



LEAK DETECTION

To protect expensive electronics from costly water damage, Veris Industries offers complete leak detection systems. Monitor either a single location or a large area with our selection of highly reliable sensing devices and controller systems.

MODEL	DESCRIPTION	PAGE
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LD1500/LD2100	Distance Read Panel	149
LD5200	Distance Read Panel, Touch Screen	151
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LEAK DETECTION SENSOR SELECTION GUIDE

SENSORS AND CONTROL PANELS

	SPOT DETECTION	SINGLE ZONE	MULTI-ZONE	DISTANCE READ
Basic Model	SD/SD-Z/MX1 page 153			
Leak Detection with Relay Output	SD-R01 page 153	LD310/LD1000 page 147	LDRA6 page 147	LD1500/LD2100 page 149 LD5200 page 151
Modbus Output			LDRA6 page 147	LD1500/LD2100 page 149 LD5200 page 151

CABLES

	CABLE KITS	CONDUCTIVE FLUIDS	CHEMICAL FLUIDS	NON-SENSING LEADER CABLE
Basic Model	LC-KIT page 157	SC page 155	SC-C page 155	NSC page 155



Make Early Detection as Simple as Possible

With leak detection kits



LD310 Leak Detection Controller Kits

Specify with Ease

Single zone controller kits pre-configured in 3', 10', 17', 25', 50', or 100' lengths.

Quiet and Easy Troubleshooting

LED indicator for alarm status. Fault LED indicates connectivity loss (some models).

Smart Zone Control

Added control with a sensitivity setting for each zone.

Interested in learning more about leak detection kits?

Contact a Leak Detection Specialist today: 800.354.8556 or at sales@veris.com
See Product Specifications on page 157



LD310, LD1000, & LDRA6

Zone Leak Detection Controller



LD310, LD1000, and LDRA6 control panels continuously monitor up to 1,000 ft. (300 ft. for the LD310) of SC or SC-C detection cable per zone. If the cable detects fluid at any point along its length, the detection panel illuminates the corresponding zone LED, clearly indicating which zone is affected. An alarm (visual for LD310, audible for all others) signals the presence of a leak. Additionally, if the cable loses continuity, the panel will activate a cable fault LED. The detection sensitivity can be set independently for each zone. A summary alarm relay output is standard.

The LDRA6 can interface with a computer via an RS-232 port, through which 117 days of cable current level readings and the last 100 alarms can be accessed for analysis. The LDRA6 also offers a Modbus slave port allowing other devices to communicate with it.

SPECIFICATIONS

Input Power: LD310 LD1000 LDRA6	5 Vdc $\pm 10\%$ 24 Vac/dc ($\pm 10\%$)@300 mA max. (AC: 50/60 Hz) 24 Vac/dc ($\pm 10\%$)@600 mA max. (AC: 50/60 Hz)
Relay Output: LD310 LD1000 LDRA	2 Form C relays (leak and fault); 1 A@24 Vdc, 0.5 A resistive@120 Vac 2 Form C relays (leak and fault); 1 A@24 Vdc, 0.5 A resistive@120 Vac 1 Form C summary alarm relay, 1 Form C relay for each zone/alarm; 1 A@24 Vdc, 0.5 A Resistive@120 Vac

INPUTS

Water Leak Detection Cable	Requires 15 ft. (4.5 m) leader cable kit (LC-Kit) per zone.
Maximum Cable Length: LD310 LD1000, LDRA6	300 ft. (91 m) 1000 ft. (305 m)
Detection Response Time: LD310 LD1000 LDRA6	< 20 sec (10 sec typical) Configurable for 10 sec or 2 min, $\pm 10\%$ 20 to 3600 sec, software adjustable in 10 sec increments, $\pm 2\%$

COMMUNICATION PORTS (LDRA6 ONLY)

RS-232 & RS-485	1200, 2400, 9600, or 19200 selectable; no parity; 8 data bits, 1 stop bit
Terminal Emulation (RS-232)	VT100 Compatible (configuration)
Modbus (RS-485) (LDRA6 only)	Slave; RTU Mode; Supports function codes 03, 04, 06 and 16

Application flexibility

Monitor up to 1,000 ft. (300 m) of water leak detection cable per zone with the LD1000 and LDRA6 or 300 ft. per zone with the LD310

LED indicators

Two LED indicators per zone, for easy troubleshooting...leak and cable fault (LD1000 and LDRA6)

Sensitivity settings

Sensitivity settings for each zone reduce false alarms...maximum detection accuracy

APPLICATIONS

- Monitoring data centers, computer room under-floor areas, mechanical rooms, and electrical control centers
- Monitoring plumbing
- Monitoring chilled beams
- Monitoring chemical/fuel storage
- Protecting records storage

Output versatility

Alarm and trend logs of the last 100 alarms and 117 days of cable current levels, plus RS-232 and Modbus RS-485 ports (LDRA6 only)

Fast response

Summary alarm relay output... fast response

NOTIFICATION

Alarm Notification: Audible Alarm LD1000 LDRA6	85 dBA@2 ft. (0.6 m) 85dBA@2 ft. (0.6 m) re-sound disabled, 8, 16, or 24 hrs.
Push Buttons: LD1000, LDRA6	1 for reset, quiet, and test

OPERATING ENVIRONMENT

Temperature	0 to 50 °C (32 to 122 °F)
Humidity	5% to 95% RH non-condensing
Altitude	15,000 ft. (4,572 m) max
Storage Environment	-20 to 70 °C (-4 to 158 °F)
Weight: LD310 LD1000 LDRA6	3 oz. (85 g) 27 oz. (766 g) 4 lbs. (2 kg)

AGENCY APPROVALS

Agency Approvals: LD310 LD1000 LDRA6	CE, RoHS compliant CE, ETL listed; conforms to UL 61010-1, RoHS compliant CE ETL Listed; conforms to UL 61010-1, EN 61010-1, CAN/CSA C22.2 No. 1010.1, RoHS compliant
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WARRANTY

Limited Warranty	2 years
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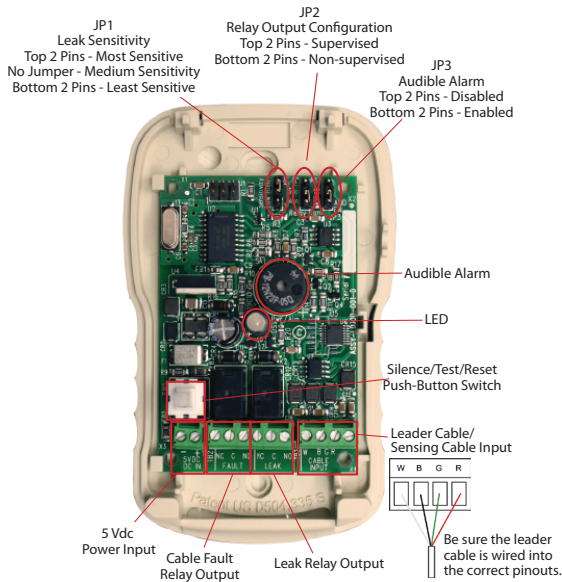


* The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.



