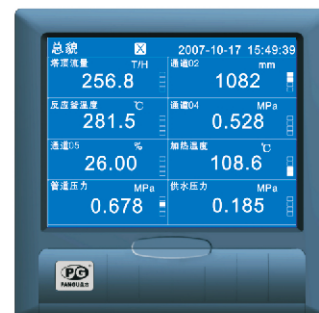


VX5300 Blue screen paperless recorder

Product overview

VX5300 maximum 16 channel all-purpose input paperless recorder can input DC current, DC voltage, frequency, millivolt, thermocouple, RTD, and other signals. It has sensor isolation power distribution output, relay alarm output, transmitter output, flow totalizer, temperature and pressure compensation, cumulative statements, historical data storage, printing, and remote communication function.



Functional characteristics

● System

- Using the latest large scale integrated circuits, international famous factory components.
- High-speed, high-performance 32-bit ARM microprocessor, which can achieve 16-way signal detection, recording, display and alarm.
- 5.6 inches 320x234 dot-matrix TFT high brightness blue screen graphic LCD display, LED backlight, clear picture quality, wide viewing angle .
- All isolated all-purpose input, can enter a variety of signals, no jumper, can be configured by software.
- The new switching power supply, working properly within the range of 100VAC ~ 240VAC.
- Integrated hardware real time clock, the clock can be accurate under power-down situations.
- Provide transmitter 24VDC isolated power distribution.
- Aluminum sealed enclosure and internal shield, which can ensure the instrument is working properly in harsh environments.
- Large-capacity FLASH memory chip store historical data, and never lost data when it is in power-down.
- 12 relay alarm output. (VX6316 series only supports 8-channel relay alarm output)

● Singal

- Enter a variety of standard signal: DC current, DC voltage, frequency, millivolt, thermocouple, RTD
- Signal full scale accuracy $\pm 0.2\%$.
- Using optoelectronic devices in channel, completely isolated.
- Provide standard 4-20mA transmitter output

● Software

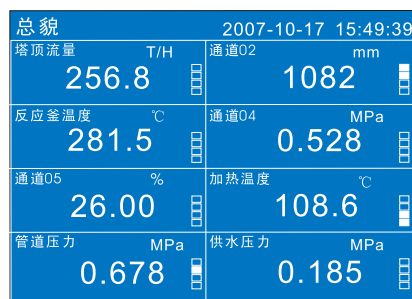
- Software locks guarantee user configuration safety.
- Chinese menu configuration can freely configurable configure and display engineering bit number, engineering units.
- Engineering quantities display range: -9999 to 19999, also supports the degree of vacuum operation and scientific notation display.
- While indicating lower and lower limit, lower limit, upper limit of each channel, upper and upper limit alarm, record and display the most recent 15 alarm information.
- Each channel supports flow accumulation function, providing hour reports, 8 hour class report, 12 hour class report, daily report + monthly report and other reports.
- Up to 4 sets of temperature and pressure compensation, support plates, and other vortex street and other flow device and steam, water, gas and other general compensation medium compensation operation.
- Curve display mode can select horizontal curve or vertical curve.

- Provide 4 sets of curve combination, each set can freely select curve channel and curve color
- Built GB231 secondary character font (6500 characters).
- Powerful T6 input method, easy to operate, support Pinyin, digital, English, special symbols, upper and lower standard character input, use international standard codes to solve the input issue of special units and Chinese-bit number.

● Communication

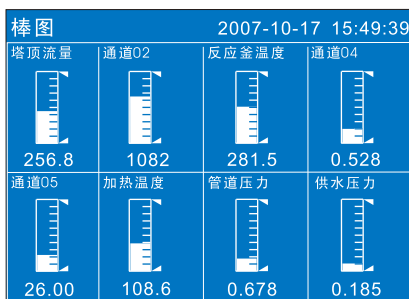
- Standard Ethernet communication interface : RJ45.
- Standard serial communication interfaces: RS232C and RS485.
- Support standard Modbus-RTU communication protocol, providing a variety of data types, such as one hundred component, engineering amount, cumulative amount. In addition to supporting the company's DataManagement data management software, also supports iFix, configuration king, MCGS, power control and other general professional configuration software, no special drive.
- Use a USB2.0 interface data, and backup history data.
- Support FAT32 file system, Windows automatically identifies the backup data files without format conversion.
- External mini-printer, you can manually print data, curves, regularly and automatically print real-time data to meet the needs of the user of on-site printing.

