



VEEDER-ROOT



BENEFITS OF UPGRADING TO THE **TLS-450PLUS**

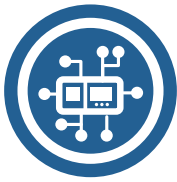
ELEVATE YOUR FUEL MANAGEMENT SYSTEM



The TLS-350 Automatic Tank Gauge (ATG) has long set the standard for exceptional quality in fuel management systems.



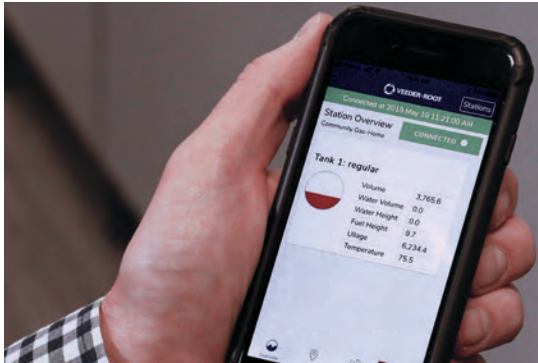
Today, the TLS-450PLUS ATG builds on that solid legacy to set a new bar for reliability and convenience.



CONNECTIVITY

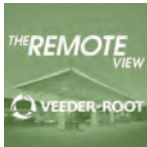
ACCESS & MANAGE CRITICAL DATA

The TLS-450PLUS provides a wide range of connectivity options, ensuring you always know what is going on with your fueling assets. Whether you need to remotely access or configure your tank gauge from a computer, or you want to check fuel inventories, alarms or more from your cell phone or tablet, the connectivity features needed to get the job done come standard, exclusively on the TLS-450PLUS and TLS4 series tank gauges.



THE PLUS VIEW app provides periodic status updates from off-site, and includes:

- Station overview for an immediate status check on tank inventory.
- Reports tab for quick access to Alarm, Inventory, and Last Delivery reports.
- Map view to allow for easy navigation between sites.



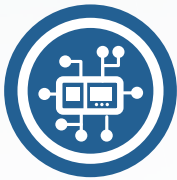
THE REMOTE VIEW app provides continuous management data for in-store use, and includes:

- App updates with ATG data as activity happens on site in real-time.
- View Active Alarms with one touch.
- Audible and on-screen notifications.



APP FEATURES	THE PLUS VIEW	THE REMOTE VIEW
Station Overview: Immediate status check on tank inventory.	✓	✓
Report Tab: Access to Alarm, Inventory and Last Delivery Reports.	✓	✓
Map View: Easy navigation between map pin points.	✓	✓
Real-Time Updates: Continuous connectivity and updates.	—	✓
One Touch Alarms: Quickly view alarms.	—	✓
Notifications: Real-time audible / visual alarms.	—	✓
Disconnect: Audible / Visual notification for lost connectivity.	—	✓
In-Store Format: For optimal experience for site personnel.	—	✓





CONNECTIVITY

ACCESS & MANAGE CRITICAL DATA



WEB-ENABLED INTERFACE

Modify configuration & programming, including:

- Print wet stock management and compliance reports.
- Set up email notifications for alarms and reports.
- Establish automatic events scheduled to your business needs.



MANAGED SERVICES

Cloud based fuel management:

Insite360 provides total control of your network with a team of analysts protecting your most valuable assets. Maximize your business with cutting-edge features including detecting dispenser flow reduction and meter drift by nozzle.



ENHANCED SECURITY

GREATER CONNECTIVITY NEEDS GREATER PROTECTION

The TLS-450PLUS provides the security needed for today's connected world. Whether a security breach comes from inside or outside an organization, older technology lacks modern security features needed to combat cyber intruders, who can wreak havoc on your business. Rest assured with the comprehensive security features of the TLS-450PLUS.

Features such as strong encryption, configurable user access, and segmented network ports help ensure your network is safe at every level. No matter your network's size, security comes standard with the TLS-450PLUS.





ENHANCED SECURITY

GREATER CONNECTIVITY NEEDS GREATER PROTECTION

THE TLS-450PLUS SUPPORTS THESE ENHANCED SECURITY FEATURES:

TLS-350

TLS-450PLUS

1. Isolated Networks:

The TLS-450PLUS provides three Ethernet connectors:

- ETH1 provides a direct connection into the gauge and will typically be used for connecting internal corporate data (POS, management, and DIM data)
- ETH2 and ETH3 are connected to an internal switch and can be used to isolate external connectivity (on-site maintenance, Wireless connections with The PLUS VIEW, etc.).

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2. Encrypted Web Access:

The TLS-450PLUS only uses the secure HTTPS interface. Access to the gauge requires a username and password.

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3. Encrypted Serial Access:

Previous consoles provided a Raw / Telnet interface for the serial commands. This is still available on the TLS-450PLUS but can be disabled. A very secure SSL/SSH based serial command interface is now available using private and public key pairs.

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4. Role-Based Access:

The TLS-450PLUS provides standard roles as well as customizable roles for users connecting to the gauge. Each role controls the user's abilities on the console screens (no access, read-only and full control).

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5. Front Panel Access:

Access to the console screen can be set up to require the user to log in to the system before being able to use the gauge. Activating Front Panel Security will help prevent unwanted access inside the station.

