

TWO- AND THREE-WIRE SENSOR INTERFACE MODULES

Form Number 845190-100 (Two-Wire Interface Module)
Form Number 845190-101 (Three-Wire Interface Module)
(For ILS-350 Systems)

Manual No. 576013-778

IMPORTANT!

For Setup Instructions, see
ILS-350 "System Setup Instructions,"
Manual No. 576013-774

For Operating Instructions, see
ILS-350 "System Operating Instructions,"
Manual No. 576013-772

ATTENTION INSTALLER:

READ THIS IMPORTANT SAFETY INFORMATION BEFORE BEGINNING WORK

This product is to be installed and operated in the highly combustible environment of a gasoline storage tank. It is essential that you carefully read and follow the warnings and instructions in this manual to protect yourself and others from serious injury, explosion, or electrical shock.

For safety reasons, we have taken particular care in the design of this product to limit the power in the wiring to the fuel tanks and to keep that wiring physically separated from any other wiring. It is your responsibility to maintain the effectiveness of these safety features by installing this product in accordance with the instructions and warnings which follow. Your failure to do so could create danger to life and property.

Leaking underground tanks can create serious environmental and health hazards. It is your responsibility to install this product in accordance with the instructions and warnings found in this manual.

Failure to install this product in accordance with its instructions and warnings will result in voiding of all warranties connected with this product.



WARNING:

SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.

CIRCUITRY WITHIN THE SENSOR AND CONSOLE BARRIER FORM AN INTRINSICALLY SAFE, ENERGY-LIMITED SYSTEM. THIS SYSTEM MAKES THE TLS SENSOR INTRINSICALLY SAFE FOR USE IN A CLASS I, GROUP D HAZARDOUS LOCATION. INTERSTITIAL SENSOR WIRING IS INTRINSICALLY SAFE ONLY WHEN CONNECTED TO VEEDER-ROOT'S TWO- OR THREE-WIRE SENSOR INTERFACE MODULE IN AN ILS-350 MONITOR.



WARNINGS:

IN INSTALLATION OF THIS PRODUCT, COMPLY WITH THE NATIONAL ELECTRICAL CODE; FEDERAL, STATE AND LOCAL CODES; AND OTHER APPLICABLE SAFETY CODES.

TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE MONITOR IS OFF DURING INSTALLATION.

CAREFULLY READ THE INSTALLATION INSTRUCTIONS AND WARNINGS FOUND IN THIS MANUAL. FAILURE TO DO SO COULD RESULT IN UNDETECTED POTENTIAL ENVIRONMENTAL AND HEALTH HAZARDS.

FAILURE TO COMPLY WITH THESE REQUIREMENTS COULD RESULT IN DEATH, SERIOUS PERSONAL INJURY, PROPERTY LOSS, OR EQUIPMENT DAMAGE AND UNDETECTED POTENTIAL ENVIRONMENTAL AND HEALTH HAZARDS.

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SECTION 1. INTRODUCTION

A. GENERAL


1. This manual contains installation procedures for the installation of a Two- or Three-Wire Sensor Interface Module in an existing ILS-350 UST Monitoring System designed and manufactured by Veeder-Root Company. This manual assumes that all preliminary site preparation is completed, and that wiring from the monitor to the sensor junction box(es) is in place.

If this is a new installation or site preparation is necessary, refer to the Veeder-Root ILS-350 "Site Preparation and Installation Instructions", Manual No. 576013-773, or contact your Veeder-Root representative for assistance.

2. When a vertical bar | appears adjacent to text or illustrations, information has been added or changed at the last revision date.

B. DAMAGE CLAIMS

1. Thoroughly examine all components and units as soon as received.

 **NOTE:** Insist that the carrier's agent 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 understandably 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 Veeder-Root headquarters in Simsbury, Connecticut so that we may assist you.

C. RETURN SHIPPING.

All shipments of Veeder-Root products must be prepaid. If the 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. Address the shipment to Veeder-Root Company, 125 Powder Forest Drive, Simsbury, Connecticut 06070-2003.

SECTION 2. INSTALLATION

IMPORTANT!

If you are installing this module in a system that has already been programmed, you **CANNOT CHANGE** the positions of existing modules and/or connectors without re-programming the entire system.

If any connectors are removed during installation, **BE SURE** they are re-connected to their original modules.

A. REQUIREMENTS

Installing interface modules in an ILS-350 Monitor 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.

B. MODULE/CONNECTOR POSITIONS


1. Module Position

- a. Record on the circuit directory (located on the inside front panel) the type of module you are installing in a slot.
- b. 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. No other type of module may be installed in that slot without reprogramming the system.

2. Connector Position. Once a sensor has been wired to certain terminals on the connector and the system has been programmed, terminal positions may not be changed without re-programming the system.


C. MODULE INSTALLATION

 **WARNING: INSTALL THIS MODULE IN ONLY THE INTRINSICALLY SAFE AREA OF THE MONITOR.**


 **WARNING: TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE ILS-350 MONITOR IS OFF BEFORE OPENING THE FRONT-PANEL AND INSTALLING OR WIRING ANY EXPANSION MODULE. IF HIGH VOLTAGE IS SHORTED ACROSS ANY BARRIER TERMINAL, EXPLOSION AND FIRE COULD RESULT.**

1. Remove appropriate module expansion slot cover by pulling snap-in fastener and sliding out of monitor.
2. Hold the module with its tabs positioned in the slots on the right-hand side of the monitor and snap-in fastener to the left. Carefully lower the module until its connector snaps into position.
3. Press down on the snap-in fasteners to secure the module.
4. **BE SURE ALL SLOTS** are covered with snap-in plates!

D. SENSOR WIRING CONNECTIONS

 **WARNING: TO AVOID ELECTRICAL SHOCK WHICH COULD KILL YOU, BE SURE AC POWER TO THE ILS-350 MONITOR IS OFF BEFORE OPENING THE FRONT-PANEL AND INSTALLING OR WIRING ANY EXPANSION MODULE. IF HIGH VOLTAGE IS SHORTED ACROSS ANY BARRIER TERMINAL, EXPLOSION AND FIRE COULD RESULT.**

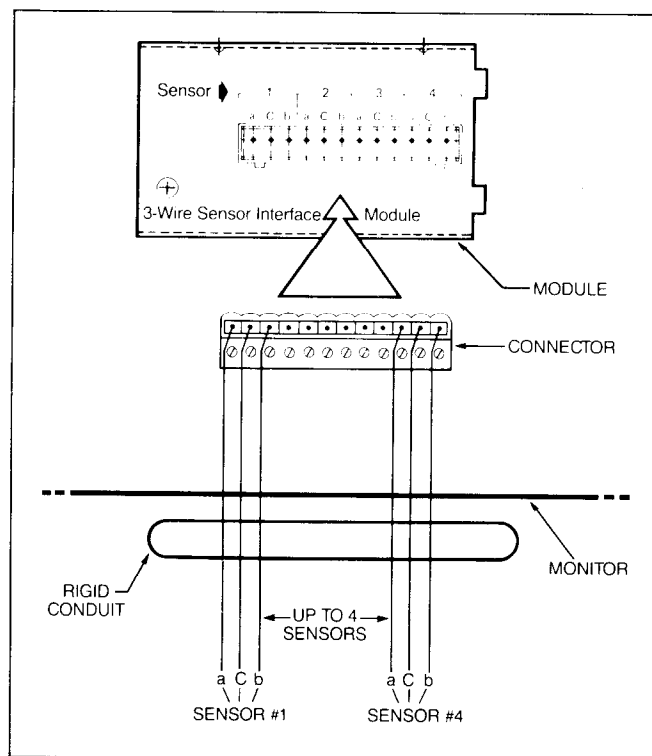
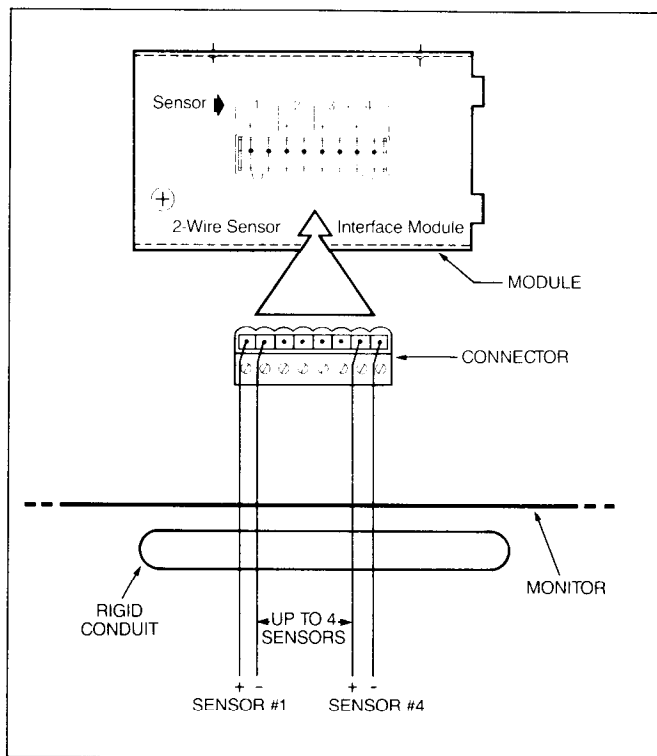
Connectors are supplied with each Sensor Interface Module. They provide screw terminations for up to four sensors. Be sure to record on the circuit directory the type of module and the name or location of each sensor wired to the connector.

 **CAUTION: ONCE SENSORS HAVE BEEN CONNECTED AND THE SYSTEM HAS BEEN PROGRAMMED, MODULE, CONNECTOR AND WIRING POSITIONS CANNOT BE CHANGED WITHOUT RE-PROGRAMMING THE SYSTEM.**

IMPROPER SYSTEM OPERATION WILL RESULT IF ANY ONE OF THESE POSITIONS IS CHANGED WITHOUT RE-PROGRAMMING.

1. **For two-wire sensors,** connect the two marked or color-coded wires from each sensor to the appropriate terminals on the Sensor Interface Module connector (see Figure 1, "Two-Wire Sensor Interface Module Wiring Diagram").
2. **For three-wire sensors,** connect the three marked or color-coded wires from each sensor to the appropriate terminals on the Sensor Interface Module connector (see Figure 2, "Three-Wire Sensor Interface Module Wiring Diagram").

VEEDER-ROOT
INTERSTITIAL SENSOR INTERFACE MODULE INSTALLATION



SECTION 3. WARRANTY CONDITIONS AND LIMITATIONS OF LIABILITY

A. LIMITATIONS OF LIABILITY. We warrant that this product will be free from defects in materials and workmanship for a period of one (1) year from the date of installation or fifteen (15) months from the date of invoice, whichever occurs first. During the warranty period, we or our representative will repair or replace the product, if determined by us to be defective, at the location where the product is in use and at no charge to the purchaser.

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, and a Warranty Registration and Checkout Form has been filed with Veeder-Root by an Authorized Veeder-Root Distributor. 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.

B. 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 thirty 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.

C. LIMITATION OF REMEDY AND WARRANTY. The provisions of Paragraph A 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.

D. LIMITATION OF DAMAGES. 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.

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

F. COLLATERAL PROMISES. 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.

G. INTERPRETATION. Rights and liabilities arising out of any contract with us shall be determined under the Uniform Commercial Code as enacted in Connecticut.

Warranty revised March 15, 1991.

VEEDER-ROOT
 Environmental Products **VR**

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