

Paperless Recorder

RD8900 Series
Starts at

\$2265



- ✓ Up to 18 Isolated Analog Inputs
- ✓ 6.1" Color TFT Display
- ✓ Plug and Play I/O Cards, 6 Slots
- ✓ User Friendly with Bar Graph, Numerical, Vertical or Horizontal Trend Display
- ✓ Auto LCD Shut Off via Infrared Detector, Prolongs Life and Saves Power
- ✓ Stores Data on Supplied 128 MB Flash Card
- ✓ Ethernet Interface Standard with RS232/422/485 Optional
- ✓ Windows Graphical Software Standard and Optional Software for Real Time View
- ✓ Portable Benchtop Option

The OMEGA® RD8900 Series paperless recorder offers real time display of data in a variety of formats on a high resolution (VGA) color TFT display. The user friendly unit with plug & play cards can easily be set to monitor, record, and evaluate any application. The user can access data on the screen, as well as from a remote site via the standard ethernet or optional RS232/422/485 serial interface. The historical data may be stored in a flash ROM, compact flash card, or collected in a remote host PC for evaluation and print out. The unit's compact size saves space and requires less than 7" behind a panel.

Specifications

Display: 6.1" TFT LCD, 640X480 pixel resolution, 256 colors

Analog Input Card:
RD8900-AI1, AI2, AI3



RD8906, \$2600, shown smaller than actual size.

Resolution: 18 bits

Sampling Rate: 5 times/sec

Maximum Rating:

-2 Vdc minimum, 12 Vdc maximum
(1 min for mA input)

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 Resistance Effect: T/C:
 $0.2 \mu\text{V}/\Omega$

3-wire RTD: $2.6^\circ\text{C}/\Omega$ of resistance
difference of 2 leads

2-wire RTD: $2.6^\circ\text{C}/\Omega$ of resistance sum
of 2 leads

Burn-Out Current: 200 nA

**Common Mode Rejection
Ratio (CMRR):** 120 dB

**Normal Mode Rejection
Ratio (NMRR):** 55 dB

**Isolation Breakdown Voltage Among
Channels:** 430 Vac min

Sensor Break Detection: Sensor open
for TC, RTD and mV inputs, below 1 mA
for 4 to 20 mA input, below 0.25V for
1 to 5V inputs, unavailable for
other inputs

Sensor Break Responding Time:

Within 10 seconds for TC, RTD and mV
inputs, 0.1 second for 4 to 20 mA and
1 to 5V inputs

Digital Input Card (RD8900-DI6)

Channels: 6 per card

Logic Low: -30V min, 0.8V max

Logic High: 2V min, 30V max

External Pull-Down Resistance:
1 k Ω max

External Pull-Up Resistance:
1.5 M Ω min

Digital Output Card (RD8900-DO6)

Channels: 6 per card

Contact Form: N O (form A)

Relay Rating: 5 A/240 Vac, life cycles
200,000 for resistive load

Comm Module (RD8900-RS)

Interface: RS232 (1 unit), RS485 or
RS422 (up to 247 units)

Protocol: MODBUS® protocol RTU mode

Address: 1 to 247

Baud Rate: 0.3 to 38.4 Kbits/sec

Data Bits: 7 or 8 bits

Parity Bit: None, even or odd

Stop Bit: 1 or 2 bits

Standard Ethernet Communication

Protocol: Mod Bus TCP/IP, 10 BaseT; auto polarity correction for 10 BaseT

Ports: AUI (attachment unit Interface) and RJ-45 auto-detect capability

Memory

Storage Memory on Board: 8 MB

CF Card: 128 MB standard; optional 1 GB

Infrared Detector

Distance: Detect moving human body within 2 m

Power: 90 to 264 Vac, 47 to 63 Hz, 60 VA, 30 W max (standard); 11 to 18 or 18 to 36 Vdc 60 VA, 30 W max (optional)

Environmental and Physical

Operating Temperature: 5 to 50°C (40 to 122°F)

Storage Temperature: -25 to 60°C (-12 to 140°F)

Humidity: 20 to 80% RH (non-condensing)

Insulation Resistance: 20 MΩ min (at 500 Vdc)

Dielectric Strength: 3000 Vac 50/60 Hz for 1 min

Vibration Resistance: 10 to 55 Hz, 10 m/S² for 2 hr

Shock Resistance: 30 m/S² (3 g) for operation, 100 g for transportation

Dimensions:

166 W x 144 H x 174 mm D (6.54 x 5.67 x 6.85") for panel mount

Panel Cutout: 138 x 138 mm (5.44 x 5.44")

Approval Standards

Safety: CE; EN61010-1 (IEC1010-1) Overvoltage category II, pollution degree 2

Protective Class: IP-30 front panel, indoor use, IP-20 housing and terminals

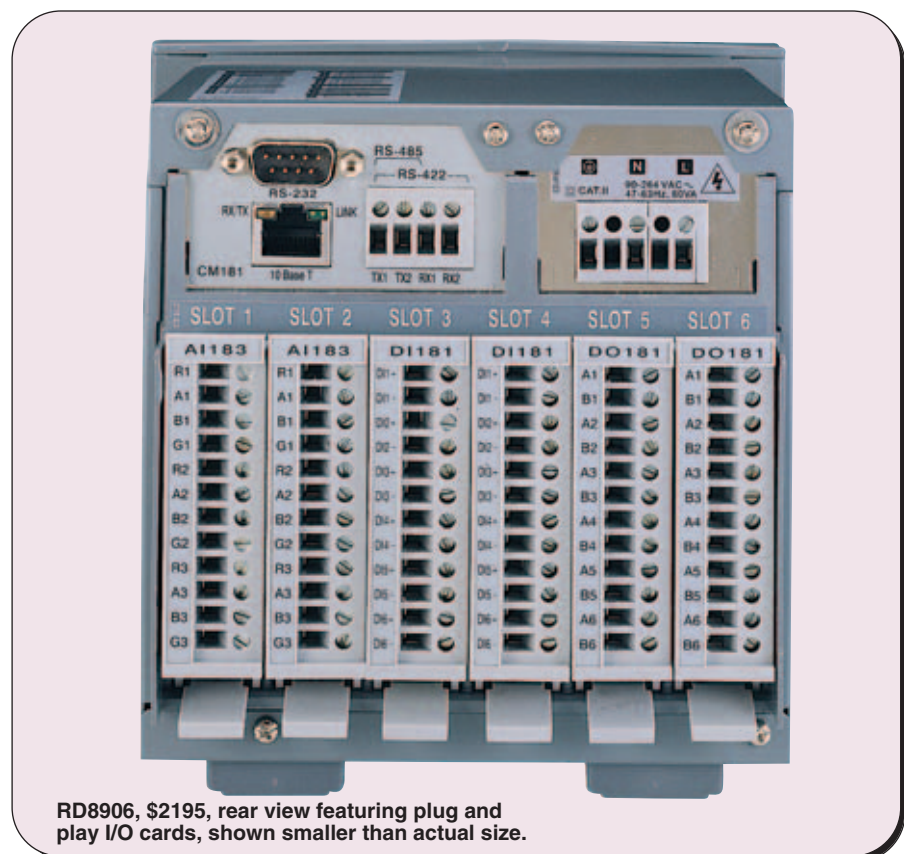
EMC

Emission: EN50081-1, EN61326 (EN55011 class B, EN61000-3-2, EN61000-3-3)

Immunity: EN50082-2, EN61326 (EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11, EN50204)



OMEGACARESM extended warranty program is available for models shown on this page. OMEGACARESM covers parts, labor, and equivalent loaners. Ask your sales representative for full details when placing an order.

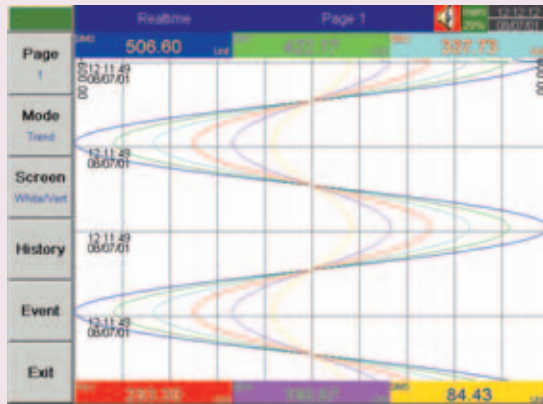


RD8906, \$2195, rear view featuring plug and play I/O cards, shown smaller than actual size.

