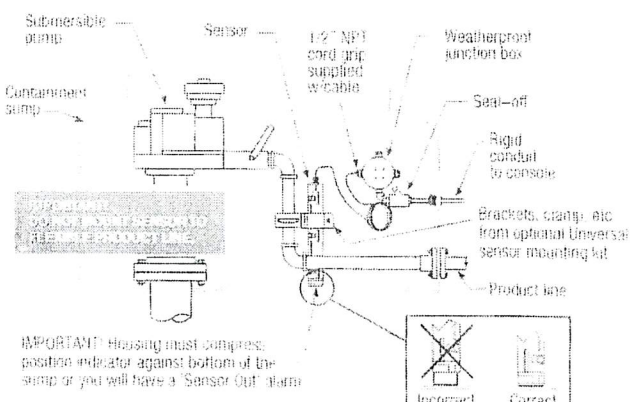


Tank Gauge

Sensor Application Matrix

Sensor Description	Form #	Page #	Where Used							Category	Fuel Compatibility											
			Dispenser Pan	Spill Containment	STP Sump	Concave Tank	Annular Space	Monitoring Well	Oil/Water Separator tank		ASTM D975	ASTM D7547	ASTM D7467	ASTM D6751	ASTM D975	ASTM D7467	ASTM D6751	ASTM D975	ASTM D7467	ASTM D6751	ASTM D975	ASTM D7467
DPS Standard Dispenser Pan	794380-322	2	X	X					X		X	X	X	X	X	X ¹		X		X		X
CSS Standard Containment Sump	794380-352	3		X	X				X		X	X	X	X	X	X ¹		X		X		X
DPO Optical Dispenser Pan	794380-320	4	X	X					X		X	X	X	X	X	X ¹		X		X		X
CSO Optical Containment Sump	794380-350	5		X	X				X		X	X	X	X	X	X ¹		X		X		X
MSS Mag Sump Sensor	857080-XXX	6	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
SSDP Solid State Dispenser Pan	794380-321	7	X	X						X	X	X	X	X	X		X	X	X		X	X
SSCS Solid State Containment Sump	794380-351	8		X	X					X	X	X	X	X	X		X	X	X		X	X
Piping Sump	794380-208	9	X	X	X					X	X	X	X	X	X		X	X		X	X	X
Non-Discriminating Stand-Alone Dispenser Pan	847990-001	10	X	X	X					X	X	X	X	X	X		X	X		X	X	X
Position-Sensitive	794380-323	11	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X
Interstitial for Fiberglass Tanks, Discriminating	794380-343	12				X			X		X	X	X	X	X		X	X	X	X	X	X
Interstitial for Fiberglass Tanks	794390-409	13				X				X	X	X	X	X	X		X	X		X	X	X
Interstitial for Fiberglass Tanks, High Alcohol	794380-345	14				X				X	X	X	X	X	X	X	X	X	X	X	X	X
Interstitial for Steel Tanks	794390-4X0	15			X	X				X	X	X	X	X	X		X	X		X	X	X
Interstitial for Steel Tanks, Position Sensitive ²	794380-333	16		X		X				X	X	X	X	X	X	X	X	X	X		X	X
Interstitial for Steel Tanks, High Alcohol	794380-430	17				X				X	X	X	X	X	X	X	X	X	X		X	X
Interstitial for Steel Tanks, High Alcohol, small footprint	794380-344	18				X				X	X	X	X	X	X	X	X	X	X	X	X	X
Hydrostatic Reservoir (Dual Point)	794380-303	19				X					X	X	X	X	X	X ¹		X		X		X
Single-Point Hydrostatic Sensor	794380-301	20				X					X	X	X	X	X	X ¹		X		X		
Single Point Mini Hydrostatic Reservoir (High Alcohol)	794380-304	21				X					X	X	X	X	X	X	X	X	X	X		X
Vapor	794390-700	22					X				X		X	X	X							
Ground Water	794380-62X	23					X				X	X	X	X	X		X	X		X	X	X
Oil / Water Separator	794690-XXX	24						X			X	X	X	X	X		X				X	X

¹Single use only if sensor was exposed to E85 (Test per Sensor Operability Guide [P/N 577013-814] in E-10 or less)²Small Containment Areas (i.e. Spill Buckets)

