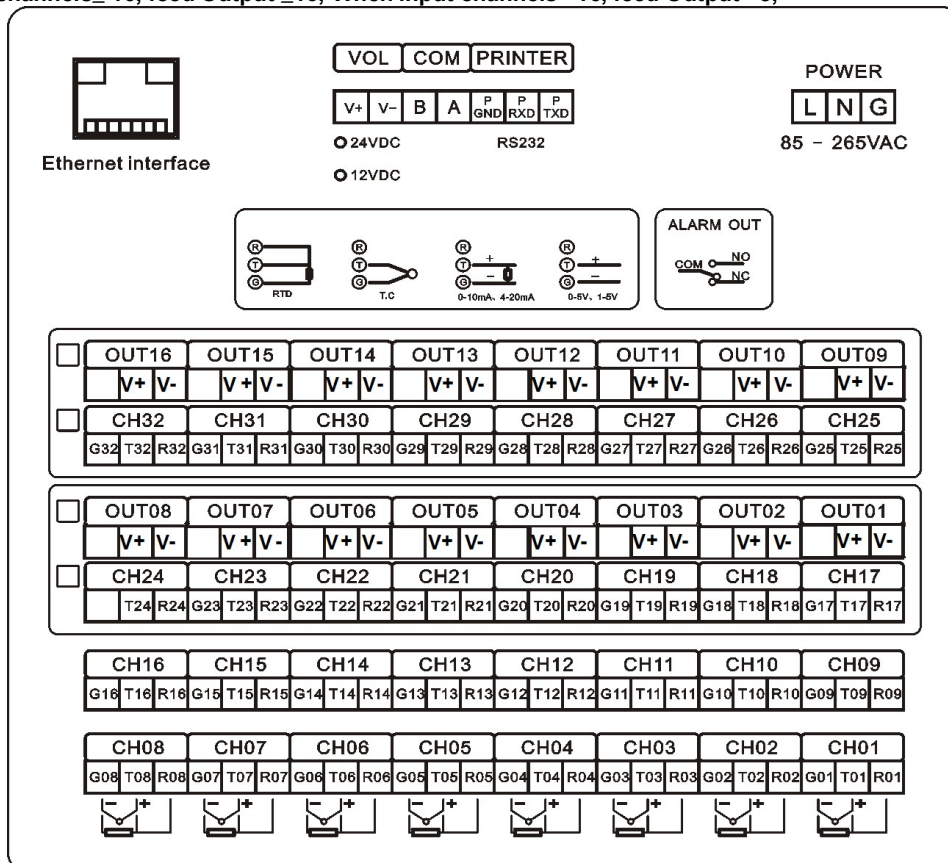


Note: When 4-20ma input, please connect 250ohm resistor in parallel connection in T, G terminal; When 0-10ma input with 500ohm

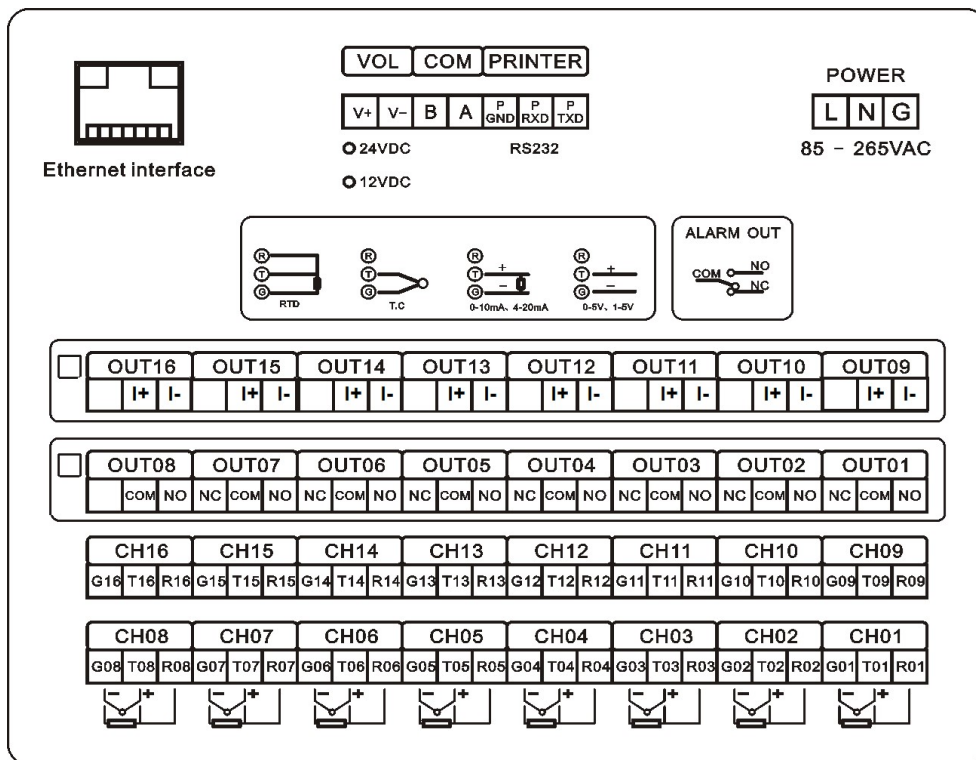
b. When input channels ≤ 16 , retransmission Output ≤ 16 ; When input channels > 16 , retransmission Output ≤ 8 ;



