RD9900 Series are network-compatible paperless recorders with high performance and high operating function employed high visibility 5.6” TFT color LCD. High speed of sampling rate 100 ms for 12 points and high accuracy of ±0.1% were realized, and measured data is stored into internal memory and maximum 2 GB compact flash card. As it can be monitored by a web browser display on several computers on intranet or internet, FTP transfer of data file and e-mail notification are also available. The recorder can be used for various applications such as data management, research, development, remote and wide range monitoring by utilizing internet environment.

Specifications

Input Specifications

Number of Measuring Points:
RD9906: 6 points
RD9912: 12 points

Input Types: Universal (refer to the table of inputs for RD200/2800)

Accuracy Rating: Refer to the table of inputs for RD200/RD2800 at omega.com/rd200_rd2800

Reference Junction Compensation
Accuracy: Type K, E, J, T, N, Platinel II; ±0.5°C or less; R, S, NiMo-Ni, CR-AuFe, WRe5-WRe26, W-Wre, U, L; ±1.0°C or less

Sampling Rate: Approximately 100 ms for all points

Burnout: Disconnection of input signal is detected on thermocouple and resistance thermometer input; UP/DOWN disable is selectable for each input

Scaling: Range/scale is selectable when DC voltage/current is programmed

Digital Filter: Programming FIR filter for each point (common to all points)

Allowable Signal Source Resistance:
Thermocouple Input (Burnout Disable)/DC Voltage Input
(±2V or less): 1 kΩ or less
DC Voltage Input (±5 to ±50V): 100 Ω or less

Resistance Thermometer: Per wire 10 Ω or less (same resistance for 3 wires)

Input Resistance: DC voltage, thermocouple input; approximately 1 MΩ

Maximum Input Voltage: DC voltage input (±2V or less)/thermocouple input (burnout disable), ±10 Vdc

DC Voltage Input (±5 to ±50V): ±60 Vdc

Dielectric Strength Between Channels: 1000 Vac or more between each channel (high strength semiconductor relay used)

Display Specifications

Display: 144 mm (5.67”) TFT color LCD

Display Types:
Measured Data Display: Trend screen, data screen, bar-graph screen
Historical Trend Display: Simultaneous display with real-time trend is available
Information Display: Alarm display, marker list, file list
Setting Screen: Alarm, computation, memory, system, maintenance, communication, etc.

Trend Screen: 12 colors selectable
Display Screen: 5 screens (5 groups)
Display Points: Maximum 44 points/screen
Time Axis Direction: Vertical or horizontal
Line Width: 1/3/5 dot selectable
Scale Display: 4 scales
Tag/Data Display (Show/hide selectable)
**Computation Specifications**

**Computation Points:** Maximum 44 points

**Computation Types:**
- **Arithmetic Operations:** Addition, subtraction, multiplication, division, remainder, exponential
- **Comparison Operations:** Equality, inequality, great, less, equality/great, equality/less
- **Logical Operations:** AND, OR, XOR, NOT
- **General Functions:** Round-up, round-down, absolute value, square root, exponent of e, natural logarithm, common logarithm
- **Integration Operations:** Analog integration, digital integration
- **Channel Data Operations:** Measured data computation, calculated data computation

**Alarm Specifications**

**Setups:** Up to 4 alarms can be programmed per channel

**Alarm Types:** Upper limit, lower limit, differential higher limit, differential lower limit (deadband is selectable), abnormal data

**Delay Function:** Setup range of alarm delay, 1 to 3600 sec

**Alarm Settings:** AND/OR selectable

**Communication Functions Network**

**FTP Server:** Data file can be read from the network computer

**Web Server:** Conformed to HTTP1.0; displays the alarm, information of maintenance by browser software (Internet Explorer 5.0 or later, NetScape 6.0 or later, Opera 7 or later)

User’s ID and password registration available

**E-Mail:** E-Mail notification at specified time for alarm activation; report data at specified time is selectable from all registered

**USB Communications**

**USB:** Communication type, USB1.1

**Transfer Systems:** Bulk transfer, control transfer

**Communication Contents:** File transfer by virtual drive connection

**General Specifications**

**Rated Power Voltage:** 100 to 240 Vac (universal power supply); 50/60 Hz

**Maximum Power Consumption:** 50 VA (DO: all points ON, 240 Vac)

**Reference Operating Condition:**
- **Ambient Temperature/Humidity Range:** 21 to 25°C, 45 to 65% RH
- **Power Voltage:** 100 Vac, ±1.0%
- **Power Frequency:** 50/60 Hz ±0.5%
- **Ambient Temperature/Humidity Range:** 50/60 Hz ±2%
- **Power Frequency:** 50/60 Hz ±2%
- **Ambient Temperature/Humidity Range:** 40 G (392 m/ S²) or less
- **Vibration:** 10 to 60 Hz, 0.5 G (4.9 m/S²) or less
- **Impact:** 40 G (392 m/ S²) or less