Display



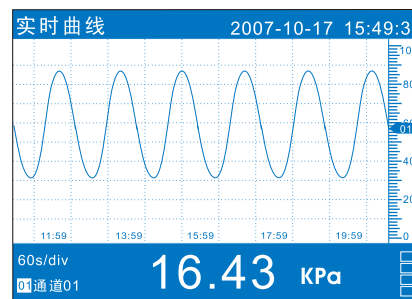
Digital display

Digital display shows measurement value, and it can also display the channel bit number, industrial units, alarm status, and the cumulative amount information.



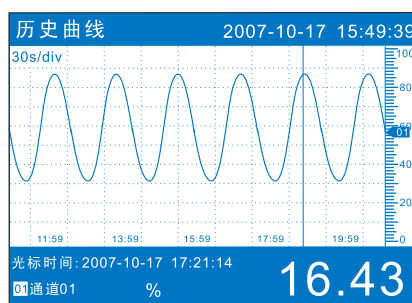
Bar graph display

Use bar graph to display measured values, which is easy and intuitive, but also show a number of channel bits, industrial units, and alarm status and other information.



Curve display

Transverse or vertical display mode can be selected. The displayed curves and curve colors can be freely combined.



Historical curve

Graphically reproduce the historical data of the selected channel.

报警列表 2007-10-17 15:49:39

通道	报警时间	消报时间	类型
01	2007-10-17 14:22:03	2007-10-17 14:22:08	LL
02	2007-10-17 14:24:03	2007-10-17 14:25:08	HH
03	2007-10-17 14:27:03	2007-10-17 14:27:08	LL

1R 2R 3R 4R 5R 6R 7R 8R 9R 10R 11R 12R

Alarm information

Display recent channel alarm time, eliminating alarm time and other information.



Flow indication

Display flow, temperature, pressure information and combination method of flow loop on the same screen, at the same time show the frequency, differential pressure, media density and other information.

General specification

Construction

Installation method : flushbonading instrument installation
(vertical instrument panel)
Angle of installation: most tilt 30 degrees backwards from
the horizontal plane
Thickness of instrument panel: 1-10mm
Boundary dimension: 144(W) x 144(H) x 220(D) mm
Weight: about 2.6kg

Input

Incoming channel: 1-12, 16 channel
Measurement period: 1 s
Signal Type :

Input mode	Input Type	measurement range
I	4~20mA	4.00 ~ 20.00mA
	10mA	0.00 ~ 10.00mA
V	5V	0.000 ~ 5.000V
	10V	0.000 ~ 10.000V
	20mV	0.00mV ~ 20.00mV
	100mV	0.00mV ~ 100.00mV
R	350Ω	0.0 ~ 350.0Ω
RTD	Pt100	-200.0 ~ 650.0°C
	Cu50	-50.0 ~ 150.0°C
	Cu53	-50.0 ~ 150.0°C
	BA1	-200.0 ~ 650.0°C
	BA2	-200.0 ~ 650.0°C
TC	S	-50.0 ~ 1768.0°C
	R	-50.0 ~ 1768.0°C
	B	500 ~ 1820°C
	K	-200.0 ~ 1372.0°C
	N	-200.0 ~ 1300.0°C
	E	-200.0 ~ 1000.0°C
	J	-200.0 ~ 1200.0°C
	T	-200.0 ~ 385.0°C
	WRES-26	0 ~ 2310°C
	F1	700 ~ 2000°C
	F2	700 ~ 2000°C
FR	Fr	0~10000Hz

Frequency input

Low level : 0 ~ 2V
High level : 4 ~ 24V

Analog input board card

- Resolution ratio: 16 bit
- Sampling rate: 1 time per second
- Measurement accuracy: $\leq 0.2\%$ F.S.
- Signal withstand voltage: minimum-15VDC, minimum+15VDC
- Sensor detection of disconnection:
Sensor open circuit of thermal resistance and thermocouple (break line)
- 4-20mA incoming current is less than 2mA
- Other Signals are Not Applicable
- Response time of Sensor open circuit:

