Series X76S
Leak Detector System

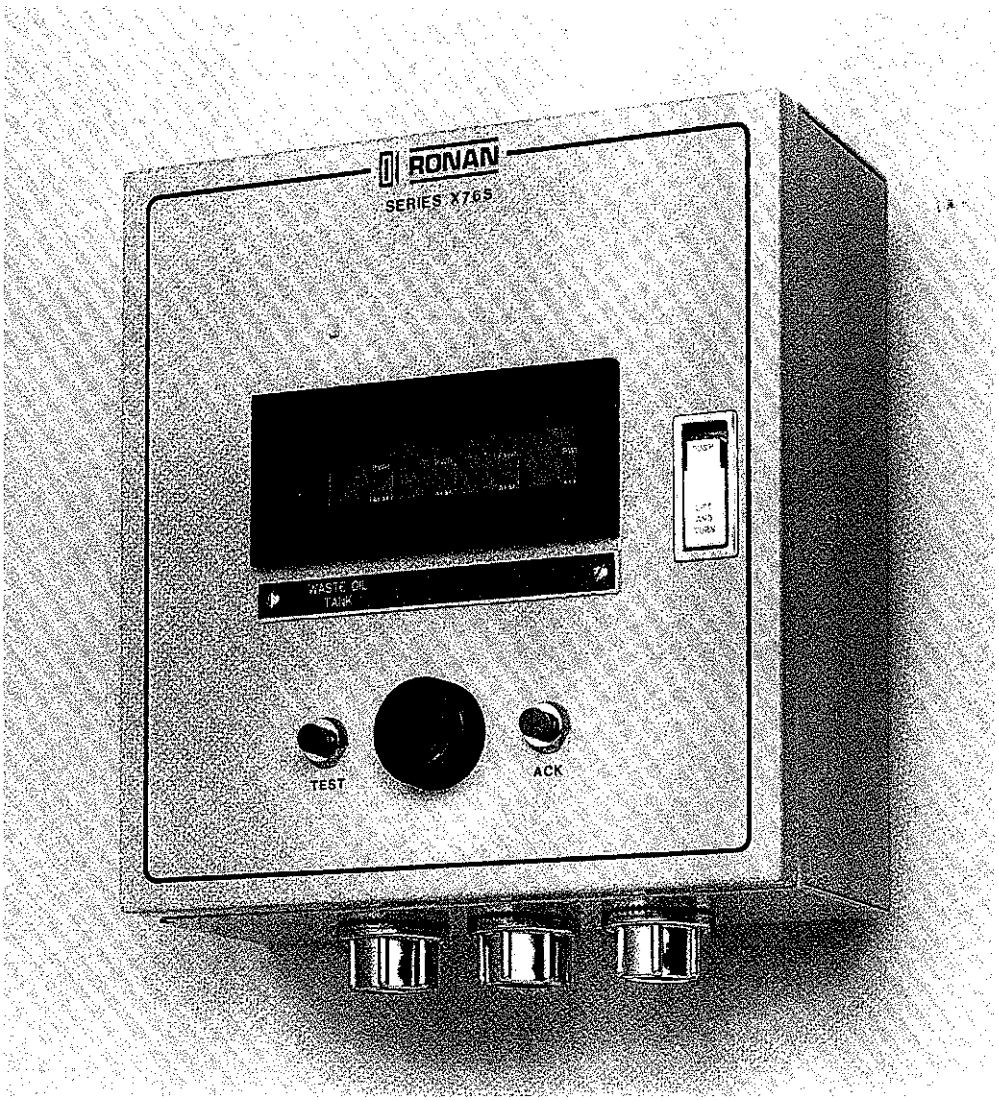
RONAN

Features

- ☐ Up to 4 Input Modules with LED Indicators
- ☐ Audible and Visual Alarms
- ☐ Intrinsically Safe Interface to Sensor
- ☐ Field-Proven Circuit Design
- ☐ NEMA Type 1 Enclosure
- ☐ Rugged Mechanical Design
- ☐ Liquid Level Sensors
  - • High Reliability
  - • UL Listed
  - • Compatible with Hydrocarbons
  - • Maintenance Free
- ☐ Alarm Contact Output per Sensor for Remote Indication or Telemetering
- ☐ Hydrostatic Leak Detector for Double-wall Tanks
- ☐ Positive Pressure Sensor for Pressurized Double-wall Tanks

Factory Mutual System Approved

UL Listed 48RO



The Model X76S Leak Detector System continuously monitors underground storage tank installations for leakage of gasoline, diesel oil, waste oil and other hydrocarbons.

