

**SENSOR INPUTS**

- ✓ Voltage/Current
- ✓ Temperature
- ✓ Pressure
- ✓ Fluid Levels
- ✓ Sonics
- ✓ Rainfall
- ✓ Shaft Position
- ✓ Humidity
- ✓ Flow
- ✓ pH
- ✓ Resistance
- ✓ Load
- ✓ Vibration
- ✓ Acceleration
- ✓ Light
- ✓ Air Quality



**NEW**  
**INCREASED**  
**MEMORY**

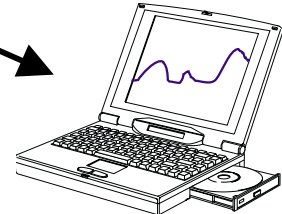
RS232 Serial Communications

**FEATURES**

- ✓ Up to 5 Year Battery Life
- ✓ 5 Year Data Retention
- ✓ Wide Temperature Range
- ✓ Class 1 Div. 2 Certification
- ✓ Large Solid State Memory
- ✓ Low Drift Calendar Clock
- ✓ Internal Temp. Sensor
- ✓ Telephone Modem Option
- ✓ Strobe Input Control Line
- ✓ Regulated Output Control
- ✓ Electronic Note Pad
- ✓ Min./Max./Avg. Functions
- ✓ Data Sensitive Recording
- ✓ Wrap-Around Recording
- ✓ 1.6 Amp. Power Switcher
- ✓ LS4 IBM/PC DOS Software
- ✓ DV+ Windows Software

This self-powered datalogger (with dual or triple battery system) provides a highly reliable means of recording field data. Lakewood's ULTRA-LOGGER makes it easy to record conditions such as temperature, pressure, fluid level, humidity, rainfall, voltages, and alarm conditions for fast graphical and tabular analysis on laptop or desktop computers. Get

your data instantly, from remote areas, by using a low power consumption telephone modem with your ULTRA-LOGGER. Graph your data within seconds with Lakewood's Dataview Windows software or click on an Excel ready file. The accuracy of processed data may be increased by as much as five times through the use of software curve-fitting.



**SPECIFICATIONS**

ANALOG INPUT

Quantity	8 Channel
Range	0 to 2.5 volts D.C.
Storage Res.	1/16383
A/D Resolution	1/8191
A/D Accuracy	1/2047
Impedance	1 Megohm

CONTACT STATUS INPUT

Quantity	8 (Dry or Wet)
Type	Switch to Ground TTL Compatible
Strobe	0-99,999,999-0 Count Cycle
Speed	20 C.P.S. Count Rate
Conditioning	Soft Debounce

DATA STORAGE

Data Samples	32K (high resolution) 64K (low resolution)
Type	Non-volatile RAM (3 Year Lithium Battery)
Interval Mode	1 Sec. to 1 Day/1 Sec. Definition
Time Accuracy	.0015% (1min/month)
Time Format	Month/Day/Year Hour/Minute/Second Hardware Calendar Clock
Time Tag	Midnight Day# Marker

COMMUNICATION

Data Transfer	Up to 12X Compression 64K/160 Sec.(Direct)
Error Handling	CRC Multiple Retry
Type	RS232C (UCB may be req'd)
Interface	9 Pin Male/D (CC10S Cable Female/Female)

OUTPUT POWER SWITCHING

Voltage Ref.	2.5 Volts @ 10mA max. 10 mA. Source
Sensor Warm-up	35 to 835 mSec (Extended) 35mSec to 307 Sec
Inst. Battery	1.6 amp. max. @ 12 Volts

ELECTRICAL

Memory Battery	Lithium (5 Yr. / Powered)
Datalogger Bat.	9V Lithium Battery Inc. (~4 months @ 5min. samples) ULB5 Lithium Opt. (~3 to 5 yrs. @ 1 min. samples)
Sleep Mode	100 Micro Amp. (Typical)
Wake Mode	6 ma-Sec Power Pulse
Communication	6 ma-Sec Power Pulse

CERTIFICATION

NRTL/C	(North America)
CSA	Class 1 Division 2
Hazardous Loc.	Groups A,B,C,D

PHYSICAL

Dimensions	~234 x 125 x 82 mm (9.2 x 4.9 x 3.2 in.)
Weight	~.68 kg. (1.5 lbs)

ENVIRONMENTAL

Operating Temp.	-40°C to +75°C (-40°F to +170°F) Non-Certified
Storage Temp.	-50°C to +90°C (-60°F to +200°F)
Humidity	0% to 95% Non-Condensing (Protected By Silicon Conformal Coating)

**Ultra-Loggers**

- UL16K** . . . . . \$895.00  
c/w 64K memory, UL16TBE terminal board and one ULB1 lithium battery

**Ultra-Logger Accessories**

- ULB1** Lithium Battery . . . \$14.00  
1 Amp. Hr. battery
- ULB5** Lithium Battery . . \$149.00  
5.2 Amp. Hr battery
- CC10S** Comm. Cable . . . \$49.00  
10' long, RS232 cable, surge protected
- URB700** Inst. Battery . . . \$89.00  
700 mA- hr. 12V Rechargeable Internal
- ULAC500** A-C Adaptor . . \$29.00  
for AC power /URB700 charging
- ULM2412** Modem . . . . \$399.00  
Low Power Consumption (5-uA Sleep)
- CSA12** Certification . . . \$149.00  
Class 1 Div. 2 Groups A, B, C, D  
(UL16 Model Only)
- LS4** IBM/PC Software . . \$149.00  
DOS version, c/w manual
- Dv1** Dataview . . . . . \$89.00  
Windows Graphing Software for LS4
- DV+** Dataview Plus . . . . \$289.00  
Windows Software - for downloading,  
monitoring and graphing data  
[Http://data.lakewood.com/downloads/dvplusnotes.html](http://data.lakewood.com/downloads/dvplusnotes.html)

[www.lakewood.com](http://www.lakewood.com)

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