

# 4- and 12-Channel Portable Thermometer/Data Loggers with SD Card Data Recorder

RDXL4SD / RDXL12SD



- ✓ SD Card, Real-Time Data Logger
- ✓ Input Signals: T/C K, J, T, E, R/S, and RTD Pt100  $\Omega$  Measurement (RDXL4SD Only)
- ✓ Display All Input Channels Simultaneously
- ✓ Data Hold, Record Max and Min Reading
- ✓ RS232/USB PC Computer Interface
- ✓ LCD with Green Light Backlight, Easy Reading
- ✓ SD Card Capacity: 1 to 16 GB

The portable RDXL4SD and RDXL12SD models are handheld thermometer/data loggers with backlight display and built-in analysis functions. The data loggers are powered by an internal battery and are capable of sampling, processing and displaying measurements without being connected to a computer. With their high resolution and fast analog to digital converter (ADC), the RDXL4SD and RDXL12SD meet the majority of data logging requirements in most industrial applications.

Real-time SD memory card data logger, built-in clock and calendar, real time data recorder, and sampling time set from 1 to 3600 seconds comes standard. Data logger can log data manually by setting the sampling time to zero. These real-time data loggers, save the 4- or 12-channels temperature measuring data, along with the time information (year, month, date, minute, second) into the SD memory card and can download to Excel. The end user can make any data or graphic analysis by themselves.



RDXL4SD with 4 Type K thermocouples and 2GB SD memory card (included).

RDXL12SD with 12 Type K thermocouples and 2GB SD memory card (included).

## SPECIFICATIONS

### Embedded Microcontroller:

Custom one-chip LSI device

### LCD Display:

82 x 61 mm (3.23 x 2.40") with green color backlight

### 4 Channels:

T1, T2, T3, T4, T1-T2

### 12 Channels:

T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11 and T12

**Sensor:** Type J, K, T, E, R/S thermocouple probe Pt100  $\Omega$  (European curve) for RDXL4SD model only

**Resolution:** 0.1/1°C or °F

**Sampling Time:** 1 to 3600 seconds

**Memory Card:** SD memory card 1 to 16 GB

**Memory Recall:** Max and min value

**Sampling Time of Display:**

Approx 1 second

**Data Output:** RS232/USB PC computer interface

**Power Off:** Auto shut off saves battery life or manual off by push button

**Operating Temperature:** 0 to 50°C  
(32 to 122°F)

**Operating Humidity:** Less than  
85% RH

**Power Supply:** Alkaline or heavy-duty  
DC 1.5V battery (UM3, AA) x 6 "AA",  
(RDXL4SD) or 8 "AA" (RDXL12SD)

**Power Current:** Approx DC 30 mA

**Weight:** 489 g (1.08 lb)

**Dimensions:** 177 H x 68 W x 45 mm D  
(7 x 2.7 x 1.9")

### Electrical Specifications (23 ±5)°C

PT100 Ω (RTD)		
Resolution	Range	Accuracy*
0.1°C	-199.9 to 850°C	±(0.4% + 1°C)
0.1°F	-327.0 to 999.9°F	±(0.4% + 1.8°F)
1°F	1000 to 1562°F	±(0.4% + 2°F)

\* Two input channels only.



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

### Sensor Types

Sensor Type	Resolution	Range	Accuracy*
K	0.1°C	-50.1 to -100.0°C -50.0 to 999.9°C	±(0.4% + 1°C) ±(0.4% + 0.5°C)
	1°C	1000 to 1300°C	±(0.4% + 1°C)
	0.1°F	-58.1 to -148.0°F -58.0 to 999.9°F	±(0.4% + 1.8°F) ±(0.4% + 1°F)
	1°F	1000 to 2372°F	±(0.4% + 2°F)
J	0.1°C	-50.1 to -100.0°C -50.0 to 999.9°C	±(0.4% + 1°C) ±(0.4% + 0.5°C)
	1°C	1000 to 1150°C	±(0.4% + 1°C)
	0.1°F	-58.1 to -100.0°F -58.0 to 999.9°F	±(0.4% + 1.8°F) ±(0.4% + 1°F)
	1°F	1000 to 2102°F	±(0.4% + 2°F)
T	0.1°C	-50.1 to -100.0°C -50.0 to 400.0°C	±(0.4% + 1°C) ±(0.4% + 0.5°C)
	0.1°F	-58.1 to 148.0°F -58.0 to 752°F	±(0.4% + 1.8°F) ±(0.4% + 1°F)
E	0.1°C	-50.1 to -100.0°C -50.0 to 900°C	±(0.4% + 1°C) ±(0.4% + 0.5°C)
	0.1°F	-58.1 to -148.0°F -58.0 to 999.9°F	±(0.4% + 1.8°F) ±(0.4% + 1°F)
	1°F	1000 to 1652°F	±(0.4% + 2°F)
R	1°C	0 to 600°C 601 to 1700°C	±(0.5% + 1°C) ±(0.5% + 1°C)
	1°F	32 to 1112°F 1113 to 3092°F	±(0.5% + 2°F) ±(0.5% + 2°F)
S	1°C	0 to 600°C 601 to 1500°C	±(0.5% + 1°C) ±(0.5% + 1°C)
	1°F	32 to 1112°F 1113 to 2732°F	±(0.5% + 2°F) ±(0.5% + 2°F)

\* Accuracy value is specified for the meter only. Accuracy is tested under the meter's environment temperature within 23 ±5°C.

Linearity correction: memorize the thermocouples curve to the intelligent CPU circuit. Above specification tests under the environment RF field strength less than 3 V/M and frequency less than 30 MHz only.

To Order	
Model No.	Description
RDXL4SD	4-channel digital thermometer with 2 GB SD card
RDXL12SD	12-channel thermometer with 2 GB SD card

Accessories	
Model No.	Description
RDXLSD-CONN	RTD connector for RDXL4SD
SW-U101-WIN	Data logging software for RDXL4SD
SW-U811-WIN	Data logging software for RDXL12SD
HC-SD	Hard case for RDXL4SD
ADAPTER-SD	AC adaptor
USB-SD	Spare USB cable
RS232-SD	Spare RS232 cable
2GB-SD	Spare 2 GB SD card

RDXL4SD comes complete with 4 beaded wire Type K thermocouples probe, 6 "AA" batteries, 2 GB SD memory card, soft carrying case and operator's manual.

RDXL12SD comes complete with 12 beaded wire Type K thermocouples probe, 8 "AA" batteries, 2 GB SD memory card, hard carrying case and operator's manual.

**Ordering Example:** RDXL12SD, 12 channel thermometer data logger. OCW-3, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 4 years.