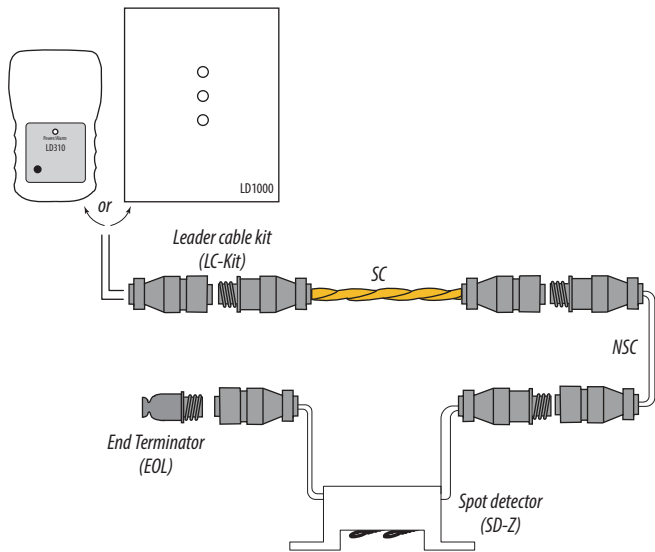
LD310

Wiring Diagram



LD310 OR LD1000 BASIC INSTALLATION WITH
SC SENSING CABLE AND SD-Z SPOT DETECTOR

Wiring Diagram

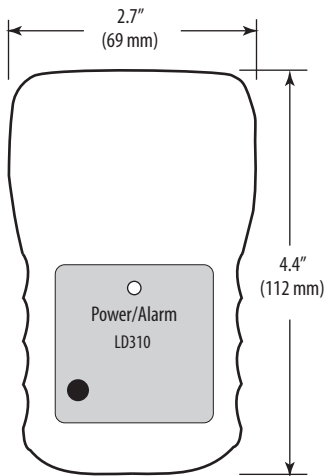


BLINK CODE KEY

MODEL	LED INDICATION	DEVICE STATUS
LD310	Solid green (on or off)	Normal operation
LD310	Flashing green (0.5 sec on/2.5 sec off)	Cable fault
LD310	Flashing green (0.5 sec on/0.5 sec off)	Leak detected
LD1000	Solid green (on or off)	Normal operation
LD1000	1 amber	Cable fault
LD1000	1 red	Leak detected
LDRA6	Solid green (on or off)	Normal operation
LDRA6	1 green	Power on
LDRA6	1 red	Leak detected
LDRA6	1 yellow	Cable fault

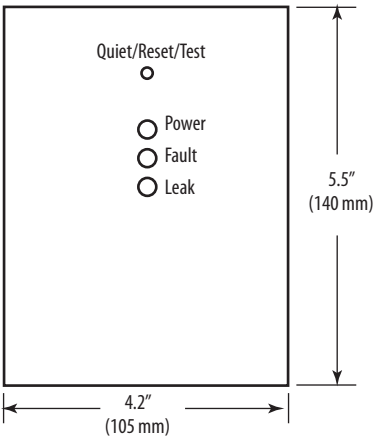
LD310

Dimensional Drawing



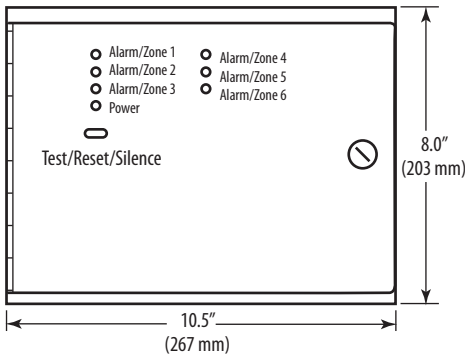
LD1000

Dimensional Drawing



LDRA6

Dimensional Drawing



ORDERING INFORMATION

MODEL	MANUF. PART #	DESCRIPTION
U006-0080*	LD310*	Leak Panel, 1 zone, LED, 2 relay outputs
U006-0001**	LD10003	Leak Panel/Remote Annunciator, 1 zone, supervised, relay output
U006-0036**	LDRA6**	Leak Panel, up to 6 zones, supervised, relay output, Modbus RTU
U006-0035	LC-KIT***	Leader cable kit for SC cables (connects from leak panel to SC or NSC cable)
U006-0061	LC-KIT-M†	Leader cable kit for SC-C and cables (connects from leak panel to SC-C or SC-H cable)
U006-0004	FM1114	Reference map, framed (11" x 14")
U006-0037	WA-DC-05	Power Supply for LD300

* Power supply not included; requires WA-DC-05 power supply.

** Power supply not included; requires Veris PS24-15W power supply or equivalent.

*** Included with LD310 and LD1000.

† Not included with LD310 and LD1000. Required for installation of SC-C cables.



LD1500 & LD2100

Helps Eliminate High Humidity False Alarms



LD2100



LD1500

Together with the SC or SC-C sensing cable, the LD1500 and LD2100 panels detect and report the presence and location of the cable-specific fluid. When the fluid comes in contact with the patented cable, the monitoring panel quickly pinpoints the location of the leak, triggering an alarm and displaying the location.