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Over 50% of security breaches within companies occur from employees.*

6. Network Routing:

The TLS-450PLUS supports advanced network routing tables to control the flow of data to gateways and networks. It can also be used to drop data coming from unwanted sources, make sure data is isolated to a certain network (e.g. ETH1), and prevent data from flowing through a default gateway.

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* <https://www.ca.com/content/dam/ca/us/files/ebook/insider-threat-report.pdf>





ENHANCED SECURITY

GREATER CONNECTIVITY NEEDS GREATER PROTECTION

► WHAT CAN HAPPEN IF YOU DO NOT TAKE OWNERSHIP OF YOUR NETWORK?

- 1. Rename Tank Information:** On consoles using Telnet, hackers find the MAC address, determine whether it is a TLS-350 or TLS-450PLUS and simply change the tank names to something inappropriate.
- 2. Resize Tanks (From 10K to 20K Gallons):** It is possible to change the tank size, so it appears the tank can hold more than it really can. The thresholds could also be changed so that overflow alarms appear at a higher level. The potential would be to overfill the tank causing an environmental leak.
- 3. Shutdown Dispensing (PLLD and Relay Settings):** The relays could be deprogrammed so that the pump wouldn't be activated on a hook signal. Additionally, PLLD could be turned off so catastrophic leaks may not be detected.
- 4. Capture Sensitive Corporate Data:** By monitoring unsecure Telnet connections, observers can gather operations data (delivery, inventory, alarms, etc.) for sale to third parties.
- 5. Shutdown IP Cards / Networking Services:** After gaining access to a vulnerable corporate network, hackers could alter TLS-350 Ethernet cards lacking passwords; changing configurations and rendering management systems ineffective. Critical operations could be impacted (hospitals, emergency providers, cell service, power plants, etc.).
- 6. Loss of Compliance Data:** Reprogramming the console could result in the loss of compliance data translating to potential regulatory fines.

NEW METHODS OF ATTACKING EQUIPMENT ARE DISCOVERED DAILY.

These are collected in a national database (CVE) and made available to the public to address the issues. Software suppliers, including Veeder-Root, use this information to create fixes. As fixes are made available, equipment should be upgraded to protect it from potential security vulnerabilities.

Veeder-Root uses two platforms daily to discover any new vulnerabilities in our TLS-450PLUS software.



TOTAL COST OF OWNERSHIP

PROTECT YOUR INVESTMENT & EXTEND YOUR WARRANTY



The TLS-450PLUS console provides an expanded, advanced feature set at a lower price point than the TLS-350 console without needing to replace your probes or sensors. Upgrading automatically extends the warranty of your probes and sensors for the duration of the warranty on your new TLS-450PLUS.

Significant labor savings can be gained with the TLS-450PLUS in comparison with the TLS-350, from the use of features like remote configuration, remote connectivity, automatic event notifications and more. The TLS-450PLUS helps reduce downtime by ensuring you have real-time access to everything you need to keep your station in top condition.



TOTAL COST OF OWNERSHIP

PROTECT YOUR INVESTMENT & EXTEND YOUR WARRANTY

COST SAVINGS CATEGORY	SAVINGS LEVEL
Equipment cost savings	\$
Remote troubleshooting and configuration	\$
Warranty extension	\$\$
Remote software download	\$\$
Free monthly software upgrades	\$\$\$
Reduced downtime due to real time access to data	\$\$\$\$



EXPANDED CAPABILITY

DESIGNED TO BE A PLATFORM FOR THE FUTURE

The TLS-450PLUS is designed to be a platform for the future. With regular updates, your operating software is always up to date with the latest enhancements and features, and your data is secure.

► FEATURES IMPROVED ON THE TLS-450PLUS TANK GAUGE INCLUDE:



Digital Pressurized Line Leak Detection (DPLLD)

The line volume expansion of DPLLD for the TLS-450PLUS provides advanced line leak detection to meet the capacity of growing fuel sites, now certified up to 1,178 gallons of capacity. The DPLLD equipment performs a 3.0 gph line leak test following each dispense. With the proper software enhancement feature installed, the DPLLD equipment will also perform 0.2 and/or 0.1 gph line tests to meet your regulatory needs, eliminating the need for separate annual line leak testing.



AccuChart™

Our third generation AccuChart™ utilizes enhanced geometric tank chart modeling for the TLS-450PLUS with optional restricted calibration range to perform calibration. Chart volumes are calculated using adjustable geometry parameters: diameter, capacity, end shape, tilt and probe offset. Completed charts are established more quickly and with higher accuracy from a limited amount of data.



Business Inventory Reconciliation (BIR)

BIR on the TLS-450PLUS has been enhanced for your custom reconciliation needs and meets federal, state, or local requirements.

It includes automated reporting on:

- Throughput thresholds
- Delivery thresholds
- Capacity thresholds
- Custom thresholds

ADDITIONAL FEATURES INCLUDE:

DEF Recirculation | Intelligent Pump Control | Enhanced Encryption Methods
Free Software Upgrades | Email Notifications | Custom Alarms



UPGRADE TODAY!

Contact your distributor or Veeder-Root sales representative today to learn more about the TLS-450PLUS.

Existing TLS-350 customers can take advantage of upgrade package savings for a limited time.

► To learn more about upgrading, visit us at veeder.com/upgrade