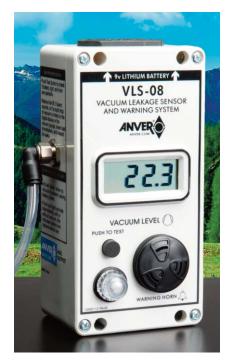


Vacuum Leakage Sensing System

Doc. No. 13600003A Sept. 20, 2017



The Latest in Solid State Vacuum Leakage Detection

The VLS-08 (Series) monitors the vacuum level automatically. If vacuum is lost during a lift, a loud horn sounds and a red light flashes to warn the operator.

Both VLS-08 & VLS-08-20 units are self-contained consisting of a pressure sensor, an audible warning horn, red warning light and a test switch, all controlled by a solid state microchip. All ANVER vacuum lifters, tilters and special vacuum lifting machinery can be equipped with the solid state leakage detection system. The system is supplied with 1/4" push-to-connect tubing vacuum input fitting. During each lifting cycle the programmed "intelligent" processor senses the peak vacuum level. From this point, a 10% loss for the VLS-08 [20% loss for the VLS-08-20] of vacuum with leakage rate less that 1-1/2 in. Hg. per second from that peak level will trigger the horn and light, informing the operator of a leak. The alarm will not sound on the detach cycle as with other primitive systems using preset switches. Even the smallest leak anywhere in the system will be detected.

The VLS-AUX is a peripheral device designed to be connected to the VLS-08 or VLS-08-20 Vacuum Leakage Sensor. When the warning system is activated, the VLS-AUX sounds a loud 105 dBA siren and a flashing strobe light is initiated. This add-on device is ideal for noisy environments, where the lifter is a distance from the operator or where other personnel may be in the general area of use.

Features

VLS-08 & VLS-08-20

- Advances Solid State Circuity with Micro-Controller.
- · Precise, reliable, Board Mounted Vacuum Transducer.
- LCD Digital Display of Vacuum Level in Inches of Hg.
- · Audible Warning Horn.
- Bright Flashing Red LED Warning Light.
- Push-To-Connect Vacuum Source Port to Connect to Vacuum Manifold
- Plug-in Output Jack to Connect to VLS-AUX Auxiliary Siren / Alarm
- Rugged Polycarbonate Enclosure.
- · Low Battery "Chirp" Indicator
- · Easy Accessible 9V Battery Holder
- · Includes (1) Standard 9V Lithium Battery

VLS-AUX

- Large 105 dBA Alarm Siren & Flashing Red Light
- Plug-In Input Jack to Connect to VLS-08 & VLS-08-20 Alarm System
- Includes 25 inch [63.5 cm] Long Signal Cable with Connectors
- Rugged Polycarbonate Enclosure.
- · Easy Accessible 9V Battery Holder
- · Includes (1) Standard 9V Lithium Battery

Principle of Operation

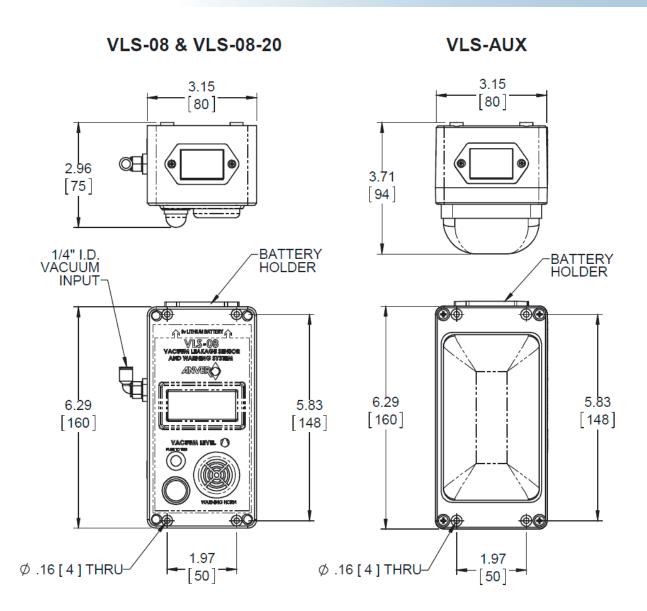
The VLS-08 (Series) Vacuum Leakage Sensor is a vacuum level differential detector which is pre-programmed to activate the alarm at 10% loss in vacuum for VLS-08 [20% loss in vacuum for VLS-08-20] with a leakage rate of less than 1.5 inches Hg. per second. The alarm will remain activated until a sufficient increase in vacuum is achieved, indicating no additional leakage is present, or the indicated vacuum level drops below 5 inches Hg. The horn, LED (red light) and LCD (digital display) can be tested by pressing and holding the "Test" pushbutton for approximately 3 seconds. Both the VLS-08 & VLS-08-20 are equipped with a low battery indicator which will cause the horn to "chirp" and the LED to flash when the battery is low. The battery should be replaced immediately with a standard 9V lithium battery. The auxiliary output jack is a open collector output which can be connected to the VLS-AUX (auxiliary siren/strobe), or to another I/O devise, such as an emergency stop function on a CNC control, through a solid state relay.

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WARNINGS

The VLS-08 (Series) is designed to be a warning device for vacuum leakage detection. When properly installed on ANVER vacuum lifters and equipment, the operator will be warned of a slow vacuum leakage and should have adequate time to safely lower the attached load. If the alarm signal is ignored and the lifting operation is continued, the vacuum loss may adversely affect the vacuum "hold", possibly resulting in the serious injury to the operator. The VLS-08 (Series) system is not designed for or not effective in detecting fast leaks or sudden failures of the vacuum systems.

The vacuum level achieved, using a Mechanical Vacuum Generator, is weight sensitive, relative to the load and lifter weight, as well as the pad(s), manifold(s) and generator volume. Lighter loads will produce a lowered vacuum reading, which may render the VLS-08 system ineffective.

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