SPECIFICATIONS

Input Power	24 Vac@600 mA max., 50/60 Hz
INPUTS	
Water Leak Detection Cable	Requires 15 ft. (4.5 m) leader cable kit (LC-KIT or LC-KIT-M)
Maximum Length	LD1500: 1500 ft. (457 m); LD2100: 2000 ft. (609 m)
Detection Accuracy	± 2 ft (0.6 m) + 0.5% of the cable length
Detection Repeatability	± 2 ft (0.6 m) + 0.25% of the cable length
Detection Response Time	5 to 995 sec \pm 2 sec, configure in 5 steps
OUTPUTS	
Relay (LD2100 only)	1 A@24 Vdc, 0.5 A resistive@120 Vac
COMMUNICATIONS PORTS	
RS-232	9600 baud, No parity, 8 data bits, 1 stop bit
RS-485	1200, 2400, 9600, or 19200 baud (selectable); No parity, 8 data bits, 1 stop bit
PROTOCOLS	
Terminal Emulation: RS-232	VT100 compatible
Modbus RS-485	Slave; RTU Mode; Supports function codes 03, 04, 06, and 16; Johnson N2 (LD2100 only)
EXPANDED PROTOCOLS	
TCP/IP, HTML, TFTP	IPv4.0
SNMP	V1: V2C MIB-2 compliant; NMS Manageable with Get, Set, Traps
SMTP email, LD2100 only	Supports client authentication (plain and login); compatible with ESMTP servers
Modbus TCP/IP	Modbus slave; TCP/IP transmission protocol
BACnet/IP	ASHRAE Std 135-2004 Annex J
ALARM NOTIFICATION	
Audible Alarm: LD2100	70 dBA@2 ft. (0.6 m); re-sound configurable (disabled, 0 to 24 hours, integer values only)

High detection accuracy

Adjustable leak and contamination alarm thresholds reduce false alarms due to high humidity...
high detection accuracy

PC configuration

Summary alarm relay output...
fast response

Visual Alarm: LD1500 LD2100	Red, 4-digit; 7 segment LED display; bi-color status LED Bi-color status LED
Email LD1500/LD2100	4 email recipients; email sent on Alarm and Return to Normal
SNMP Traps LD1500, LD2100	4 community strings
LOGGING CAPABILITIES	
Event Log LD1500 LD2100	Last 10 events Last 500 events
Trend Log LD2100	Cable current level every day, for the last 288 days
LOGIN SECURITY	
Display Access	1 Administrator (password for configuration, no password required to view panel status)
FRONT PANEL INTERFACE	
Display LD2100	Green alphanumeric dot matrix
Push Buttons LD2100	Test/Reset
LED Indicator LD1500 LD2100	1 tri-color Power/Status (green = power on; red = alarm; yellow = cable fault) 1 bi-color Power/Status (green=power on, red=alarm)
OPERATING ENVIRONMENT	
Temperature	0 to 50 °C (32 to 122 °F)
Humidity	5 to 95% RH non-condensing
Altitude	15000 ft. (4572 m) max.
Mounting	Vertical wall mount (DIN rail mounting option available on LD2100 only)
WARRANTY	
Limited Warranty	2 years
AGENCY APPROVALS	
Agency Approvals	CE*; ETL listed: conforms to UL 61010-1, EN 61010-1; CSA C22.2; RoHS compliant

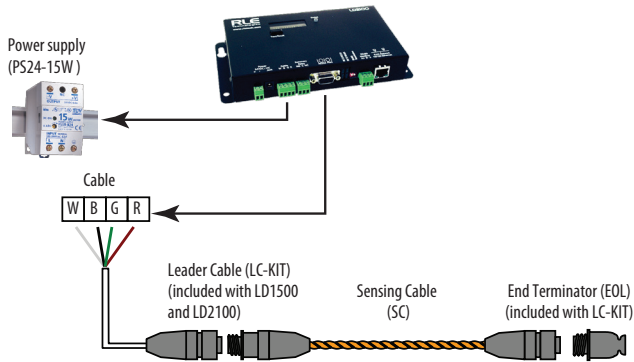


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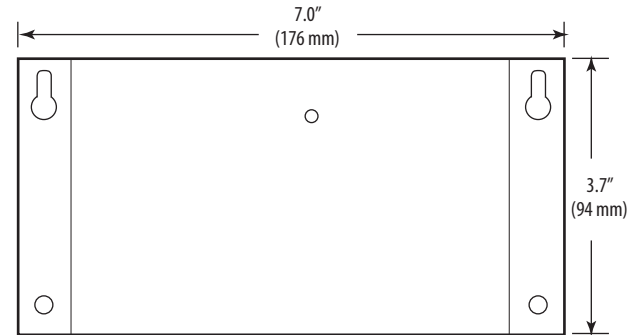


LD1500/LD2100 BASIC SC INSTALLATION

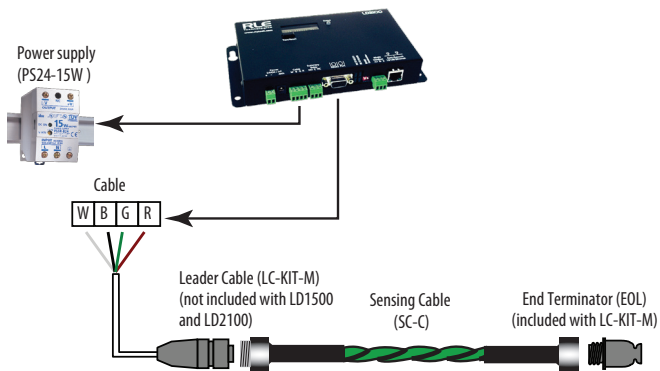
Wiring Diagram

**LD1500**

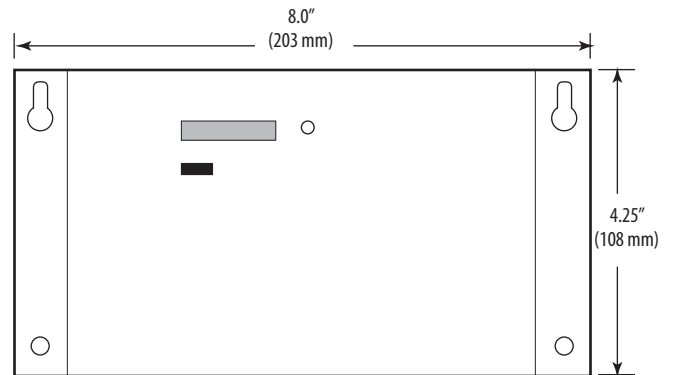
Dimensional Drawing

**LD1500/LD2100 BASIC SC-C INSTALLATION**

Wiring Diagram

**LD2100**

Dimensional Drawing

**ORDERING INFORMATION**

MODEL	MANUF. PART #	DESCRIPTION
U006-0038*	LD1500*	Leak Panel, 1500' Distance Read, Modbus, BACnet, SNMP, SMTP, and relay outputs
U006-0047*	LD2100*	Leak Panel, 2000' Distance Read, Modbus, BACnet, SNMP, SMTP, and relay outputs
U006-0035**	LC-KIT**	Leader cable kit for SC cables (connects from leak panel to SC or NSC cable)
U006-0061***	LC-KIT-M***	Leader cable kit for SC-C cables (connects from leak panel to SC-C cable)
U006-0004	FM1114	Reference map, framed (11" x 14")

* Power supply not included. Use LD-ENC (U006-0045) wall mount enclosure with built-in power supply or Veris PS24-15W power supply or equivalent.