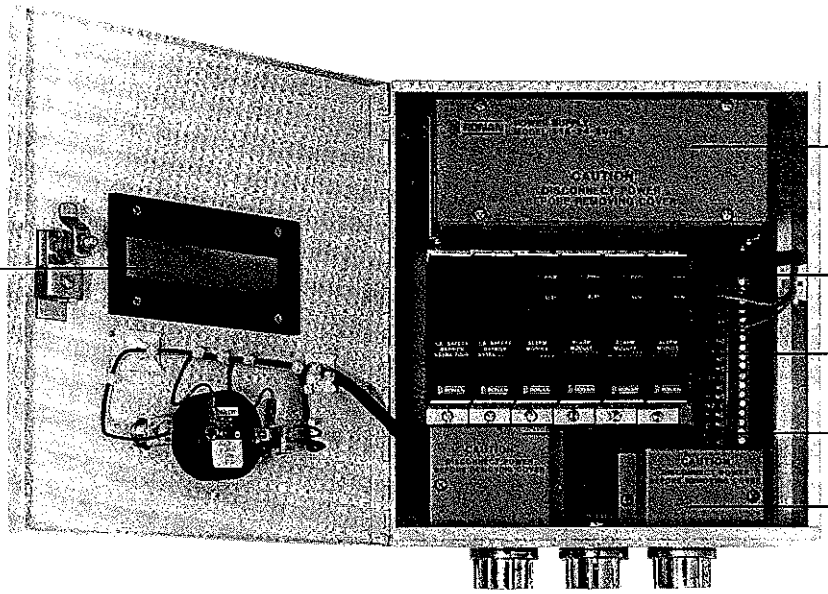
Two types of Liquid Level Sensors are horizontally or vertically positioned in the normally dry annular space of double-walled tanks. Upon accumulation of product due to a leak, the sensor will provide an audible and visual alarm.

Hydrostatic and air pressure sensors can provide monitoring of both the outer or inner shell of a double-wall tank.

The sensor's outputs are continuously supervised by individual alarm modules via FM approved intrinsically safe barriers. This allows installation of the sensors in Class I, Division 1, Groups C, or D areas as defined in the National Electrical Code, without using costly conduits, conduit seals and explosion proof junction boxes.

The X76S provides up to four sensor alarms.

Series X76S Leak Detector System

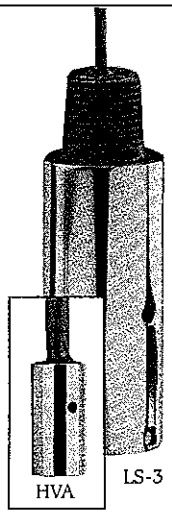


The Sensors

Model LS-3 N.C. & HVA Tank Level Sensors

The Model LS-3 N.C. is most suitable for steel, double-wall tanks. The unit is positioned vertically on the bottom of the tank annulus or at maximum fuel level of a tank to prevent overflow. The all-polysulfone level switch features a single-pole, single-throw contact, actuated by the float of the unit. The contact status is annunciated on the X76S monitor.

The HVA is a miniature liquid sensor for use in restricted vertical riser applications.



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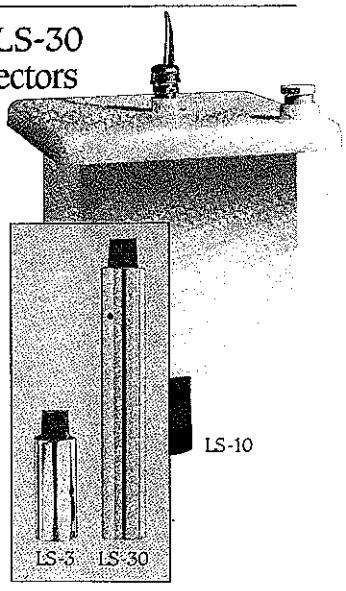
Models LS-3 N.O. & LS-30 Hydrostatic Leak Detectors

The Models LS-3 N.O. and LS-30 Leak Detectors monitor any U.L. rated hydrostatic double-wall fiberglass tank reservoir.

