

Integrated Solutions



Single
System

TLS-350 Plus

Integrated solution for centralised, single system site monitoring

Modular design

The TLS-350 Plus lets you choose the exact set of risk management and fuel management features you need today. As regulatory requirements and your business needs change, the flexible TLS-350 Plus platform allows you to add new features tomorrow. A safe investment, a smart decision.

Leading-edge technology

The TLS-350 Plus has defined the industry standard for tank monitoring systems with: advanced magnetostrictive probe technologies offering 0.76 LPH monthly monitoring and 0.38 LPH volumetric tank testing; accurate, automatic electronic line leak detection; and a complete line of standard leak sensors to monitor double-wall tanks, containment sumps, and wet or dry

wells. Plus, for 24-hour stations and high volume operations, Continuous Statistical Leak Detection (CSLD), the most advanced leak detection technology available today, provides 24-hour, automatic leak detection without tank shutdown. No lost business. No lost operating time.

Leading-Edge Business Management Features

The TLS-350 Plus takes business management a step beyond normal fuel inventory management. If equipped with the appropriate Dispenser Interface Module, the TLS-350 Plus will reconcile fuel sales to inventory on an hourly basis (HRM). The AccuChart™ auto-calibration functionality will provide you with the most accurate inventory readings available. The internal GSM modem

& TCP/IP communications options allow easy remote connectivity for centralised network control, fuel logistics management and receipt of critical alarm messages instantaneously. The optional Fuel Management software available for the TLS-350 Plus allows you to track average daily fuel usage, predict the days of remaining inventory, and improve delivery scheduling. By utilising

Inform™, Veeder-Root's tank management software, all inventory management and environmental compliance can be easily centralised on a personal computer in one location. The use of these time and money saving options extend your investment in the TLS-350 Plus beyond environmental risk management requirements, improving your bottom line.

Technical specifications

System Capabilities

- > AccuChart™ Automatic Tank Calibration
- > Continuous inventory monitoring for up to 16 tank compartments
- > Monitor LPG and AdBlue
- > Fast, 0.38 LPH & 0.76 LPH in-tank leak detection
- > CSLD precision tank testing option for continuous 24-hour leak detection
- > Automatic, precision line testing and leak detection for pressure systems
- > Auto-dial out capability out for centralised alarm management
- > Enhanced wet stock management via Inform™ remote polling application or FMS Fuel management Service
- > IFSF compatible
- > Up to 32 External Inputs from other forecourt devices for extended alarm monitoring capability
- > Up to 32 Relay Outputs to control / activate on site systems & devices
- > HRM Hourly Reconciliation Monitoring - dynamic leak detection watchdog
- > Automatic adjusted delivery reports for accurate delivery verification
- > Programmable in-tank alarms to automatically monitor critical high or low fuel levels and water presence
- > Data communications via RS232, RS485, Ethernet or IFSF
- > Third party certified precision leak detection for tanks and lines
- > Compatible with Mag-XL flexible probes for above ground tall tank installations
- > Proven performance and reliability in the field
- > Easy upgrade to TLS-350R specification for advanced reconciliation features

Standard Models

Part number (ATEX 230 Volt)	Description
848260-024	TLS-350 Plus Monitoring Console with Integral Printer
848260-004	TLS-350 Plus Monitoring Console without Integral Printer
848561-004	TLS-350 Plus PC Version without Printer or Keyboard (requires Inform™ single site software)

TLS-350 Plus Interface Modules

The TLS-350 Plus monitoring console contains three compartments in which individual interface modules can be installed. Interface modules may be factory-installed in the console upon initial ordering, or ordered separately as spare modules to expand an existing system.