** Included with LD1500 and LD2100.

*** Not included with LD1500 or LD2100. Required for installation of SC-C cables.

LD5200

Minimizes High Humidity False Alarms



LD5200 distance read panel has an innovative touch screen interface that accesses all basic functions. The LD5200 can operate as a stand-alone device, with the user configuring, monitoring, locating, and acknowledging leaks at the panel. It can also be connected to the building network and accessed via a web interface, which expands the capabilities of the unit, adding a convenient interactive facility mapping tool. When a leak is detected, the mapping tool displays the location in the building where the alarm occurred. Multiple communication protocols make the LD5200 readily compatible with existing building systems. Use with our SC or SC-C sensing cable for a complete solution to leak detection.

SPECIFICATIONS

Input Power	100 to 240 Vac@500 mA max., 50/60 Hz
INPUTS	
Water Leak Detection Cable LC-KIT or LC-KIT-M	Requires 15 ft. (4.5 m) leader cable kit
Maximum Length	10000 ft. (3048 m), 7,000 ft. SC-C
Minimum Length	35 ft. (1037 m)
Detection Accuracy	± 2 ft (0.6 m) + 0.5% of the cable length
Detection Repeatability	± 2 ft (0.6 m) + 0.25% of the cable length
Detection Response Time	5 to 990 sec ± 2 sec, software adjustable in 5-sec increments
OUTPUTS	
Analog	4 to 20 mA Loop Powered, 18 to 36 Vdc, RL = 500 Ω max.
Relay	2 Form C Leak Relays, 2 Form C Cable Break Relays; 1 A @ 24 Vdc, 0.5 A resistive@120 Vac;configurable for supervised or non-supervised, latched or non-latched
Maintenance Relay	1 A@24 Vdc, 0.5 A resistive @120 Vac; configurable for supervised or non-supervised, latched or non-latched
COMMUNICATIONS PORTS	
EIA-232	9600 baud, No parity, 8 data bits, 1 stop bit
EIA-485 (Port 1, Port 2, Port 3)	9600, 19200, or 38400 baud (selectable); No parity, 8 data bits, 1 stop bit
RJ-45	10/100 Bast T Ethernet port (TCP/IP)
PROTOCOLS	
Terminal Emulation EIA-232	VT100 compatible
Modbus RTU EIA-485	Master and slave; RTU Mode; BACnet MS/TP; N2, slave

Touch screen

Touch screen interface allows access to basic functions... stand-alone configuration and monitoring

Pinpoint leaks

Web interface offers expanded capabilities through the building mapping tool...pinpoint leaks quickly and accurately

Troubleshooting

Detailed alarm history with time and date stamps...assists in troubleshooting

One device

Acts as a master device for up to 127 leak detection units with up to 10,000 feet of SC cable or 7000 feet of SC-C cable...monitor large areas with only one device

Easy integration

Multiple communication protocols available...easy integration into building systems

RJ-45	Ethernet, TCP/IP; Modbus/TCP/UDP, Master and slave; SNMP V1, V2, V3, NTP, SMTP, DNS, BACnet/IP
ALARM NOTIFICATION	
Audible Alarm	85 dBA@2 ft. (0.6 m); re-sound 0 to 999 min.
Visible Alarm	Indicated on LCD touch screen & through web interface
LOGGING CAPABILITIES	
Event Log	Last 1024 events, downloadable to .txt files
Trend Log	Cable current level every day for the last 365 days, downloadable to .txt files
LOGIN SECURITY	
LCD Touch Screen	No password required to view controller status & data. Administrator password limits access to configuration options.
Web Interface	Username and password can be configured
FRONT PANEL INTERFACE	
Display	480 x 272 pixel color backlit LCD touch screen; 95.04 mm x 53-85 mm
OPERATING ENVIRONMENT	
Temperature	0 to 50 °C (32 to 122 °F)
Humidity	5 to 95% RH non-condensing
Altitude	15000 ft. (4572 m) max.
Mounting	NEMA 1 wall mount enclosure
WARRANTY	
Limited Warranty	2 years
AGENCY APPROVALS	
Agency Approvals	CE; ETL listed: conforms to UL 61010-1, EN 61010-1; CAN/CSA C22.2 No. 61010-1; RoHS compliant

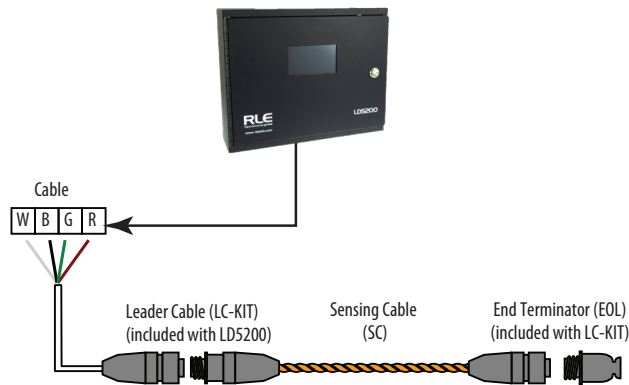


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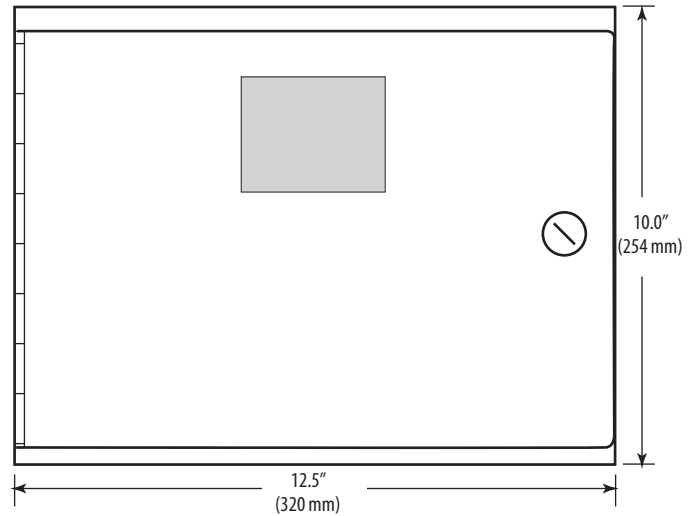


