SeaHawk

LD1000

ARCHITECT AND ENGINEER SPECIFICATIONS

RLE TECHNOLOGIES

Rev. 1.0 110063

1. GENERAL SPECIFICATION

1.1 The contractor shall provide RLE Technologies' SeaHawk LD1000 Alarm Panel (hereinafter referred to as the "LD1000") as described in subsequent sections of this specification to perform the functions of water leak detection, event annunciation, and notification. The system shall include but not be limited to: a SeaHawk LD1000 Alarm Panel, SeaHawk Water Leak Detection Cable–patent # 6144209 (no substitutions permitted), an LC-kit (leader cable and end-of-line terminator), and optional installation accessories.

1.2 The SeaHawk LD1000 System components listed above shall be manufactured by RLE Technologies, 104 Racquette Drive, Fort Collins, CO 80524, U.S.A. Tel (970) 484-6510, Fax (970) 484-6650, URL: www.rletech.com

2. CODES/STANDARDS COMPLIANCE

2.1 The SeaHawk LD1000 System shall have the following listings and approvals:

2.1.1 CE Certified; EMC – EN61326 Class A

2.1.2 UL STD 61010A-1; EN STD 61010-1; CAN/CSA C22.2 STD NO. 61010-1

2.1.3 CL2P/CMP per UL STD E162948 (for SeaHawk Water Leak Detection Cable); ANSI, NFPA 262.

3. COMPONENT DESCRIPTION

3.1 SEAHAWK LD1000 ALARM PANEL

3.1.1 The LD1000 shall be constructed as a stand alone unit suitable for vertical surface wall mounting. The LD1000 Alarm Panel shall be housed in a metal Type 1 enclosure.

3.1.2 The overall size of the LD1000 shall be 4.125"W x 5.5"H x 2.25"D (105mmW x 140mmH x 58mmD)

3.1.3 The LD1000 shall operate on externally supplied 24VAC/VDC @600mA max, 50/60 Hz power supply, isolated.

3.1.4 The LD1000 shall be suitable for operating at ambient temperatures between 32°F and 122°F (0°C and 50°C), relative humidity between 5% and 95%, non-condensing and a maximum altitude of 15,000 feet (4572m). The LD1000 shall be suitable for storage at temperatures between -4°F and 158°F (-20°C and 70°C).

3.1.5 The sensing cable input of the LD1000 requires a 15 foot (4.57m) long leader cable and EOL (product code: LC-KIT) to facilitate remote mounting.

3.1.6 The LD1000 shall be capable of monitoring up to 1,000 feet (304.8m) of RLE Technologies SeaHawk Water Leak Detection Cable and shall have a leak response time of less than 30 seconds.

3.1.7 The LD1000 Alarm Panel shall include one Form C Leak Relay, one Form C Cable Fault Relay, configurable to, two Summary Form C Relays with contacts rated at 1A at 24VDC, 0.5A resistive at 120VAC. The relays shall be configurable as latched or non-latched and supervised or non-supervised.

3.1.8 The LD1000 shall continuously monitor the SeaHawk Water Leak Detection Cable for contact with water and other conductive liquids. In case a leak is detected, the LD1000 shall sound an audible alarm, flash the red Leak LED, and activate the relay output.

3.1.9 The LD1000 shall continuously supervise the electrical integrity of the SeaHawk Water Leak Detection Cable. In case of a cable fault/break, the LD1000 shall sound an audible alarm, flash the yellow Fault LED, and activate the relay output.

3.1.10 When either the leak or fault LED is flashing and the audible alarm is sounding, pressing the Quiet/Reset/Test pushbutton once shall silence the alarm and cause the flashing LED to change to a solid red (leak) or yellow (fault) color. Pressing and holding the Quiet/Reset/Test pushbutton shall reset the LD1000 Alarm Panel and initiate a self-test.

3.1.11 The LD1000 shall have the following indicators, switches and/or buttons:

A.) One green Power LED that illuminates when the power is on.

B.) One amber Fault LED that illuminates yellow when a cable fault/break is detected.

C.) One red Leak LED that illuminates when water is detected.

