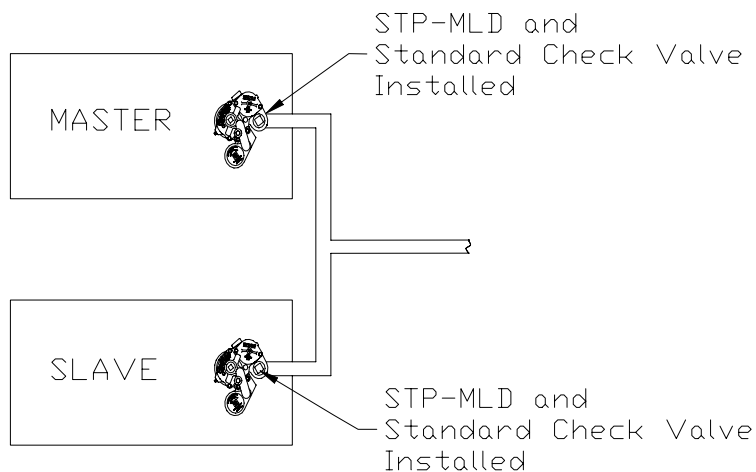


Veeder-Root TLS-350, STP-SCI Smart Controller and Mechanical Leak Detection

Veeder-Root and FE Petro recognize that as station sizes and volumes continue to rise, customers need more than one pump on a product to provide a large total flow during peak business periods. This bulletin describes our recommendations for manifolded pumps/tanks when used with: Veeder-Root's TLS-350 tank monitoring system, at least two STP-SCI controllers, and without a tank syphon.

With the Veeder-Root console (software version 22 TLS) and STP-SCI controllers, the lead pump can now be selected. This new feature is available for customers with multiple tanks of the same product. With this new feature it is possible, in many cases, to eliminate syphon systems that are typically used in these multiple tank configurations. The scenario for using these updates is described below.

Multiple Tanks with a Pump in Each Tank Using Mechanical Leak Detectors (Figure 1)



- One STP-MLD installed in each pump.
- One Master and at least one Slave STP-SCI (determined by switch settings inside the STP-SCI controllers). See the *STP-SCI Installation and Owner's Manual* for proper switch settings.
- Veeder-Root's TLS-350 monitors and controls the levels in each tank eliminating the need for a syphon bar between tanks.
- When the Veeder-Root sends a hook signal to one of the STP-SCI controllers, that STP-SCI becomes the lead controller.
- The lead FE Petro STP-SCI Smart Controller starts other STP-SCI controllers when demand for product increases during peak business periods.

Figure 1

System Requirements

- Installation manuals for both Veeder-Root's TLS-350 and FE Petro's STP-SCI.
- Two or more SCI controllers (one SCI configured as a Master and the rest configured as Slaves).

Note: The STP-SCI is not compatible with the STP-SC. The STP-SC controllers will not function as described in this bulletin, STP-SCI controllers must be used.

- A Veeder-Root TLS-350 with software version 22 TLS. Please contact Veeder-Root for availability.
- 18 AWG 3-wire shielded communication cable (300 V minimum) connecting the STP-SCIs.
- Use the Standard model FE Petro check valve in both pumps.

Caution: If using High Pressure model pumps, PMAH150 or PMAH200, make sure tank overfill protection is installed in the system. The pressure produced from one pump may open the pressure relief valve of the other pump and cause product to fill from one tank to the other during operation.



- Wire the STP-SCI controllers to the Veeder-Root console according to Figure 2 of this bulletin.

Warning: Highly flammable vapors or liquids may be present in the environment in which this equipment is installed or serviced. Installing or working on this equipment means working in an environment that presents risks of severe injury or death if instructions and standard industry practices are not followed. Follow all applicable codes governing the installation and servicing of this product and the entire system. Always lock out and tag electrical circuit breakers while installing or servicing this equipment and related equipment. Refer to the *Installation and Owner's Manual* of this equipment and related equipment for complete installation and safety information.



Basic Operation

- The Veeder-Root TLS-350 system monitors the tank product levels.
- When a 120 VAC hook signal from a dispenser is present, the Veeder-Root TLS-350 system will select a STP-SCI controller based on the product level in the tanks dictated to it by the console configuration.
- When demand for product rises (more people are dispensing product), the lead STP-SCI will call an additional STP-SCI to turn on.
- In this configuration, if there are any faults in the system, the whole system will be shut down.

The wiring diagram in Figure 2 shows the connections between the Veeder-Root Power Bay console and the Master/Slave STP-SCIs.