LD5200 BASIC SC INSTALLATION

Wiring Diagrams

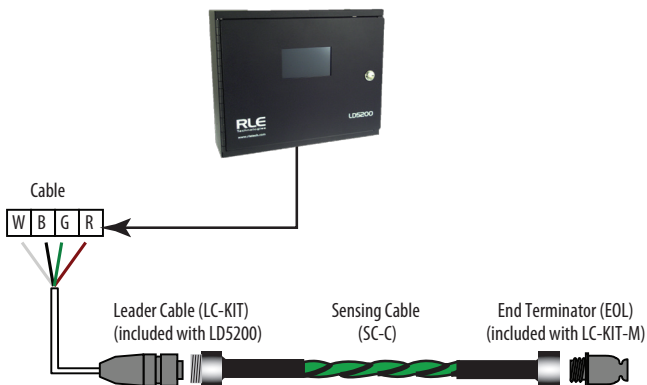


DIMENSIONAL DRAWING

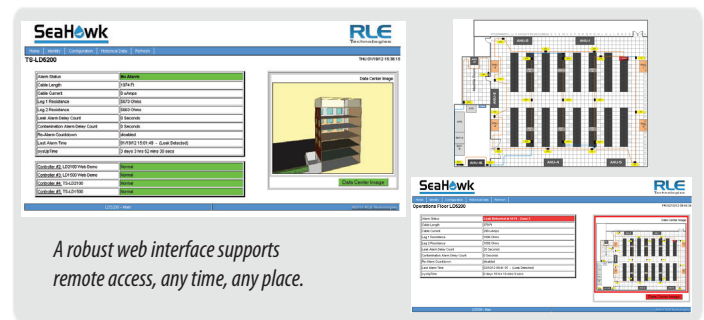


LD5200 BASIC SC-C INSTALLATION

Wiring Diagrams



WEB INTERFACE



ORDERING INFORMATION

MODEL	MANUF. PART #	DESCRIPTION
U006-0079	LD5200	Leak Panel, Distance Read, supervised, multiple outputs: relay, 4 to 20 mA, Modbus RTU, leader cable and EOL terminator
U006-0035*	LC-KIT	Leader cable kit for SC cables (connects from leak panel to SC or NSC cable)
U006-0061**	LC-KIT-M	Leader cable kit for SC-C cables (connects from leak panel to SC-C cable)
U006-0004	FM1114	Reference map, framed (11" x 14")

*Included with LD5200.

**Not included with LD5200. Required for installation of SC-C cables.

SD, SD-R01, SD-Z & MX1

Spot Leak Detectors



SD, SD-R01, SD-Z and MX1 Spot Detectors detect conductive fluids at a single point for the most economical way to detect fluids in small, confined areas. These devices are commonly used in small rooms and in air-conditioning drip pans. Use only with SC conductive fluid leak detection cables.

Veris offers four models of spot detectors which can integrate with various building management systems.

SPECIFICATIONS

SD, SD-R01, SD-Z

Input Power: SD-R01 Only	24 Vac/dc $\pm 10\%$; 0.1 A max. (AC: 50/60 Hz)
Storage Environment	-20 to 70 °C (-4 to 158 °F)

OUTPUTS

Solid-state: SD Only	12 to 36 Vac@0.01 A min., 0.1 A max., 50/60 Hz; 18 to 36 Vdc@0.01 A min., 0.1 A max.
Relay: SD-R01 Only	Dry Contact, Form C; 1 A@24 Vdc, 0.5 A @120 Vac resistive

LEADER CABLE (NSC)

Length:	
SD	14 ft. (4.2 m)
SD-R01	14 ft. (4.2 m)
SD-Z	10 ft. (0.3 m) (2 cables included)
Connector: SD-Z Only	1 male, 1 female; 4 pin, 0.96" (24.38 mm) diameter; connects to SC or NSC Cable

OPERATING ENVIRONMENT

Temperature	0 to 50 °C (32 to 122 °F)
Humidity	5% to 95% RH non-condensing
Altitude	10,000 ft. (3,048 m) max.

WARRANTY

Limited Warranty	2 years
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Simple installation

Simple installation – screw, or ram-set to floor (SD, SD-R01, SD-Z)

Simple operation

Simple operation...no maintenance

Solid-state design

No moving parts to fail

Polymer coated

SD, SD-R01, SD-Z models have polymer-coated sensing probes...no exposed metal that will rust

Durability

All models are fully potted for water resistance...maximum durability

MODEL	DESCRIPTION
SD Spot Detector	<ul style="list-style-type: none"> Operates on either 12 to 36 Vac or 18 to 36 Vdc power Includes a 14 ft. (4.2 m) leader cable
SD-R01 Spot Detector with Relay Output	<ul style="list-style-type: none"> Works with any system that accepts dry contacts Operates on 24 Vac/dc $\pm 10\%$ Automatically resets when conductive fluid is no longer present (AC power only; if DC power is used, device must be reset by disconnecting power momentarily) Includes a 14 ft. (4.2 m) leader cable
SD-Z Spot Detector	<ul style="list-style-type: none"> Designed for use with all RLE detection panels, with SC sensing cable to integrate both zone and spot detection into one panel Powered by the LD310, LD1000, LD5200, LDRA6, or LD2000 When used with a distance read panel (LD2000 or LD5200), the location of the leak will be identified (simulates 50 feet) Includes one male and one female end connector, each on a 1 ft (30 cm) lead wire
MX1 Spot Detector	<ul style="list-style-type: none"> Battery-operated or 12 to 30 Vdc/24 Vac powered

SPECIFICATIONS

MX1

Input Power	12 to 30 Vdc/24 Vac, 50/60 Hz; typical 10-year life lithium battery model available
Max Current Draw, MX1V	10 mA
Output	N.C. solid-state, (opens on alarm)
Output Rating	30 Vac/dc@0.1 A max., not polarity sensitive
Sensing Electrodes	Gold plated

OPERATING ENVIRONMENT

Temperature	-20 to 80 °C (-4 to 176 °F)
Humidity	0 to 100% RH
Water Resistance	Not intended for continuous submersion in water

WARRANTY

Limited Warranty	5 years
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AGENCY APPROVALS

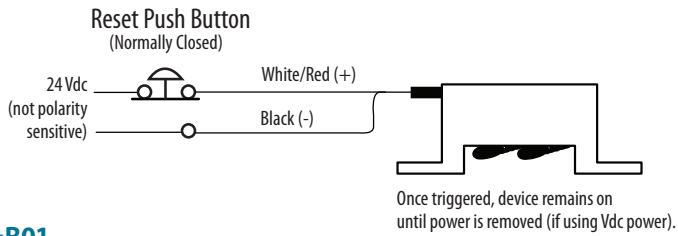


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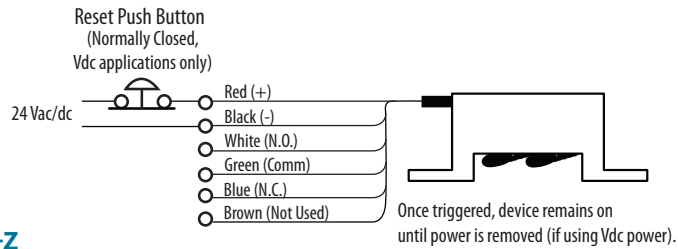


