
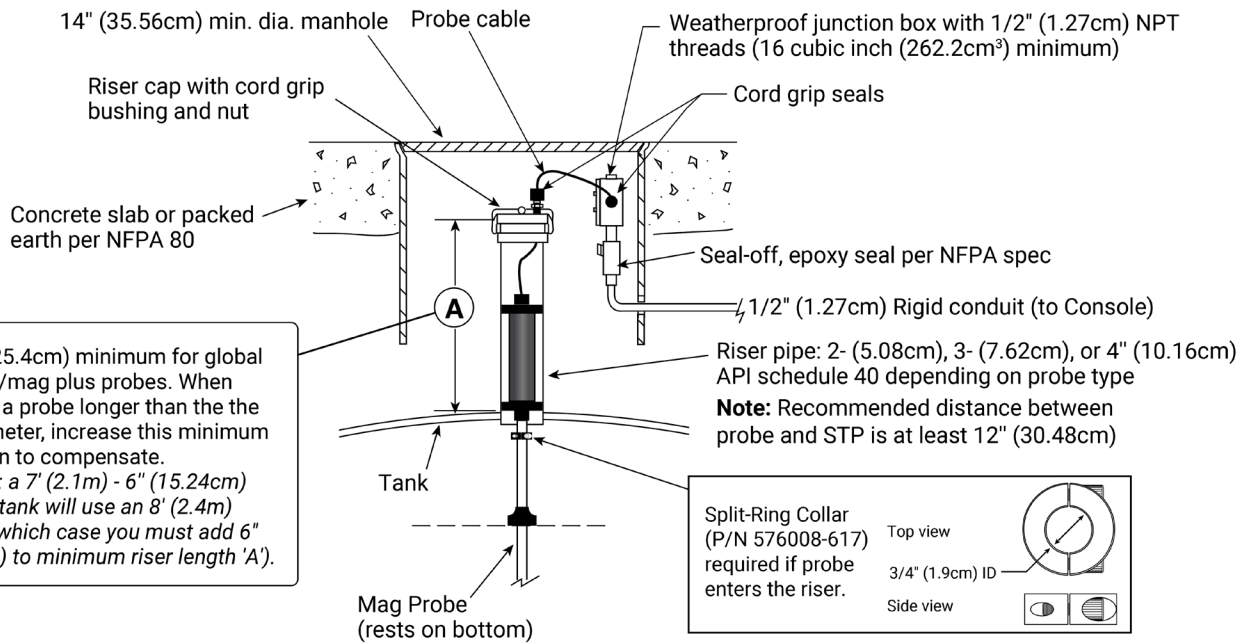


Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Alternative Fluids with No Water Detection in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	Leak Detection / BIR - Accuchart Probes 1. 846397-4XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 2. 846397-5XX SS In-Tank Probe with HGP Canister with No Water Detection & 0.2GPH Testing Capability, UL 3. 846391-4XX SS In-Tank Probe with Aluminum (AL) Canister with No Water Detection & 0.1 GPH Testing Capability, UL 4. 846391-5XX SS In-Tank Probe with AL Canister with No Water Detection & 0.2 GPH Testing Capability, UL No Leak Detection/Inventory Only Probes 1. 846397-6XX SS with HGP Canister with No Water Detection & No Leak Detection/ Inventory Only, UL 2. 846391-6XX SS with AL Canister with No Water Detection & No Leak Detection/ Inventory Only, UL	Alcohol (<=100% Alcohol)*	A. 0.1 GPH static in-tank testing for USTs only			
		Fuel Oil #6	B. 0.2GPH static in-tank testing for USTs only			
		Propylene Glycol	C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only			
		Methyl Alcohol*				
		Methanol (<=100% Alcohol)*	D. No Leak Detection / Inventory Only for USTs & ASTs			
		ETBE (<=100% Ether)	E. BIR – Accuchart for USTs only			
		Ethanol (<=100% Alcohol) includes E85*	* Limited to E85 for ATEX probes			
		MTBE (<=100% Ether)				
		Used Oil				
Ethylene Glycol						
Windshield Washer Fluid						
DEF (AdBlue)						
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

	Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits	846400-0X4 Mag Plus Alternative Fluids Float Kit - No Water Float	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X4 Mag Plus Alternative Fluids Float Kit - No Water Float	3" (7.62cm)		
	846400-1X4 Mag Plus Alternative Fluids Float Kit - No Water Float	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	N/A		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	N/A		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	N/A		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	N/A		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	N/A		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

Example Installation



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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>

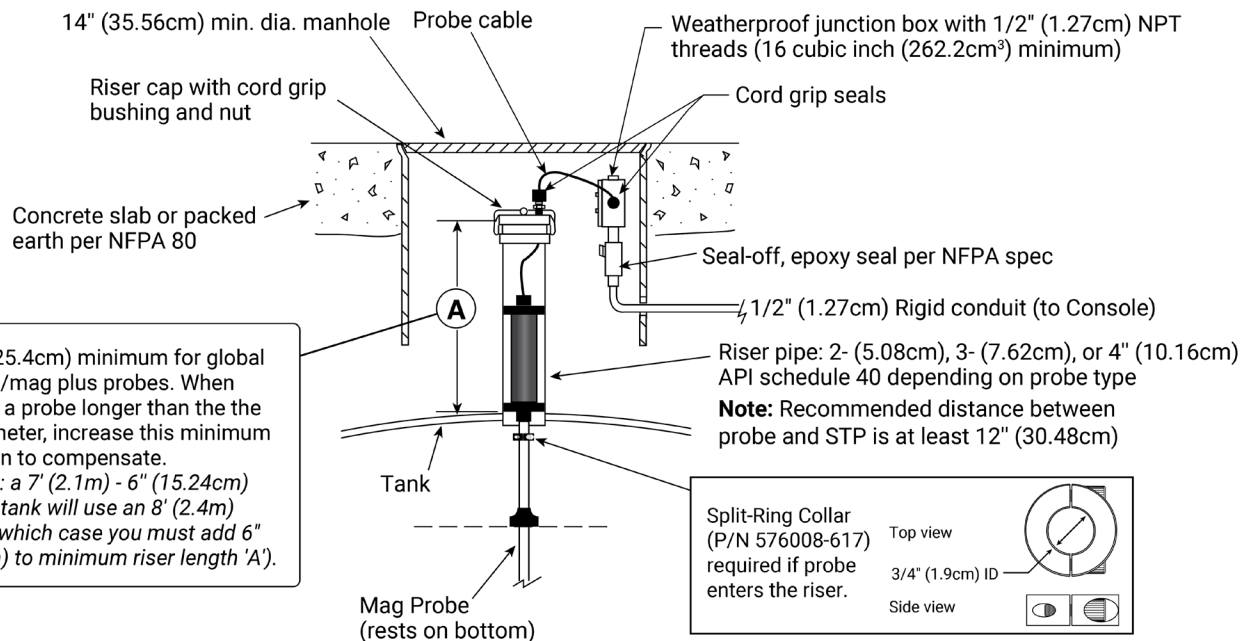
Probe Description & Product Application	<p>Stainless Steel Mag Plus In-Tank Probe for Monitoring Gasoline, Retail Diesel Products & Water in both USTs and ASTs</p>	
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Specific Products Monitored / Product Compatibility	Part # & Description	Specific Products	Monitoring Functionality
	Leak Detection / BIR - AccuChart Probes		
	1. 846397-1XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & 0.1GPH Testing Capability, UL	Gasohol (<=15% Ethanol)	A. 0.1 GPH static in-tank testing for USTs only
	2. 846397-2XX SS In-Tank Probe with HGP Canister with Water Detection & 0.2GPH Testing Capability, UL	Gasoline with <=7% Methanol and 8% TBA	B. 0.2 GPH static in-tank testing for USTs only
	3. 846391-1XX SS In-Tank Probe with Aluminum (AL) Canister with Water Detection & 0.1 GPH Testing Capability, UL	Gasoline with <=15% MTBE	C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only
	4. 846391-2XX SS In-Tank Probe with AL Canister with Water Detection & 0.2 GPH Testing Capability, UL	Gasoline with <=17% TAME	
		Leaded Gasoline	D. No Leak Detection / Inventory Only for USTs & ASTs
		Mineral Spirits	E. BIR – AccuChart for USTs only
		Premium Unleaded Gasoline	
		Regular Unleaded Gasoline	
		Gasoline with <=15% ETBE	
		Gasoline with <=12% TBA	
		Diesel (Fuel Oil #2)	
		Aviation Gas	
		Kerosene (Fuel Oil #1)	
	Bio Diesel (Low Density)		

Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64 (32 with BIR)	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4 - TLS-4XX	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length	
Float Installation Kits	886100-XX0 Mag Plus Phase Separation Float Kit	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
	846400-3X0 Mag Plus Gasoline Float Kit	3" (7.62cm)		
	846400-1X0 Mag Plus Gasoline Float Kit	2" (5.08cm)		
	846400-0X1 Mag Plus Diesel Float Kit	4" (10.16cm)		
	846400-3X1 Mag Plus Diesel Float Kit	3" (7.62cm)		
	846400-1X1 Mag Plus Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes			
Specifications	Product	Water		
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)		
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)		
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)		
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)		
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" / 7.0" for Phase Sep.	0.630" (1.6cm)		
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)			
Third Party Evaluation / Agency Listings & Links	UL, cUL, ATEX, IECEx http://www.nwglde.org/evals/veeder_root_j.html			
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library			

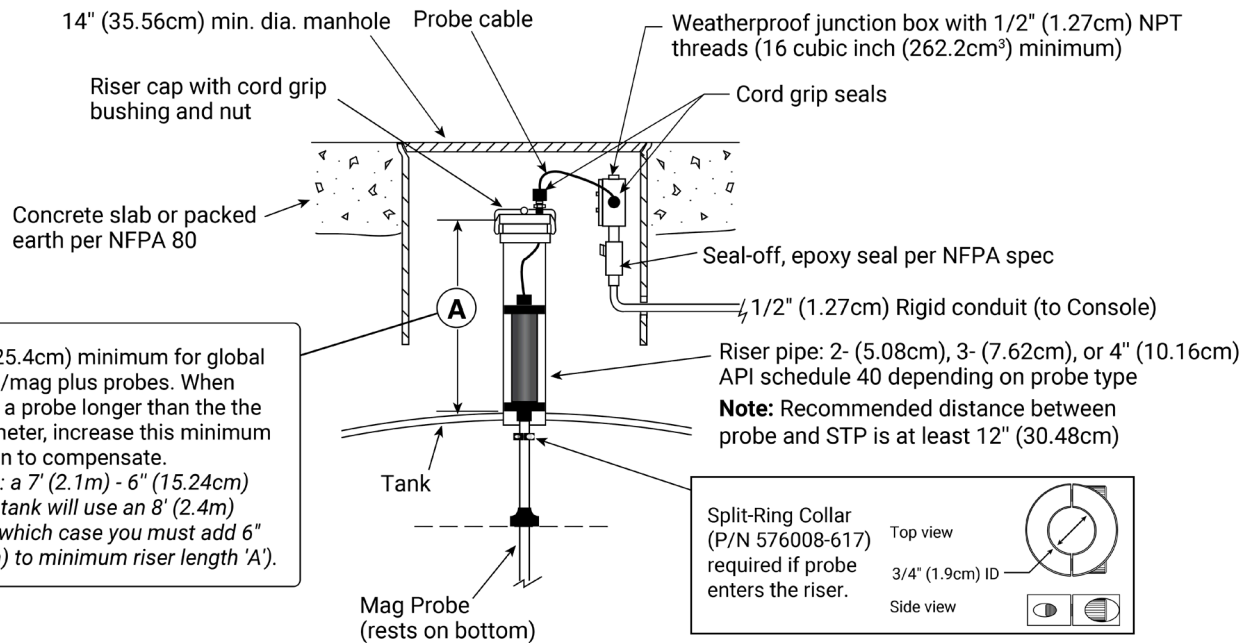
Example Installation




Probe Description & Product Application	Stainless Steel Mag Plus In-Tank Probe for Monitoring Jet Fuel Products with Water Detection in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	<p align="center">Part # & Description</p> <p>Leak Detection with Water Detection</p> <ol style="list-style-type: none"> 846397-1XX Stainless Steel (SS) with High Grade Polymer (HPG) Canister with Water Detection & 0.1GPH Testing Capability 846397-2XX (SS) with (HPG) Canister with Water Detection & 0.2GPH Testing Capability 846391-1XX (SS) with Aluminum (AL) Canister with Water Detection & 0.1GPH Testing Capability 846391-2XX (SS) with (AL) Canister with Water Detection & 0.2GPH Testing Capability <p>No Leak Detection/Inventory Only Probes</p> <ol style="list-style-type: none"> 846397-3XX (SS) with (HPG) Canister with Water Detection & No Leak Detection/Inventory Only 846391-3XX (SS) with (AL) Canister with Water Detection & No Leak Detection/Inventory Only 	<p align="center">Approved Products</p> Jet Fuel (incl JP8) Jet Fuel (JP10)	<p align="center">Monitoring Functionality Options</p> A. 0.1 GPH static in-tank testing for USTs only B. 0.2GPH static in-tank testing for USTs only C. 0.2 GPH Continuous Statistical Leak Detection (CSLD) for USTs only D. No Leak Detection / Inventory Only for USTs & ASTs E. BIR – Accuchart for USTs only			
Console Compatibility	Maximum Probes / Console	<p align="center">Probe Interface Modules</p>				
TLS-450PLUS (8600 Series)	64	Module Part # 332812-001	Module Description Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	# of Modules per Console Up to 4	# of Probe Inputs per Module 16	Availability Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No Module required, probe input capability factory installed				
TLS-300C	2					
Float Installation Kits	<p align="center">Part # & Description</p>	<p align="center">Float Size</p>	<p align="center">Cable Lengths</p>	<p align="center">Min/Max Probe Length</p>	<p align="center">Min/Max Chemical Tank Diameter</p>	
846400-0X1 Mag Plus Diesel Float Kit		4" (10.16cm)	5', 10', 20'	48" (1.2m) - 144" (3.66m)	N/A	
846400-3X1 Mag Plus Diesel Float Kit		3" (7.62cm)				
846400-1X1 Mag Plus Diesel Float Kit		2" (5.08cm)				
Other Installation Accessories	312020-952 4" (10.16cm) NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" (10.16cm) Threaded NPT Riser Cap for In-Tank Probes					

Specifications	Product	Water
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)	
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html	
Product Installation Guide Link	https://www.veeder.com/us/technical-document-library	