Due to the possibility of groundwater seeping into a reservoir, the LS-30 is designed to detect liquid level gains as well as losses.

LS-10 and LS-20 Reservoir Assemblies are supplied when a permanent reservoir is not part of the tank package.



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Model LS-7 Tank Level Sensor

The Model LS-7 Level Switch is designed for horizontal applications where access is difficult, such as a dual-wall fiberglass tank's annulus. The unit is engineered to provide high-reliability point-level sensing. The plastic construction is compatible with all hydrocarbon liquids, providing long, trouble-free performance.

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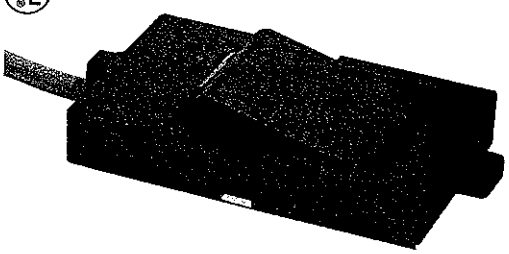

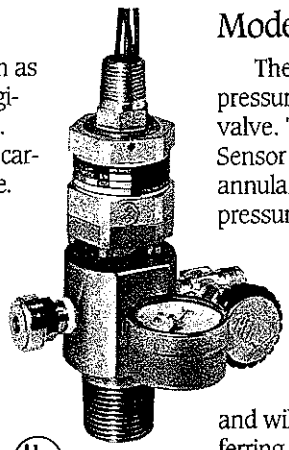

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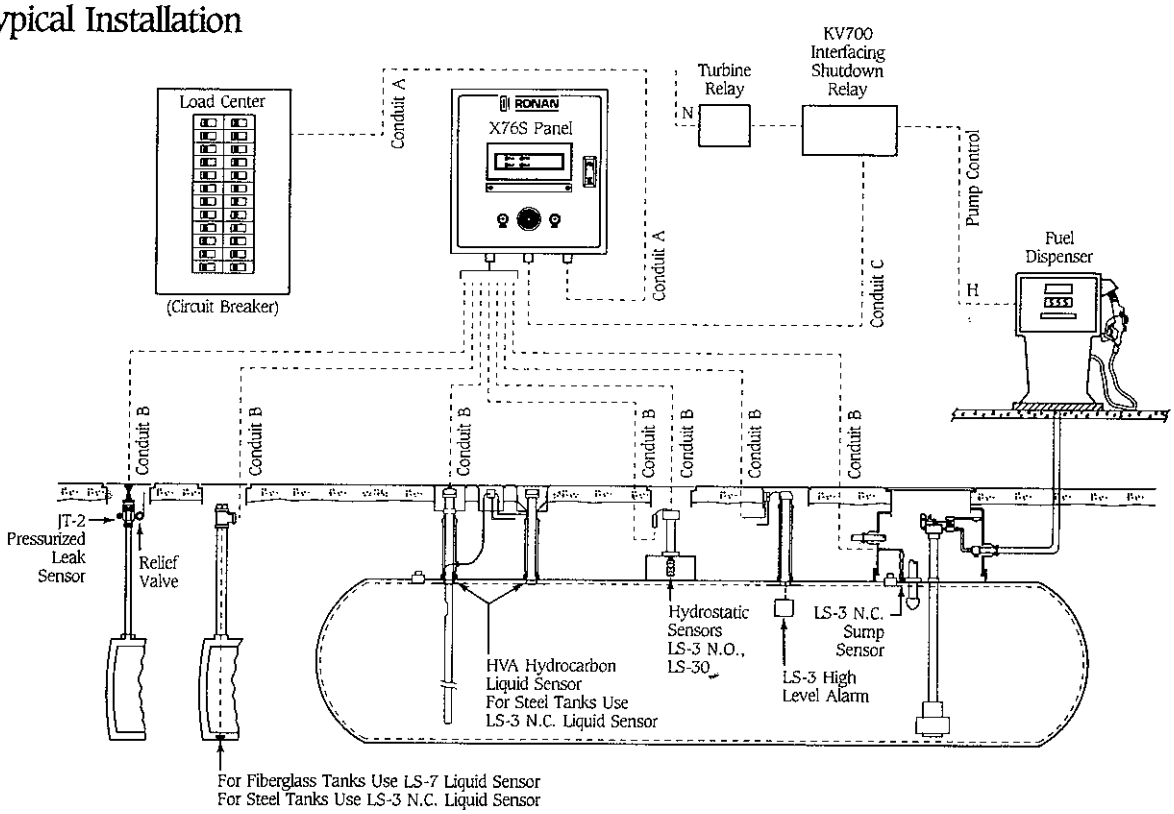
Model JT-2 Tank Leak Sensor

