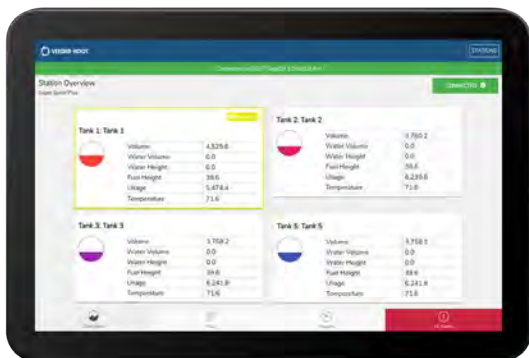


TLS-450PLUS Automatic Tank Gauge

The Fuel Management System to Grow Your Business

Why the TLS-450PLUS?

The TLS-450PLUS Automatic Tank Gauge (ATG) provides the most comprehensive site data for advanced fuel asset management. Combining industry leading algorithms with enhanced security, real-time notification, and anywhere anytime access, the TLS-450PLUS keeps your customer's site running profitably. The TLS-450PLUS is ideal for retail and commercial/industrial applications that have multiple tanks, requiring more than 12 probe and sensor inputs.



▶ MAINTAIN CONTROL OF YOUR FUELING OPERATIONS

- **Inspection ready compliance** – easy access to all federal, state, and local agency reports.
- **Remote connectivity** – monitor your site performance, receive real-time alerts, and access compliance data via web-enabled devices – anytime, anywhere, with a wide range of options including THE PLUS VIEW app, THE REMOTE VIEW app, Web-Enabled Interface and Managed Services with cloud-based fuel management through Insite360.
- **Data protection** – store up to 3 years data and protect it from power outages, battery replacements or software upgrades.
- **Security controls** – partitioned Ethernet networks, customized user access, and Secure Socket Layer (SSL) encrypted connectivity to keep your network safe.

▶ OPERATE AT PEAK EFFICIENCY

- **Remote software download** – hassle-free access to software updates.
- **Logistics visibility** – increase inventory management awareness to avoid runouts and haulbacks.
- **Faster problem resolution** – diagnose and troubleshoot issues remotely to understand ongoing situations better and avoid unnecessary dispatch.
- **Customized alarms** – preprogram alarm alerts to provide scenario-specific information to predetermined individuals.
- **Graphical User Interface (GUI)** – designed with features for ease of use, including workflow wizard, context sensitive help and user-defined favorites.



TLS-450PLUS (UL/cUL) Part Numbers	
Application Software	
333545-001	TLS-450PLUS application software
Hardware*	
860091-301	TLS-450PLUS touch screen console with printer
860091-401	TLS-450PLUS touch screen console without printer
860091-001	TLS-450PLUS console without display, without printer
Interface Modules	
332812-001	Universal sensor/probe interface module
332813-001	Universal input/output interface module
333564-001	10-amp controller module
Communication Modules	
332818-001	Sitefax interface module
332866-001	Single RS-232 interface module
332868-001	RS-232 dual interface module
332870-001	RS-232/RS-485 dual interface module
Feature Enhancement Software	
332972-006	Continuous Statistical Leak Detection (CSLD)
332972-007	Ultimate Testing Line Leak Detection for DPLLD
332972-008	Risk Management Line Leak Detection for DPLLD
332972-009	Base Compliance Line Leak Detection for DPLLD
332972-018	Timed Sudden Loss Detection
333149-001	BIR/AccuChart TLS-450PLUS EDIM factory installed
333580-001	BIR/AccuChart TLS-450PLUS CDIM factory installed
333581-001	BIR/AccuChart TLS-450PLUS LVDIM factory installed
333582-001	BIR/AccuChart TLS-450PLUS MDIM factory installed

* Includes a 2-port RS-232 Module, a 3-port Ethernet Module and a 2-port USB Module.

CAPABILITIES

- **AccuChart 3.0 Tank Calibration** – 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.
- **Business Inventory Reconciliation (BIR)** – improves business decisions by combining meter transaction sales with AccuChart 3.0 Tank Calibration to better understand the site variance. It includes automated reporting on: throughput thresholds, delivery thresholds, capacity thresholds, custom thresholds.
- **Digital Pressurized Line Leak Detection (DPLLD)** – 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.
- **Built-in Data Logging** – enables approved data transfer for wet stock management.
- **Timed Sudden Loss Detection** – monitors unexpected changes in inventory, exposing possible issues including theft during quiet periods.
- **Diesel Exhaust Fluid (DEF) Recirculation** – provides a recirculation and/or Temp Control heat trace system to prevent DEF product from freezing or overheating in lines that utilize DEF in bulk dispensing systems.
- **Intelligent Pump Control (IPC)** – allows the TLS-450PLUS to display and report Submersible Turbine Pump (STP) activity through a direct communication link between a STP pump controller and the TLS-450PLUS system via a RS-485 connection. This software feature is available only in the TLS-450PLUS platform.

INTEGRATED SITE SOLUTIONS

The TLS-450PLUS ATG and STP control boxes act as the interface between the STP and the dispenser, while numerous sensors and probes monitor various conditions to ensure the fueling system remains healthy. If an abnormal state is detected, the TLS-450PLUS ATG will record a condition result and generate an audible and visual alarm to notify the store operator. Remote connectivity options for the TLS-450PLUS ATG ensure that critical site statuses, such as inventory and alarm activity are available to site managers when they are not onsite. Stay connected, secure, and compliant with Veeder-Root's Integrated Site Solutions.



TLS-450 PLUS



TLS4i TLS4c

Veeder-Root Specification Sheet
8600 & 8601 Series Consoles



Standard Features	TLS-450 PLUS	TLS4i	TLS4c
WVGA LCD color touch screen with user-friendly graphic display	✓	✓	✓
Universal AC power supply, 100-249 VAC, 50/60Hz	✓	✓	✓
Rechargeable backup battery	✓	✓	✓
Internal 5 amp relays, 120/240 VAC or 30 Vdc	1	2	2
One internal universal low voltage input, 12Vdc (contact closure sense)		✓	✓
Maximum number of universal probe and/or sensor inputs	256 ¹	12	6
Maximum number of probes	32	4	2
Maximum number of any one type of sensor	99 ²	12	6
Optional inputs and outputs	✓ ^{3,4}		
Web-enabled: view and control from web or smart phone browsers	✓	✓	✓

¹=with TLS-XB ²=Available on version 6A or higher ³=20 High Output, 20 High Inputs, 16 Low Voltage Inputs ⁴=80 High Output, 80 High Inputs, 64 Low Voltage Inputs with TLS-XB

Communications	TLS-450 PLUS	TLS4i	TLS4c
Configurable optically isolated RS-232/RS-485 serial ports (provides electrical isolation)		2	2
Configurable RS-232/RS-485 serial ports	5 ¹	2	2
Ethernet port(s)	3	1	1
Ethernet network(s)	2	1	1
USB ports (external/internal)	2/2	2/0	2/0
External GSM/GPRS modem via Ethernet port	✓	✓	✓

¹=Up to

System Specifications	TLS-450 PLUS	TLS4i	TLS4c
Multipoint tank chart, supports up to 5,000 unique points	✓	✓	✓
Network printer support via Ethernet	✓	✓	✓
Operating temperature: 0°C to 40°C (32°F to 109°F)	✓	✓	✓
Storage temperature: -40°C to 70°C (-40°F to 158°F)	✓	✓	✓
Relative humidity 0-90% (non-condensing)	✓	✓	✓
Approximate external dimensions (inches)	18.4 x 11 x 8.8	13 x 8 x 3.5	13 x 8 x 3.5
Construction 16GA (.060 inch) powder coated steel	✓	✓	✓

Safety Approval Groups	TLS-450 PLUS	TLS4i	TLS4c
UL/cUL listed	✓	✓	✓
ATEX	✓		
IECEX	✓		
NEPSI	✓		
FCC	✓	✓	✓
EMC	✓	✓	✓
PESO	✓		

Operational Features	TLS-450 PLUS	TLS4i	TLS4c
Multi-language GUI capability ¹	✓	✓	✓
Units of measure: metric, imperial, USA	✓	✓	✓
Customizable user login with role-based access levels	✓	✓	✓
Custom alarms for unique labeling or on-site instruction	✓	✓	✓
Customizable automatic events for email, print reports, relay and pump control	✓	✓	✓
Workflow wizard for streamlined setup	✓	✓	✓
Context sensitive help	✓	✓	✓
Comprehensive reports	✓	✓	✓
Up to three years of history available	✓	✓	✓
Inventory and delivery monitoring	✓	✓	✓
Power outage	✓	✓	✓
Alarm history	✓	✓	✓
Storage capability – setup, configuration and data history	✓	✓	✓
Additional feature enhancement software upgrade capability (through USB)	✓	✓	✓
Prominent visual status indicators including power, warning and alarm	✓	✓	✓
Software upgrade through USB	✓	✓	✓
Remote software download capability via Ethernet ²	✓	✓	✓

¹=Arabic, Brazil Portuguese, Chinese, Simplified Chinese, English, Finnish, French, German, Hebrew, Hindi, Italian, Korean, Polish, Portuguese, Russian, Spanish ²=available on version 5B or higher

Additional Functionality When Combined with Appropriate Equipment and/or Software	TLS-450 PLUS	TLS4i	TLS4c
AccuChart tank calibration including selectable calibration range and data sufficiency tracking	Optional		
Business Inventory Reconciliation (BIR)	Optional		
Hourly Reconciliation Monitoring (HRM)	Optional		
Timed Sudden Loss ¹	Optional	Optional	Optional
10-amp controller module	Optional		
Digital Pressurized Line Leak Detection (DPLLD) – 0.1 GPH annual, 0.2 GPH monthly & 3 GPH hourly testing	Optional		
In-Tank Static Leak Detection (SLD) – 0.1 GPH annual testing and 0.2 GPH monthly testing	✓	Optional	Optional
Continuous Statistical Leak Detection (CSLD) – 0.2 GPH for single and manifolded tanks	Optional	Optional	Optional
Phase separation detection up to E1.5 (4" float kit)	✓	✓	✓
Mag-FLEX tall tank AST monitoring	✓	✓	✓
Fuel density monitoring	✓	✓	✓
Range: 43 - 50 pounds/ft ³ (petroleum)	✓	✓	✓
Range: 50 - 56 pound/ft ³ (diesel)	✓	✓	✓

¹=available on version 6B or higher

Call 888.561.7942 or visit www.veeder.com

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