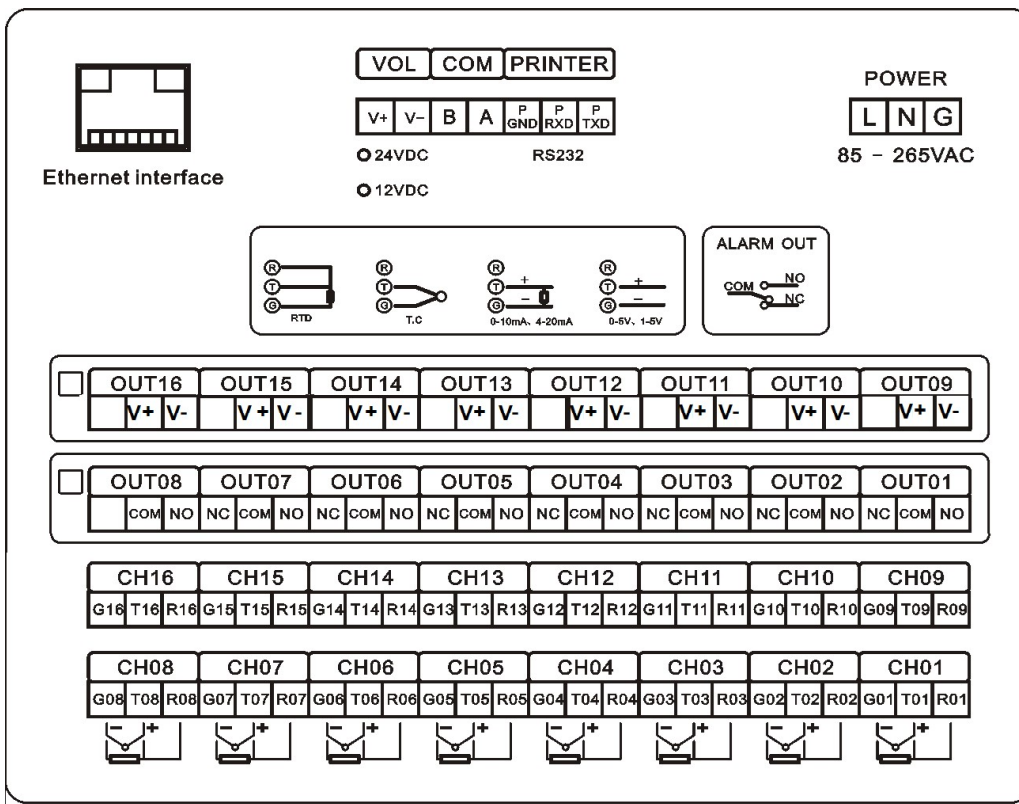
c. When input channels ≤ 16 , feed Output ≤ 16 ; When input channels > 16 , feed Output < 8 ;