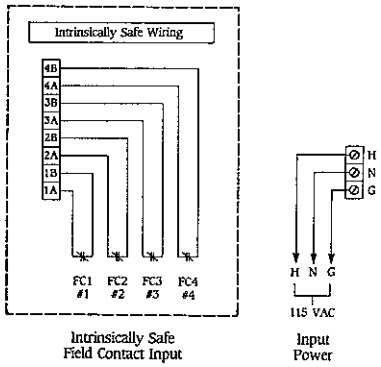
The Model JT-2 assembly consists of a pressure switch, fill valve and safety release valve. The Model JT-2P Positive Pressure Leak Sensor is designed to provide monitoring of the annular cavity of double-wall tanks via air pressure. Any breach of the containment will cause a pressure loss and will be sensed by the pressure switch transfiguring its contact should pressure fall below .5 PSIG.

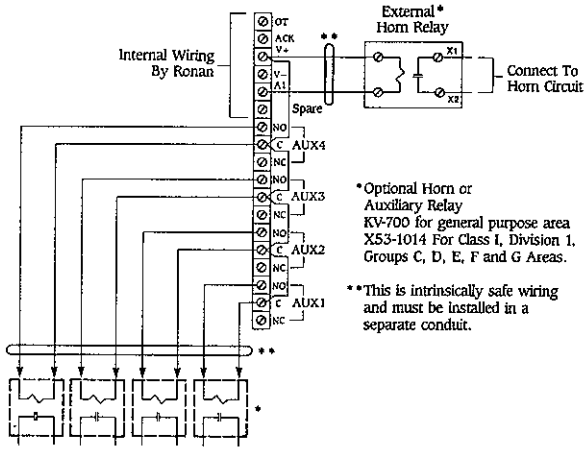
The Model JT-2V Vacuum Leak Sensor monitors for loss of vacuum and will be sensed by the vacuum switch transferring its contact should vacuum fall to .5 inches of mercury.

Typical Installation

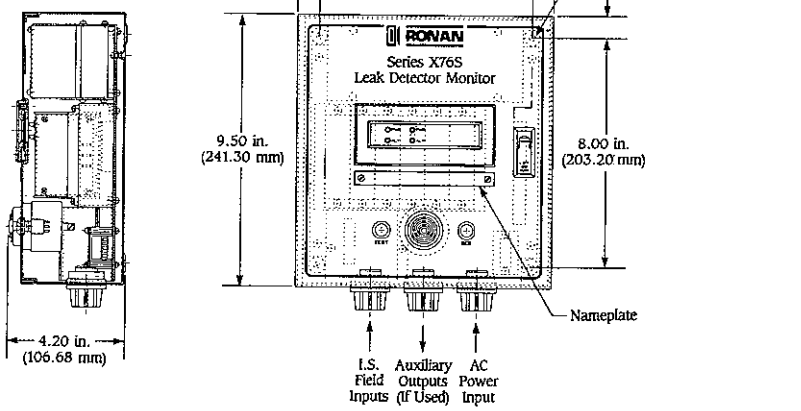


Wiring Information





Mechanical Dimensions



Specifications

System, Model X76S
Power: 115 Vac, 60 Hz
Power Consumption: 100 VA
Operating Temperature: 32° to 165°F (0° to 75°C)
Dimensions: 9×9.5×4.2 in. (22.86×24.13×10.67 cm)
Mounting: General purpose area; wall mount