**Transportation Condition (At the Packed Condition on Shipment from Our Factory):**
- **Ambient Temperature/Humidity Range:** -20 to 60°C, 5 to 90% RH (note: no dew condensation)
- **Vibration:** 10 to 60 Hz, 0.5 G (4.9 m/S²) or less
- **Impact:** 40 G (392 m/ S²) or less

**Power Failure Protection:** Setups and data are backed up by flash memory

**Clock:** Lithium battery backs up RAM (minimum 5 years)

**Insulation Resistance:**
- **Secondary Terminals and Protective Conductor Terminals:** 20 MΩ or more at 500 Vdc
- **Primary Terminals and Protective Conductor Terminals:** 20 MΩ or more at 500 Vdc

**Dielectric Strength:**
- **Secondary Terminals and Protective Conductor Terminals:** 1 minute at 500 Vac
- **Primary Terminals and Protective Conductor Terminals:** 1 minute at 1500 Vac
- **Primary and Secondary Terminals:** 1 minute at 2300 Vac

**See next page for additional information.**
Case Assembly Material:
Door Frame: ABS resin
Case: Steel
Color:
Door Frame: Black (equivalent to Mussel N3.0)
Case: Painting color, gray (equivalent to Mussel N7.0)
Weight: 2.2 kg (4.85 lb)
Mounting: Panel mounting
Terminal Screws:
Power Terminals/Protective Conductor Terminals/
Communications Terminals: M4.0
Measuring Input Terminals/Alarm Output Terminals/Remote Contact Terminals: M3.5

<table>
<thead>
<tr>
<th>Name</th>
<th>Contents</th>
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<tbody>
<tr>
<td>Alarm Output</td>
<td>Relay contact output at alarm activation and abnormal input; output points: 12; contact capacity: mechanical relay, 100 Vac 0.5 A, 240 Vac 0.2 A</td>
</tr>
<tr>
<td>Communication Interface</td>
<td>Communication interface for high-order instruments RS232C/RS485 switchable **Ethernet and USB equipped as standard</td>
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** See previous page for additional information.

Options Specifications

RD9900 Series Screens

Real Time Trend Screen
Display data (measured and virtual) of selected group. Vertical trend and horizontal trend.

Input/Computation Setting

Bar-Graph Screen
Display data (measured and virtual) of selected group. Combination display with real-time trend is available.

Dual Trend Screen
Two split display for real-time and historical trend. Scroll available for historical trend.

Data Screen
Display data (measured and virtual) of selected group. Simultaneous display of alarm status.

Information Setting Screen

Alarm Settings

Schedule Setting Screen

OMEGACARE™ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE™ covers parts, labor and equivalent loaners.
Application Software ZAILA (Sold Separately)

The software is applied for replay display/wave editing operation of recorded data in RD9900 series. It has replay display of vertical/horizontal trend and circular trend function, and also analyzing function such as magnify/reduce/partially magnify of graphs and message insert.

- Trend display: Selectable from Trend Display Window (Vertical Flow, Horizontal Flow) and Circular Trend Display Window
- Continuous Replay Display Window: Trend is Scrolled Continuously (Automatically); Scroll Changes by Speed and Renewal Data Number
- Data List Display Window: Displays Registered Data as List Display
- Bar-Graph: Displays by bar; Message Can be Inserted into Bar-Graph
- Data Between Markers: Displays Date/Time, Time Difference Between 2 Data, Data Difference, Maximum, Minimum, Average, Standard Deviation and Median Among all Data
- Alarm Display: Points for Alarm Activation at Each Level are Displayed on a Trend Graph
- Settings: Cursor, Trend Line, Scale Axis, Time Axis, Title Input on the Graph, Graph Assistant and Magnify/Reduce/Rotation of Graphs

Environment
CPU: 1GHz or more
OS: Windows 98/Me/2000/XP Home/XP Pro
Memory: 256 MB or more (512 MB or more recommended)
Disk Drive: CD-ROM drive
Hard Disk: Disk space 100MB or more
Language: English, Japanese, Chinese (simplified and traditional characters)

To Order

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<tr>
<th>Model No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>RD9906</td>
<td>6 points paperless recorder</td>
</tr>
<tr>
<td>RD9912</td>
<td>12 points paperless recorder</td>
</tr>
<tr>
<td>POWERCORD-SE</td>
<td>Power cord</td>
</tr>
</tbody>
</table>

Option Boards

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<th>Description</th>
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<td>RD9900-C24</td>
<td>RS232C/RS485 communication interface</td>
</tr>
<tr>
<td>RD9900-AL12</td>
<td>12 point mechanical relay</td>
</tr>
</tbody>
</table>

Option Software

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<tbody>
<tr>
<td>RD9900-ZAILA</td>
<td>ZAILA data analysis software</td>
</tr>
</tbody>
</table>

Comes complete with operator’s manual and 128 MB compact flash card.

Ordering Examples: RD9912, 12 points paperless recorder. RD9906, 6 points paperless recorder and OCW-3, OMEGACARE™ extends standard 2-year warranty to a total of 5-years.