Example Installation

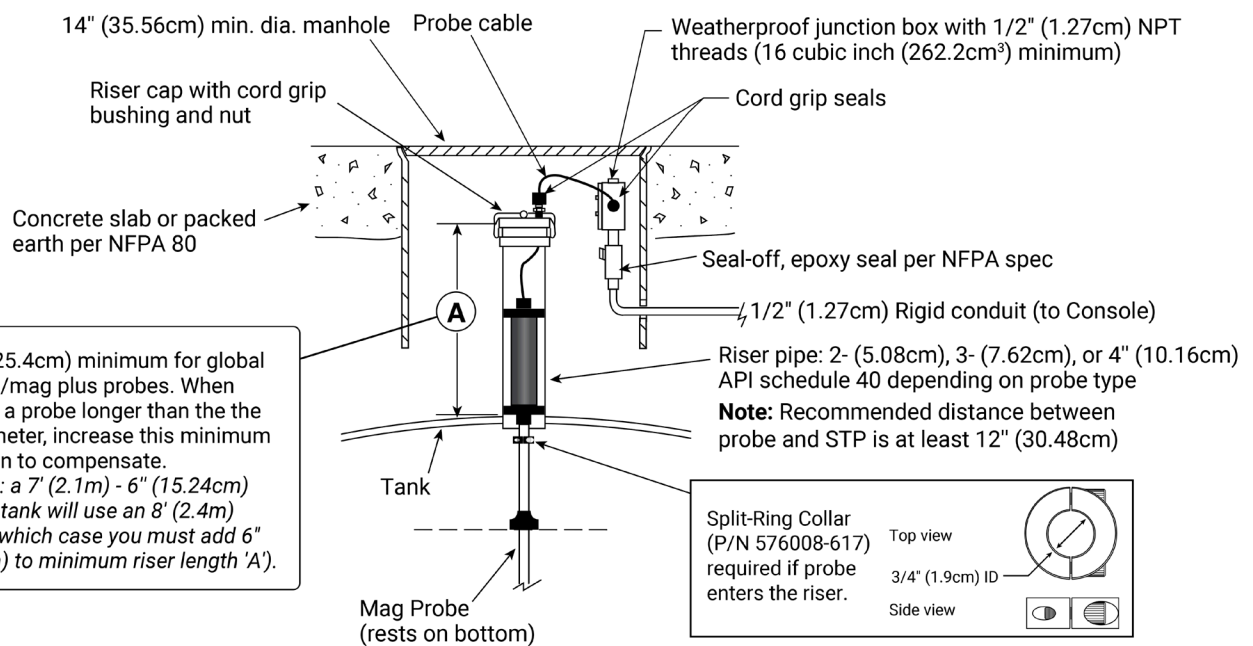


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Probe Description & Product Application	Mag Plus In-Tank Probe for Monitoring Light & Heavy Oil Products with & without Water Detection in both USTs and ASTs					
Specific Products Monitored / Product Compatibility	Part # & Description	Approved Products	Monitoring Functionality Options			
	No Leak Detection/Inventory Only Probes with Water Detection 1. 846397-3XX Stainless Steel (SS) In-Tank Probe with High Grade Polymer (HGP) Canister with Water Detection & No Leak Detection/Inventory Only, UL 2. 846391-3XX SS In-Tank Probe with Aluminum (AL) Canister with Water Detection & No Leak Detection/Inventory Only, UL	Motor Oil	No Leak Detection / Inventory Only			
		Gear Oil, 90W				
		Transmission Fluid				
		Bio Diesel (High Density)				
		Fuel Oil #4				
		Toluene				
	No Leak Detection/Inventory Only Probes with No Water Detection 1. 846397-6XX SS In-Tank Probe with HGP Canister with No Water Detection & No Leak Detection/Inventory Only, UL 2. 846391-6XX SS In-Tank Probe with AL Canister with No Water Detection & No Leak Detection/Inventory Only, UL					
Console Compatibility	Maximum Probes / Console	Probe Interface Modules				
		Module Part #	Module Description	# of Modules per Console	# of Probe Inputs per Module	Availability
TLS-450PLUS (8600 Series) with TLS-XB installed (3 max per system)	64	332812-001	Universal Sensor Module (USM) Interface for Probes, Sensors, and DPLLD	Up to 4	16	Sold Separately (either Factory Installed or as a Spare Module)
TLS4i (8601 Series)	4	No module required, probe input capability factory installed				
