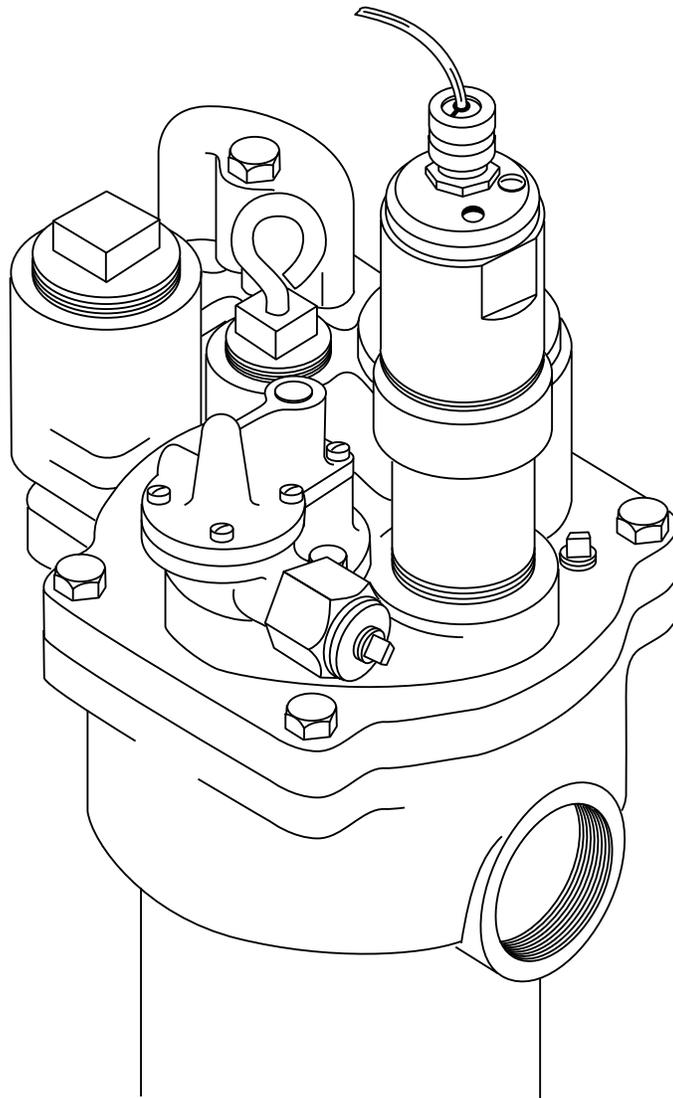


Installation Manual

Pressurized Line Leak Controller Module For Veeder-Root TLS-350/350R Systems

Manual Number 576013-499, Revision C



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Please circle one number for each.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
This manual contains the information I need.	5	4	3	2	1
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577013-339, Revision B

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Introduction

General

This manual contains installation procedures for the installation of a Pressurized Line Leak Controller Interface Module, part nos. 847490-207 (120 Volt) and 847490-507(240 Volt), in an existing TLS-350 UST Monitoring System or TLS-350R Inventory Management System designed and manufactured by Veeder-Root.

It is assumed that all preliminary site preparation is completed, and that field wiring is in place. If this is a new installation or if site preparation is necessary, refer to the Veeder-Root TLS-350 *Site Preparation and Installation Instructions* Manual, TLS-350R *Site Preparation and Installation Instructions* Manual, or the Pressurized Line Leak Detection System *Site Preparation and Installation* Manual, or contact your Veeder-Root representative for assistance.

Safety Symbols

The following safety symbols are used throughout this manual to alert you to important safety hazards and precautions



Electricity

High voltage exists in, and is supplied to, the device. A potential shock hazard exists.



Explosive

Fuels and their vapors are extremely explosive if ignited.



Turn Power Off

Live power to a device creates a potential shock hazard. Always turn power off to the device and associated STPs when servicing unit.



Read all instructions and symbol warnings.

Safety Warnings

 WARNING	
  	<p>You are working with a device in which potentially lethal voltages may be present.</p> <p>Death or injury may result if safety precautions are not followed.</p> <ol style="list-style-type: none"> 1. Read all instructions and symbol warnings. 2. Turn power off before installing these modules.