Characteristics

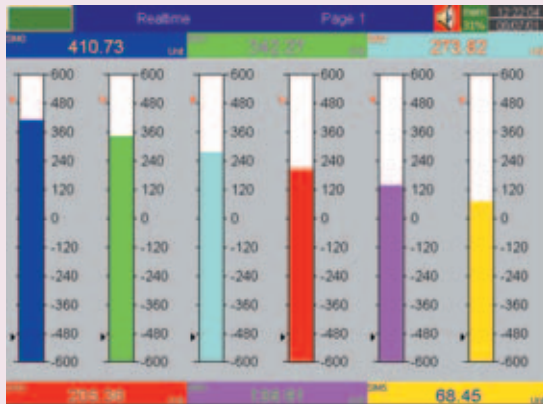
Type	Range	Accuracy @25°C	Input Impedance
J	-120 to 1000°C (-184 to 1832°F)	±1°C	2.2 MΩ
K	-200 to 1370°C (-328 to 2498°F)	±1°C	2.2 MΩ
T	-250 to 400°C (-418 to 752°F)	±1°C	2.2 MΩ
E	-100 to 900°C (-148 to 1652°F)	±1°C	2.2 MΩ
B	0 to 1820°C (32 to 3308°F)	±2°C (200 to 1820°C)	2.2 MΩ
R	0 to 1767.8°C (32 to 3214°F)	±2°C	2.2 MΩ
S	0 to 1767.8°C (32 to 3214°F)	±2°C	2.2 MΩ
N	-250 to 1300°C (-418 to 2372°F)	±1°C	2.2 MΩ
L	-200 to 900°C (-328 to 1652°F)	±1°C	2.2 MΩ
PT100 (DIN)	-210 to 700°C (-346 to 1292°F)	±0.4°C	1.3 kΩ
PT100 (JIS)	-200 to 600°C (-328 to 1112°F)	±0.4°C	1.3 kΩ
mV	-8 to 70 mV	±0.05%	2.2 MΩ
mA	-3 to 27 mA	±0.05%	70.5 Ω
0~1V	-0.12 to 1.15V	±0.05%	32 kΩ
0~5V	-1.3 to 11.5V	±0.05%	332 kΩ
1~5V	-1.3 to 11.5V	±0.05%	332 kΩ
0~10V	-1.3 to 11.5V	±0.05%	332 kΩ

Trend Mode



- View max 6 real time data trends vertically
- Recognize data trends easily by different colors and tag names
- Switch to other configured pages easily by "Page" function key
- Display current "Time/Date" information
- Remind the user of "Alarm" or "Memory Full"

Bar Graph Mode



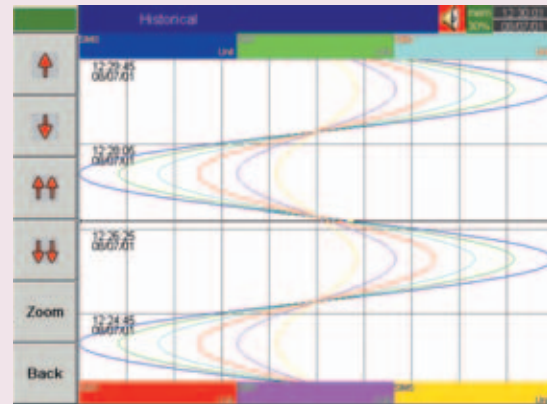
- View max 6 real time data in bar graphs
- Scale individually by user in "configuration"
- Display data value and tag name in different colors together with each bar graph
- Mark "Hi/Lo" alarm limits
- Display current "Time/Date" information
- Remind the user of the "Alarm" or "Memory Full"

Numerical Mode



- View max 6 real time data in numbers
- Display data value and tag name in different color
- Mark "Hi/Lo" alarm limits
- Display current "Time/Date" information
- Remind the user of the "Alarm" or "Memory Full"

Historical Mode



- Display max 6 sets of historical data simultaneously
- View desired data section by "▲" and "▼" function keys
- Access precise data value at a point selected by moving the "ruler"
- "Zoom" to expand/contract the display time span
- View historical data trends and their respective data values
- Recognize trends easily by different colors and individual tag names

