

Model 71VR1 Compact Paperless Recorder

- 1/4 DIN size (96 x 96 mm) panel mount compact recorder
- 3.5 inch TFT color LCD display
- Max. 8-point each of analog and discrete inputs are stored, displayed and alerted.
- Max. 8-point discrete outputs can be assigned for alarm trips.
- Direct field inputs at the built-in terminals and optional remote inputs via Modbus RTU
- Data can be transferred to PC via the front IR port

The soldering machine photo is for illustrative purposes only. (Not an actual product)

M-System's Model 71VR1 is a 1/4 DIN size (96 x 96 mm panel cutout), compact paperless recorder that can store and display the maximum of 8-point analog inputs and 8-point discrete inputs. The 3.5 inch TFT color LCD display can show two pen channels at once on a trend graph or digital/bargraph indicators.

Field signals are connected to local terminals and polled remotely from Modbus RTU I/O devices. Three models are available depending on the number of local inputs:

- 71VR1-E001 : Di x 2, Do x 2 and Modbus
- 71VR1-E101 : Di x 2, Do x 2, DC mA/V input x 2 and Modbus
- 71VR1-E501 : Di x 2, Do x 2, DC mA/V input x 2, universal input x 3 and Modbus

Data sampling rate is selectable between 100 msec. and 10 seconds depending upon the number of local and remote inputs. In addition to manual and continuous recording mode, conditional recording triggered by AND/OR functions in combinations of analog/discrete signal values/states is available. This allows the user to record only necessary part of the data in order to save memory area.

Each analog input signal is independently set with four (4) alarm thresholds. In addition to the built-in DO terminals, at the maximum of 8-point discrete outputs can be mapped on remote output devices to alert externally.

Alarm events are recorded in an alarm history file, up to 200 events.

Data is stored in a memory card at the rear side of the recorder, and can be transferred to a PC and converted into CSV format files with this card or via the front IrDA port.

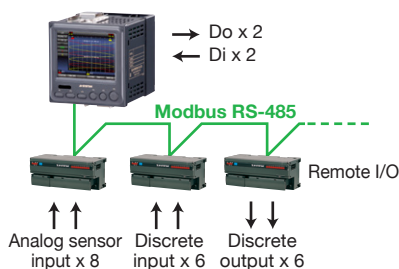
Thanks to its small panel size and shallow depth of only 10 centimeters (4 inches) needed behind the panel surface*1, the 71VR1 can be mounted on control panels built into industrial and commercial machineries. Imagine the 71VR1 mounted on a wave soldering machine. Single unit can monitor and record solder temperature, conveyor speed, starting/stopping of the machine, current consumption and their alarm history.

IP 65 front panel is also suitable for applications and installations where splashing water is present such as food and sanitary plants.

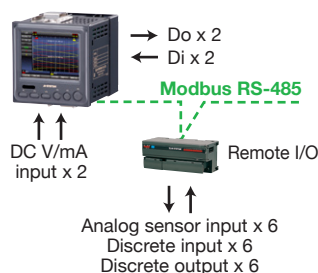
For M-System product information and downloadable data sheets, visit On-Line Signal Conditioners Data Library at: <http://www.m-system.co.jp/mssenglish/index.htm>.