Damage Claims

1. Thoroughly examine all components and units as soon as received. If damaged, write a complete and detailed description of the damage on the face of the freight bill. The carrier's agent *must* verify the inspection and sign the description.
2. Immediately notify the delivering carrier of damage or loss. This notification may be given either in person or by telephone. Written confirmation must be mailed within 48 hours. Railroads and motor carriers are reluctant to make adjustments for damaged merchandise unless inspected and reported promptly.
3. Risk of loss, or damage to merchandise remains with the buyer. It is the buyer's responsibility to file a claim with the carrier involved.
4. Immediately advise your Veeder-Root representative, distributor, or the factory so that we may assist you.

Return Shipping

All product returns, including warranty replacements, repairs, and core credits, must be returned on an RGA (Returned Goods Authorization) for proper processing. To return a product under this procedure:

1. Call Customer Service at (800) 873-3313 to obtain an RGA number.
2. Clearly print the RGA number on the packages being returned. No package can be received without this number.
3. All shipments of Veeder-Root products must be prepaid.
4. If the PLLD Controller Module is damaged, return it in the original shipping container with shock absorbing material provided. Veeder-Root will accept no liability for damage caused by improper packing.
5. Address the shipment to Veeder-Root Co., 6th Avenue at Burns Crossing, Altoona, Pennsylvania 16602.
6. All warranty returns must also include a legible WSR (Warranty Service Report). Problem description and corrective action must be filled out in detail.

PLLD Controller Module

Requirements

Installing interface modules in a TLS-350 or TLS-350R console is a simple process. However, there are important points to remember:

1. For each module, a corresponding expansion slot with a connector must be available.
2. ALL unused expansion slots MUST be covered (see Figure 3 on page 7).

 WARNING	
   	<p>The console contains high lethal voltages and connects to devices in potentially explosive or flammable environments.</p> <p>If high voltage is shorted across any barrier terminal, explosion and fire could occur resulting in serious injury, death or extensive property damage. Also, if live wiring is touched, serious injury or death could result from electrical shock.</p> <p>To avoid electrical shock, explosion or fire:</p> <ol style="list-style-type: none"> 1. Be sure AC POWER to the TLS-350 or TLS-350R monitor is OFF before opening the front panel and installing or wiring any expansion module. 2. Do not allow any power bearing wire to short across any wiring or module in the Intrinsically Safe compartment of the console.

Controller Module Installation



For additional information regarding the below steps, refer to the Veeder-Root TLS-350 or TLS-350R *Site Preparation and Installation* manual.



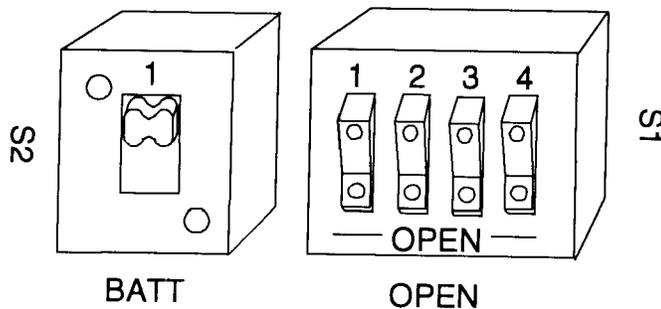
1. Read and follow all instructions carefully.
2. Turn console POWER OFF before installing the module.



3. Avoid shorting high voltage across any component or module to the intrinsically safe section of the console. This could result in an explosion near the device.
4. Open the right-hand door of the TLS-350 or TLS-350R console by unscrewing the right-top and right-bottom door screws.
5. To retain current programming, be sure that the CPU (for TLS-350) or ECPU (for TLS-350R) board battery switch is set to "ON" (see Figure 1 on page 5 and Figure 2 on page 6). To avoid electrical shock or damage to components, if accessing the battery switch, avoid touching any circuit components with your hand or any conductive tool or metallic jewelry.
6. Remove one module slot cover from the console Power Area compartment.
7. Hold the module with its snap-in fasteners positioned at the lower edge, and carefully slide the module into its slot.
8. To secure the module, press down on the snap-in fastener until its connector engages completely with the connector on the board. Do not apply excessive force when installing the module.
9. BE SURE ALL UNUSED SLOTS at the bottom of the power area ARE COVERED with snap-in plates! (Veeder-Root Module Cover Part No. 329339-001)

Important Note: *If you are installing this module in a system that has already been programmed, you CANNOT CHANGE the position of existing modules and/or connectors without reprogramming the entire system.*

If any connectors are removed during installation, BE SURE they are reconnected to their original modules.



