



JR TECHNOLOGY
LIMITED

REINFORCED PLASTICS & COMPOSITES
PRODUCTION ENGINEERS

PAPERLESS RECORDER /
DATA LOGGER

With its dual-function keys and sharp display, OMEGA's RD8250 is a sophisticated process recorder. The graphic user interface— comprising a nematic LCD with white LED backlight— makes configuration easy.

This recorder can display real-time data in digital or trend format. Via the front-panel USB port (order “-USB” option), the user can upload data from a flash memory card to a PC. The RD8250 comes with a standard power supply (North American plug), 120 to 240 Vac, 50/60 Hz. Other power options include universal plug set, 12 to 24 Vdc isolated input, and rechargeable battery pack (order “-UPS” option). With the battery pack installed, the RD8250 can function for up to 8 hours, preserving data and settings in the event of a power loss.



FEATURES

- 2 configurable isolated inputs for DC voltage & current, thermocouples, RTD's, frequency & RPM pulse
- 4 internal alarm setpoints
- 2 alarm relay outputs
- 1 digital control input
- Maximum storage rate of 100 samples per second
- Compact Flash cards can store up to 2 gigabytes of data in memory
- Optional software for graphic analysis, printing, transfer & exporting
- Bright, clear display



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SPECIFICATIONS

INPUT POWER:

Standard: 9 ±0.5 Vdc @ 5 VA (depends on external loads); external AC wall transformer (included), non-isolated, 100 to 240 Vac, 50/60 Hz

Option 1: Isolated 12 to 24 Vdc (not compatible with internal battery pack option below)

Option 2: Internal battery pack; provides uninterrupted operation and controlled output

Output: 2 outputs, 5 Vdc @ 50 mA, to power external sensors

Number of Channels: 2 universal, user selectable

Isolation: 300 Vac / Vdc channel input to chassis ground

DC INPUT:

Voltage:

Ranges: 0 to 250 mV, 0 to 1.25 V, 0 to 2.5 V, 0 to 5 V, 0 to 12.5 V, 0 to 25 V

Accuracy: 0.1% of reading

Resolution: 0.025% FS

Current:

Ranges: 0 to 20 mA, 4 to 20 mA, 0 to 50 mA

Accuracy: 0.1% of reading, excluding 250 Ω external shunt (required)

Resolution: 0.025% FS

Thermocouple:

Accuracy: 0.3% FS (typical)

Ambient Temperature Sensor Accuracy: ±1.5°C (2.7°F)

Type Range:

J: -100 to 760°C ±2°C (-148 to 1400°F ±3°F)

K: -100 to 1000°C ±2°C (-148 to 1830°F ±3°F)

T: -100 to 400°C ±2°C (-148 to 750°F ±3°F)

E: -80 to 400°C ±2°C (-112 to 750°F ±3°F)

Shutdown During Blackout: 6 Vdc, 2400 mAh NiMH

Backup Time: 8 hours typical (depends on external load)

RTD:

Accuracy: 0.3% FS (typical)

Resolution: 0.1°C

Internal Current Source: 1 mA

Type Range (2 or 3 Wire):

100 Ω Pt 385: -100 to 750°C (-148 to 1380°F)

100 Ω Pt 392: -100 to 750°C (-148 to 1380°F)

Frequency Input (Hz)/Range: 0 to 10,000/0 to 600,000 rpm

Speed Input (rpm) Accuracy:

Frequency: ±1 Hz

rpm: ±1 rpm below 9999 rpm, ±10 rpm above 9999 rpm

Input:

Low: <1 Vdc

High: >3 and <12 Vdc

Pulse Width: 10 ms minimum

Input Impedance: >100 KΩ

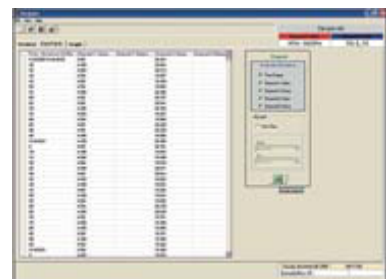
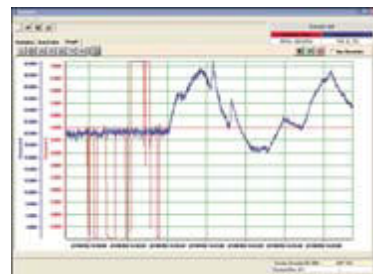
Measurement Rate: Up to 100 samples per second per channel

Math Functions: $y = mx + b$; average, high peak, low peak

Media: Compact flash to 2 GB

Display: LCD graphics, 160 x 80 pixels, black FSTN with white LED backlight, user-controlled backlight level & contrast adjustment (electronic)

Display Modes: Trending (horizontal), large dual digital readout, mixed mode



RD8250-SW, Windows software for graphics analysis, printing and exporting.



User Interface: 5-button keypad (dual-function buttons)

Clock: Auto leap year and daylight-saving adjustments, internal battery backup

Relay Output: 2 alarm outputs, 30 V and 0.5 A form "A" relays

Opto-Isolated Input: 1 input, 5 to 12 Vdc activation @ 10 mA typical

Audible: Internal beeper (multiple tones)

Dimensions (Front Panel): 96 x 96 x 152 mm (3.78 x 3.78 x 6") (1/4 DIN)

Environmental: Indoor use only, Installation Category II per IEC 664; Pollution Degree Level II per IEC61010-1

Operating Temperature: -10 to 50°C (14 to 122°F)

Max Relative Humidity: 80% for temperatures up to 31°C (88°F), decreasing linearly to 50% @ 40°C (104°F)

Optional USB: Front-panel USB 2.0 slave port for data and remote real-time display when using Navigator software (non-volatile).

Ethernet: Real time data display, historic data transfer, remote control and recorder configuration when using navigator software; built-in web server displays current measured values



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