VR06 PAPERLESS RECORDER

HIGH RESOLUTION 6.4” SCREEN WITH UP TO 6 CHANNELS AND PLUG & PLAY I/O

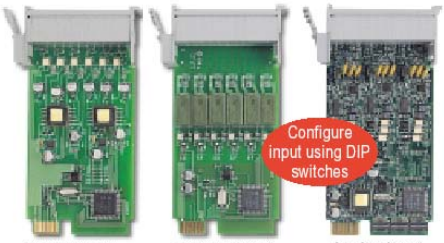
The VR06 is the newest, most advanced paperless recorder available. It is ideal for monitoring, recording, and evaluating processes in a variety of applications.

The VR06 is a modular paperless recorder that allows for up to 6 analog inputs and/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 VR06 ideal for portable applications. For more than 6 analog inputs refer to the VR06.

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 VR06 has UL, CSA, and CE approvals.

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

Back View



- **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
- **Security: Basic or optional with CFR21 Features**
- **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**
- **Standard 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
  RoHS Compliant

VR06 v2.37 November 2011
http://www.futuredesigncontrols.com

P.O. Box 1196 / Bridgeview, IL 60455
Office: 888.751.5444 / Fax: 888.307.8014
Technical Support: 866.342.5332

GENERAL SPECIFICATIONS

POWER: 90-250VAC 47-63Hz, 20-28VAC 47-63Hz, 11-18 or 18-36 VDC: all 60VA 30W maximum
DISPLAY: 6.4" TFT LCD, 640X480 pixel resolution, 256colors
MEMORY: Storage Memory on board: 8MB. CF Card: 512MB standard; optional 1 & 2 GB
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) [consult manual for special range Negative/Positive VDC input modules]

RESOLUTION: 18 bits
SAMPLING RATE: 5 times/second
MAXIMUM RATING: -2 VDC minimum, 12 VDC maximum
SENSOR LEAD: T/C: 0.2 µV/ohm
BURN-OUT CURRENT: 200nA
TEMPERATURE EFFECT: ±1.5 µV/°C for all inputs except mA input ±3.0 µV/°C for mA input
RESISTANCE EFFECT: 3-wire RTD: 2.6°C/ohm of resistance difference of two leads
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

ANALOG OUTPUT CARD (3-Channels: AO183I for mA or AO183V for VDC output)

RESOLUTION: 15 bits
ACCURACY: ±0.05% of Span ±0.0025% /˚C
LINEARITY: ±0.005% of Span
TEMPERATURE EFFECT: ±0.0025% of Span /˚C
OUTPUT REGULATION: 0.01% for full load change
OUTPUT SETTING TIME: 0.1 second (stable to 99.9%)
LOAD RESISTANCE: 0-500 ohms (current), 10K ohms minimum (voltage)

DIGITAL INPUT CARD (DI181)

CHANNELS: 6 per card with maximum of one card
LOGIC LOW: -30V minimum, 0.8V maximum.
LOGIC HIGH: 2V minimum, 30V maximum
EXTERNAL PULL-DOWN: 1K Ohm maximum resistance
EXTERNAL PULL-UP: 1.5MOhm 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 with maximum of one 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/1P, 10 Base T
PORTS: AUI (Attachment Unit Interface)/RJ-5

Part Number Matrix

VR06 – □ □ □ □ - □ □ □ - □ □ □
1 2 3 4 - 5 6 7 - 8 9 10

1 Power
- 4: 90-250 VAC, 47-63 Hz
- 5: 20-28 VAC, 47-63 Hz
- 6: 11-18 VDC
- 7: 18-36 VDC
- 9: Special order

2 Analog Input Card
- 1: 1 channel
- 2: 2 channel
- 3: 3 channel
- 4: 4 channel
- 5: 5 channel
- 6: 6 channel

3 Digital Input Card
- 0: none
- 1: 6 digital inputs

4 Digital Output Card
- 0: none
- 1: 6 relay outputs

5 Communication
- 0: standard Ethernet interface
- 1: RS-232/422/485 + Ethernet
- 9: Special order

6 PC software
- 1:Observer I: non-communication application
- 2: Observer II: RS232/422/485 or Ethernet

7 Firmware
- 1: Mathematics, Counter, Totalizer & CFR-21 Type Features

8 Storage Media [Compact Flash CF]
- 6: 1 GB
- 7: 2 GB
- X: other

9 Case/Mounting
- 1: Standard Panel Mounting
- 2: Bench top/Portable style with handle, front power switch & power cable

10 Special Option:
- 0: none
- 1: 24VDC power supply–for 6 channels
- 2: 3-channel Retrans: current output
- 3: 6-channel Retrans: current output
- D: 3-channel Retrans: voltage output
- E: 6-channel Retrans: voltage output
- X: Consult factory and/or manual for other combinations

NEMA 4X Option part #: VR18-NEMA4X CVR

Notes: VR06 has 6 expansion slots for analog & digital I/O and Transmitter Power Supply modules
Observer I software reads data from VR06 CF Card; Observer II reads data from CF Card or via communication and offers additional features. For more information refer to Instruction Manual or http://www.futuredesigncontrols.com
Each card takes one of the 6 available slots. [Communication option RS232/422/485 does not utilize an expansion slot.]
Universal & Special Range Analog Input Cards are available as one, two or three inputs.
Special Range Analog Input Cards with Negative/Positive mV, VDC & mA spans are available [no t/c or RTD inputs]
Analog Output Cards are available with three outputs.
Transmitter Power Supply Card has 6 non-isolated 24VDC/30mA outputs
Digital Input & Output Cards: Each card has 6 inputs or relay outputs.