SeaHawk

LD300

ARCHITECT AND ENGINEER SPECIFICATIONS

RLE TECHNOLOGIES

110064 REV 1.0

1. GENERAL SPECIFICATION

1.1 The contractor shall provide a RLE Technologies SeaHawk LD300 Single Zone Water Detection Controller (hereinafter referred to as the "LD300 Module") 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 LD300 Module, 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 LD300 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 LD300 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)

3. COMPONENT DESCRIPTION

3.1 SEAHAWK LD300 MODULE

3.1.1 The SeaHawk LD300 Module shall be constructed as a stand alone unit suitable for vertical surface wall mounting. The LD300 Module shall be housed in a lightweight plastic enclosure.

3.1.2 The overall size of the LD300 Module shall be 2.7"W x 4.4"H x 1.1"D (69mmW x 112mmH x 28mmD)

3.1.3 The LD300 Module shall operate on externally supplied, isolated 5VDC @100mA power supply.

3.1.4 The LD300 Module 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 LD300 Module shall be suitable for storage at temperatures between -4°F and 158°F (-20°C and 70°C).

3.1.5 The LD300 Module input requires a 15 foot (4.57m) long leader cable and EOL (product code: LC-KIT) to facilitate remote mounting.

3.1.6 The SeaHawk LD300 Module shall be capable of monitoring up to 300 feet (91.44m) of RLE Technologies SeaHawk Water Leak Detection Cable and shall have a typical leak response time of 20 seconds.

3.1.7 The SeaHawk LD300 Module shall include two Form C relay outputs with contacts rated at 1A at 24VDC, 0.5A resistive at 120VAC. The relays shall be configurable as supervised or non-supervised.

3.1.8 The LD300 Module shall continuously monitor the SeaHawk Water Leak Detection Cable for contact with water and other conductive liquids. In case a leak is detected, the LD300 Module shall flash the LED quickly (once every second) and activate a Leak relay output.

3.1.9 The LD300 Module shall continuously supervise the electrical integrity of the SeaHawk Water Leak Detection Cable. In case of a cable fault, the LD300 Module shall flash the LED slowly (once every 3 seconds) and activate a Fault relay output.

3.1.10 When the leak or cable fault condition is resolved, the LD300 Module shall illuminate the LED with a solid green and reset the relay outputs.

3.1.11 The SeaHawk LD300 Module shall have the following indicators, switches and/or buttons:

A.) One green Power/Alarm LED that illuminates solid green when the power is on and the system is operating normally, blinks slowly when a cable fault is detected, and blinks quickly when a leak is detected.

B.) One internal jumper to select between low, medium, and high detector sensitivity.

C.) One internal jumper to select between supervised and non-supervised relay outputs.

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 LD300.

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). Preinstalled male and female connectors on the SD-Z allow 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.

3.3.5 An X-Connector (X-CON) shall be used to branch the SeaHawk Leak Detection Cable in multiple directions. The X-CON shall be constructed with a single cable input, a single cable output and two additional branch lines. Multiple X-CONs can be used within a single system. The overall size of the X-CON shall be 2.0”W x 0.9”H x 3.0”D (50.8mm x 22.86mm x 76.2mm).

3.3.6 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.

4. SYSTEM COMMISSIONING AND MAINTENANCE

4.1 The RLE Technologies Leak Detection System shall be installed and maintained as recommended in the RLE Technologies' SeaHawk LD300 User Guide.

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