

## VR18 PAPERLESS RECORDER

### HIGH RESOLUTION 6.1" SCREEN WITH 18 CHANNELS AND PLUG & PLAY I/O

The VR18 is the newest, most advanced paperless recorder available. It is ideal for monitoring, recording, and evaluating processes in a variety of applications.

The VR18 is a modular paperless recorder that allows for up to 18 analog inputs or a mix of analog and digital I/O cards. Other features include: high-resolution color display (640 x 480 pixels), infrared detector for prolonged display life, plug & play I/O card, shallow unit depth, and user-friendly interface. The low-voltage and bench-top kit options also make the VR18 ideal for portable applications.

Multiple display formats and easy-to-access keys make monitoring and setup extremely easy. Data can be stored in flash ROM, on a compact flash card, or on a PC via RS232/422/485 or Ethernet options. The VR18 meets UL, CSA, and CE approval standards.

- **6.1" Color TFT LCD with 640x480 pixels resolution**
- **6 Slot Plug & Play Supported I/O Cards**
- **Infrared Detector to extend display life**
- **Various Display Formats**  
Vertical trend, Horizontal trend, Bar Graph, Numerical or mixed
- **Up to 18 isolated input channels**
- **High Flexibility**  
User configurable I/O card;  
Expandable modular architecture;



- **User-Friendly**  
Soft keys coupled with interactive dialog simplify setup &  
Operation with easy-to-access function keys
- **Data Saved in removable Compact Flash ROM**
- **Communication**  
Standard Ethernet and optional RS-232/422/485
- **High Accuracy**  
18-bit A-D analog input, 15-bit D-A analog output
- **Fast Sampling Rate – 5 times per second**  
200ms for all channels; Programmable Filter or Moving Average Sampling Method
- **Data Log interval configurable with Instant, Average, Minimum or Maximum Values**
- **Optional Configurable Alarms, Messages**
- **Optional Transmitter Power Supply Module; 24VDC/30mA - six non-isolated channels**
- **Optional Math Module including Boolean logic, totalize, count, timer, etc. Includes formatted reports for daily, weekly & monthly totalize & count values**
- **Portable/Bench-Top Assembly Kit**
- **Agency Approvals – CE, UL component recognition & CSA**

## GENERAL SPECIFICATIONS

POWER: 90-264VAC, 47-63Hz, 60VA, 30W maximum 11-18 or 18-36 VDC 60VA, 30W maximum  
DISPLAY: 6.1" TFT LCD, 640X480 pixel resolution, 256colors  
MEMORY: Storage Memory on board: 8MB.CF Card: 16MB standard. Optional 64,128MB  
OPERATING TEMPERATURE: 5°C to 50°C  
HUMIDITY: 20 to 80% RH (non-condensing)  
DIMENSIONS (W x H x D): 166 x 144 x 174mm [6.53" x 5.67" x 6.85"] Panel Mount DIN cutout dimensions: 138 x 138mm

## ANALOG INPUT CARD (AI181, AI182, AI183)

RESOLUTION: 18 bits  
SAMPLING RATE: 5 times/second  
MAXIMUM RATING: -2 VDC minimum, 12 VDC maximum  
TEMPERATURE EFFECT:  $\pm 1.5 \mu\text{V}/^\circ\text{C}$  for all inputs except mA input  $\pm 3.0 \mu\text{V}/^\circ\text{C}$  for mA input  
SENSOR LEAD: T/C:  $0.2 \mu\text{V}/\text{ohm}$   
RESISTANCE EFFECT: 3-wire RTD:  $2.6^\circ\text{C}/\text{ohm}$  of resistance difference of two leads  
BURN-OUT CURRENT: 200nA  
INPUT TYPED: J, K, T, E, B, R, S, N, L, PT100 (DIN), PT100 (JIS), mV, mA, 0~1V, 0~5V, 1~5V, 0~10V

## DIGITAL INPUT CARD (DI181)

CHANNELS: 6 per card  
LOGIC LOW: -30V minimum, 0.8V maximum.  
LOGIC HIGH: 2V minimum, 30V maximum  
EXTERNAL PULL-DOWN: 1K Ohm maximum resistance  
EXTERNAL PULL-UP: 1.5M Ohm minimum resistance

## COMM MODULE (CM181)

INTERFACE: RS-232/422/485, Modbus RTU  
BAUD RATE: 0.3~38.4 baud.

## DIGITAL OUTPUT CARD (DO181)

CHANNELS: 6 per card  
CONTACT FORM: N.O. (form A).  
RELAY RATING: 5A/240 VAC, life cycles 200,000 for resistive load

## STANDARD ETHERNET

PROTOCOL: Mod Bus TCP/IP, 10 Base T  
PORTS: AUI (Attachment Unit Interface)/RJ-5

## Part Number Matrix

VR18 – □ □ □ □ - □ □ □ - □ □ □  
1 2 3 4 - 5 6 7 - 8 9 10

- |  |  |  |
|--|--|--|
| <b>1</b> Power<br>4: 90-250 VAC, 47-63 Hz<br>6: 11-18 VDC<br>7: 18-36 VDC<br>9: Special order  | <b>4</b> Digital Output Card<br>0: none<br>1: 6 relay<br>2: 12 relay   | <b>9</b> Case/Mounting<br>1: standard Panel Mounting<br>2: Bench top/Portable style w/handle     |
| <b>2</b> Analog Input Card<br>0: none<br>1: 1 channel<br>2: 2 channel<br>3: 3 channel<br>4: 4 channel<br>5: 5 channel<br>6: 6 channel<br>A: 9 channel<br>B: 12 channel<br>C: 15 channel<br>D: 18 channel | <b>5</b> Communication<br>0: standard Ethernet interface<br>1: RS-232/422/485 + Ethernet<br>9: Special order   | <b>10</b> Special Option:<br>0: none<br>1: 24VDC power supply—for 6 channels<br>X: other options |
| <b>3</b> Digital Input Card<br>0: none<br>1: 6 channel<br>2: 12 channel  | <b>6</b> PC software<br>1: Free basic software Observer I for non-communication application<br>2: Extensive software Observer II for of RS-232/422/485 or Ethernet | <b>7</b> Firmware<br>0: Basic function<br>1: Mathematics, Counter & Totalizer                    |
|  | <b>8</b> Storage Media [Compact Flash CF]<br>1: 16MB<br>2: 64 MB<br>3: 128 MB CF card<br>X: other option   | <u>NEMA 4X Option</u><br>part #: VR18-NEMA4X CVR   |

Note: VR18 has 6 expansion slots for analog inputs, Transmitter Power Supply module, digital inputs and digital relay outputs. Each card takes one of the 6 available slots.

Analog Input Cards are available as one, two or three inputs.

Transmitter Power Supply Card has 6 non-isolated 24VDC/30mA outputs

Digital Input & Output Cards: Each card has 6 inputs or relay outputs.

Communication option RS232/422/485 does not utilize an expansion slot.

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