

2 YEAR
WARRANTY



Ω OMEGA™

User's Guide



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RDXL6SD-USB
Temperature Data Logger with USB



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SPECIFICATIONS

Temperature Resolution	0.1° for temperatures below 1000° (C or F) 1° for temperatures above 1000° (C or F)"
Display	2.83" (72 mm) resistive touch TFT, 320 x 240 pixels, backlit
Configurable Parameters	Temperature units, alarms, signal processing, date and time, data logging, power options, graph channels
Temperature Units	°F or °C
Alarm Configuration	12 x visual alarms (2 per channel) with adjustable level, individually configurable HI or LO.
Signal Processing	Average, minimum, maximum, standard deviation, 2-channel difference
Display Response Time	1 s
Operating Temperature	0 to 50°C (0 to 40°C for battery charging)
Power Supply	Built-in rechargeable Li-ion battery, or USB, or 5 V DC mains adapter (included)
Battery Life (Typical)	32 hours while logging with full display brightness Up to 96 hours while logging in power saving mode"
Charge Time	6 hours (using mains adapter)
Weight	200 g without thermocouples
Dimensions	136(w) x 71(h) x 32(d) mm, without thermocouples

Inputs

4 x thermocouple inputs (any of the following types), for use with miniature thermocouple connectors, plus

2 x RTD inputs, spring clamp, for 2-wire or 3-wire RTDs, 28 to 16 AWG

Input Type	Temperature Range	Accuracy of RDXL6SD-USB only (whichever is greater)
Type J	-200°C to 1200°C	± 0.1% or 0.8°C
Type K	-200°C to 1372°C	± 0.1% or 0.8°C
Type T	-200°C to 400°C	± 0.1% or 0.8°C
Type R	0°C to 1768°C	± 0.1% or 0.8°C
Type S	0°C to 1768°C	± 0.1% or 0.8°C
Type N	0°C to 1300°C	± 0.1% or 0.8°C
Type E	-200°C to 1000°C	± 0.1% or 0.8°C
Pt100, Pt200, Pt500, Pt1000	-200°C to 850°C	± 1.0% or 1.0°C

Data Logging

Data Logging Interval	1 to 86,400 seconds (1 day)
Max. SD Card Capacity	32 GB SD or SDHC (4 GB SD Card included - approx 2 years of data)
Variables Logged	Measured temperature, cold junction temperature, alarm events
File Format	.csv (can be imported to Excel)
Configurable Parameters	Sample rate, number of samples, scheduled start date/time, (or manual start/stop)

PC Interface

Windows Software	RDXL-TempLog (free download at omega.com/RDXL6SD-USB)
Communication protocol	Modbus (address table available at omega.com/RDXL6SD-USB)

MODEL NUMBERS

RDXL6SD-USB 6-channel handheld temperature data logger with 4 GB SD Card, USB cable and mains adapter

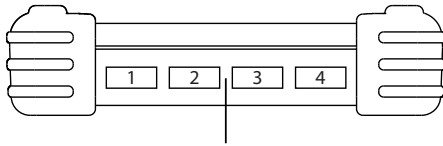
RDXL6-ELMAU Spare mains power adapter

INTERFACE

The RDXL6SD-USB is fully configurable via the built-in touch screen using an intuitive menu system. For more information please see omega.com/RDXL6SD-USB

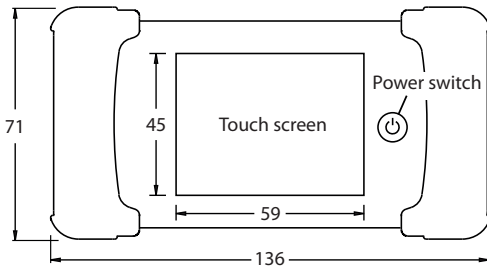
DIMENSIONS

Top

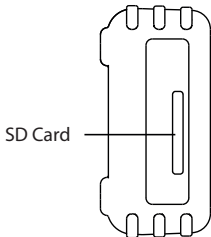


4 x thermocouple inputs, channels 1 to 4

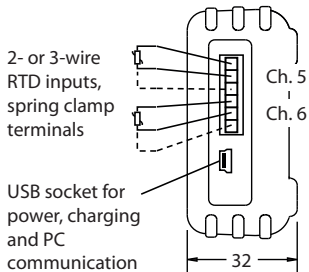
Front



Left



Right





WARNING

This device has an internal, non-removable, rechargeable Lithium-Ion Polymer battery. Do not attempt to remove or replace the battery as this could cause damage and will invalidate the warranty. Do not attempt to charge the battery in ambient temperatures outside of the range 0°C to 40°C (32°F to 104°F). Do not dispose of batteries in a fire as they may explode. Dispose of batteries according to local regulations. Do not dispose as household waste. Improper use or use of unapproved chargers may present a risk of fire, explosion, or other hazard, and will invalidate the warranty. Never use a damaged charger. Only use the charger indoors.

Refer to this instruction sheet when the warning symbol () is encountered.

To avoid the possibility of electric shock or personal injury:

Before using the thermometer, inspect the case. Do not use the thermometer if it appears damaged. Look for cracks or missing plastic;

Do not apply a voltage between any terminal and earth ground while the USB is connected;

To prevent damage, do not apply more than 1V between any two input terminals;

Do not use the instrument around explosive gas, vapour or dust.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **25 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **two (2) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence. The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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- ☑ Recorders, Controllers & Process Monitors
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- ☑ Data Logging Systems
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- ☑ Signal Conditioners
- ☑ Data Acquisition Software

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- ☑ Immersion & Band Heaters
- ☑ Flexible Heaters
- ☑ Laboratory Heaters

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- ☑ Pumps & Tubing
- ☑ Air, Soil & Water Monitors
- ☑ Industrial Water & Wastewater Treatment
- ☑ pH, Conductivity & Dissolved Oxygen Instruments