Part number and Description	Feature Compatability (where applicable)
LOW-POWER COMPARTMENT	
329356-002 Four-Input Probe Interface Module (Maximum 4 per console)	Series 8463 Mag Plus Probes Mag-XL Tall Tank Probes (XLi Converter required)
329358-001 Eight-Input Interstitial / Liquid Sensor Interface Module (Maximum eight per console)	Liquid Interstitial Sensor with Header Tank (711-002-1000) Series 79438 Discriminating Tank Chamber and Dispenser Sump Sensors Series 79438 Sump Sensors Series 79439 Twin Wall Piping Sump Sensor
329356-004 Eight- Input Smart Sensor Module	Series 8570 Mag Sump Sensors
332250-001 Seven Input Smart Sensor Module with Embedded Pressure Sensor Interface	SCVS Vacuum Sensor monitoring (requires STP)
329956-001 Eight-Input Type A Sensor Interface Module	Series 79436 Interstitial / General Purpose Sensors for Monitoring Dry Spaces
329357-001 Five-Input Vapour Sensor Interface Module	Series 79439 Vapour Sensors
329399-001 Five-Input Groundwater Sensor Module	Series 79438 Groundwater Sensors
330843-001 Six-Input Pressurised Line Leak Interface Module (maximum 1 per console)	Series 8484 Pressurised Line Leak Detection System
HIGH-POWER COMPARTMENT	
329359-001 Four-Relay Output Interface Module	Provides 4 volt-free switch outputs
329360-001 Two-Input/Two-Relay Output Interface Module	Provides 2 volt-free switch outputs and 2 External inputs
332451-001 Four-Input Interface Module	Provides 4 External inputs
330374-002 Three-Output Pressurised Line Leak Controller Interface Module (maximum 1 per console)	Series 8484 Pressurised Line Leak Detection System
COMMUNICATIONS COMPARTMENT	
330280-xxx TLS-350 Series Dispenser Interface Modules (DIMs)	Required for AccuChart™ & HRM features
331272-001 TLS-350 Series IFSF Interface Module (requires IFSF Console software)	For bi-directional data communication over IFSF LON
330586-001 Dual-Port RS232 / RS485 Interface Module	Provides 1 x RS232 and 1 x RS485 connection
461-100-4103 Dual-Port DIS Interface Module	As above, with RJ45 cable x 3m
461-100-4102 Single Port DIS Interface Module	Provides 1 x RS-485 connection, with RJ45 cable x 3m
330148-001 RS232 Interface Module with Auxiliary Port (Slot 4 only)	Serial Port with Auxiliary Port (DB-25) for daisy chaining one or more consoles
329362-001 RS232 Interface Module	Provides a 25-pin D-connector for data transmission to POS, BOS or PC (no Modem initialisation)
330546-002 RS232 SiteLink Interface Module	As above, with automatic Modem initialisation
330020-425 Ethernet – TCP/IP Communications Module	Provides connectivity to local and wide area networks (LAN / WAN)
532-100-2021 Internal Landline Modem	Version 23.0 software or higher (Country specific telephone line adaptors are not included and should be supplied locally)
532-100-2022 Internal GSM Modem	Version 23.0 software or higher, SIM card not included

Specifications

Operating Temperature Range	0°C to 45°C (32°F to 118°F)
Storage Temperature Range	-10°C to 45°C (15°F to 118°F)

Dimensions

Width x Height x Depth:	51 x 33 x 19cm
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Gilbarco Veeder-Root Products – behind every successful forecourt

Gilbarco Veeder-Root is the largest supplier in the world representing the leading brands of solutions and technologies that provides convenience, control and environmental integrity to retail fuelling and adjacent markets. Gilbarco Veeder-Root is the only manufacturer that can provide all your fuel forecourt solutions.



Pumps and Dispensers

Designed to be at the core of retail forecourt solutions centering on quality and innovation, Gilbarco Veeder-Root's broad portfolio of pumps and dispensers are proven to deliver profitability for our customers today and tomorrow.



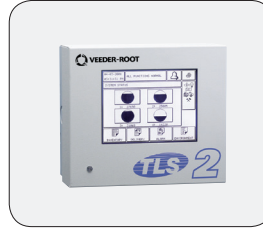
Payment

Secure and flexible payment solutions to create new business at the pump.



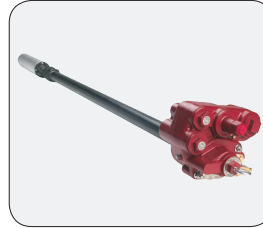
Automation

Solutions that drive efficiencies, prevent fraud, improve customer experiences and increase profitability.



Automatic Tank Gauging

Innovative tank monitoring and loss detection to automate wet stock management, environmental control and risk management across the network and allow centralised data management to optimise operational profitability.



Submersible Pumps

The most efficient way to pump fuel on a forecourt; consistent flow rates, no vapour lock and minimal maintenance.

For more information contact:

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Wet Stock Management System



Enhances
Control

TLS-350R Monitoring System

Industry leading wet stock management system that enhances control and helps improve your bottom line

Veeder-Root's TLS-350R monitoring system

Veeder-Root's TLS-350R Monitoring System adds value to automatic tankgauging with highly advanced inventory management capability — Business Inventory Reconciliation. This fully integrated system automatically collects metered sales information from electronic and mechanical dispensers and provides a comprehensive reconciliation with in-tank inventories and deliveries.

AccuChart™

The TLS-350R uses AccuChart™, Veeder-Root's patented tank calibration algorithm, to minimise errors due to dynamics, such as tank tilt, deflection and end shape, to create an optimal tank chart for each tank in the system.

The automatic calibration process is conducted through the typical operating levels in the tank as fuel is dispensed. The end result is the most accurate inventory measurement available on the market today. The updated calibration charts can also be obtained from the TLS-350R through an RS-232 interface using a computer.

Variance analysis

The highly accurate inventory readings introduced through AccuChart™ allow the system to pinpoint fuel loss issues, such as sales losses or delivery shortages. We call this process variance analysis. Variance analysis allows the operator early identification of fuel loss problems to give the user a competitive edge.

Adjusted delivery reporting

Adjusted delivery reporting ensures that you get what you pay for. When a bulk delivery is made, the TLS-350R measures the amount of any fuel dispensed during delivery and provides a report showing the volume increase, the amount of fuel dispensed during the delivery and the actual delivery amount.

Periodic variance thresholds

The TLS-350R automatically calculates periodic variance thresholds and includes the variances on a Periodic Reconciliation Report. The variance threshold is programmable so it can be set to local regulations if necessary.

Automatic tank-to-meter mapping

Manual methods of mapping tanks to meters have historically provided challenges to installers and operators relative to inventory reconciliation. Automatic tank-to-meter mapping eliminates the possibility that product being dispensed through a meter is reconciled against the wrong tank. When dispensing begins, the TLS-350R recognises a reduction in in-tank inventory and associates the reduction with a dispensing event. This association allows for construction of an accurate meter to tank map. Tank-to-meter mapping on average takes up to two days, depending on the level of station activity.

Modular design meets current business and regulatory requirements, with expansion capabilities for future needs

The TLS-350R lets you choose the exact set of risk management and fuel management features you need today. As regulatory requirements and your business needs change, the flexible TLS-350R platform allows you to add

new features tomorrow. A safe investment, a smart decision. The TLS-350R is available with an integral printer or can be connected to a remote printer. The system can be programmed to generate reports at the end of a shift, day or period. Periodic reports are programmable to cover up to a 62-day cycle and can print in either column (summary) or row formats.

Leading edge leak detection technology

The TLS console range has defined the industry standard for tank monitoring systems with: advanced magnetostrictive probe technologies offering 0.76 LPH monthly monitoring and 0.38 LPH volumetric tank testing; accurate, automatic electronic line leak detection; advanced technology sensors; and a complete line of standard leak sensors to monitor double-wall tanks, containment sumps, and wet or dry monitoring wells. Plus, for 24-hour stations and high-volume operations, Continuous Statistical Leak Detection (CSLD), the most advanced leak detection technology available

today, provides 24-hour, automatic leak detection without tank shutdown. No lost business. No lost operating time

Leading Edge Business Management Features

The TLS-350R takes business management a step beyond normal fuel inventory management. The internal GSM modem & TCP/IP communications options allow easy remote connectivity for centralised network control, fuel logistics management and receipt of critical alarm messages instantaneously. The optional fuel manager software available for the TLS-350R allows you to track average daily fuel usage, predict the days of remaining inventory, and improve delivery scheduling. By utilising Inform™, Veeder-Root's tank management software, all inventory management and environmental compliance can be easily centralised on a personal computer in one location. The use of these time and money saving options extend your investment in the TLS-350R beyond environmental risk management requirements, improving your bottom line.

Technical specifications

Features	
	<ul style="list-style-type: none"> > Automatic Business Inventory Reconciliation and variance Analysis > AccuChart™ Automatic Tank Calibration > Automatic Tank-To-Meter Mapping > Continuous inventory monitoring for up to 16 tank compartments > Monitor LPG and AdBlue > Fast, 0.38 LPH & 0.76 LPH in-tank leak detection > CSLD precision tank testing option for continuous 24-hour leak detection > Automatic, precision line testing and leak detection for pressure systems > Auto-dial out capability out for centralised alarm management > Enhanced wet stock management via Inform™ remote polling application or FMS Fuel management Service > IFSF compatible > Up to 32 External Inputs from other forecourt devices for extended alarm monitoring capability > Up to 32 Relay Outputs to control / activate on site systems & devices > HRM Hourly Reconciliation Monitoring - dynamic leak detection watchdog > Automatic adjusted delivery reports for accurate delivery verification > Programmable in-tank alarms to automatically monitor critical high or low fuel levels and water presence > Data communications via RS232, RS485, Ethernet or IFSF > Third party certified precision leak detection for tanks and lines > Compatible with Mag-XL flexible probes for above ground tall tank installations > Proven performance and reliability in the field > Easy upgrade to TLS-350R specification for advanced reconciliation features

Standard Models

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848260-124	TLS-350R Monitoring Console with Integral Printer (includes Printer Communications Module)
848260-104	TLS-350R Monitoring Console without Integral Printer
848561-104	TLS-350R PC Version without Printer or Keyboard (requires Inform™ Single Site software)

TLS-350R Monitoring System

TLS-350 Plus Interface Modules

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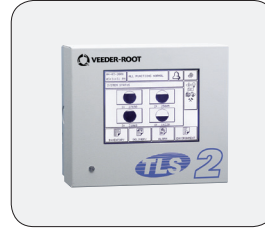
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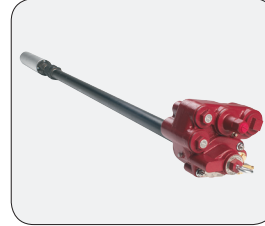
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