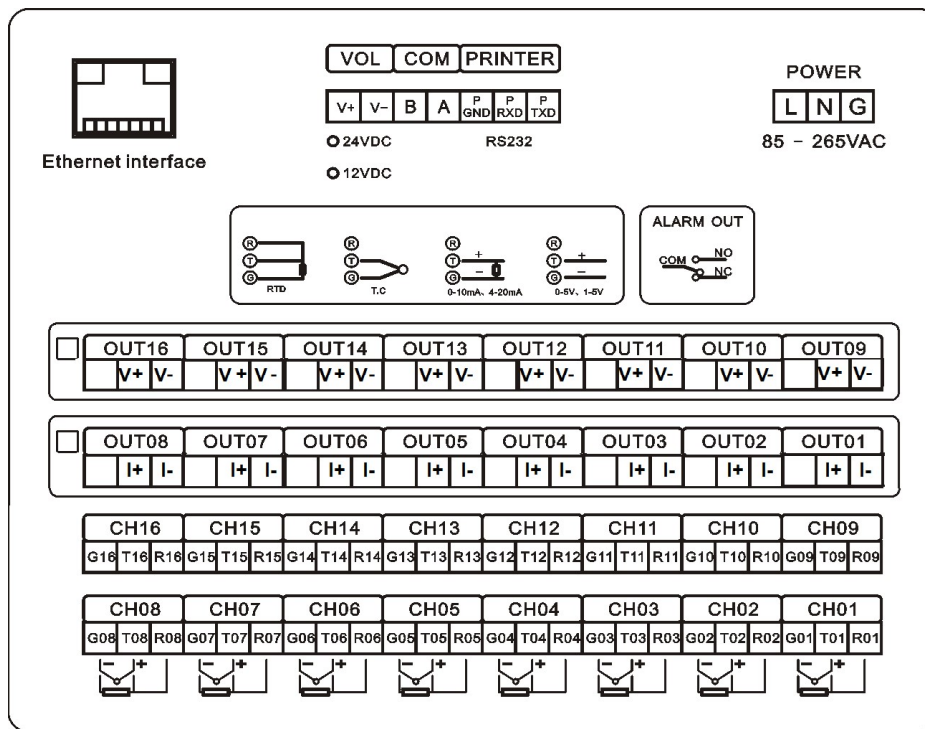
d. When input channels ≤ 16 , relay output ≤ 8 + retransmission output ≤ 8



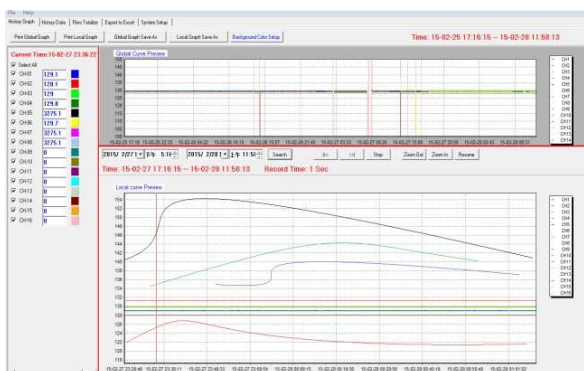
e. When input channels ≤ 16 , relay output ≤ 8 + feed output ≤ 8



f. When input channels ≤ 16 , retransmission output ≤ 8 + feed output ≤ 8



PC Software



PC Software for USB Data Transferring, standard default
Used for history data checking and further analysis

- . History Data will be displayed in digit and trend
- . History Data can be exporting the data as Excel for further analysis
- . History Data can be printed in the curve by printer directly
- . Flow Totalizer data display in shifty, weekly, monthly

Suitable for PC Version: Window 2000/XP, VISTA, Win7, 8, 10

Installation: Please copy our software in your PC directly



DCS Software for RS485, Ethernet Communication
Optional, Used for real time monitoring&reading
while memory automatically

- . Data in will be displayed in digit and curve
 - . History Data can be exporting the data as Excel for further analysis
 - . History Data can be printed in the curve by printer directly
- Suitable for PC Version:** Window 2000/XP, VISTA, Win7, 8, 10
Installation: Please copy our software to your PC directly