TLS4c (8601 Series)	2					
TLS-350/R/PLUS	16	329356-002	4-Input Probe Interface Module	4	4	Sold Separately (either Factory Installed or as a Spare Module)
TLS-300i	4	No module required, probe input capability factory installed				
TLS-300C	2					

Part # & Description	Float Size	Cable Lengths	Min/Max Probe Length
Float Installation Kits			
846400-0X4 Mag Plus Alternative Fluids Float Kit - No Water Float	4" (10.16cm)	5' (1.5m), 10' (3.05m), 20' (6.1m)	48" (1.2m) - 144" (3.66m)
846400-3X4 Mag Plus Alternative Fluids Float Kit - No Water Float	3" (7.62cm)		
846400-1X4 Mag Plus Alternative Fluids Float Kit - No Water Float	2" (5.08cm)		
846400-0X1 Mag Plus Diesel Float Kit	4" (10.16cm)		
846400-3X1 Mag Plus Diesel Float Kit	3" (7.62cm)		
846400-1X1 Mag Plus Diesel Float Kit	2" (5.08cm)		
Other Installation Accessories	312020-952 4" NPT Riser Cap and Ring Kit for In-Tank Probes 330020-282 4" Threaded NPT Riser Cap for In-Tank Probes		
Specifications	Product	Water	
Measurement Accuracy	+/- 0.0300" (0.762mm)	+/- 0.0300" (0.762mm)	
Resolution - One Sample Reading	+/- 0.002857" (0.072571mm)	+/- 0.002857" (0.072571mm)	
Minimum Measurement - 2" (5.08cm) Float Kits	3.23" (8.2cm)	0.867" (2.2cm)	
Minimum Measurement - 3" (7.62cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)	
Minimum Measurement - 4" (10.16cm) Float Kits	3.04" (7.72cm)	0.630" (1.6cm)	
Operating (Working) Temperature Range	-40 to +122°F (-40 to +50°C)		
Third Party Evaluation / Agency Listings & Links	http://www.nwglde.org/evals/veeder_root_j.html		
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Example Installation



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