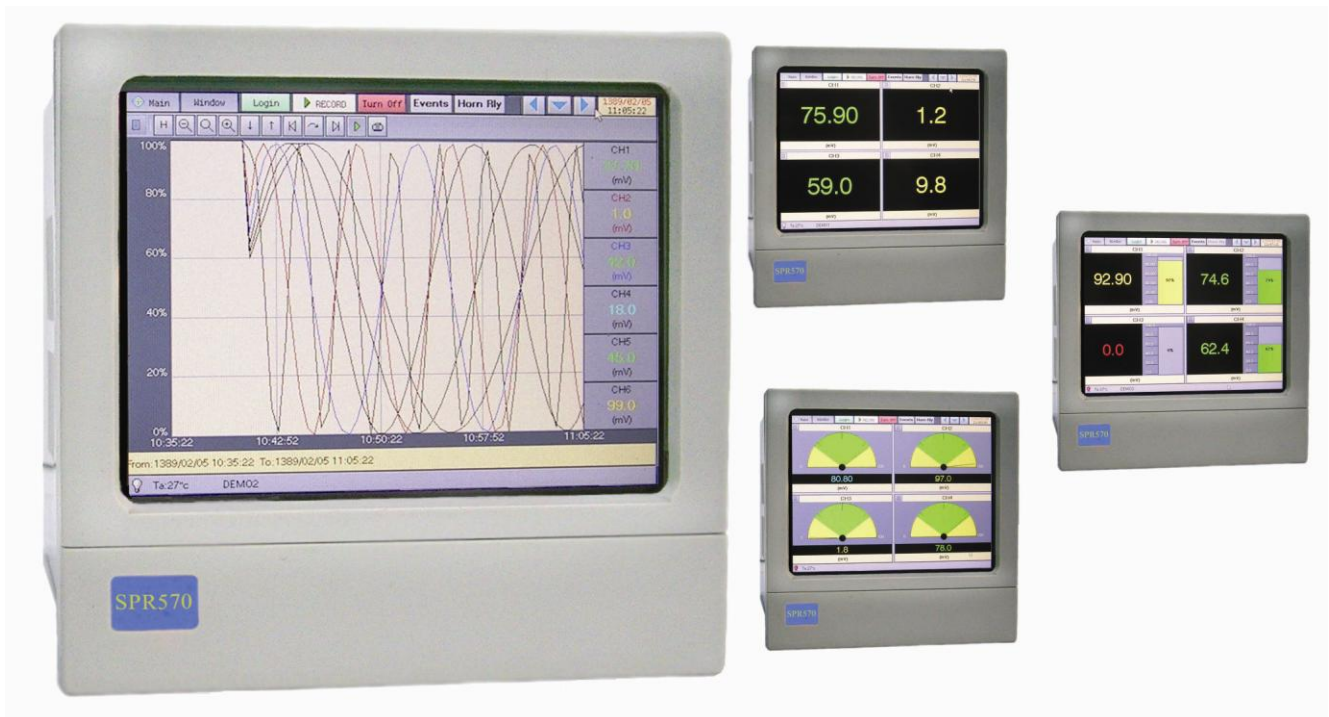




## SPR570: Smart Paperless Recorder 5.7" With TouchScreen



ثبات بدون کاغذ مدل SPR570 با صفحه نمایش 5.7 اینچ

Datasheet:

## **SPR570 (v1.61) Paperless Recorder**

The SPR570 is a secure, easy-to-use paperless recorder. It has up to 40 channels (18 internal channels and up to 40 channels with external modules) such as analog input, analog output, digital input and digital relay contact output. mV, V, mA, RTD, TC and ohm can be connected to each analog input channel (universal input) or transferred to it via digital communication. Input channels are freely configurable to suit your process requirement. In addition you can define and use up to 2 relay contact output signals for each analog input channel. It has an intuitive, touch screen display to enable operators to clearly view process data in varying formats such as digital, trend, bar graph, meter, historical and trend gauge. Data is stored in internal memory, can be used for long term records of your process. If an event occurred on the defined input signal, event is observable on the LCD and user can ACK (acknowledge) it. Horn relay can produce voice alarm on sensitive input.