SD

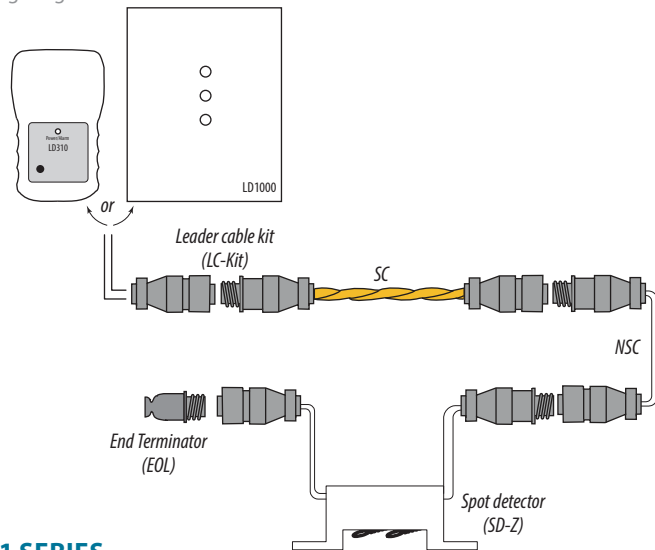
Wiring Diagram

**SD-R01**

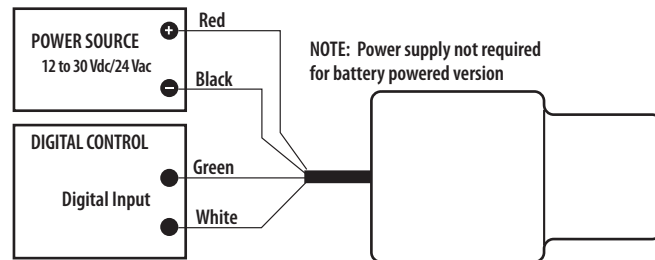
Wiring Diagram

**SD-Z**

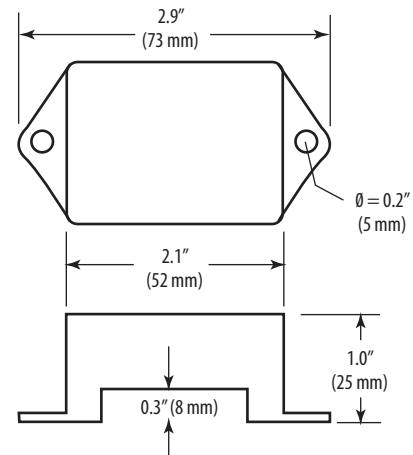
Wiring Diagram

**MX1 SERIES**

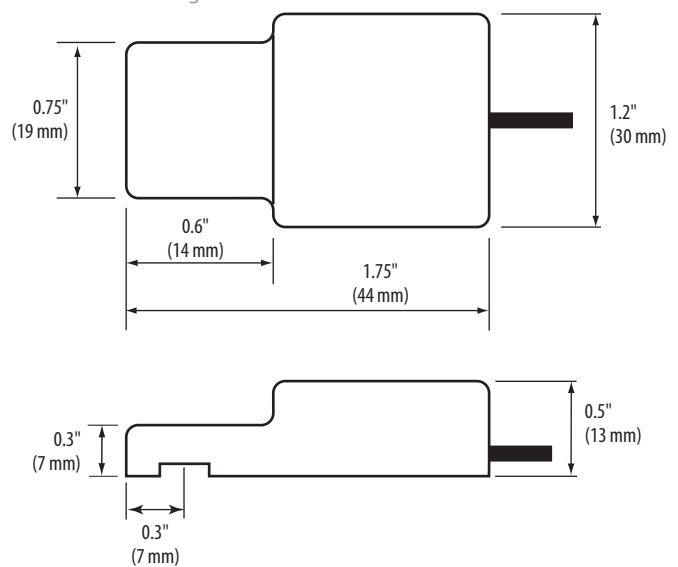
Wiring Diagram

**SD SERIES**

Dimensional Drawing

**MX1 SERIES**

Dimensional Drawing

**ORDERING INFORMATION**

MODEL	MANUF. PART #	DESCRIPTION	CE	ETL
U006-0006	SD	Spot Detector, 14' leader cable	•	•
U006-0007	SD-R01	Spot Detector, 14' leader cable, relay out	•	•
U006-0008	SD-Z*	Spot Detector, 2x10" leader cable	•	•
MX1B	MX1B	Spot Detector, battery		
MX1V	MX1V	Spot Detector, 12 to 30 Vdc/24 Vac		

* The SD-Z uses DIN style connectors. Connect it via the LC-KIT, or integrate it into an LC-KIT-SC/NSC cable configuration.

SC, SC-C & NSC

Highly Flexible, Resists Bends and Kinks, Abrasion Resistant



Sensing and non-sensing cables are designed for use with Zone and Distance Read panels. The sensing cables detect the presence of detectable liquid, and send a signal to the panel. The panel generates an alarm and pinpoints the location of the leak or spill along the cable's length. Sensing cables are designed for high accuracy and maximum reliability.

SC water detection cable senses the presence of water or other conductive fluid. SC-C chemical sensing cable detects the presence of chemicals (see Specifications for list).

NSC non-sensing cable is used to extend the control panel's leader cable to an area where SC detection cable is needed. It also bridges lengths of SC detection cable in areas where sensing is not required. Invisible to the control panel, the non-sensing cable does not affect the accuracy of readings or limit the amount of detection cable that can be connected to a control panel. NSC cables are only compatible with systems using SC water detection cables.

All cables are highly flexible, durable, and kink-resistant. They lie flat after installation, and are abrasion resistant. The cables are plenum rated and UL Listed, making them ideal for use under raised floors and areas where plenum rated cable is required. Choose a pre-specified cable length or a custom length for your convenience and installation flexibility.

