LD310, LD1000, & LDRA6

ZONE LEAK DETECTION CONTROLLER

FEATURES

- 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... application flexibility
- Two LED indicators per zone, for easy troubleshooting...leak and cable fault (LD1000 and LDRA6)
- Sensitivity settings for each zone reduce false alarms...maximum detection accuracy
- Summary alarm relay output...fast response
- 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)... output versatility

DESCRIPTION

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

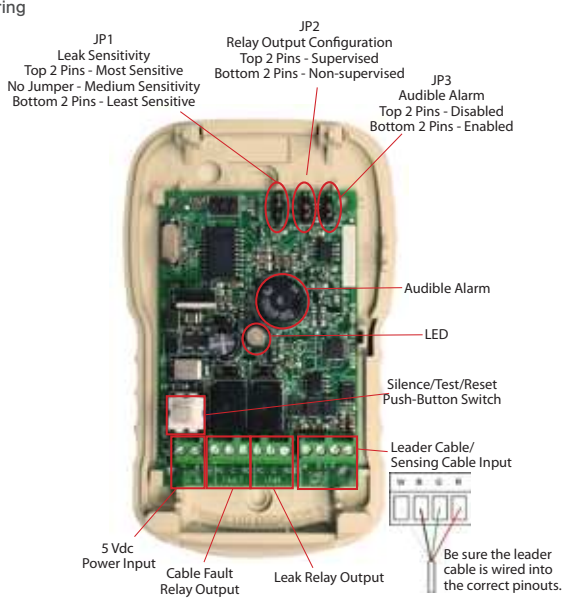
Input Power: LD310 LD1000 LDRA6	 5 Vdc ±10% 24 Vac/dc (±10%)@300 mA max. (AC: 50/60 Hz) 24 Vac/dc (±10%)@600 mA max. (AC: 50/60 Hz)
Relay Output: LD310 LD1000 LDRA	 2 Form C relays (leak and fault); 1 A@24 Vdc, 0.5 A resistive@120 Vac 2 Form C relays (leak and fault); 1 A@24 Vdc, 0.5 A resistive@120 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, ± 10% 20 to 3600 sec, software adjustable in 10 sec increments, ± 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
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: 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

APPLICATIONS

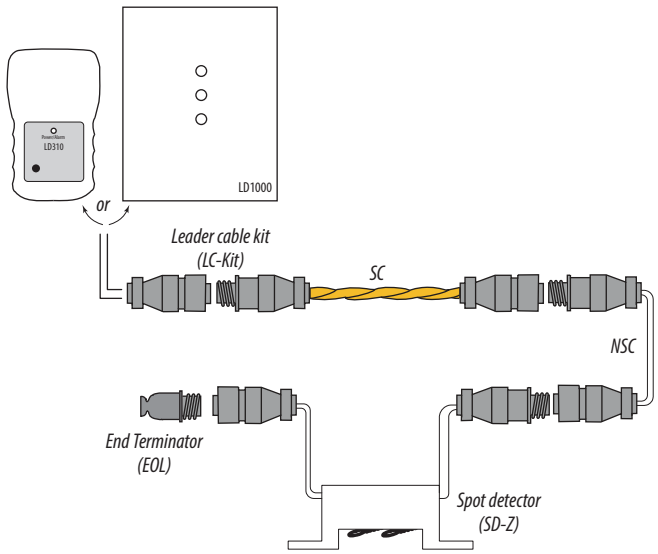
- Monitoring data centers, computer room under-floor areas, mechanical rooms, and electrical control centers
- Protecting records storage rooms
- Monitoring plumbing in facilities
- Monitoring chilled beams
- Monitoring chemical and fuel storage areas

WIRING DIAGRAMS

LD310 Wiring



LD310 or LD1000 Basic Installation with SC Sensing Cable and SD-Z Spot Detector

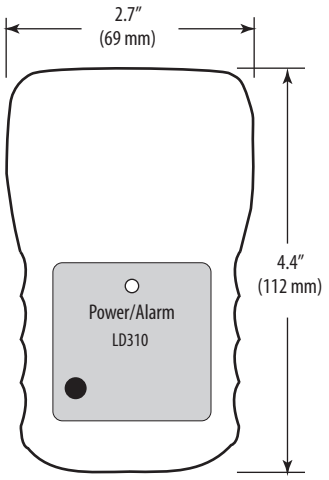


BLINK CODE KEY

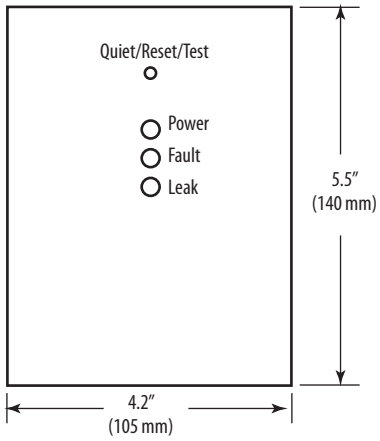
MODEL	LED INDICATION	DEVICE STATUS
LD310	Solid green (on or off)	Normal operation
LD310	Flashing green (0.5 sec on/2.5 sec off)	Cable fault
LD310	Flashing green (0.5 sec on/0.5 sec off)	Leak detected
LD1000	Solid green (on or off)	Normal operation
LD1000	1 amber	Cable fault
LD1000	1 red	Leak detected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

DIMENSIONAL DRAWINGS

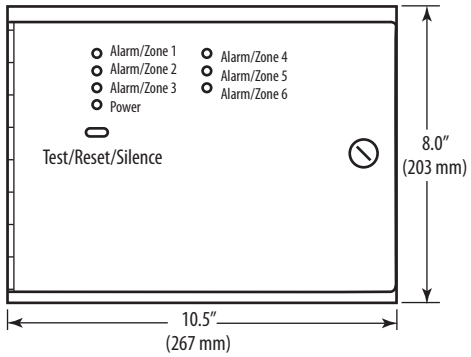
LD310



LD1000



LDRA6



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

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