■ Specification

Input		Input Type		Measured Range	Input Independence
Input No.	1, 2,3, 4,5,6.....32, optional	RTD	Pt100	-200 to 600℃	>20MΩ
Thermocouple Input	K, J, T, E, R, S, B, N, Wre526, Wre325		CU50	-50 to150℃	>20MΩ
RTD Input	Pt100, CU50, CU100		CU100	-50 to150℃	>20MΩ
Analog Input	4-20mA, 0-10mA, 0-5V, 1-5V, 0-10VDC	T.C	K	-50 to 1300℃	>20MΩ
mV Input	0—20mV,0-60mV, 0-100mV, 0-500mV		J	0 to 1000℃	>20MΩ
Isolation	photoelectric isolation		T	-200 to 350℃	>20MΩ
Accuracy	± (0.2%FS +1) digit		E	0 to 800℃	>20MΩ
Resolution	0.1℃ when temperature input		R	-50 to 1700℃	> 20MΩ
Sample time	0.5~1 second per 8 channels, independent		S	-50 to 1700℃	> 20MΩ
Decimal No.	0-4 programmable; 1 when temperature		B	300 to 1800℃	>20MΩ
T.C. cold compensation	Built- in auto. Compensation		N	0 to 1300℃	>20MΩ
Compensation Tolerance	Max.±1℃		Wre526	0-2300℃	>20MΩ
Channel-GND Isolation	1000VAC		Wre325	0-2300℃	>20MΩ
Channels 'Isolation	400VAC	Analog	4-20mA	-20000 to 20000	250 Ω
Temperature shift	50PPM		0-10mA	-20000 to 20000	500Ω
CMR Ratio	85-110dB		0-5VDC	-20000 to 20000	500KΩ
T.C. wire resistor	Less than 1000Ω		1-5VDC	-20000 to 20000	500KΩ
RTD wire resistor	max1000Ω per wire, should same each wire		0-10VDC	-20000 to 20000	500KΩ
Inner CPU	32bits ARM CPU, high performance	mV	0-60mV	-20000 to 20000	>20MΩ
Hardware watchdog	CPU inner integration for long-term stability		0-100mV	-20000 to 20000	>20MΩ
Memory		Display			
Memory Capacity(≤CH16	90days x Record Interval Time/CH numbers	LCD Size		7'' color TFT LCD, touch screen	
Memory Capacity(≥CH16	180days x Record Interval Time/CH number				
Record interval time	1,2..10...3600seconds, programmable	LCD Resolution		640x480 TFT color LCD	
CH Numbers	1,2,3,4,5,6...32, ordered total channel 'no.s	Interval time		1-3600 seconds, set flexibly	
Memory type	Flash memory	Data Display Type		Digit, curve, barograph, chart;	
Data transfer Media	8GB USB pen driver; 16G, 32G optional	Background		50,000hours (lifespan)	
Transferred data file	≤CH16: 128MB, ≥CH16: 256MB in recorder	Screensaver		0-30,000second, set flexibly	
Data File Name	Year/month/Day/Address.dat: 19031801.dat	Engineer unit		℃, %, psi,bar,m3/hr, ppm..... programmable	
Full capacity memory	earliest data replaced by newest data	Resolution		32 Bit AD inner, final resolution:16 bit	
Data Format	Binary format or cannot read or write	Display		5 digits; Flow totalize:11 digits	
Outputs (Option)		Others			
Relay	Max. 16 outputs, programable	Power Supply		100-240VAC, 47-63Hz; 24VDC	
Retransmission	Max.16 channels, 4-20ma, 0-10ma output	Consumption		Maximum 25VA (25W)	
Communication	RS485, Ethernet Standard MODBUS-RTU	Insulation		Power to ground (housing) > 1500VAC	
Printing	RS232 printing port	Case material		Metal for case and bezel, acrylic panel (ip20)	
Flow Totalize	With temperature pressure compensation	Mounting		Panel flush mounting	
Math	+, -, x,/, mini, max, average	Size/Install/N.W.		180X150X150mm/138X138mm/2.4KG	
Feed	Max. 16 output,12VDC,24VDC, max. 125mA	Working Ambient		T: 0-50 deg CH: 10%-85 % (No dew)	

■ Output Specification (Option)

