

# Module Expansion Board Kit

## Installation Guide

# Notice

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# Installation Instructions

## Introduction

This manual contains procedures to install a Module Expansion Board Kit in an existing TLS-350 Series Console. This manual assumes that all preliminary site preparation is completed, and that wiring from the console to any external devices being connected to an expansion module is in place.

## Related Manuals

If this is a new installation or site preparation is necessary, refer to:  
576013-879 TLS-350 & TLS-350R Site Prep and Installation Guide

## 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 Symbols

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

 <b>Electricity</b> High voltage exists in, and is supplied to, the device. A potential shock hazard exists.	 <b>Turn Power Off</b> Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.
 <b>Explosive</b> Fuels and their vapors are extremely explosive if ignited.	 <b>Flammable</b> Fuels and their vapors are extremely flammable.

**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.

## Overview

The Expansion Board Kit can be installed in either the Intrinsically Safe Bay or Power Bay of the console to provide connections for up to six additional interface modules in that bay. One kit is required for a bay if more than 2 modules will be installed in that bay.

## Kit Contents

Each Expansion Board Kit (P/N 847490-001) contains:

- 1 plug-in Expansion Board with two retaining screws
- 5 snap-in slot covers
- Installation Guide 576013-738

## Connector Removal/Installation

**Important**

Caution: Once external devices 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 interface module is moved from one slot to another without reprogramming.

If any connectors must be unplugged to allow installation of the Expansion Board Kit, it is extremely important that the connectors be re-installed on the same Interface Modules they were originally connected to.

It is not necessary to remove existing interface modules to install an Expansion Board Kit.

## Expansion Board Installation



 <b>WARNING</b>	
	<p>This console contains high voltage circuitry isolated from intrinsically safe circuitry.</p> <p>Serious injury or death could result if you accidentally touch components or connections in which high voltage is present. Also, If high voltage is shorted across any barrier terminal, explosion or fire could result.</p> <ol style="list-style-type: none"><li>1. Turn off power to the console before installing the Expansion Board in either Bay of the console.</li><li>2. Do not alter or modify any component or substitute components in this kit.</li></ol>

Figure 1 shows an Expansion Board installed in each bay of the console (installation is the same in either bay).

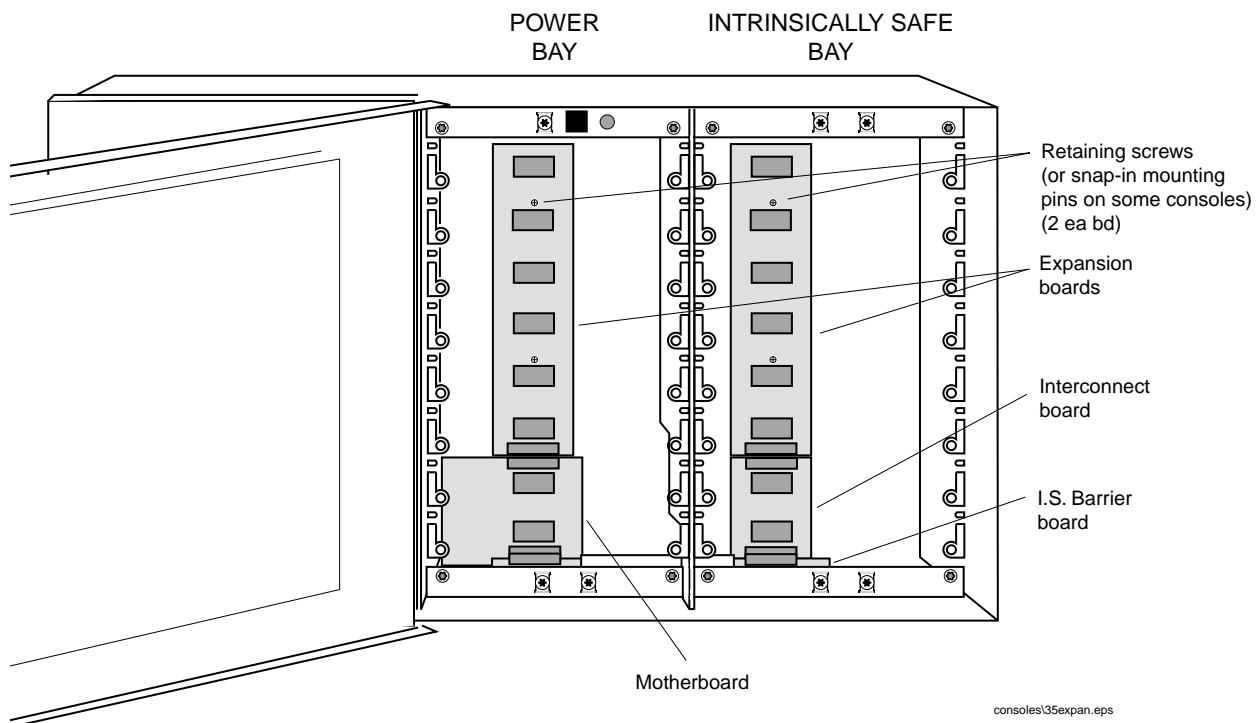


Figure 1. Expansion Board installation



1. Turn off power to the console.

2. If wiring to existing interface modules blocks access to the large six-slot cover plate, you should unplug the connectors from the modules, but not the modules from their slots.

Before removing any connectors, tape and label them and the modules to which they attach so you can reconnect them correctly.

3. Remove the six-slot cover from the bay in which you are installing the Expansion Board by pulling out on the snap-in fasteners in each corner and then lifting the cover out of the console.
4. Align the Expansion board connector with the connector on the motherboard or I.S. Barrier board (see Figure 1).
5. Push the Expansion Board down to engage the connectors.
6. Align the two (2) holes in the Expansion Board with the two PEM nuts shown in Figure 1 and screw in the two retaining screws (on consoles with snap pins, press in carefully on the board until the pins snap in the holes).
7. Cover all unused slots with the single-slot snap-in covers furnished with this kit. **ALL UNUSED SLOTS MUST BE COVERED!**
8. Press down firmly on the cover's two snap-in fasteners to secure each slot cover in place.

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