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Alarm Module
Field Sensor: Dry contact
Field Sensor Voltage: 115 Vac (supplied by X76S)
Number of Inputs: One per module

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Intrinsically Safe Barrier Module X53
Number of Inputs: Two per module
Sensors Voltage: 24 Vdc, current limited
Sensors: Dry contact
Output Interface to Alarm Module: Relay contact; normally open/normally closed; selectable
Power Consumption: 750 mW per input
Supply Voltage: 24 Vdc from I.S. power supply

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Power Supply I.S. (Intrinsically Safe)
Power Input: 115 Vac
Output Voltage: 24 Vdc

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Tank Leak Sensor, Model LS-3 N.C.
Housing: 304 stainless steel
Switch:
Type: SPST N.C.
Rating: 10 VA
Float material: Buna-N
Pressure: 50 PSIG maximum
Leads: 20 AWG

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Tank Leak Sensor, Model LS-7
For steel and fiberglass double-wall tanks.
Housing Material: PVC (Geon 87241)
Liquid SpG: .70 minimum
Switch:
Type: SPST N.C.
Rating: 10 VA
Leads: 20 AWG

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Hydrostatic Tank Leak Detectors, Models LS-10 or LS-20
Reservoir:
Volume:
LS-10, two gallons (7.47 liters)
LS-20, four gallons (15.14 liters)
Material: Polyethylene plastic
Switches: Model LS-3 N.O. and LS-30
Type: LS-3 N.O., SPST; LS-30, DPDT
Rating: 10 VA
Float material: Buna-N
Pressure: 50 PSIG maximum
Leads: 20 AWG

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HVA Mini Liquid Vertical Riser Sensor
Housing: Stainless steel
Contacts: Gold plated
Float: Gold plated aluminum
Type: Single pole, normally open
Leads: 20 AWG

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Tank Leak Sensor, Model JT-2
Housing: Stainless steel, explosion proof, hermetically sealed, NEMA Types 7 and 9
Classification:
Class 1: Groups A, B, C and D
Class 2: Groups E, F and G
Switch:
Type: SPDT N.O. (shelf condition)
Rating: 10 VA
Electrical Connection: ½ in.–14 NPT with PVC-insulated 18 AWG leads
Pressure:
Setpoint: JT-2 Positive Pressure Leak Sensor, .5 PSIG, JT-2V Vacuum Leak Sensor, .5 inches of mercury
Connection: ¼ in.–18 NPT
Adjustment: ⅛ in. Allen wrench through port
Temperature Range: −40° to 180°F (−40° to 82°C)

UL Listed 48RO; CSA Approved 34146

Ordering Information

The Ronan Model X76S Leak Detector Monitor System can be configured to meet the different local and state codes for underground storage by proper selection of sensors and monitor modules. For example, a particular local code and/or type of facility may require leak detection of a tank annulus. The monitor system would consist of the following items:

Model X76S-( )-(_____)

Sensor Type
LS-3(*) Vertical Liquid Level
LS-7 Horizontal Liquid Level
LS-10 Hydrostatic Reservoir with LS-3
LS-20 Hydrostatic Reservoir with LS-3
LS-30 Dual Liquid Level
HVA Mini Liquid for Vertical Riser
JT-2P Positive Pressure Leak
JT-2V Vacuum Leak
* N.O.=Normally Open, N.C.=Normally Closed
Note: Use additional lisiting if more than one type of sensor is used. e.g.: (2LS-3)-(1LS-10)

Sensor Quantity

No. of Alarm Inputs
(1 thru 4) max 4

Warranty: Ronan warrants equipment of its own manufacture to be free from defects in material and workmanship under normal conditions of use and service, and will repair or replace any component found to be defective, on its return, transportation charges prepaid, within one year of its original purchase. This warranty carries no liability, either expressed or implied, beyond our obligation to replace the unit which carries the warranty.

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