4-20mA	2 s
1-5V	2 s
Thermal resistance	4 s
Thermocouple	4 s

Display

- Display: 5.6 inches LCD (320*234 point)
- Display color: blue/white
- Bit number: 5 Chinese characters or 10 alphabets (digital)
- Unit: 3 Chinese characters or 7 alphabets (digital)
- Status display:
Image name, board card condition, alarm condition, USB device flag, and circulation display mark
- Image display:
Measured data (pandect, digital display, bar graph display, curve display)
Function image (historical curve, accumulation statement, data backup, data printing, Alarm List)
- Pandect display: display the date and alarm condition of all measurement channels
- Curve display: Landscape Mode and Portrait Mode could be choosed
- Historical curve: display the stored data of the memory, which can be enlarged 1/2/4/8/16/32 times
- Alarm information: total records show 15 records.

Temperature and pressure compensation(VX5300F only)

- Measuring equipment: pore plate, vortex (current mode), vortex street (frequency type)
- Measuring media: steam, water, general gas
- Steam temperature: 0 ~ 600°C
- Steam pressure: 0.1 ~ 22Mpa
- Steam state: automatic decision of saturated vapor and superheated steam
- Water temperature: 0 ~ 150°C
- Water pressure: 0.6Mpa ~ 1.6Mpa
- Gas compressibility factor: automatic search is offered for air, oxygen, nitrogen, and constant can be set for general gas
- Vortex street coefficient: 0.00000 ~ 999,999

Memory

- External Storage
Media: U-disk
Form: FAT32
Mode: file record
Capacity: 8G
- Internal Storage
Media: memory
Form: binary save
Mode: continuous record
- Capacity:
1-12 channel

Interrecord gap	1s	2s	5s	10s	15s	30s	1min	2min	4min
Recording duration	3d	6d	15d	30d	45d	90d	180d	360d	720d

16 channel

Interrecord gap	1s	2s	5s	10s	15s	30s	1min	2min	4min
Recording duration	40h	3d	8d	16d	24d	48d	96d	192d	384d

Alarm

- Set Number: 4 alarms can be set at most in each channel
- Alarm type: upper and upper limit alarm, upper limit alarm, lower limit alarm, lower and lower limit alarm
- Alarm delay time: 1 - 10 s
- Alarm output: output to internal relay
- Display: When an alarm occurs, alarm condition is displayed in the homologous image, and the alarm icon is displayed in the status bar
- Alarm record: alarm information which has happened displays in the alarm list image.

● Clock

- Clock: Hardware Clock, which remains operation when it is power down
- Operating range: 2001 ~ 2099
- Clock precision: $\pm 10\text{ppm}$ (0 ~ 50°C) , exclusive of delay error which resulted in the power opened (under 1 second)

● Power

- Rated voltage: 220VAC
- Supply power range: 100 ~ 240VAC
- Rated frequency: 50 Hz
- Power dissipation: $\leq 20\text{W}$

● 24VDC transmitter distribution output

- Output voltage: 24VDC
- Maximum output current: 65mA DC (overload protection current: about 90mA)
- Output points: 4 loops

● Frequency input power output

- Output voltage: 12VDC 24VDC
- Output points: the same to the apolegamic Frequency Input
- Maximum output current: 30mA DC

● Transport and storage condition

- Environment temperature: -10°C ~ 60°C
- Environment humidity : 0% ~ 95%RH (No condensation)

● Normal running conditions

- Power supply: 220VAC/50Hz
- Operating temperature: 0°C ~ 50°C
- Environment humidity : 20% ~ 85%RH (No condensation)
- Preheating time: 30 minutes after power supply
- Installation site: indoor

Additional Specification

● Analog output (/T1,T2,T3,T4)

- Output points: 1-4 channels
- Output mode: Transmitting Output of measurement channel
- Output type: 4 ~ 20mA
- Maximum load: 750Ω

● Alarm output relay (/A1~A12)

- Output points: select from 6,8 and 12 point
- Contact capacity: 250VAC/3A, 30VDC/3A (Resistive load)
- Contact type: normally open
- Relay share: "or" operation

