Console Description	The TLS4i Automatic Tank Gauge has the same graphical user interface as the TLS-450PLUS tank gauge, increasing technician familiarity for quick setup using the easy-to-navigate color touch screen. It is a simplified, self-contained solution, ideal for the commercial and industrial businesses monitoring up to four tanks.	

	Console Part # & Description	**Standard Hardware & Application Software**
TLS4i Consoles, Standard Hardware & Software	1. 860199-120 TLS4i Console, 12 Inputs, Ethernet, 7" Color LCD Display 2. 860199-110 TLS4i Console, 12 Inputs, Ethernet, No Display	**Software** – 333578-001 TLS4i Application Software (must order one per Console) includes Web-enabled, Custom Alarm, On-Console Help, Extended Storage **Hardware** – Two Configurable RS-232 or RS-485 Ports, One Ethernet Port, Two USB Ports, 2 Relay Outputs (120/240 VAC 5A; 30 VDC 5A; Fuse Ratings 5A, 250 VAC Type T (Slo-Blo)), 1 Low Voltage Input (max contact closure ratings 12 VDC 0.015A Class I wiring is required for 12 volt closure circuits)

	Part # & Description	
TLS4i Optional Software	Static In-Tank Leak Detection (SLD) for TLS4i and TLS4c, for USTs only	333410-015
	Continuous Statistical Leak Detection (CSLD) for TLS4i and TLS4c, for USTs only	333410-006
	Timed Sudden Loss Detection for TLS4i and TLS4c	333410-018
	Note: If software features are added to an existing console, the Feature Enhancement will be shipped with a kit that includes a wrist strap, manual, iButton holder and programmed iButton – P/N 333530-002.	

	Part # & Description	
Optional Printer for TLS4 Series Consoles	Direct Connect External Printer for TLS4 Series Consoles (Epson Model: TM-T88V)	330020-832
	Wall Mounting Bracket for External Printer for TLS4 Series Consoles	330020-839

Specifications	
Operating Temperature	+32 to +104°F (0 to +40°C)
Storage Temperature	-40 to +158°F (-40 to +70°C)
Installation Location	NEMA 4 or indoors
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. For barrier ground, 4 sq. mm wire, rated for at least 90C.
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.

Specifications (continued)

System Power Requirements	Either AC input or DC input, but not both. 1. Universal AC power supply: 100 to 249 VAC, 50/60Hz, 2A max. 2. DC power supply: +24 VDC, 2A max. and +5 VDC, 4A max. Um <= 250 Vrms or 250 VDC
Display Specifications	7" (17.78cm) Color WVGA LCD touch screen display
Data Storage Features	SD card
Software Security Features	Centralized Device Management to protect your network of TLS4 series consoles
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
System Security	1. Port availability control: SSH Port (22), HTTPS Port (443), Serial Command Port (10001) 2. Reassign Port Numbers (i.e., HTTPS on 50443) 3. System Integrator CVE Scans & Fixes 4. Periodic System Updates to protect against persistent threats
Customized Alarm Features	Customizable for all alarms
Approvals	UL cUL, ATEX, IECEx, NEPSI, FCC, FMC, PESO, ANZEx, ULC, INMETRO, IQC, EAC, NWGLDE, CEN
Third Party Evaluations	http://www.nwglde.org/evals/veeder_root_zf.html
Product Installation Guide	https://www.veeder.com/us/technical-document-library

System Compatibilities Guide

Feature/Console	TLS4i
CONSOLE DESIGN	
Modular/Expandable Features	●
LCD with Touch Screen	7" WVGA Color
Integral Roll Printer	
Universal Power Supply	●
INVENTORY CONTROL	
Graphical Inventory Status	●
Complete Inventory Reports	●
Programmable Auto Report Times	●
Inventory Increase Report	●
Timed Sudden Loss Detection	Optional
BUSINESS INVENTORY RECONCILIATION	
Shift-Based Reconciliation	
Reconciliation by Tank	
TANK CALIBRATION	
Multi-Pass Tank Calibration	
Single-Pass / Metered Drop	
Limited Range Calibration	
Supports Multiple Tank Charts per Tank	
Supports Multiple Line Manifold Tanks	
Graphical / Text Calibration Diagnostics	
Automatic and Manual Meter Mapping	
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	●
AIR VAPOR MONITORING	
Vapor Collection Monitor	
ALARMS	
Leak	●
Overfill	●
High Level	●
Sudden Loss	Optional
High Water	●
Low Inventory	●
Programmable Alarm Limits	●