- Follow all safety and installation instructions in the Veeder-Root Site Prep and installation instructions for the Veeder-Root TLS-350.
- Follow all safety and installation instructions in the STP-SCI *Installation and Owner's Manual* for wiring not shown in Figure 2.
- Set the SW1 and SW2 switches to a Master-Slave configuration and **not** a Master-Slave Alternating Circuit (M-S/AC) configuration. If the STP-SCIs are configured as M-S/AC, the pumps will not turn on in a predictable manner.
- Calibrate controllers according to calibration instructions in the STP-SCI *Installation and Owner's Manual*.

Wiring Diagram between Veeder-Root TLS-350 and FE Petro STP-SCI with MLDs Installed in Pumps

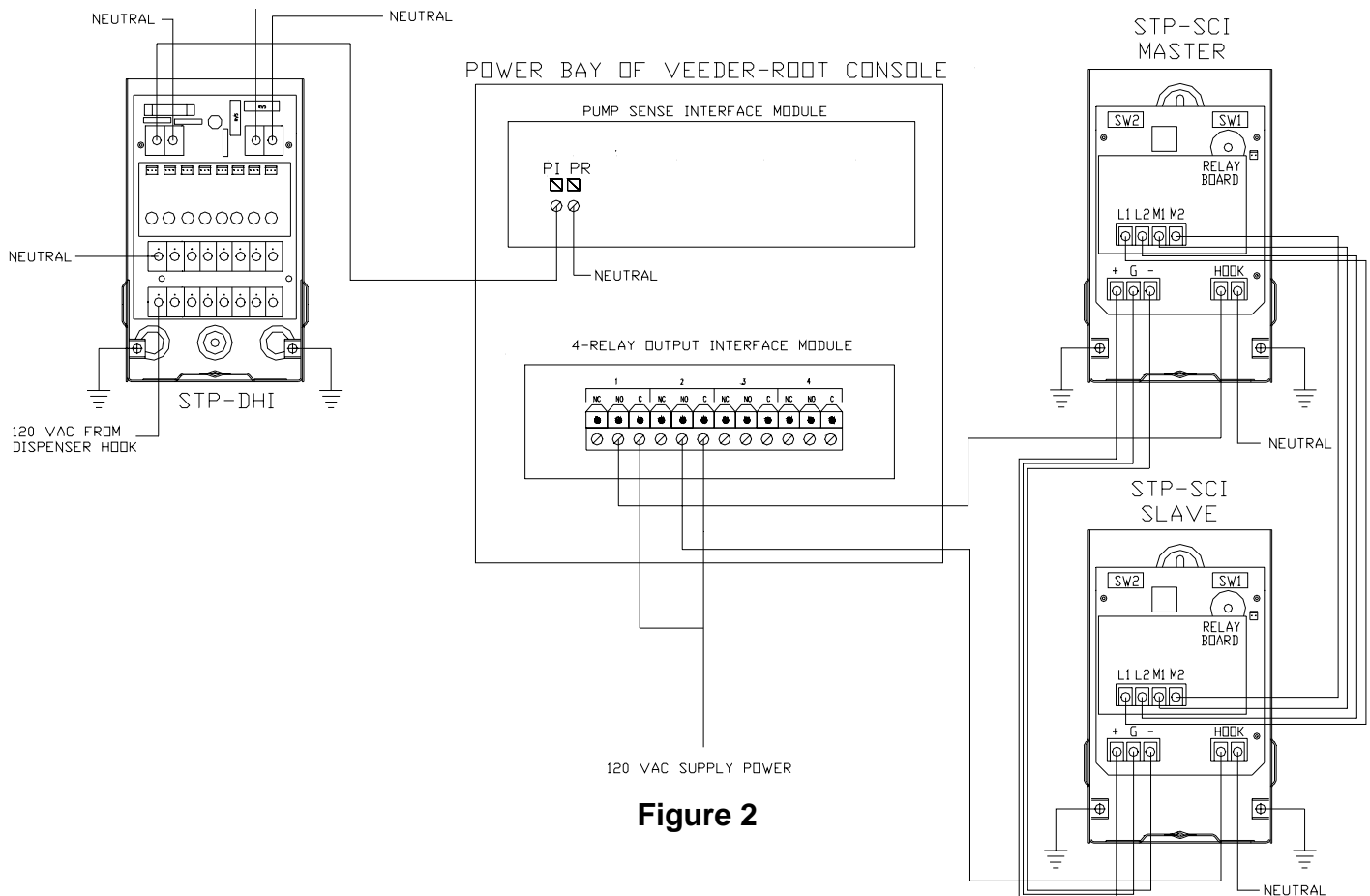


Figure 2

Please contact Technical Support if we may be of any assistance.