SPECIFICATIONS

Plenum Rating: SC NSC	CL2P/CMP C(UL) CL3P/CMP C(UL) California State Fire Marshall approved
Shear Strength: SC/NSC SC-C	>180 lbs (>81.65 kg) 160 lbs (72.6 kg)
Cut Through Resistance: SC/NSC SC-C	>40 lbs (>18.2 kg) with 0.005" (0.13 mm) blade >50 lbs (>22.7 kg) with 0.005" (0.13 mm) blade
Abrasion Resistance: SC/NSC SC-C	60 cycles per UL 719 >65 cycles per UL719
Connector: SC/NSC SC-C	4-pin, 1" (25.4 mm) dia., circular, locking, 4-pin 0.5" (13 mm) diameter

Strong

Strong, durable, and abrasion resistant

Easy installation

Expansion with mating end connectors...easy installation

Installation flexibility

Available in pre-measured and custom lengths with pre-installed end connectors

Plenum rated

Plenum rated and UL Listed

Accurate

Highly accurate alarm notification...fewer false alarms

Application versatility

SC and SC-C cables detect the presence of specific fluids

OPERATING ENVIRONMENT

Temperature: SC/NSC SC-C	0 to 75 °C (32 to 167 °F) 90 °C (194 °F) max.
Humidity: SC/NSC	5 to 95% RH non-condensing
Altitude: SC/NSC	15,000 ft. (4,572 m) max.

STANDARD LENGTHS

SC-10/NSC-10	10 ft. (3.1 m)
SC-17	17 ft. (5.1 m)
SC-25/NSC-25	25 ft. (7.7 m)
SC-50/NSC-50	50 ft. (15.3 m)
SC-100/NSC-100	100 ft. (30.5 m)
Storage Environment	-30 to 85 °C (-22 to 185 °F)
Weight	0.02 lbs/ft (29.7 g/m)
Detectable Liquids/ Chemical Resistance: SC-C*	In accordance with ASTM D543, cable functions normally after seven days exposure to the following: fresh deionized water, tap water, sulfuric acid (98%), sulfuric acid (50%), hydrochloric acid (37%), sodium hydroxide (10%), aqua regia, ethylene glycol (60% in DI water)
Agency Approvals: SC NSC	CE; UL; RoHS compliant UL E118871; UL 13, power limited circuit cable; UL 444, communication cables; NFPA 262; plenum flame test (UL 910); NEC Articles 725 and 800; RoHS compliant

WARRANTY

Limited Warranty	2 years
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AGENCY APPROVALS



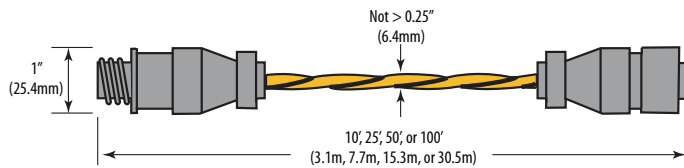
* Prolonged exposure to concentrated ketones may cause temporary reduction of sensitivity; call for details.

** The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

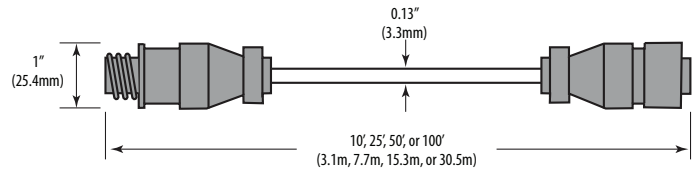


SC

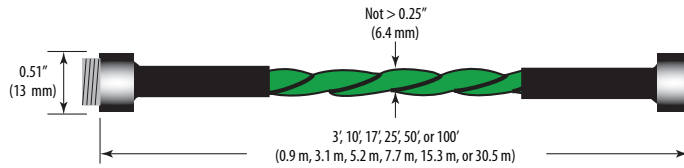
Dimensional Drawing

**NSC**

Dimensional Drawing

**SC-C**

Dimensional Drawing

**ORDERING INFORMATION**

Sensing Cable

MODEL	MANUF. PART #	DESCRIPTION
U006-0009	SC-10	Sensing Cable, Water, 10 feet
U006-0048	SC-17	Sensing Cable, Water, 17 ft
U006-0013	SC-25	Sensing Cable, Water, 25 feet
U006-0014	SC-50	Sensing Cable, Water, 50 feet
U006-0010	SC-100	Sensing Cable, Water, 100 feet
U006-0011*	SC-1000	Sensing Cable, Water, 1000 feet, bulk
U006-0012*	SC-2000	Sensing Cable, Water, 2000 feet, bulk
U006-0049	SC-C-3	Sensing Cable, Chemical, 3 ft
U006-0050	SC-C-10	Sensing Cable, Chemical, 10 ft
U006-0051	SC-C-17	Sensing Cable, Chemical, 17 ft
U006-0052	SC-C-25	Sensing Cable, Chemical, 25 ft
U006-0053	SC-C-50	Sensing Cable, Chemical, 50 ft
U006-0054	SC-C-100	Sensing Cable, Chemical, 100 ft

*CPCE (U006-0039), SPCL (U006-0040), and SCCS (U006-0041) tools are required for installation. LCDE (U006-0029) is highly recommended.

ORDERING INFORMATION

Non-sensing Cable

MODEL	MANUF. PART #	DESCRIPTION
U006-0017	NSC-10	Non-Sensing Cable, 10 feet
U006-0021	NSC-25	Non-Sensing Cable, 25 feet
U006-0022	NSC-50	Non-Sensing Cable, 50 feet
U006-0018	NSC-100	Non-Sensing Cable, 100 feet
U006-0019*	NSC-1000	Non-Sensing Cable, 1000 feet, bulk
U006-0020*	NSC-2000	Non-Sensing Cable, 2000 feet, bulk

*CPCE (U006-0039), SPCL (U006-0040), and SCCS (U006-0041) tools are required for installation. LCDE (U006-0029) is highly recommended.

LC-KIT & LC-KIT-M

Single Zone Leak Detection Controller Kits



Single zone leak detection controller kits are pre-configured in popular lengths for monitoring single areas or rooms. Kits come with everything needed for a complete system, including an LD310 single zone control panel, a leader cable kit with end-of-line terminator, sensing cable, and a WA-DC-05 power supply. LD310 control panels continuously monitor up to 300 ft. of leak detection cable. If the cable detects compatible fluid at any point along its length, the detection panel LED illuminates and an alarm signals the presence of a leak. Additionally, if the cable loses continuity, the panel will activate a cable fault LED pattern.