### **Applications**

Building Automation /Factory Automation/ Machine Automation/ Remote Maintenance/ Remote Diagnosis/ Testing Equipment

| <b>Available Feature</b>         |  |
|----------------------------------|--|
| Display                          | 5.7 " True Color LCD (640x480)   |
| Analog Input Channel             | 18 Isolated Channel (up to 40 channel with external modules)                 |
| Digital Input Channel            | 24 Isolated Channel*   |
| Analog Output Channel            | Up to 18 Isolated Channel*   |
| Digital Output Channel           | Up to 18 Isolated Channel*   |
| Event Inputs                     | 8  |
| Alarm                            | 6 Alarm level for each analog input  |
| Internal Memory                  | 1 GB (Increased in accordance with the request)                              |
| Interface                        | RS-485 and Ethernet  |
| Virtual Channels                 | Included   |
| Batch                            | -  |
| Screen Builder                   | To design mimic diagram pages  |
| Security                         | Up to 50 unique user names with configurable access permission and passwords |
| Configuration Software           | Included   |
| Review/Quick chart Lite Software | Included   |
| Standard View                    | digital, trend, bar graph, meter, historical, trend gauge                    |

\*: Total channel can be up to 18 for internal (24 for digital input), and up to 40 with external modules.

### **Specification**

- 18 isolated analog input channels with a sampling rate of 10 sample/sec for every input and ability to increase analog signals with external modules up to 40 input channel
- Ability to define digital output for analog input (digital control signal) and increase digital outputs via external modules
- Ability to increase digital input channels with external modules up to 40 channel
- Ability to increase analog output channels with external modules up to 40 channel
- USB port for data transfer, signal settings transfer and upgrade firmware
- Industrial internal memory with a large volume for secure store information for long time
- Quick recovery of data that stored in memory based on time and signal name
- Date and time based on Hijri calendar
- Standard views for displaying measured values
- Software for viewing data and editing device setting on the PC
- Screen saver for increased LCD lifetime

- Ability to remote configuration via FTP(100/100 Base-T)
- Electrical Isolation channel-to-channel and channel to device
- Sampling rate 10 sample/sec for analog inputs and sampling rate 1000 sample/sec for digital inputs
- Can detect input failure and types of error maybe happen on the analog inputs
- Ability to define new signals types using their graph or table
- Scaling on the input signals
- Filtering on the input signals
- Ability to define totalizer for each input signal
- Online viewing of totalized values
- Ability to define mathematical channels on any physical channel and performing functions such as addition, subtraction, multiplication, division, square root, logarithm and power, etc
- Standard Views for display different signals on 1 page with different sizes and saving them and placing them on the START UP
- Different users with configurable access permission and passwords

## Device Specifications

| <b>Communication</b>              |  |
|-----------------------------------|--|
| Interface                         | RS-485   |
| Format (Parity, Data, Stop)       | (N,8,1), (odd,8,1), (even,8,1), (N,8,2), (odd,8,2), (even,8,2)             |
| Baud Rate                         | 1200 ~ 115200 bps  |
| Protocol                          | MODBUS RTU   |
| Address                           | 1-255  |
| <b>Interface</b>                  |  |
| Interface                         | Ethernet   |
| Connector Type                    | RJ-45  |
| Protocol                          | MODBUS TCP, 100 Base T   |
| <b>LCD Display</b>                |  |
| LCD                               | 5.7 " True Color LCD (with LED Backlight)                                  |
| Resolution                        | 640 x 480  |
| Touch Screen                      | Yes (Resistive)  |
| Screen Saver                      | Yes (Selectable)   |
| <b>Memory</b>                     |  |
| Internal Memory                   | 1GB up to 4GB secure data storage (Industrial Compact Flash)               |
| <b>Isolation</b>                  |  |
| Electrical Isolation (Continuous) | 2000 VAC channel-to-channel  |
| <b>Power</b>                      |  |
| System                            | Industrial Switching Power Supply  |
| AC Input                          | Universal  |
| Input Range                       | 85 ~ 264 VAC/ 47~63 HZ<br>120 ~ 370 VDC (Optional) / 24 VDC, 1A (Optional) |
| Protection                        | Short Circuit, Overload, Over leakage, Over Temperature                    |
| MTBF                              | 309700 hrs   |
| Leakage Current                   | Low  |
| Cooling By                        | free air convection  |
| <b>Mechanical</b>                 |  |
| Dimensions Box (W x H x D)        | 144mm x 144mm x 220mm  |
| Installation                      | Panel Mount  |