Relay Output		Flow Totalize	
Output No.	Max. 16 outputs	Display Type	Flow rate, Flow totalize, batch totalize
Relay type	NO+NC; 220VAC/30VDC/3A	Flow rate	-20000 to 20000, 5 digits
Output type	programmable, Individual output per channel or Common output for all channel,	Flow Totalize	0.0 to 2000000000.0, 11digits
Alarming type	HA, HHA, LA, LLA, DIFF. per channel	Batch Totalize	0.0 to 200000000.0, 10digits
Alarming display	HA, HHA, LA, LLA will be flashing when alarming occurs in screens	Decimal no.	Flow rate: 0-4, Totalizer: 1-5, programable
Serial Communication output		Compensation	Temperature, pressure compensation
Output Type	RS485 communication serial port	Com. Type	superheating steam, saturated steam, gas linear pressure, linear temperature
Isolation	Photoelectrical isolated	Square root	Off, different pressure on, different pressure off
Function	read and write the data and parameter	Engineer unit	Flow rate: Kg/h, kg/s, t/h, M3/hr.....
Protocol	Standard MODBUS-RTU protocol		Flow totalize: kg, t, m3....
Baud rate	4800, 9600, 19200		Batch totalize: kg, t,m3...
Address	0-253, programmable	Retransmission Output	
Cable	RS485 shielded twisted pair cable	Output no.& type	Max. 16 channels, 4-20ma, 0-10ma
Ethernet Communication Output		Math	
Output	Ethernet communication output	Channel no.	1-32 channels
Isolation	Photoelectrical isolated	Math type	Plus.: +, Minus: -, multiply, division: ÷
Function	read and write the data and parameter		Average, Max. Min.
Protocol	Standard MODBUS-TCP/IP protocol	Decimal No.	0-4, programmable
Printing Function		Polyline Math	
Output Type	RS232 printing port	Function	Used for value polyline offset
Data Type	History data in digital or curve	Channel no.	1-16 channels
Resolution	240dots/line	Polyline no.	0-6, programmable
Interval time	1-30000 seconds, programmable	Range	-20000 to 20000
Printing time	Programmable as required	Decimal no.	0-4, programmable
Printer (Suggested)		PC software	
Type	Dot Matrix, Ribbon mini printer	PC version	Window 2000/XP, VISTA, Win7, 8, 10
Resolution	96dots/line,	PC hardware	30MB or more
	144dots/line,	Installation	Please copy it to your PC directly
	240dots/line	PC software	free, Used when USB drive data transfer
size	122.6x66.6x73mm	Functions	Display the history data in digital and curve
Cut size	103mm(W)x57mm(H)x65mm(D)		Export the data as excel formal further
Net Weight	1kg		Print the history data in curve by printer
Paper Width	44mm/57mm		Flow totalize display in shift, week, month
Print Width	32mm/48mm	DCS software	RS485, Ethernet communication, option
Power supply	5VDC,1.5A	Functions	Real time reading, monitoring while memory

Order Code

MPR5000S color paperless recorder (installation size: 138x138mm)										Description
MPR5000S		-X	-X	-X	-X	-X	-X	-X	-X	MPR5000S universal paperless recorder
Screen	T									Touch screen 7inch LCD color TFT
Channels No.	-01									1 channel
	-02									2 channels
	-XX									
	-32									32 channels
Communication Output										None
	-C1									photoelectric- isolated RS485 communication
	-C2									photoelectric- isolated RS232 communication
	-C3									photoelectric- isolated Ethernet communication
Flow Totalize, Math Function										None
		-F								Flow totalizer; Math Function
*Relay Output (*As below notes)										None
		-NOC								1 Relay output: NO+NC ,30VDC/3A, 220VAC/3A
										