D.) One audible alarm with an 85 DBA sound output at 2 feet (0.6 m) which shall sound for cable fault and leak detected conditions and shall be silenced by the depression of the Quiet/Reset/Test pushbutton.

E.) One Quiet/Reset/Test multifunction pushbutton to silence an alarm, reset all alarms, and activate the self-test.

3.1.12 The LD1000 shall allow leak detection sensitivity adjustments.

3.1.13 The LD1000 shall allow modification of the default alarm delay setting from 10 seconds to 2 minutes (dipswitch setting).

3.1.14 The audible alarm on the LD1000 shall have the ability to be disabled.

3.2 SEAHAWK WATER LEAK DETECTION CABLE

3.2.1 The SeaHawk Water Leak Detection Cable shall detect the presence of water and other conductive liquids and shall be constructed of two sensing wires and two insulated wires with an abrasion resistant, non-conductive polymer core. Each individual sensing wire shall be covered with a non-conductive polymer mesh to help prevent false alarms from contaminants. The SeaHawk Water Leak Detection Cable shall be fast drying and highly flexible allowing for small bend radii. The SeaHawk Leak Detection Cable shall be available in 10 feet (3.05m), 25 feet (7.62m), 50 feet (15.24m), 100 feet (30.48m), and custom lengths with mating connectors (male/female) pre-installed.

3.2.2 The SeaHawk Water Leak Detection Cable shall be suitable for operating at ambient temperatures between 32°F and 167°F (0°C and 75°C), relative humidity between 5% and 95%, non-condensing and a maximum altitude of 15,000 feet (4572m). The Water Leak Detection Cable shall be suitable for storage at temperatures between -22°F and 185°F (-30°C and 85°C) and shall be plenum rated to CL2P per UL (ANSI/NFPA262). The SeaHawk Water Leak Detection Cable shall have a Sheer Strength of > 180 lbs. (81.65kg) and a Cut Through Resistance of > 40 lbs (18.14kg) with a .005in (0.127mm) blade.

3.3 INSTALLATION ACCESSORIES

3.3.1 The LC-KIT includes a 15 feet (4.57m) leader cable and an end-of-line terminator (used on the last length of cable or Spot Detector connected to the system) is required for the LD1000.

3.3.2 SeaHawk Non-Sensing Cable (NSC) shall be used to bridge between sections of SeaHawk Water Leak Detection Cable where water leak detection is not needed. The SeaHawk NSC shall be plenum rated to CL3P per UL. NSC shall be available in 10 feet (3.05m), 25 feet (7.62m), 50 feet (15.24m), 100 feet (30.48m), and custom lengths with mating connectors (male/female) pre-installed.

3.3.3 The SD-Z spot detector can be integrated into the system for use in areas where only a spot detector may be needed. The overall size of the SD-Z shall be 1.55”W x 2.0”H x 1.0”D (39.37mmW x 50.8mmH x 25.4mmD). SD-Z has preinstalled male and female connectors for integration between lengths of SC and/or NSC cable.

3.3.4 The SD-Z1 spot detector can be integrated into the system for use in areas where only a spot detector may be needed. The overall size of the SD-Z1 shall be 1.55”W x 2.0”H x 1.0”D (39.37mmW x 50.8mmH x 25.4mmD). The SD-Z1 uses a 14 foot (4.27m) leader cable to be connected to the zone input. No LC-Kit is required to connect the SD-Z1 to the LD1000.

3.3.5 J-Clips (JC) shall be used to secure cables every 4 feet (1.22m) and on any corners or bends of the SeaHawk Water Leak Detection Cable and/or SeaHawk Non-Sensing Cable. The overall size of the J-clips shall be 1”W x 1.1”H x 0.5”D (25mmW x 28mmH x 12mmD). J-clips shall be available in quantities of 10, 25, 50, and 200.

3.4 SYSTEM COMMISSIONING AND MAINTENANCE

3.4.1 The RLE Technologies Leak Detection System shall be installed and maintained as recommended in the RLE Technologies’ SeaHawk LD1000 User Guide.

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