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Figure 1. CPU Board Battery Switch ON (S2)

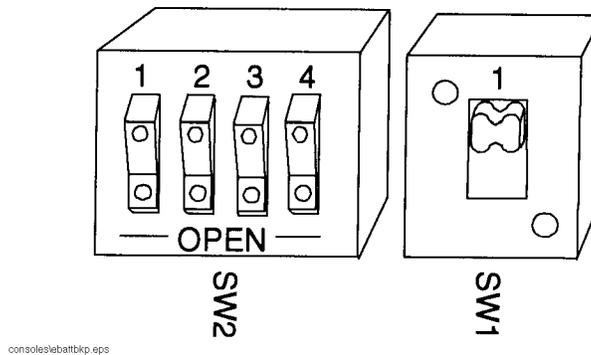


Figure 2. ECPU Board Battery Switch ON (SW1)

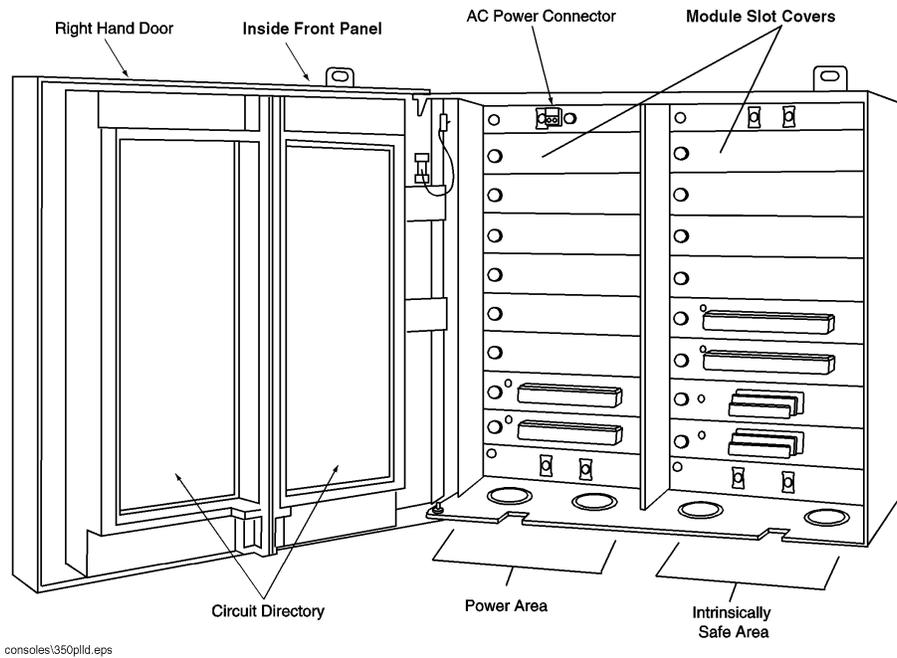
Module/Connector Positions

Module Position

- Record on the circuit directory (on the inside front panel; see Figure 3 on page 7) the type of module you are installing in this slot.
- Once a particular type of module has been installed in that slot, the system will always look for that type of module in that slot.

Connector Position

- Identify all connectors according to their slot location using the self-adhesive numbering labels supplied with each module.



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Figure 3. Inside View of TLS-350/350R

PLLD Controller Module Wiring Connections

 WARNING	
   	<p>The console contains high lethal voltages and connects to devices in potentially explosive or flammable environments.</p> <p>If high voltage is shorted across any barrier terminal, explosion and fire could occur resulting in serious injury, death or extensive property damage. Also, if live wiring is touched, serious injury or death could result from electrical shock.</p> <p>To avoid electrical shock, explosion or fire:</p> <ol style="list-style-type: none"> 1. Be sure AC POWER to the TLS-350 or TLS-350R monitor is OFF before opening the front panel and installing or wiring any expansion module. 2. Do not allow any power bearing wire to short across any wiring or module in the Intrinsically Safe compartment of the console.

1. The Pressurized Line Leak Controller Module comes with a connector in place. The connector provides screw terminations for switch inputs and AC controls. **Do not remove the connector from the module or remove the module from its slot in the monitor during wiring.** Terminal identifications appear only on the module bracket. Removing the connector from the module increases the risk of wiring errors.
2. Label all connectors using the self-adhesive labels supplied according to the slot in which the modules are installed.
3. Turn off power to all the dispensers which can activate the STP associated with the Pressure Line Leak Controller module being installed.
4. Record the location (i.e., Line #1, Line #2, etc.) of each line wired to a module on the circuit directory inside the monitor door.



Important Note: High voltage Pressure Line Leak Interface (PLLD) Module positions must follow the same product order as the low voltage Pressure Line Leak Interface (PLLD) positions. If this rule is not followed, the wrong pressure will be read on a product line, and failed 3 gal/hr. tests will disable the fueling for the product identified by the low voltage PLLD position.

Note: *Once Pressurized Line Leak Sensors have been connected and the system has been programmed, module, connector, and wiring positions cannot be changed without reprogramming the system. Improper system operation will result if any one of these positions is changed without reprogramming. Refer to the TLS-350 or TLS-350R System Setup Manuals for more detailed information.*

5. Connect the three (3) color-coded or marked wires from the pump controls (STP relay control box) and the one (1) wire from the main breaker panel to the proper terminals on the Pressurized Line Leak Controller Module connector (see Figure 4 on page 10; Pressurized Line Leak Controller Module Wiring Diagram for Red Jack Relay Control Box, or Figure 5 on page 11; Pressurized Line Leak Controller Module Wiring Diagram for Non-Red Jacket Relay Control Box).

Important Note: *Be sure to maintain the correct circuit orientation between the color-coded or marked field wires and connector terminals during wiring. Use of an improper module could result in damage to the module and/or the dispensers.*

Note on Figures 3 and 4: *For TLS consoles powered by a 240 VAC source, use a 240 VAC Pressure Line Leak Controller (part number 847490-507) with relay contacts rated at 240 VAC, 2 amps maximum, a 240 VAC 4 Relay Output module (part no. 847490-500), and a 240 VAC I/O Combination (part no. 847490-501).*

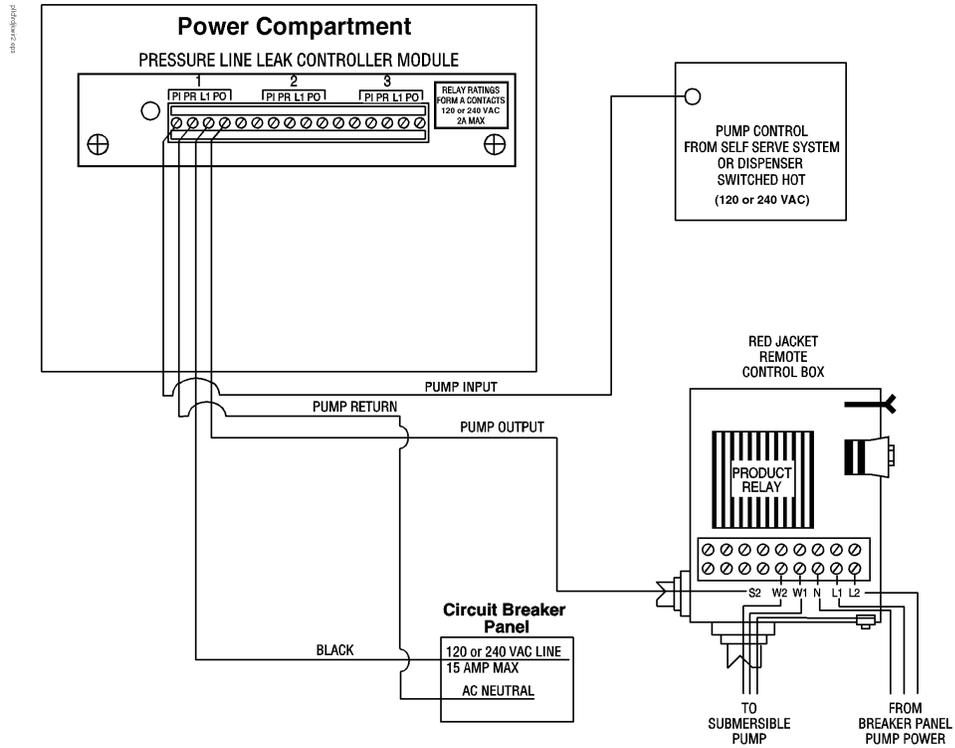


Figure 4. Pressure Line Leak Controller Module Wiring Diagram for Red Jacket Relay Control Box

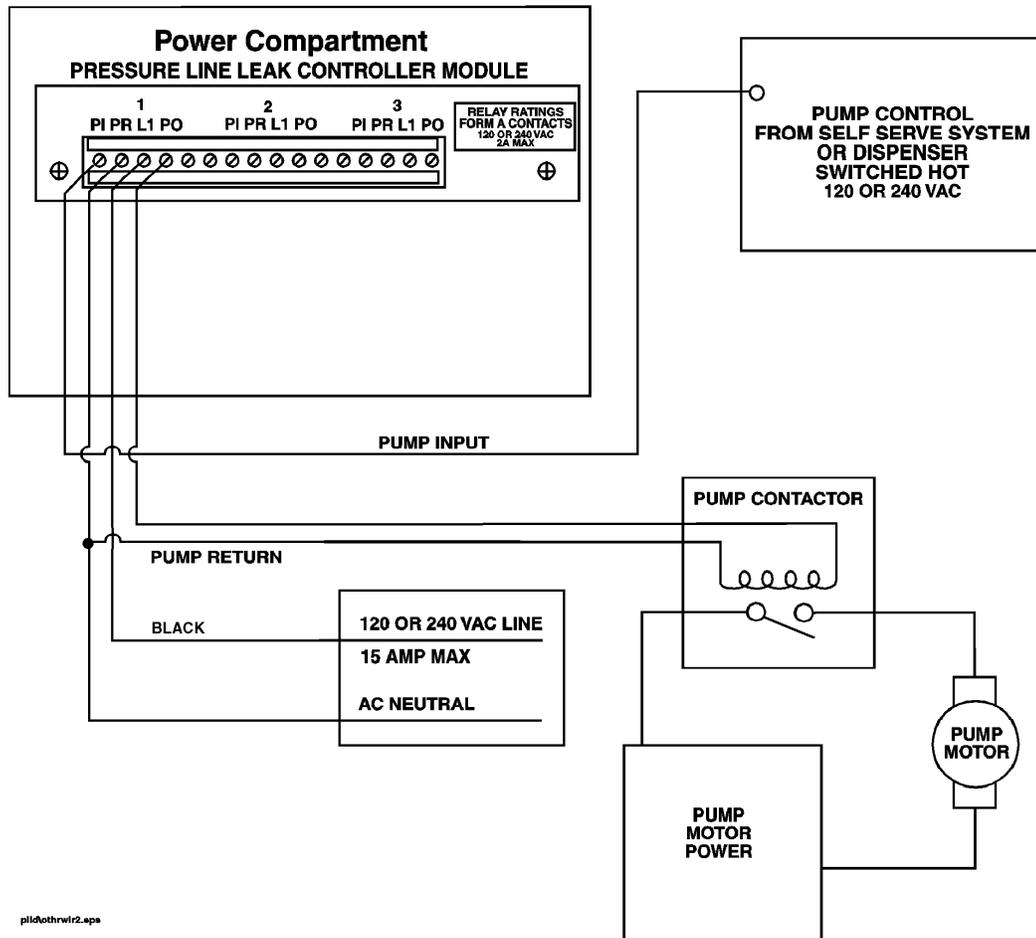


Figure 5. Pressure Line Leak Controller Module Wiring Diagram for Non-Red Jacket Relay Control Box

Warranty Conditions and Limitations of Liability

Limitations Of Liability

We warrant that this product will be free from defects in materials and workmanship for a period of 1 year from the date of installation or 15 months from the date of invoice, whichever occurs first. We will repair or replace the product if it is returned to us, transportation prepaid, within the warranty period and is determined by us to be defective.

We shall not be responsible for any expenses incurred by the user.

This warranty applies only when the product is installed in accordance with Veeder-Root's specifications. This warranty will not apply to any product which has been subjected to misuse, negligence or accident; or misapplied; or used in violation of product manuals, instructions or warnings; or modified or repaired by unauthorized persons; or improperly installed.

Inspection

You shall inspect the product promptly after receipt and shall notify us at our Simsbury office in writing of any claims, including claims of breach of warranty, within 30 days after you discover or should have discovered the facts upon which the claim is based. Your failure to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

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The provisions of "Limitations Of Liability" on page 13 are our sole obligation and exclude all other remedies or warranties, express or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to you or to any other person for injury to person or damage to or loss of property or value caused by any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions or warnings; or modified or repaired by unauthorized persons; or improperly installed.

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Under no circumstances shall we be liable for any incidental, consequential or specific damages, losses or expenses arising from this contract or its performance or in connection with the use of, or inability to use, our product for any purpose whatsoever.

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No action regardless of form arising out of this contract may be commenced more than 1 year after the cause of action has accrued, except an action for nonpayment.

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There are no representations, warranties, or conditions, express or implied, statutory or otherwise except those herein contained, and no agreement or waivers collateral hereto shall be binding on either party unless in writing and signed by you and accepted by us at our Simsbury office.

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