		16NOC								16 Relays output: NO+NC ,30VDC/3A, 220VAC/3A
*Retransmission Output (*As below notes)										None
		T								1 Channels' isolated 4-20mA, 0-10mA output
		..								
		16T								16 Channels 'isolated 4-20mA ,0-10mA output
Auxiliary power supply										None
		-P3								24VDC auxiliary power supply, max125mA
		-P2								12VDC auxiliary power supply, max 125mA
Print Output										None
		-P								RS232 Printing port for mini printer
Power Supply		-N								100-240VAC
		-D								24VDC
High Resolution 0.01 °C of Temperature measurement Specified Functions										None
		SP								Pt100-2:Pt100 input: -100 to 300 °C , Resolution:0.01degc, Acc.:+/-0.05%FS :+/-0.2°C Remove CU100 signal
		SK								K-300:K thermocouple input: -100 to 300°C , Resolution:0.01degc, Acc.:+/- (0.05%FS+1) °C : +/-1.2°C ; Remove Wre326 signal
		ST								T-300:T thermocouple input: -100 to 300°C , Resolution:0.01degc, Acc.:+0.05%FS :+/-1.2°C Remove Wre526 signal
		SPKT								PT100-2, K-300, T:300 signal all included

MPR5000S color paperless recorder (cutout size: 138x138mm)										Description
MPR5000S		-X	-X	-X	-X	-X	-X	-X	-X	MPR5000S universal color paperless recorder
Screen	T									180X150X150mm, Touch screen 7inch LCD color
Channels No.	-01									1 channel
	-02									2 channels
	-XX									
	-32									32 channels
Communication Output										None
	-C1									photoelectric- isolated RS485 communication
	-C2									photoelectric- isolated RS232 communication
	-C3									photoelectric- isolated Ethernet communication
Flow Totalize, Math Function										None
		-F								Flow totalizer; Math Function
*Relay Output (*As below notes)										None
		-NOC								1 Relay output: NO+NC ,30VDC/3A, 220VAC/3A
										
		16NOC								16 Relays output: NO+NC ,30VDC/3A, 220VAC/3A
*Retransmission Output (*As below notes)										None
		T								1 Channels' isolated 4-20mA, 0-10mA output
		..								
		16T								16 Channels 'isolated 4-20mA ,0-10mA output
*Feed output: Auxiliary power supply for transmitter Output (*As below notes)										None
		2P3								2 channels feeds :24VDC output, max. 125mA
		2P2								2 channels feeds :12VDC output, max. 125mA
										
		16P3								16 channels feeds :24VDC output, max.125mA
		16P2								16 channels feeds :12VDC output, max.125mA
Print Output										None
		-P								RS232 Printing port for mini printer
Power Supply								-N		100-240VAC
								-D		24VDC
High Resolution 0.01 °C of Temperature measurement Specified Functions										None
		SP								Pt100-2:Pt100 input: -100 to 300 °C , Resolution:0.01degc, Acc.:+/-0.05%FS :+/-0.2°C Remove CU100 signal
		SK								K-300:K thermocouple input: -100 to 300°C , Resolution:0.01degc, Acc.:+/- (0.05%FS+1) °C : +/-1.2°C ; Remove Wre326 signal
		ST								T-300:T thermocouple input: -100 to 300°C , Resolution:0.01degc, Acc.:+0.05%FS :+/-1.2°C Remove Wre526 signal
		SPKT								PT100-2, K-300, T:300 signal all included

Notes:

1. Please choose the relative order code for correct functions you need

E.g.: Order Code: MPR5000ST-06- C1-F-2NOC-N:

MPR5000ST: Universal input, touch screen color paperless recorder

06: 6 channels

C1:RS485 communication output,

2NOC:2 relay output: NO+NC, 3A

F: Flow totalizer with temperature and pressure compensation, math Function,

Power Supply:100-240VAC

Default standard USB function and pc software: USB data transferring and PC software.

***Notes: the function is not required; it is not required to be chosen in order code.**

2. The terminals are common for input channels >16, relay, retransmission, relay output no., feed outputs

- a. When input channels ≤ 16 , it supports Relay Output ≤ 16 ; When input channels > 16 , Relay Output ≤ 8 ;
- b. When input channels ≤ 16 , It supports Retransmission Output ≤ 16 ; When input channels > 16 , Retransmission Output ≤ 8
- c. When input channels ≤ 16 , It supports Feeds Output ≤ 16 ; When input channels > 16 , Feeds Output ≤ 8
- d. When input channels ≤ 16 , it supports Relay Output ≤ 8 + Retransmission Output ≤ 8
- e. When input channels ≤ 16 , it supports relay output ≤ 8 +feed output ≤ 8
- f. When input channels ≤ 16 , it supports retransmission output ≤ 8 +feed output ≤ 8

