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TLS-300i Automatic Tank Gauge

Console Description	The TLS-300i Automatic Tank Gauge offers flexibility in up to four tank inventory control and in-tank leak detection systems for underground storage tanks. It is intended for smaller tank retailers and commercial operators.	
TLS-300i Consoles, Standard Hardware & Software	**Part # & Description** 1. 848590-421 TLS-300i Four-Tank Configurable Console with Integral Printer - 120V UL/cUL 2. 848590-411 TLS-300i Four-Tank Configurable Console less Integral Printer - 120V UL/cUL	**Standard Hardware** Two input dry contact relays, two output (Form C) 120V 2 amp or 24DC 2 amp contact relays, built-in RS-323 Port, and 8 liquid /interstitial sensor capacity
TLS-300i Optional Hardware	**Part # & Description**	
	Static In-Tank Leak Detection (SLD) for TLS-300i and TLS-300C	330161-001
	Continuous Statistical Leak Detection (CSLD) for TLS-300i and TLS-300C	330161-003
TLS-300i Optional Software	**Part # & Description**	
	SiteFax™ Modem Kit for TLS-300i and TLS-300C	331398-001 (Requires software version 15 or higher)
	Module, Ethernet, TCP/IP Communications for TLS-300i and TLS-300C	330020-424 (Requires software version 15 or higher)

Specifications	
Operating Temperature	+32 to +104°F (0 to +40°C)
Storage Temperature	-40 to +162°F (-40 to +74°C)
Installation Location	Indoors, climate-controlled space
Relative Humidity	0-90% (non-condensing)
External Dimensions	13" x 8" x 3.5" (33.02cm x 20.32cm x 8.89cm)
Construction	16GA (0.060 in/0.1524 cm) powder coated steel
Console Power Wiring Requirements	AC Power Wiring – Wires carrying 120 or 240 VAC from power panel to the console should be #14 AWG (or larger) wire for line, neutral & chassis ground (3); and 4 sq. mm, rated for at least 90C for barrier ground.
Probe & Sensor to Console Wiring Requirements	1. Wire Type – Shielded cable required regardless of conduit material or application. It must be rated less than 100 picofarad per ft manufactured with a suitable material such as Carol C2534 or Belden 88760, 8760, or 8770. 2. Wire Length –Maximum 1,000ft (304.8m) to meet intrinsic safety requirements. Improper system operation could result for runs over 1,000ft (304.8m). 3. Wire Gauges – Color coded – shielded cable used in all installations. Wires should be #14 - #18 AWG stranded copper wire and installed as Class 2 circuits. As an alternate method when approved by the local authority having jurisdiction, #22 AWG wire such as 88761 may be suitable with the following requirements: Wire run is less than 750ft (228.6m); Capacitance does not exceed 100 pF/ft; Inductance does not exceed 0.2 uH/ft.
System Power Requirements	Universal AC power supply: 100 to 249 VAC, 50/60Hz, 2A max.
Display Specifications	2-line, 24 character liquid crystal display with a 24-key front panel keypad with control and alphanumeric capability for programming, operating, and reporting functions.
Custom User Access	Front Panel Display control through user specific log-in; User defined roles to restrict access / functionality. Screen permissions can be limited to view, edit, perform.
Approvals	UL, cUL, ATEX, ANSI, API, ASTM, EPA, NWGLDE, NBS, NEC, NFPA, FCC, BASEEFA, FM, EAC, INMETRO, and IECEx
Third Party Evaluations	http://www.nwglde.org/vendor_indexT_Z.html
Product Installation Guide	https://www.veeder.com/us/technical-document-library

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System Compatibilities Guide

Feature/Console	TLS-300i PC-300i 4-Tank Configurable
ALARM	
Leak	Optional
Overfill	•
High Level	•
Sudden Loss	•
High Water	•
Low Inventory	•
External Input	•
Programmable Alarm Limits	•
DATA COMMUNICATIONS	
RS-232	•
Fax Transmittal (SiteFax)	Optional
Ethernet	Optional
Remote Printer Interface	
SYSTEM CAPABILITIES	
Manifold Tank Capability	•
Self-Diagnostics	•
Setup Archive Feature	
Emergency Generator Capability	•
Memory Backup Capability	•
Full Alpha-Numeric Keyboard (Excludes PC Consoles)	•
Touch-Screen Display	
SYSTEM CAPACITIES	
In-Tank Probes	4
Pressurized Line Leak Detectors	
Wireless Pressurized Line Leak Detectors	
Magnetostrictive Discr. Level Indicating Sump Sensors	
Discr. Dispenser Pan & Contain. Sump Sensors	8**
Solid-State Non-Discr. Dispenser Pan & Contain. Sump Sensors	
Sump Sensors	8**
Position Sensitive Pan/Sump Sensors	8**
Interstitial Sensors for Fiberglass Tanks	8**
Solid-State Discr. Interstitial Sensors for Fiberglass Tanks	
Alt. Ethanol Fluid Interstitial Sensors for Fiberglass Tanks	
Interstitial Sensors for Steel Tanks	8**
Microsensors	
Position Sensitive Interstitial Sensors for Steel Tanks	8**
Alt. Ethanol Fluid Solid-State Interstitial Sensors for Steel Tanks	8**
Hydrostatic Sensors for Brine-Filled Double-Wall Tanks	8**
Hydrostatic Sensors for Brine-Filled Double-Wall Sumps	8**
Oil Water Separator Sensors	8**
Solid-State Discriminating Dispenser Pan & Containment Sump Sensors	
Groundwater Sensors	
Vapor Sensor for Monitoring Wells	
Output Relays	2
External Inputs	2
Vacuum Sensor	

Feature/Console	TLS-300i PC-300i 4-Tank Configurable
CONSOLE DESIGN	
Modular/Expandable Features	
Fixed Features	•
Integral Printer	Optional
INVENTORY CONTROL	
Business Inventory Reconciliation	
Variance Analysis	
Fuel Manager	
Complete Inventory Reports	•
Programmable Auto Report Times	•
Inventory Increase Report	•
IN-TANK LEAK TEST	
0.1 GPH Tank Tightness Testing	Optional
0.2 GPH Tank Tightness Testing	Optional
Continuous Statistical Leak Detection	Optional
Selectable Test Rates	Optional
Programmable Automatic Test Schedules	Optional
PASS, FAIL, or INVALID Indicators	Optional
LINE LEAK DETECTION	
Integral Line Leak Detector	
Programmable Line Test Features	
INTERSTITIAL/SUMP LEAK SENSING	
Tank Annulus	•
Sump	•
Dispenser Pan	•
Mag Sump	
Sensor Location Identifiers	•
VAPOR WELL MONITORING	
Hydrocarbon Vapor Detection	
High Water Level Alarm	
GROUNDWATER MONITORING	
Hydrocarbon Liquid Detection	
Low Water Alarm	
SECONDARY CONTAINMENT VACUUM SENSING SYSTEM (SCVS)	
Vacuum Sensors	
AIR VAPOR MONITORING	
In-Station Diagnostics (ISD)	
Carbon Canister Vapor Polisher	
Vapor Pressure Sensor	
Vapor Flowmeter	

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Example Illustrations

Illustrations used in this guide for example sensor installations may contain components that are customer supplied and not included with the sensor. Please check with your Veeder-Root Distributor for recommended installation accessories.

Third Party Evaluations

Third party evaluations of the Veeder-Root sensors contained in this application guide can be found under the Veeder-Root vendor name on the National Work Group on Leak Detection Evaluations (NWGLDE) website:

http://www.nwglde.org