## I/O Specifications

| Analog Input Card                 |              |  |
|-----------------------------------|--------------|--|
| Channels                          |              | 6 Per Card   |
| Universal Input Type              | Voltage      | ±10V   |
|                                   | Current      | 0~ 5 mA, 0~ 20 mA, 4~ 20 mA  |
|                                   | Thermocouple | J, T, E, N, XK, XA (K)   |
|                                   | RTD          | 3850(10Ω), 3850(46Ω), 3850(50Ω), 3850(100Ω), 3911(10Ω), 3911(50Ω), 3911(100Ω),s 3926(10Ω), 3926(50Ω), 3926(100Ω), CU(10Ω), CU(50Ω), CU(100Ω), Ni(10Ω), Ni(50Ω), Ni(100Ω) |
| Resolution                        |              | 13-bit   |
| Electrical Isolation (Continuous) |              | 2000 VAC channel-to-channel  |
| Overvoltage Protection            |              | 250 VAC  |
| Input Impedance                   |              | RTD, TC >1MΩ<br>Volt: 20KΩ   |
| Individual Channel Configuration  |              | Yes  |
| Sampling Rate                     |              | 10 sample/sec (100 ms parallel sampling)   |
| Channel Fault detection time      |              | 3 Sec  |
| Thermal effect                    |              | 3 mΩ/°C for ohm input, 2μV/°C for mV input   |

| Analog Output Card      |         |                            |
|-------------------------|---------|----------------------------|
| Channels                |         | 6 Per Card                 |
| Output Types            | Voltage | 0~10 V , 0~5 V             |
|                         | Current | 0~20 mA , 4~20 mA , 0~5 mA |
| Resolution              |         | 16-bit                     |
| Accuracy                |         | ±0.02% of FSR              |
| Voltage Output Load     |         | Max: 10K ohm               |
| Current Load Resistance |         | 400 Ohms                   |
| Isolation               |         | 2000 VAC                   |
| Output Stability Time   |         | 0.1 S                      |

| Digital Input Card     |               |
|------------------------|---------------|
| Channels               | 8 per Card    |
| Input Frequency        | 500 HZ        |
| On Voltage Level       | 3.5 ~ 150 VDC |
| Off Voltage Level      | 0 ~ 2.5 VDC   |
| Input Impedance        | 47 kΩ         |
| Overvoltage Protection | ±150 VDC      |
| Sampling Rate          | 1000 bps      |

| Digital output Card |   |
|---------------------|---|
| Channels            | 6 Per Card                                |
| Relay Type          | Signal Relay (Normal Open , Normal Close) |
| Contact Rating      | 3 A @ 120 VAC , 3A @ 24 VDC               |

## RTD Input Range

| RTD Type   | Overall Range |
|------------|---------------|
| 3850(10Ω)  | -200 ~ 850°C  |
| 3850(46Ω)  | -200 ~ 850°C  |
| 3850(50Ω)  | -200 ~ 850°C  |
| 3850(100Ω) | -200 ~ 850°C  |
| 3911(10Ω)  | -200 ~ 850°C  |
| 3911(50Ω)  | -200 ~ 850°C  |
| 3911(100Ω) | -200 ~ 850°C  |
| 3926(10Ω)  | -200 ~ 850°C  |
| 3926(50Ω)  | -200 ~ 850°C  |
| 3926(100Ω) | -200 ~ 850°C  |
| CU(10Ω)    | -200 ~ 260°C  |
| CU(50Ω)    | -50 ~ 180°C   |
| CU(100Ω)   | -50 ~ 200°C   |
| Ni(10Ω)    | -192 ~ 175°C  |
| Ni(50Ω)    | -192 ~ 175°C  |
| Ni(100Ω)   | -192 ~ 175°C  |