SPECIFICATIONS

LD310 Controller

Input Power	5 Vdc ±10%
Storage Environment	-20 to 70 °C (-4 to 158 °F)
Weight	3 oz. (85 g)

INPUTS

Water Leak Detection Cable	Requires 15 ft. (4.5 m) leader cable (kit included)
Maximum Cable Length	300 ft. (91 m)
Detection Response Time	<20 sec (10 sec typical)
Relay Output	2 Form C relays (leak and fault); 1 A@24 Vdc, 0.5 A resistive@120 Vac

OPERATING ENVIRONMENT

Temperature	0 to 50 °C (32 to 122 °F)
Humidity	5 to 95% RH non-condensing
Altitude	15,000 ft. (4,572 m) max

SPECIFICATIONS

Cables

Plenum Rating: SC NSC	CL2P/CMP C(UL) CL3P/CMP C(UL) California State Fire Marshall approved
Shear Strength: SC/NSC SC-C	>180 lbs (>81.65 kg) 160 lb (72.6 kg)
Cut Through Resistance: SC/NSC SC-C	>40 lbs (>18.2 kg) w/0.005" (0.13 mm) blade >50 lbs (>22.7 kg) w/0.005" (0.13 mm) blade
Abrasion Resistance: SC/NSC SC-C	60 cycles per UL 719 >65 cycles per UL719
Connector: SC/NSC SC-C	4 pin, 1" (25.4 mm) dia., circular, locking, 4 pin, 0.5" (13 mm) diameter

Application flexibility

Monitor up to 3', 10', 17', 25', 50', or 100' of leak detection cable

LED indicator

Bi-color LED indicator for alarm status and cable fault...easy indication of leaks or equipment problems

Audible alert

Selectable on/off audible alert

APPLICATIONS

- Monitoring data centers, computer room under-floor areas, mechanical rooms, and electrical control centers
- Monitoring plumbing in facilities
- Monitoring chilled beams
- Monitoring chemical and fuel storage areas
- Protecting records storage rooms

OPERATING ENVIRONMENT

Temperature: SC/NSC SC-C	0 to 75 °C (32 to 167 °F) 90 °C (194 °F) max.
Humidity: SC/NSC:	5 to 95% RH non-condensing
Altitude: SC/NSC:	15,000 ft. (4,572 m) max.
Storage Environment: SC NSC	-30 to 85 °C (-22 to 185 °F) 0 to 75 °C (32 to 167 °F)
Chemical Resistance: SC-C*	In accordance with ASTM D543, cable functions normally after seven days exposure to the following: fresh deionized water, tap water, sulfuric acid (98%), sulfuric acid (50%), hydrochloric acid (37%), sodium hydroxide (10%), aqua regia, ethylene glycol (60% in DI water)
Agency Approvals: LD300 SC NSC	CE; RoHS compliant CE; UL; RoHS compliant UL E118871; UL 13, power limited circuit cable; UL 444, communication cables; NFPA 262; plenum flame test (UL 910); NEC Articles 725 and 800; RoHS compliant

WARRANTY

Limited Warranty	2 years
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AGENCY APPROVALS



*Prolonged exposure to concentrated ketones may cause temporary reduction of sensitivity; call for details.

** The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

Pushbutton

Pushbutton switch allows users to silence the audible alarm and to test and reset the system

Max accuracy

Sensitivity settings for each zone help reduce false alarms... maximum detection accuracy

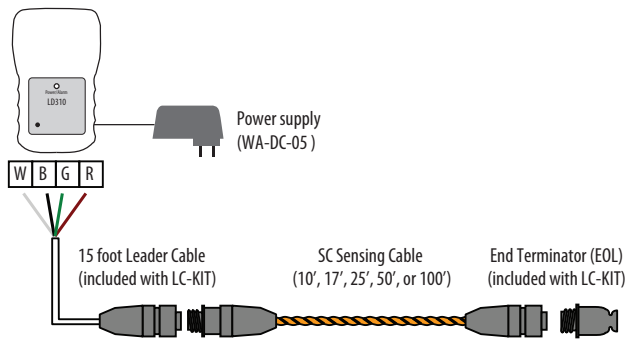
Fast response

Summary alarm relay output



SINGLE ZONE KIT WITH SC SENSING CABLE

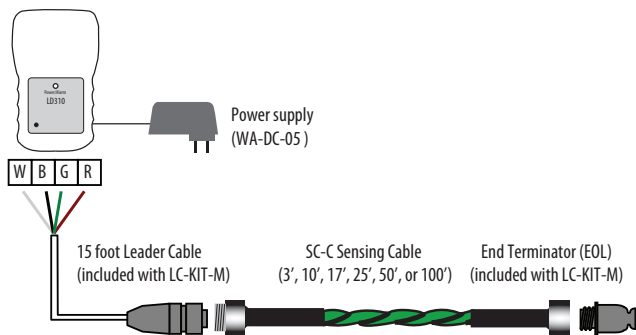
Wiring Diagram

**BLINK CODE KEY**

LED INDICATION	DEVICE STATUS
Solid green (on or off)	Normal operation
Flashing green (0.5 sec on/2.5 sec off)	Cable fault
Flashing green (0.5 sec on/0.5 sec off)	Leak detected

SINGLE ZONE KIT WITH SC-C SENSING CABLE

Wiring Diagram

**ORDERING INFORMATION**

MODEL	DESCRIPTION	KIT INCLUDES THESE MANUF. PART #S
U006-0062	Kit, LeakDet, LD310, 10' Conductive Fluid	LD310, LC-Kit, SC-10 & WA-DC-05
U006-0063	Kit, LeakDet, LD310, 17' Conductive Fluid	LD310, LC-Kit, SC-17 & WA-DC-05
U006-0064	Kit, LeakDet, LD310, 25' Conductive Fluid	LD310, LC-Kit, SC-25 & WA-DC-05
U006-0065	Kit, LeakDet, LD310, 50' Conductive Fluid	LD310, LC-Kit, SC-50 & WA-DC-05
U006-0066	Kit, LeakDet, LD310, 100' Conductive Fluid	LD310, LC-Kit, SC-100 & WA-DC-05
U006-0067	Kit, LeakDet, LD310, 3' Chemical	LD310, LC-Kit-M, SC-C-3 & WA-DC-05
U006-0068	Kit, LeakDet, LD310, 10' Chemical	LD310, LC-Kit-M, SC-C-10 & WA-DC-05
U006-0069	Kit, LeakDet, LD310, 17' Chemical	LD310, LC-Kit-M, SC-C-17 & WA-DC-05
U006-0070	Kit, LeakDet, LD310, 25' Chemical	LD310, LC-Kit-M, SC-C-25 & WA-DC-05
U006-0071	Kit, LeakDet, LD310, 50' Chemical	LD310, LC-Kit-M, SC-C-50 & WA-DC-05
U006-0072	Kit, LeakDet, LD310, 100' Chemical	LD310, LC-Kit-M, SC-C-100 & WA-DC-05

Cables, EOL, and power supply only.