WATER LEAK DETECTION ALARM SYSTEMS

SECTION 16500

aquaALERT®
ADVANCED WATER LEAK DETECTION SYSTEMS

A Division of:
Light Engineered Displays, Inc.
109 Portwatch Way
Wilmington, N.C. 28412
Phone: (800) 251-2512
Fax: (800) 251-9878
Internet: www.ledinc.com
Email: sales@ledinc.com

Part 1: General

1.1 Summary

A. Provide subfloor Water Leak Detection System as shown on drawings, specified herein, and as needed for a complete and proper installation.

B. Related work not in this section:
   1. Conduit systems, wires and cables.
   2. Other alarm systems.

1.2 Approvals

A. Contractor shall submit manufacturer's technical product literature on all related system components.

B. Contractor shall submit shop drawings that include, but are not limited to, the following:
   1. Plan view of the hazard area including the location of pipes, valves, and any likely source of water intrusions.
   2. Location of equipment to be protected.
   3. Layout of water detector cable and location of alarm panel.

1.3 Quality Assurance

A. Water leak detection system must be listed by Underwriter's Laboratory, Inc. or other acceptable testing facility.
B. Installation shall be supervised by a representative, trained by the manufacturer, with a minimum of five years experience in installation and testing of like systems.
C. Contractor shall warranty the system for a period of one year after the final Inspection.

Part 2: Products

2.1 General

A. Water leak detection system to utilize linear water sensing cable and shall detect the presence of water at any point along its length. Spot Detectors are NOT acceptable.

B. Water sensing cable layout to provide coverage for each AHU, all water lines, and the perimeter areas. Sensing cable shall be arranged in independent zones of approximately 100' per zone. Zoning shall be designed for reference by geographical area. Cable shall be color coded per zone.

C. The system shall include and be integral with a color coded floor plan of the hazard area. This plan shall depict the entire routing of the water sensing cable along with its respective zoning.

D. The system shall be the LW Series as manufactured by AquaALERT, a division of Light Engineered Displays, Inc. Manufacturer will have at least 10 years manufacturing of Water Leak Detection systems.

Part 2: Products (continued)

2.2 Control Panel

A. The Control Panel shall operate from 120 VAC, include battery backup. and provide supervision for the water sensing cable. The control panel shall provide, at a minimum, the following:

1. Green Power On LED.
2. Red Alarm LED, per zone.
3. Yellow Trouble LED, per zone.
4. Common Alarm and Common Trouble relays to remote tie-in.
5. Audible device and Acknowledge switch.
6. Adjustable sensitivity to compensate for ambient room environment.
7. Supervised detection zones utilizing low current, low voltage, pulsed AC to maximize cable longevity.

2.3 Water Detection Cable

A. Water Detection Cable shall consist of two parallel conductors with a supervised end of line resistor circuit. The conductors are individually insulated with a protective outer covering of braided rayon.

B. The Cable shall be decay and corrosion resistant and shall not require replacement after being wet.

C. The Cable shall be designed to cut to fit installation using ordinary terminal blocks for connections. Special connectors are not acceptable.

Part 3: Operation

3.1 Operation

A. Detection of water shall cause the following to occur:

1. Activate the alarm sonalert in the Water Detection Panel.
2. Visual indication of water detection, by zone, on the integral color coded annunciator map.
3. Operate alarm relay for remote tie-in.

B. A break in the water sensing cable, either conductor, any zone, shall cause the following:

1. Activate the trouble sonalert in the water detection panel.
2. Visual indication of trouble condition, by the zone, on the annunciator display.
3. Operate trouble relay for remote tie-in.

C. Loss of normal input power shall cause the following:

1. Power On indicator will extinguish.
2. Unit will continue to operate, with no loss of functions, for up to 24 hours.
3. Unit will indicate trouble if batteries become weak before normal power is restored.