## Thermocouple Input Range

| T/C Type  | Overall Range |
|-----------|---------------|
| TC-XK     | -250 ~ 1200°C |
| TC-XA (K) | -250 ~ 1200°C |
| TC-J      | -200 ~ 1200°C |
| E         | -270 ~ 1000°C |
| T         | -270 ~ 400°C  |
| N         | -270 ~ 1300°C |

## Standard Views:

### Digital View

- Display maximum 24 channel values
- Display Numerical value and input type of each channel



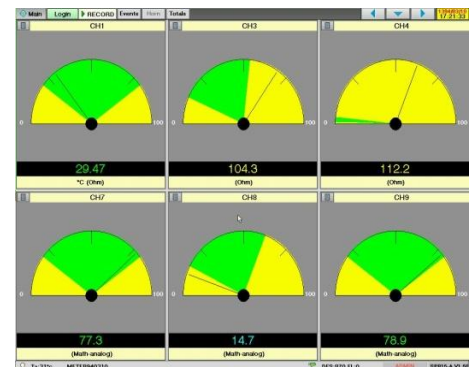
### Trend View

- Display maximum 6 channel values as a trend diagram
- Ability to define different color for each channel separately
- Display current time and date information (Hijri calendar)
- Display Numerical value and input type of each channel
- Vertical or horizontal trending
- Ability to determine the trend thickness



### Meter View

- Display maximum 6 channel values as meter diagram
- Display Numerical value and input type of each channel
- Change color according the range of values defined for each signal



## Bar Graph view

- Display maximum 6 channel values
- Bar graph presentation of the analog channels
- Display Numerical value and input type of each channel
- Change color according the range of values defined for each signal



## Trend Gauge:

- Up to 6 displays in a page
- Separate trend and bar graph for each channel
- Zooming on each trend
- Separate ruler for each trend
- Numerical data display
- Display Numerical value and input type of each channel
- Change color according the range of values defined for each signal



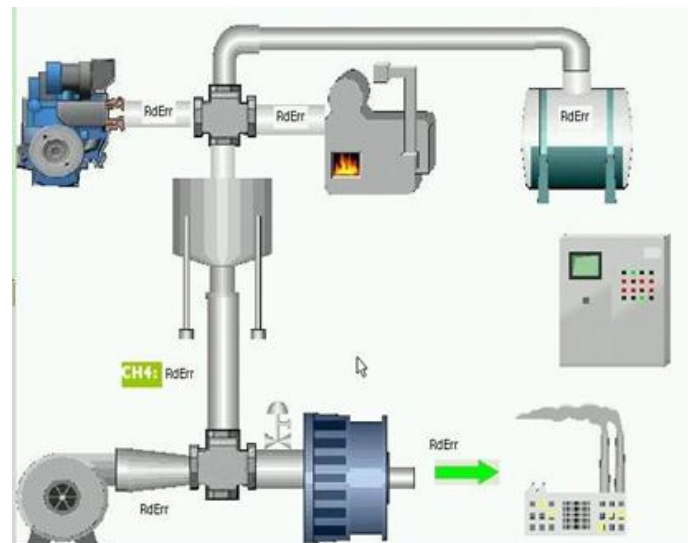
## Historical View

- Ability to offline load of maximum 6 channel data
- Ability to define specific time period to load channel data
- Display channels values at any time using ruler
- Vertical or horizontal diagram display



## Mimic Diagram

- Ability to design graphic pages or mimic diagram
- The library contains graphics equipment



# Mechanical information and installation guide SPR570