● Communication (/C2,/C3)

- Connection type: RS232C (/C2) or RS485 (/C3)
- Protocol: Modbus-RTU (from machine) protocol
- Traffic rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600
- Byte swap: 2-1 4-3, 1-2 3-4, 4-3 2-1, 3-4 1-2

● Print (/C4)

- Printer: panel micro printer
- Print content: real-time data, historical data, accumulated data
- Printing method: hand print, regular print

● Ethernet (/E)

Protocol : Modbus-TCP
Port number : 1

● USB (/U)

- Protocol: compatible with USB2.0 protocol
- Number of ports: 1

● Cumulative / reporting (/L)

- Cumulative points: the same as number of input channels, each input channel can be accumulated
- Cumulative range: 0 ~ 999,999,999
- Report type: hour report, 8-hour class report, 12-hour class report, daily report + monthly report
- Report length:

Report forms	Time length
Hour report	16d
8-hour class report	128d
12-hour class report	192d
daily+monthly report	1y

● Instrumentation 24VDC power supply (/P1)

Supply voltage : 20VDC~28VDC
Power : $\leq 20\text{W}$

Selection table

● 12 channel selection table

Type	Function	Specification	Description
VX5301			1 channel input
VX5302			2 channel input
VX5303			3 channel input
VX5304			4 channel input
VX5305			5 channel input
VX5306			6 channel input
VX5307			7 channel input
VX5308			8 channel input
VX5309			9 channel input
VX5310			10 channel input
VX5311			11 channel input
VX5312			12 channel input
Function	R		General records
	F		Temperature and pressure compensation
Additional specification	/T□	1~4	4 channel 4~20mA output
	/A□	1~12	1-12 normally open contact output
	/C□	2	RS232 communication
		3	RS485 communication
		4	Micro printer terminal*1
	/E		Ethernet
	/U		USB function
	/L		Accumulate/Report

*1 Support private micro printer only.

16 channel selection table

Type	Function	Specification	Description
VX5316			16 channel input
Function	R		General records
	F		Temperature and pressure compensation
Additional specification	/A8		8 normally open contact output
	/C□	2	RS232 communication
		3	RS485 communication
		4	Micro printer terminal*1
	/E		Ethernet
	/U		USB function
	/L		Accumulate/Report

Customization function

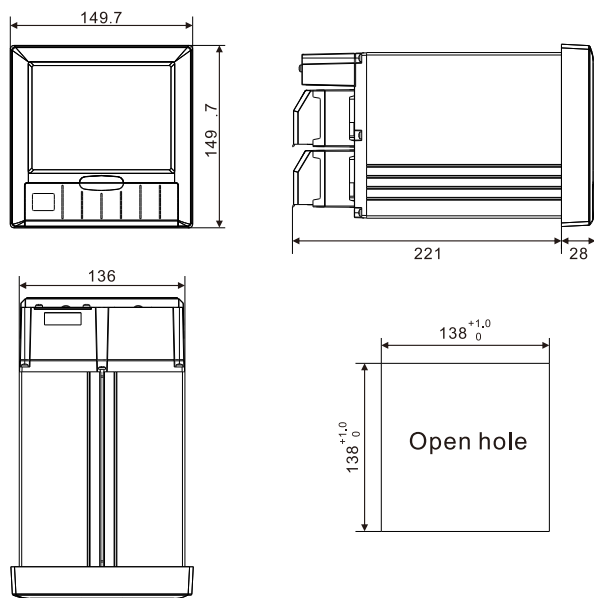
Specification	Description
/FB□ 1-12	1-12 channel frequency input, with 12V power*2
/FC□ 1-12	1-12 channel frequency input, with 24V power*2
/PT	Anti-corrosion paint protection
/P1	24VDC power supply

*2 Please contact to the manufacture to custom frequency input channel.

Accessories (sold separately)

Product	Type	Specification
U disk	860206	4GB
Communication modular converter	862101	Active RS232/RS485 modular converter
Power filter	863101	220VAC/1:1/50W
Software	864801	MDMR multi machine data management software

Mounting dimension (Unit: mm)



Terminal connection diagram