*1. Except that for personnel access

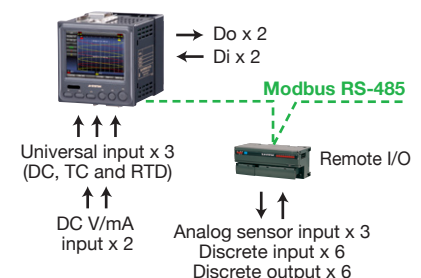
Remote I/O Type 71VR1-E001



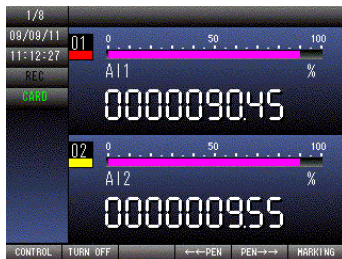
DC Input Type 71VR1-E101



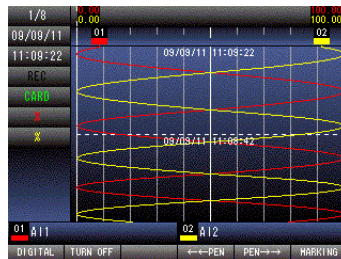
Universal Input Type 71VR1-E501



Clear & Legible Color Display



Digital Indicators



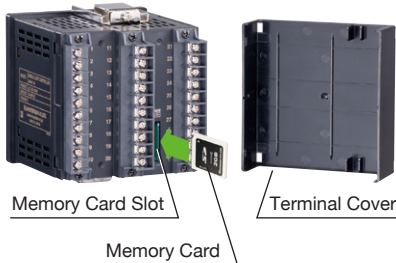
Trend Graph

ALARM HISTORY			1/17
DATE/TIME	LOG		
08/08/11 18:08:33/500	SET	AI1	
08/08/11 18:08:28/500	SET	AI2	
08/08/11 18:08:27/000	SET	AI1	
08/08/11 18:08:24/500	SET	AI2	
08/08/11 18:08:23/500	SET	AI1	
08/08/11 18:08:22/500	SET	AI2	
08/08/11 18:08:18/500	SET	AI1	
08/08/11 18:08:13/500	SET	AI2	
08/08/11 18:08:08/500	SET	AI1	
08/08/11 18:08:07/500	SET	AI2	
08/08/11 18:08:05/000	SET	AI1	
08/08/11 18:08:03/500	SET	AI2	

Alarm History

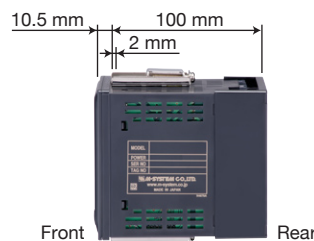
Memory Card & Safety Cover

The rear field terminal blocks are separable for easy wiring and installation. The safety cover protecting against electrical shock is tethered with a strap.



Only 10 cm Behind the Panel

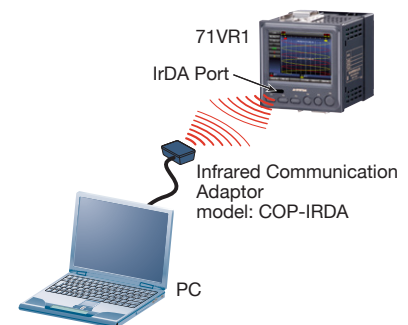
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*1. Except that for personnel access

Infrared Communication

Stored data can be uploaded to a PC using the Infrared Communication Adaptor.



SPECIFICATIONS

■ GENERAL SPECIFICATIONS

Degree of protection: IP65

Connection: M3 screw terminal

Screw terminal material:

Nickel-plated steel (torque 0.5 N·m)

Isolation:

Analog inputs to contact input to contact outputs to Modbus to power to FG

Usable logical channels

Analog input: Max. 8 points

Discrete input: Max. 8 points

Discrete output: Max. 8 points

Data storage: Memory card

Trend:

File names by date; 60000 samples per file; max. 200 files (approx. 13 days @storing rate 0.1 s, 138 days @1 s, 1388 days @10 s)

Alarm history:

One file; max. 200 events

■ DISPLAY

Display device: 3.5-inch TFT LCD

Display colors: 256

Resolution: 320 x 240 pixels

Backlight: LED

Display update interval: 500 msec.

■ INPUT & OUTPUT

DC Input:

-20 to +20 mAdc, -1 to +1 Vdc,

-5 to +5 Vdc, -10 to +10 Vdc

Universal input

DC Input: -20 to +20 mAdc, -1 to +1 Vdc,

-5 to +5 Vdc, -10 to +10 Vdc

T/C: K, E, J, T, B, R, S, C, N, U, L, P

RTD: Pt100, JPt100, Pt50, Ni100, Cu10, Cu50

Contact input: Dry contact, 2 points

Contact output: Relay contact, 2 points

■ EXTERNAL INTERFACE

• Modbus RTU:

Int data (signed 16 bit) for analog signal

Transmission:

Half-duplex, asynchronous, no procedure

Interface: Conforms to EIA RS-485

Max. transmission distance: 500 meters

Baud rate: 4800, 9600, 19200, 38400 bps

• Infrared interface

Interface: IrDA

Max. transmission distance: ≤0.2 m (with COP-IRDA and 71VRCFG)

■ INSTALLATION

Power input

AC: 100-240 V, approx. 10 VA @240 V

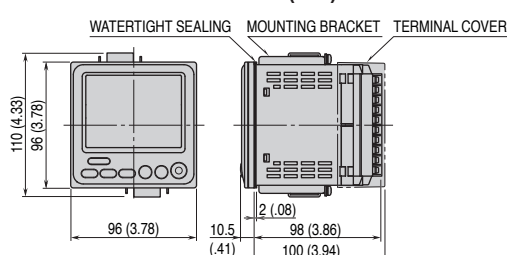
DC: 24 V, 85-150 V, approx. 6 W

Operating temperature:

-5 to +55°C (23 to 131°F)

Weight: 550 g (1.2 lbs)

EXTERNAL DIMENSIONS



Your local representative: