ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Veeder-Root 330749-001* at our website: *Click HERE*

Manual No: **576013-632** ● Revision: **C**

Probe/Thermistor Interface Module

Installation Guide

VEEDER-ROOT

Notice

Veeder-Root makes no warranty of any kind with regard to this publication, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Veeder-Root shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this publication.

Veeder-Root reserves the right to change system options or features, or the information contained in this publication.

This publication contains proprietary information which is protected by copyright. All rights reserved. No part of this publication may be photocopied, reproduced, or translated to another language without the prior written consent of Veeder-Root.

DAMAGE CLAIMS

1. Thoroughly examine all components and units as soon as they are 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.

RETURN SHIPPING

For the parts return procedure, please follow the appropriate instructions in the "General Returned Goods Policy" and "Parts Return" pages in the "Policies and Literature" section of the Veeder-Root **North American Environmental Products** price list.

© Veeder-Root 2003. All rights reserved.

Introduction **1**

Related Manuals **1**

Contractor Certification Requirements **1**

Safety Precautions **1**

Module Positions and Labeling **2**

Figure 1 - Console Interface Module Bays 2

Circuit Directory **3**

Figure 2 - Modular Console System Circuit Directory 3

Installing Probe/Thermistor Interface Module - I.S. Bay **4**

Figure 3 - Probe/Thermistor Interface Module Wiring 4

Introduction

This manual contains instructions for installing the Veeder-Root Probe/Thermistor Interface Module (P/N 847490-104) in TLS-350/ProMax/EMC Consoles.

This manual assumes field wiring has been run from the Mag Probe and/or Thermistor to the console following instructions in the appropriate console's site prep manual.

Related Manuals

576013-879	TLS-3XX/ProMax/EMC Consoles Site Prep Manual (Mag Probe)
576013-873	VLLD Site Prep and Installation Manual (Thermistor)
576013-623	TLS-3XX Series Consoles System Setup Manual

Contractor Certification Requirements

Veeder-Root requires the following minimum training certifications for contractors who will install and setup the equipment discussed in this manual:

Level 1 Contractors holding valid Level 1 Certification are approved to perform wiring and conduit routing, equipment mounting, probe and sensor installation, tank and line preparation, and line leak detector installation.

Level 2/3 Contractors holding valid Level 2 or 3 Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root Tank Monitoring Systems, including Line Leak Detection and associated accessories.

Warranty Registrations may only be submitted by selected Distributors.

Safety Precautions

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

 **EXPLOSIVE** Fuels and their vapors are extremely explosive if ignited.	 **FLAMMABLE** Fuels and their vapors are extremely flammable.
 **TURN POWER OFF** Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.	 **READ ALL RELATED MANUALS** Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.

⚠ WARNING



The equipment is used in location where lethal voltages and explosive vapors or flammable fuels may be present.

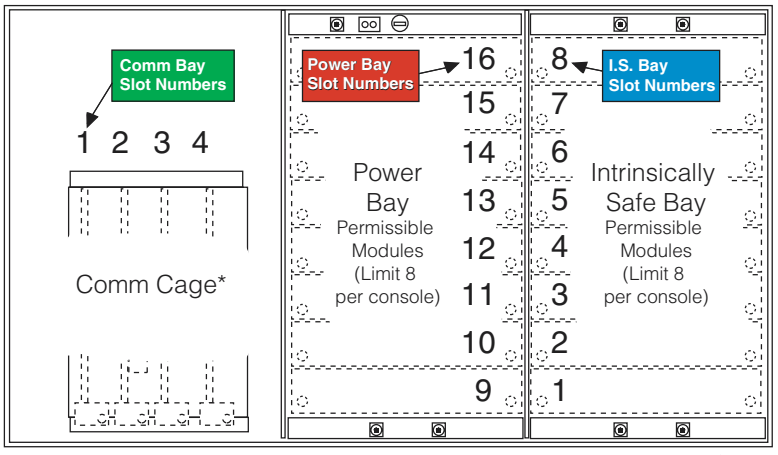
Care must be taken when installing, servicing or replacing parts in the system or serious injury or death from explosion, fire or shock may occur.

For this system:

1. **Comply with the latest National Electric Code, federal, state, and local codes, and any other applicable safety codes. In addition, take necessary precautions during installation, service, and repair to prevent personal injury, property loss and equipment damage.**
2. **Refer servicing to trained and qualified personnel only.**
3. **Substitution of components may impair intrinsic safety.**
4. **Be sure AC power to the console is "OFF" before opening the console panel covers, plugging in the module, and connecting probe and thermistor wires. Do not short any voltage across any barrier terminal including sensors or probes.**

Module Positions and Labeling

1. Modular consoles have three bays in which interface modules can be installed; Comm bay (left door), Power bay, and Intrinsically Safe (I.S.) bay (right door). The Probe/Thermistor Interface Module is installed in the I.S. bay.



*See Serial Comm Installation Guide for permissible modules.

Figure 1. Console Interface Module Bays

In all cases, the position of all modules, their respective connectors, and the devices wired to the connectors must be recorded to prevent improper replacement during installation or service. A circuit directory for Power and I.S. bay Interface Modules is adhered to the back of the right-hand door for this purpose.

During programming, module positions and the devices wired to each module are identified and stored in memory. If a connector is removed and reinstalled on a different module after programming, or if an entire module with its connector is removed and reinstalled in a different module slot, the system will not properly recognize the data being received.

2. If a system contains multiple modules of a single type (i.e., two Probe/Thermistor Interface Modules), they may be swapped between their respective slot locations, **however, the connectors must remain with their original locations, not with the original modules**.

3. Once a device has been wired to certain terminals on a connector and the system has been programmed, the wires from that device may not be relocated to other terminals without reprogramming the system.

Grounding Probe and Sensor Shields

Probe and sensor cable shields are grounded at the console only. Do not ground the shield in the field junction box.

CIRCUIT DIRECTORY

A circuit directory is adhered to the inside of the right-hand door. It should be filled out as the module's connectors are being wired.

The following information should be recorded for each module installed:

- Module Type: record what type of module has been installed in the slot, e.g., Probe/Thermistor Interface Module.
- Position Record: record the physical location and/or type of device wired to each terminal of the module connector in the slot, e.g., Tank 1.

In the example directory shown in Figure 2, slot 4 contains a Probe/Thermistor Interface Module. Position 1 on the connector receives the + and – wires from the probe in Tank 1, position 2 from the probe in Tank 2, etc. Since this system has five tanks, a second Probe/Thermistor Interface Module is installed in slot 5 and its connector position 1 receives the wires from the probe in Tank 5.

Positions on each module are numbered and each connector terminal is identified with the acceptable input. There are eight positions for each slot even though some modules accept fewer devices.

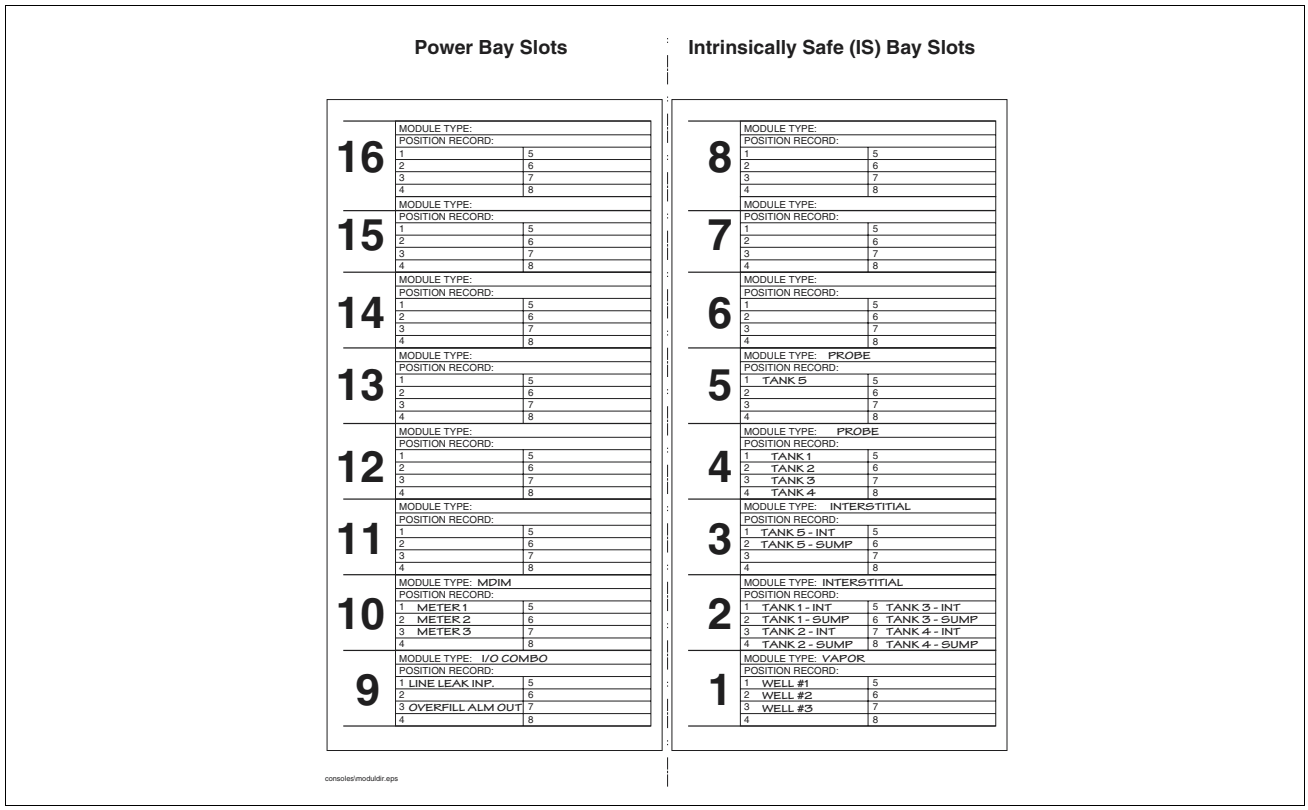


Figure 2. Modular Console System Circuit Directory

Installing Probe/Thermistor Interface Module - I.S. Bay

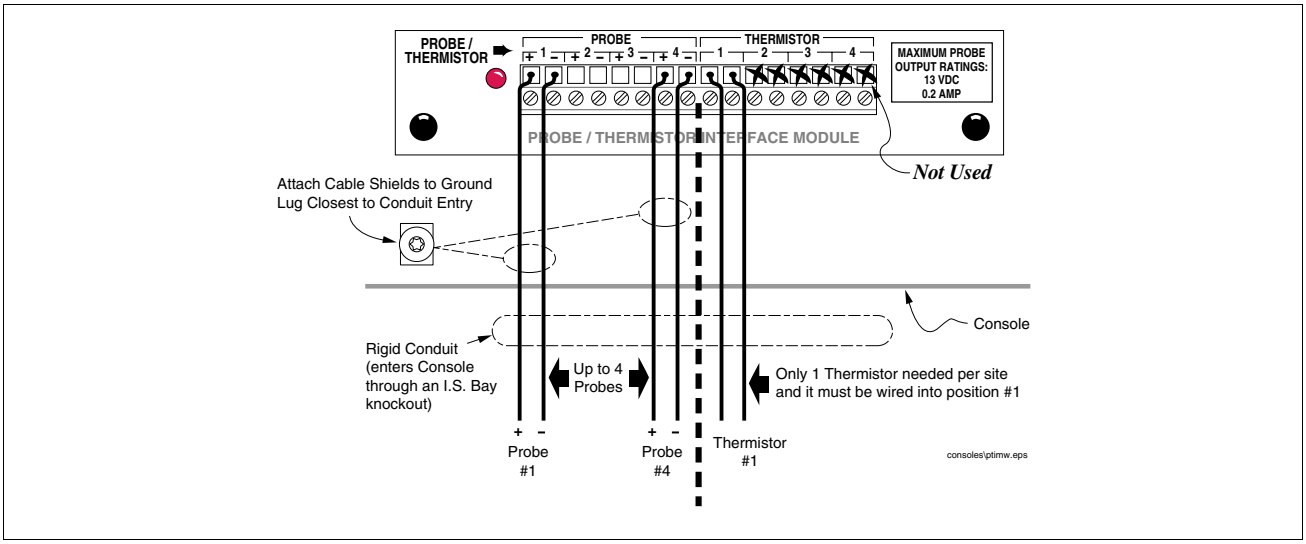


Figure 3. Probe/Thermistor Interface Module Wiring

1. Turn Off power to the console. Open the right-hand door of the console. If you are replacing an existing Probe/ Thermistor Interface module, tag the probe wires with their positions, as you remove them from the old module. Remove the old module.

   If you are adding a new module, remove the blank plate from one of the unused I.S. slots.
2. Hold the new module with its snap-in fasteners positioned in the lower right and left corners and carefully slide the module into its I.S. bay slot until its connector engages with the connector on the board.
3. Press down on the snap-in fasteners to secure the module. BE SURE ALL UNUSED SLOTS are covered with blank snap-in plates.
4. Connectors are supplied with each module. They provide screw terminations for up to four Mag probes and up to four Thermistors.
5. If replacing an old module, reconnect the tagged wires in exactly the same connector position on the new module as they were in on the old module.

   If adding a new module, connect two marked or color-coded wires from each Mag Probe (or Thermistor) to the appropriate terminals on the module as shown in Figure 3. See the table below about device polarity.

Device	Wires	Observe Polarity
Mag Probe (up to 4)	2	Yes
Ground temperature thermistor - When using volumetric line leak detection (VLLD), only one ground temperature thermistor is needed per site and the thermistor must be wired to thermistor position number 1 (positions 2 - 4 are not used).	2	No

6. Ground the shields of each probe wiring pair to one of the console's ground terminals.
7. Reapply power to the console.
8. Refer to the TLS-3XX Setup Manual to program the Probe/Thermistor Interface Module.

Veeder-Root has sales offices around the world to serve you.

Headquarters

125 Powder Forest Drive
Simsbury, CT 06070-7684
Tel: (860) 651-2700
Fax: (860) 651-2719
Email: marketing@veeder.com

Australia

Level 1 441 South Road
Moorabbin 3189 Victoria
Tel: +61 3 9556 5435
Fax: +61 3 9556 5482
Email: rxdupuy@veeder-australia.com

Brazil

Rua ado Benatti, 92
Sao Paulo - SP 05037-904
Tel: +55 (0) 11 3611 2155
Fax: +55 (0) 11 3611 1982
Email: clopez@veeder.com

Canada

Eastern Canada
Tel: (519) 925-9899
Western Canada
Tel: (604) 576-4469
Email: marketing@veeder.com

China

Room 2202, Scitech Tower
No. 22 Jian Guomen
Wai DaJie
Beijing 100004
Tel: +86 10 6512 8081
Fax: +86 10 6522 0887
Email: lu ying@veeder.com

England

Hydrex House, Garden Road
Richmond, Surrey TW9 4NR
Tel: +44 (0) 20 8392 1355
Fax: +44 (0) 20 8878 6642
Email: sales@veeder.co.uk

France

94-106 Rue Blaise Pascal
93600 Aulnay Sous Bois
Tel: +33 (0) 1 4879 5599
Fax: +33 (0) 1 4868 3900
Email: sales@veeder.co.uk

Germany

Uhlandstrabe 49
78554 Aldingen
Tel: +49 (0) 7424 1400
Fax: +49 (0) 7424 1410
Email: sales@veeder.co.uk

Mexico

Sagitario #4529-3
Col. La Calma C.P. 45070
Zapopan, Jalisco
Tel: (523) 632 3482
Fax: (523) 133 3219
Email: jmartinez@veeder.com

Poland

01-517 Warszawa ul. Mickiewicza 18/12
Tel/Fax: +48 (0) 22 839 08 47
Email: sales@veeder.co.uk

Singapore

246 MacPherson Road
#08-01 Betime Building
348578
Tel: +65 (0) 6745 9265
Fax: +65 (0) 6745 1791
Email: francis yap@veeder.com

VEEDER-ROOT

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP