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SS-LAN Interface Module

Installation Guide

VEEDER-ROOT

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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.
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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.

Introduction

General

This manual contains installation procedures for the installation of the Service Station Local Area Network (SS-LAN) Interface Module in existing TLS-350/TLS-350R consoles designed and manufactured by Veeder-Root.

For additional information regarding Interface Modules, refer to the Veeder-Root TLS-3XX *System Setup* manual. If this is a new installation, or if site preparation is necessary, refer to the Veeder-Root TLS-3XX *Site Prep* manual, or contact your Veeder-Root representative for assistance.

Interface Modules

Interface Modules provide an interface for the TLS-350/TLS-350R to certain Point-of-Sale (POS) systems. This manual describes the operation, installation, and set-up of the SS-LAN Interface Module.

The Interface Module reports tank level information to the POS. Also, the Interface Module allows the console to gather relevant dispensing information, including how much product has been dispensed from each fueling station when configured.

Interface Module Installation Kits

Interface Module Installation Kits provide hardware and cable to interconnect the TLS-350/TLS-350R to the POS systems.

Safety Precautions

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. 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

You are working with a device in which potentially lethal voltages may be present.

Death or injury may result if safety precautions are not followed.

1. **Read all instructions and symbol warnings.**
2. **Turn power off before installing this kit.**

TLS-350/TLS-350R Hardware/Software Requirements

The following hardware is required:

- TLS-350 or TLS-350R console with Business Inventory Reconciliation (BIR)
- One SS-LAN Interface Module: Part No. 331001-001.
- You will also need to order the SS-LAN Installation Kit No. 331029-XXX for your required cable length.

Table 1.- Kit Numbers for SS-LAN Cables

Cable Lengths	Kit Number
5-foot cable	331029-005
10-foot cable	331029-010
25-foot cable	331029-025
50-foot cable	331029-050
100-foot cable	331029-100
200-foot cable	331029-200

Table 2.- Software Requirements

Console	Console System Software	SS-LAN Module Software
TLS-350R w/BIR	346324-XXX-C (or higher)	349646-001B
TLS-350R w/o BIR		
TLS-350		

System Limitations

- Dispensers must dispense single product only; no blenders.
- One SS-LAN Interface Module per network.

System Setup

Installation varies depending on whether your console has the BIR feature. All TLS-350 and some TLS-350R Consoles do *not* support the BIR Feature, so they are used only for Inventory reporting on the SS-LAN. The TLS-350R Consoles that do support the BIR feature are capable of performing both BIR and Inventory Reporting on the SS-LAN.

Checking for BIR in TLS-350R Console

1. Press the MODE key until the front panel display reads:

   DIAG MODE
   PRESS <FUNCTION> TO CONT

2. Press the FUNCTION key until the front panel display reads:

   SYSTEM DIAGNOSTIC
   PRESS <STEP> TO CONTINUE

3. Print out a description of the software currently in your system. Press the PRINT key and the printer prints:

```
SOFTWARE REVISION LEVEL
VERSION XXX.XX
SOFTWARE# XXXXXX-XXX-XXX
CREATED - YY.MM.DD.HH.MM

S-MODULE# XXXXXX-XXX-X
SYSTEM FEATURES:
  PERIODIC IN-TANK TESTS
  ANNUAL IN-TANK TESTS
  CSLD
  BIR ← you will see BIR on the printout if BIR is installed
  FUEL MANAGER
  PRECISION PLLD
```

4. Press the MODE key to return to the main screen:

   MMM DD, YYYY HH:MM:SS XM
   ALL FUNCTIONS NORMAL

TLS-350R w/BIR System Setup

SS-LAN Function	Dispenser Module Data String[1]
Inventory Only	EHDMAXX[2]
Inventory w/Dispenser Events	CEHDMAXX[2]

[1]Refer to the "Reconciliation Setup" section in the Veeder-Root TLS-350R *System Setup* manual for further information on entering the Dispenser Module Data String.

[2]Note: The M in the string denotes metric units - therefore you must enable Metric units in System Setup. XX in the string denotes the station address of the TLS-350R, where XX represents a two digit Hexadecimal value between 40-7F Hexadecimal. To set for 40 Hexadecimal, enter a 4 and a 0 in place of the two Xs in the string.

TLS-350/TLS-350R w/o BIR System Setup

For the TLS-350R System without the BIR feature, it is necessary to set station address using the dip switches SW1 and SW2 (ref. Figure 1). You must also enable "metric mode" in System Setup.

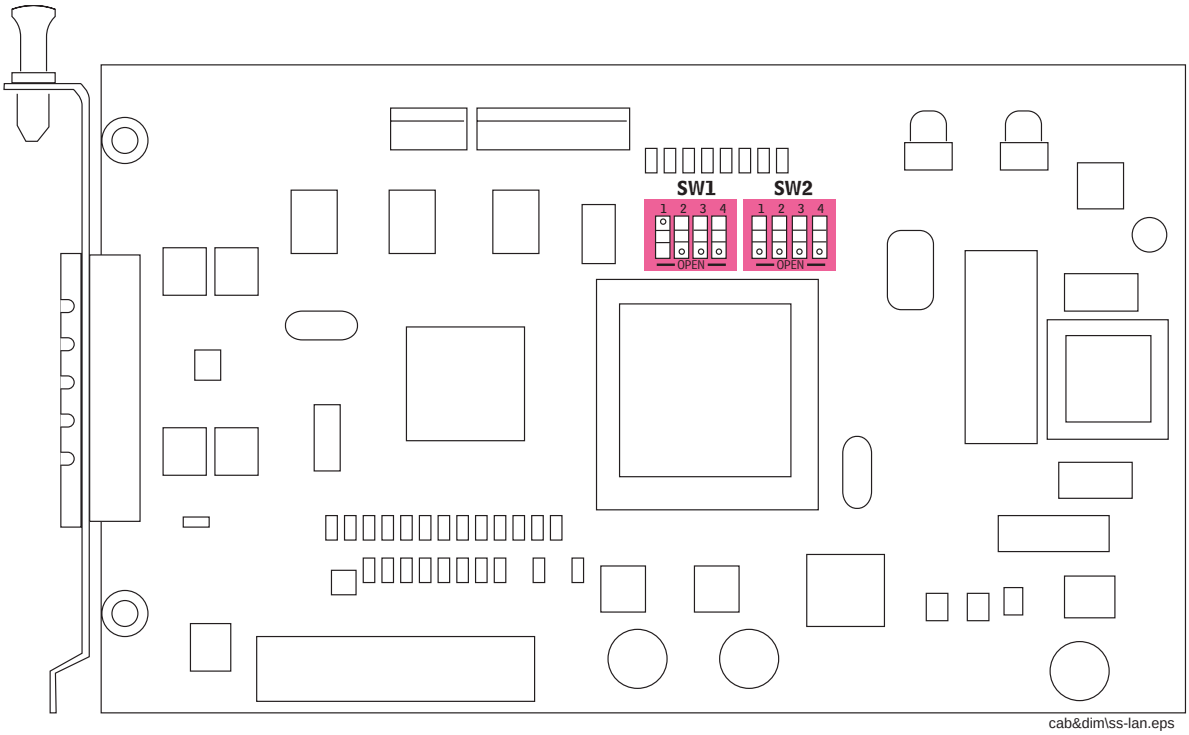

Figure 1. Dip Switch SW1/SW2 on SS-LAN Interface Module

Before you start this procedure, you need to determine the station address. The station address is the node location on the Service Station Local Area Network (SS-LAN) of the TLS-350/TLS-350R. Most station addresses can use the common address shown in the table below. If not, refer to "Advanced Installation Procedures for Consoles without the BIR Feature".

Table 3.- Service Station Local Area Network (SS-LAN) Address

STATION ADDRESS		SW1 POSITION				SW2 POSITION			
Hex	ASCII	1	2	3	4	1	2	3	4
40	@	0	1	0	0	0	0	0	0
41	A	0	1	0	0	0	0	0	1

0=Open (off)
1=Closed (closed)

Advanced Installation Procedures for Consoles without the BIR Feature

Switches can be configured to any station address between the range 40-7F (hexadecimal). Each position on SW1 represents the higher address nybble and each position on SW2 represents the lower address nybble. (See the table below for hexadecimal values).

Table 4.- SS-LAN Hexadecimal Switch Positions

SW1 POSITION				SW2 POSITION			
1	2	3	4	1	2	3	4
X80	X40	X20	X10	X08	X04	X02	X01

Example 1: For address 40 hexadecimal place position 2 on SW1 in the “Closed” position and configure the rest of the switches on both dip switch banks to the “Open” positions. The “Open” position has a value of 0. The closed switch in position 2 has a value of 40 hexadecimal (together they equal 40 hexadecimal).

Example 2: To configure for 41 hexadecimal, close position 2 on SW1 and position 4 on SW2. SW1 position 2 equals 40 hexadecimal and SW2 position 4 equals 1 hexadecimal (together they equal 41 hexadecimal).

SS-LAN Installation

For additional information regarding the below steps, refer to the Veeder-Root TLS-3XX *Site Prep* manual.

The SS-LAN module can only be installed in slots 1, 2, or 3 of the console's comm bay. Slot 4 cannot be used for this module. One SS-LAN module can accept one SS-LAN communications cable.

1. Open the left-hand door of the TLS-350/TLS-350R console by unscrewing the left-top and left-bottom locking bolts.
2. To retain current programming, be sure that the ECPU board battery switch is set to "ON". To avoid electrical shock or damage to components when accessing the battery switch, avoid touching any circuit components with your hand or any conductive tool.
3. Remove the existing retaining bracket panel from the communication compartment.
4. Hold the interface module with its snap-in fastener positioned at the lower edge and carefully slide the module into its slot (see Figure 2 on page 6).
5. 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.
6. BE SURE ALL UNUSED SLOTS at the bottom of the communication compartment ARE COVERED!
7. Check to see that the three position module connector is accessible through the slot opening in the bottom of the console once installation is complete.

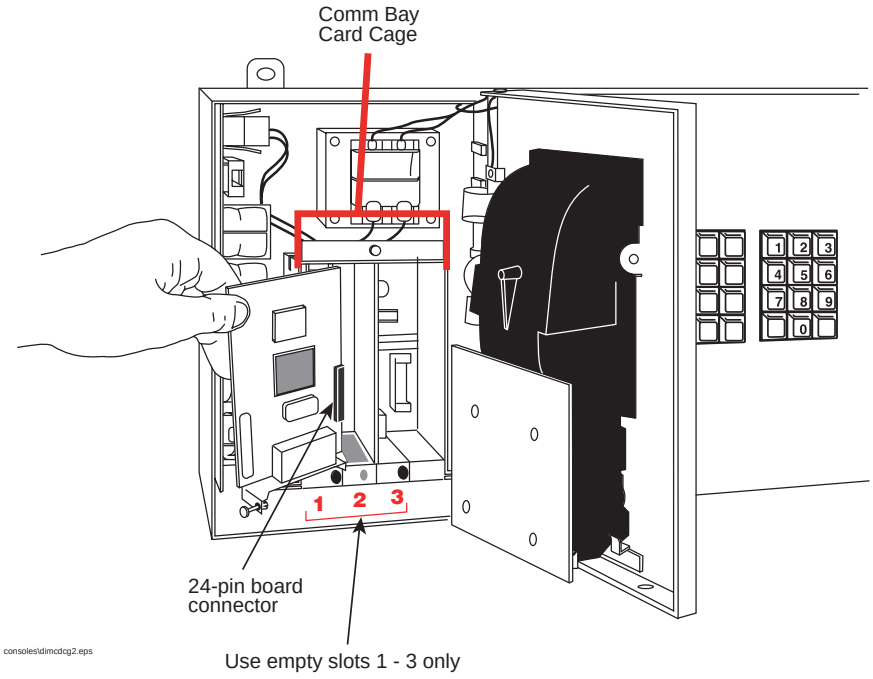

Figure 2. SS-LAN Interface Module Card Installation

Wiring to the Junction Box

CAUTION: When wiring to the junction box, keep wires physically separated from any other wiring or conduits. Any unused wire should be coiled up.

1. Refer to [Figure 3] and locate the TRA and TRB terminals on the terminal block located inside the junction box. The TRA and TRB terminals are the differential signals used in the RS-485 interface for the SS-LAN.

   Note: Junction box screw terminal positions could vary! Refer to manufacturer's installation manual.

2. Connect the blue wire with white stripe on the SS-LAN communications cable to the TRA screw terminal.
3. Connect the white wire with blue stripe on the SS-LAN communications cable to the TRB screw terminal.
4. The orange wire with white stripe and white wire with orange stripe are not used and should remain disconnected from the SS-LAN.

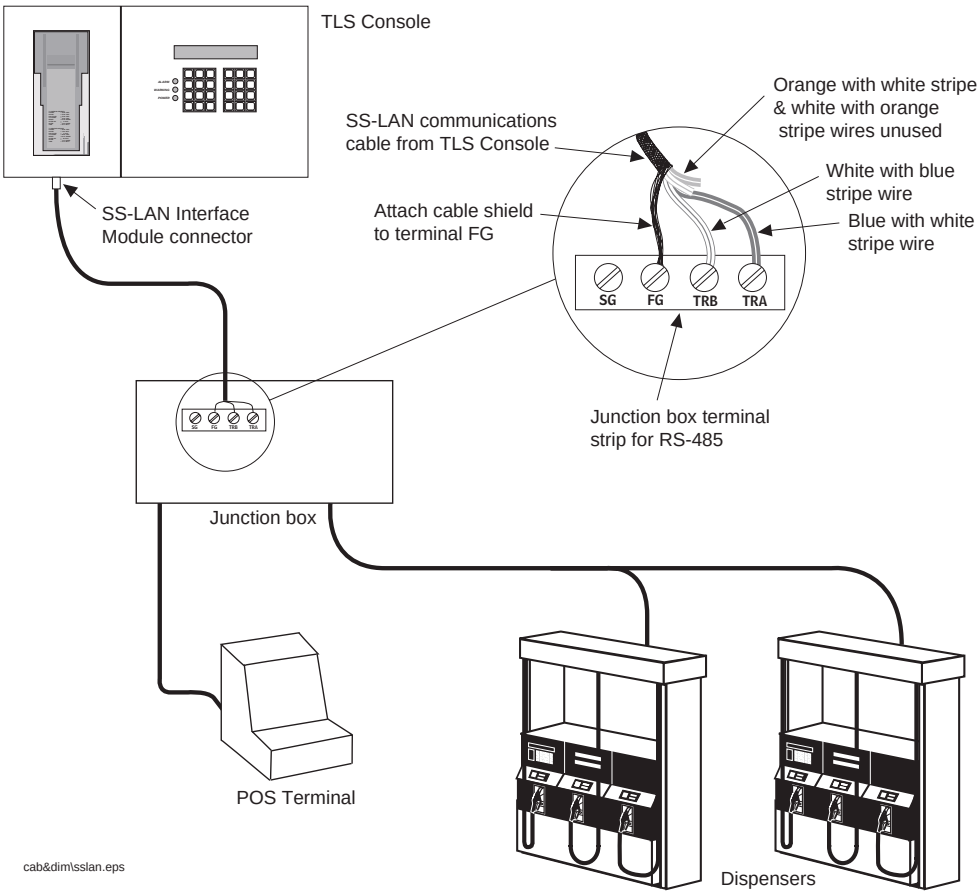

Figure 3. SS-LAN Interface Example Wiring Diagram

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For technical support, sales or other assistance, please visit:
www.veeder.com