Alarm List

Ack	Type	Source	Action Time	Clear Time	Status
3	Event	PW ON	2001/6/7 12:21:37	2001/6/7 12:26:10	Cleared
4	LoAlarm	SM6	2001/6/7 12:21:41	2001/6/7 12:26:44	Cleared
5	LoAlarm	SM12	2001/6/7 12:21:41	2001/6/7 12:26:44	Cleared
6	LoAlarm	SM18	2001/6/7 12:21:41	2001/6/7 12:26:44	Cleared
7	HiAlarm	SM4	2001/6/7 12:22:12	2001/6/7 12:25:3	Cleared
8	HiAlarm	SM4	2001/6/7 12:25:33	2001/6/7 12:29:34	Cleared
9	HiAlarm	SM18	2001/6/7 12:25:48	2001/6/7 12:30:10	Cleared
10	HiAlarm	SM6	2001/6/7 12:26:36	2001/6/7 12:29:11	Cleared
11	HiAlarm	SM12	2001/6/7 12:26:45	2001/6/7 12:29:11	Cleared
12	LoAlarm	SM12	2001/6/7 12:29:12	2001/6/7 12:31:5	Cleared
13	LoAlarm	SM6	2001/6/7 12:29:57	2001/6/7 12:31:5	Cleared
14	LoAlarm	SM4	2001/6/7 12:30:38	2001/6/7 12:31:15	Cleared
15	LoAlarm	SM18	2001/6/7 12:30:52	2001/6/7 12:31:51	Cleared
16	HiAlarm	SM12	2001/6/7 12:31:5	2001/6/7 12:31:47	Cleared
17	HiAlarm	SM6	2001/6/7 12:31:38	2001/6/7 12:31:55	Cleared
18	HiAlarm	SM12	2001/6/7 12:31:48	2001/6/7 12:33:27	Cleared
19	HiAlarm	SM4	2001/6/7 12:32:18	2001/6/7 12:34:6	Cleared
20	HiAlarm	SM18	2001/6/7 12:32:32	2001/6/7 12:34:6	Cleared
21	HiAlarm	SM6	2001/6/7 12:33:18	2001/6/7 12:34:6	Cleared
22	HiAlarm	SM12	2001/6/7 12:33:28	2001/6/7 12:35:7	Cleared
23	LoAlarm	SM4	2001/6/7 12:34:6	2001/6/7 12:37:7	Cleared
24	LoAlarm	SM18	2001/6/7 12:34:12	2001/6/7 12:37:7	Cleared
25	LoAlarm	SM6	2001/6/7 12:34:58	2001/6/7 12:37:7	Cleared
26	LoAlarm	SM12	2001/6/7 12:35:8	2001/6/7 12:37:7	Cleared
27	HiAlarm	SM12	2001/6/7 12:37:8		Alarm
28	LoAlarm	SM6	2001/6/7 12:37:18		Alarm
29	LoAlarm	SM18	2001/6/7 12:37:33		Alarm
30	LoAlarm	SM6	2001/6/7 12:38:18		Alarm

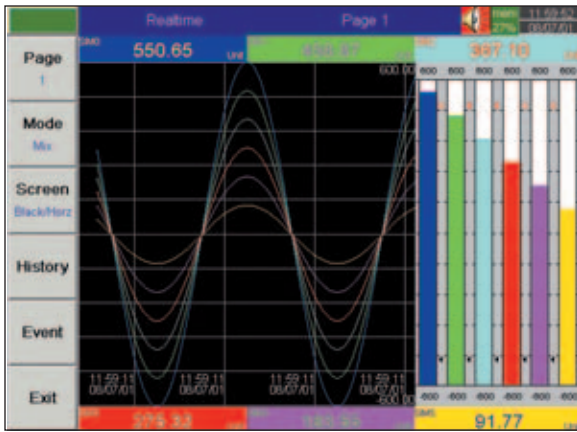
- List all the alarm records clearly with useful information
- Browse through the alarm list or "acknowledge" alarm easily by function keys on the vertical bar
- Remind the user of the alarm status in different colors

Configuration Mode

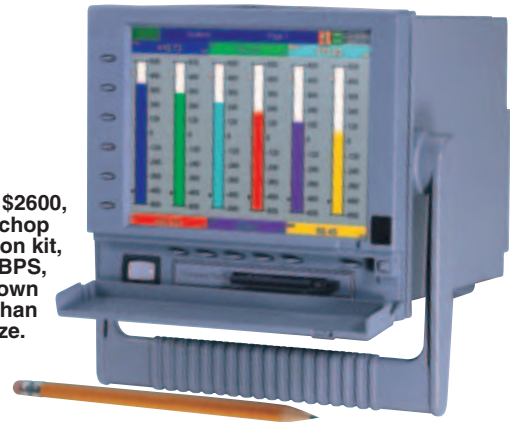
1	2	3	4	5	6	7	8	9	10	11	12	13
Configuration Pen1												
General												
Type	Analog Input				Name				SM4			
DataLog	High Compress				Unit				Unit			
Properties												
Source	1-1				(Slot_CH)							
EngineeringHigh	100.000				EngineeringLow 0.000							
Event												
Event	Type	SetPoint	Job1				Job2					
1	Hi	500.00	LogAlarm				NoAction					
2	Lo	500.00	LogAlarm				NoAction					
<< < > >> Back												

- Configure pen (input/output, pen name, event, job.....)
- Configure page (color, pen, decimal, pen width.....)
- Configure timer
- Configure instrument (storage media, display, communication, time/date.....)

Realtime trend screen.



RD8906, \$2600, with benchtop conversion kit, RD8900-BPS, \$205, shown smaller than actual size.



MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)		
Model No.	Price	Description
RD8901	\$2265	Recorder, 1-input, color, 5 spare I/O slots
RD8902	2285	Recorder, 2-input, color, 5 spare I/O slots
RD8903	2300	Recorder, 3-input, color, 5 spare I/O slots
RD8904	2500	Recorder, 4-input, color, 4 spare I/O slots
RD8905	2565	Recorder, 5-input, color, 4 spare I/O slots
RD8906	2600	Recorder, 6-input, color, 4 spare I/O slots
RD8909	2900	Recorder, 9-input, color, 3 spare I/O slots
RD8912	3200	Recorder, 12-input, color, 2 spare I/O slots
RD8915	3400	Recorder, 15-input, color, 1 spare I/O slot
RD8918	3600	Recorder, 18-input, color, no spare I/O slots

Options (Field Installable in Spare I/O Slots, One Slot Required for Each Item)

Model No.	Price	Description
RD8900-AI1	\$145	Analog input card, 1-channel
RD8900-AI2	245	Analog input card, 2-channels
RD8900-AI3	375	Analog input card, 3-channels
RD8900-DI6	275	Digital input card, 6 inputs
RD8900-DO6	275	Digital output card, 6 relays/alarms
RD8900-DO12	465	Digital output card, 12 relays/alarms
RD8900-TPS	199	Transmitter power supply (24 Vdc 180 mA)

Accessories

Model No.	Price	Description
RD8900-BPS	\$205	Kit to convert to benchtop style
RD8900-SW2	195	Software, real time graphical via comm port
1GB-FC	65	Memory card, 1 GB compact flash (optional); standard with recorder: 128 MB

Comes complete with operator's manual, panel mounting brackets, basic observer software for non-communication application and 128 MB flash card.

Notes: Recorder offers Ethernet interface as standard. To include RS232/422/485 communications add **"-RS"** suffix and add **\$155** to price. Feature may be field installed by ordering **RD8900-RS**. To include counter/totalizer math functions add **"-MATH"** suffix and **\$325** to price. To operate on DC power add **"-DC12"** (for 11 to 18 Vdc) or **"-DC24"** (for 18-36 Vdc) suffix, no additional charge

Standard software provided with recorder supports transfer of data and recorder configuration only via the memory card. User must have a memory card reader (not provided) connected with the host computer. The data may be read, analyzed, printed or transferred via an Excel type file to another application. The RD8900-SW2 allows above, plus supports real time monitoring and configuration via the communications port. Software is Windows 98, NT, 2000 and XP compatible.

Ordering Examples: RD8906, recorder with 6 inputs, plus RD8900-DO6, digital output card, plus 1GB-FC, memory card, \$2600 + 275 + 65 = **\$2940**. OCW-3, OMEGACARESM extends standard 1-year warranty to a total of 4 years (\$350), \$2600 + 350 = **\$2950**.

RD8903, recorder with 3 inputs, plus RD8900-DI6, digital input card, plus RD8900-BPS, kit to convert to benchtop style, plus RD8900-SW2, software for real time graphical via communications port, \$2300 + 275 + 205 + 195 = **\$2975**. OCW-3, OMEGACARESM extends standard 1-year warranty to a total of 4 years (\$350), \$2300 + 350 = **\$2650**.

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