

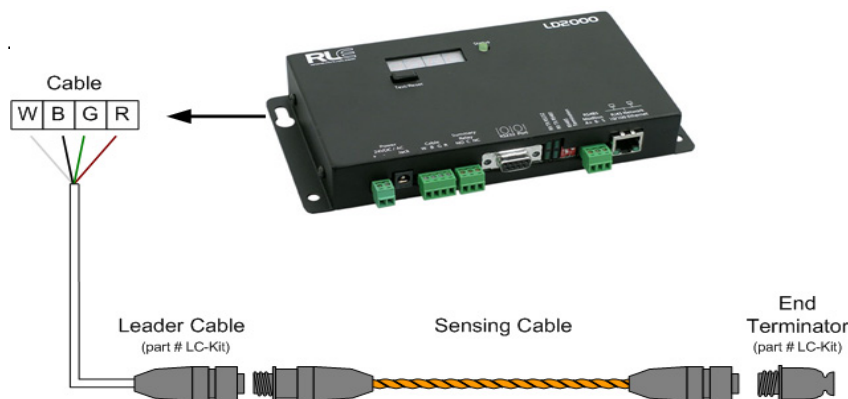



# SeaHawk LD2000

The LD2000 is one of the market's first web-accessible distance read leak detection panels. When integrated with SeaHawk Water Leak Detection Cable (sensing cable) and/or zone spot detectors (SD-Z), the LD2000 detects the presence of any conductive fluid and reports the distance to the leak. Within seconds, the distance to the leak is shown on the LED display. The physical location of the leak can then be determined by cross referencing the distance displayed on the LED display with a cable reference map or by linking to a saved image through the web-based interface.

The LD2000 can easily integrate into existing Building Management Systems (BMS) and Network Management Systems (NMS) or be configured for direct alarm notification via email.

The LD2000 can accommodate a continuous run of up to 5,000 feet (1524m) of sensing cable and is ideal for leak detection in areas where the sensing cable may not be visible. Common applications of this system include data centers (under raised floors), clean rooms, telecommunication centers and other critical areas. The LD2000 offers a reliable leak detection solution that mitigates potential water damage, costly business outages, and downtime.



Basic installation of LD2000, leader cable, sensing cable, and EOL terminator

## Features

- HTML interface
- Quick return to normal status after sensing cable is wiped dry
- Adjustable leak, delay, and contamination thresholds
- Eight configurable virtual zones
- Modbus integration
- SNMP, Modbus, BACnet, and summary relay output
- SMTP (email) notification
- Supervised system
- Fifteen physical zones

## Benefits

- Convenient configuration and management
- Ready for next alarm—cable dries quickly
- Helps prevent nuisance & false alarms
- Allows users to label unique areas
- Can be used to identify simultaneous leaks
- Simple integration with BMS& NMS
- Alarm notification via email and other wireless devices
- No factory calibration required
- Identifies cable disconnects & breaks
- Annunciates multiple, simultaneous leaks when other Distance Read controllers are integrated into the system

# Leak Detection

# LD2000 Specifications

<b>Power</b>	24VDC@ 600mA max., 50/60Hz; requires power supply: PSWA-DC-24-ST (not included) 24VAC Isolated@ 600mA max., 50/60Hz; requires power supply (not included) 100/120/230-240VAC@ 500mA max., 50/60Hz power supply; included in the LD-ENC optional enclosure
<b>Accessories</b>	Leader cable and EOL terminator (LC-KIT; included), caution tags (SC-T), framed reference map (FM1114), leak detection cable (sensing cable; SC-xx), non-sensing cable (NSC-xx), spot detector (SD-Z), X-Connector for cable branching (X-CON), weighted cable connector (WCCS-50), J-Clips for securing cable (JC-xx)
<b>Output</b>	
Relay	1 Form C summary relay, 1A @ 24VDC, 0.5A resistive @ 120VAC; configurable for latched or non-latched
<b>Inputs</b>	
Water Leak Detection Cable	Compatible with SeaHawk Sensing Cable (not included)
Cable Input	Requires SeaHawk LC-Kit: 15ft (4.57m) leader cable and EOL (LC-Kit included)
Maximum Length	5,000ft (1524m)
Detection Accuracy	± 2ft (0.6m) +/- 0.5% of the cable length
Detection Repeatability	± 2ft (0.6m) +/- 0.25% of the cable length
Detection Response Time	5-995sec, software adjustable in 5sec increments; ±2sec
<b>Communication Ports</b>	
Ethernet	10/100BASE-T, RJ45 connector; 500VAC RMS isolation
EIA-232	DB9 female connector; 9600 baud; 8 data bits, no parity, 1 stop bit
EIA-485	1200, 2400, 9600, 19200, or 38400 baud (selectable); Parity: none, even or odd, 8 data bits, 1 stop bit
<b>Protocols</b>	
TCP/IP, HTML, TFTP	IPv4.0; webpages comply with Rehabilitation Act of 1973, sections 504 and 508, US Dept of Education (website accessibility for computer users with disabilities)
SNMP	V1: V2C MIB-2 compliant; NMS Manageable with Get, Set, Traps
SMTP (Email)	Supports Client Authentication (plain and login); compatible with ESMTP Servers
Modbus (EIA-485)	Slave; RTU mode; Supports function codes 03, 04, 06 and 16 Master: RTU mode for integration with RLE's LD5100, LD2000 and LD1500 products only; Johnson N2
Modbus TCP/IP UDP/IP	Modbus Slave; TCP/IP transmission protocol Modbus Master; TCP/IP transmission protocol for integration with RLE's LD2000 and LD1500 products only
BACnet/IP	ASHRAE STD 135-2004 Annex J
BACnet MS/TP	EIA-485
BACnet Alarms	Automatically reports to a single destination
Terminal Emulation (EIA-232)	VT100 compatible
<b>Alarm Notification</b>	
Visual Alarm	Red, 4-digit; 7 Segment LED Display; Bi-color status LED
Email (Ethernet)	4 Email recipients; email sent on Alarm and Return to Normal; each alarm notifies all email recipients
SNMP Traps (Ethernet)	4 Community Strings
<b>Logging Capabilities</b>	
Event Log	Last 500 events
Trend Log	Cable current level every day for the last 288 days
<b>Login Security</b>	
Web Browser Access (Ethernet)	Web password Read Only; 1 Web password Read/Write
Terminal Emulation Access	None
<b>Front Panel Interface</b>	
Display	Red, 4-digit; 7 Segment LED Display; Bi-color status LED
Push Buttons	Test/Rest: 1
LED Indicators	Power/Status: 1 bi-color (Power On: green; Alarm: red)
<b>Operating Environment</b>	
Temperature	32° to 122°F (0° to 50°C)
Humidity	5% to 95% RH, non-condensing
Altitude	15,000ft (4,572m) max.
<b>Storage Environment</b>	-4° to 185°F (-20° to 85°C)
<b>Dimensions</b>	8"W x 4.25"H x 1.25"D (203mmW x 108mmH x 32mmD)
<b>Weight</b>	1.5 lbs. (680g)
<b>Mounting</b>	Wall mountable; Rack mount bracket LD2000-RMD (optional); Wall mount enclosure LD-ENC (optional)
<b>Certifications</b>	CE; ETL listed: conforms to UL STD 61010-1, EN STD 61010-1; certified to CSA C22.2 STD NO. 61010-1; RoHS compliant