Sensor Description	Position Sensitive Sensor		This Sensor is installed in a containment sump or dispenser pan and will detect the presence of, and differentiate between, hydrocarbons and other liquids.		Sensor Matrix 
Form Number	794380-323				
Where Used (Typical)	☒ Dispenser Pan ☒ Spill Containment ☒ STP Sump ☐ Corrosion Tank ☐ Annular Space ☐ Monitoring Well ☐ Oil/Water Separator Tank		Category ☐ Discriminating ☒ Non-Discriminating ☒ Position Sensitive ☐ Level Sensing ☐ State Testing ☐ Hydrostatic		
Fuel Compatibility	☒ Gas ☒ Diesel ☒ Kerosene ☒ Jet Fuel ☒ Aviation Gas ☒ E-15 ☒ E-85 ☒ E-100 ☐ Bio-Diesel 20 ☐ Bio-Diesel 100 ☒ Green Diesel ☐ DEF ☒ Waste Oil ☒ Motor Oil				
Console Compatibility (*International Only)	Min. Console Software	Sensor Interface Modules			
		Module Form #	Module Description	# Of Modules Per Console	# Of Sensor Inputs Per Module
TLS-450PLUS (8600 Series)	6A or Higher	332812-001	Universal Sensor Module (USM)	Up to 4 - TLS-4XX Up to 8 - TLS-4XX w/opt. TLS-XB	16
TLS-450	4A or Higher	332812-001			
¹ TLS4 (8601 Series)	6A or Higher	330020-750	Universal Sensor Input Output Module (USIOM-AC)	1	12
TLS4i (8601 Series)		330020-750			Included
¹ TLS4B (8601 Series)		330020-751			
TLS4c (8601 Series)		330020-751			
TLS-350/R/PLUS	124/324 or higher	329356-004	Interstitial Sensor Interface Module	Up to 8	8
TLS-350J		329356-003	4 Probe / 4 Sensor Interface Module	1	4
TLS-300i		330230-001	4 Probe / 8 Sensor Interface Module		Included
TLS-300C		330513-001	2 Probe / 8 Sensor Options		
Alarm Notification	Normal	Sensor in normal state- no liquid present			
	Sensor Out alarm	Sensor not resting on bottom of containment			
	Fuel alarm	Liquid present in containment area			
	Sensor out	Sensor not communicating to ATG / Console			
Installation Kit	330020-012	Universal Sensor Mounting Kit (Sold separately)			
Specifications			Example Installation		
Operating Principle	Product permeable, reed switch /float				
Product Activation Height	1.52" (3.86cm)				
Operating Temp	0 to +140°F (0 to +60°C)				
Dimensions	12" (30.5cm) high, 2.2" (5.6cm) dia.				
Miscellaneous / Notes	Standard Cable Length: 12Feet (3.66m).				
Third Party Evaluation	http://www.nwglde.org/evals/veeder_root_o.html				
Links	http://www.veeder.com/us/products/tls-automatic-tank-gauge-systems/sensors/dispenser-pan-monitoring-sensors				
Warranty with System	1 Yr Parts & Labor				
Warranty (When purchased separately)	1 Yr Parts Only				

Specifications and Compatible Fluids Requirements

The table below lists Veeder-Root Line Leak Detector specifications.

SPECIFICATION	TLS-4XX w/ DPLLD	TLS-350 w/ PLLD	TLS-350 w/ WPLLD
OPERATING TEMP:	-25 TO +130°F	-25 TO +130°F	-25 TO +130°F
COMPATIBLE FUELS:	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 0 - 100% ETHANOL 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 0 - 100% ETHANOL 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE	UNLEADED GASOLINE LEADED GASOLINE 5% METHANOL / 95% UNLEADED 10% ETHANOL / 90% UNLEADED 15% MTBE / 85% UNLEADED DIESEL BIODIESEL (UP TO B100) ^{1,2} KEROSENE JET FUEL AVIATION GASOLINE
LINE FLOW RATE:	120 GPM MAX. W/SWIFTCHECK VALVE	120 GPM MAX. W/SWIFTCHECK VALVE	120 GPM MAX. W/SWIFTCHECK VALVE
OPERATING RANGE:	0 - 70 PSI	0 - 70 PSI	0 - 70 PSI
PROOF PRESSURE:	200 PSI	200 PSI	200 PSI
MAX. VERTICAL PIPELINE HEIGHT ABOVE TRANSDUCER³	11 FEET	11 FEET	11 FEET
MINIMUM PUMP OUTPUT PRESSURE⁴	23 psi	23 psi	23 psi

¹Biodiesel compliant with ASTM D7467 (up to B20) or ASTM D6751.

²Consult pump manufacturer for compatibility ratings on fuel blends greater than B20.

³Applications that exceed these max. vertical pipeline heights will require further consultation. Please contact Veeder-Root at 800-323-1799 (request a Veeder-Root/Red Jacket Application Engineer).

⁴Pump output pressure should be a minimum of 4 psi above the check valve's relief pressure.

Veeder-Root recommends that system software for the console be upgraded to the latest version when installing any new hardware. For TLS-350 Consoles, when installing latest software, PLLD or WPLLD must be specified and customer must upgrade to ECPU2 if not already installed. See Accessories/Upgrades section of price book or your local Veeder-Root authorized distributor for details.