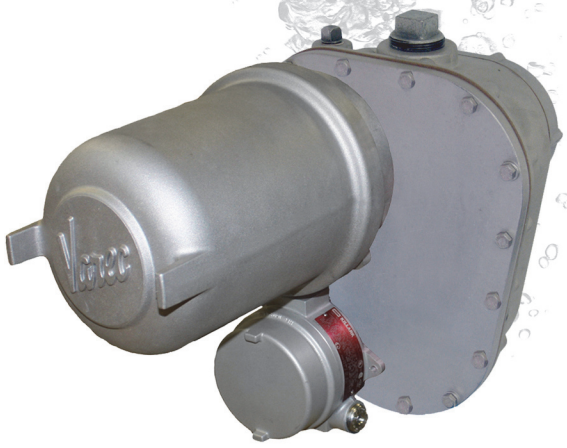
2910 Float & Tape Transmitter

Transmit level and temperature data from the tank side to the control room and activate alarms or relays with SPDT cam-operated switches

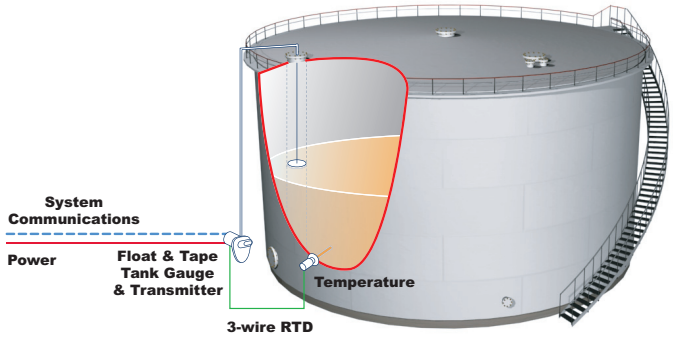


Highlights

- Easy in-service installation - mounts directly to most mechanical tank gauges, including Varec, GSI, L&J and Sakura
- Minimal service or repair with no parts to wear out - absolute encoder utilizes capacitive sensors and precision direct-drive gearing transmits accurate level reading to the control room
- Integrate temperature measurement for volumetric calculations with an on-board 3-wire RTD temperature input
- Industry Standard Protocols - MODBUS, Mark/Space, or Tankway options
- Activate alarms or relays with; 2 discrete inputs (as standard), 2 inputs or 4 contact outputs (as option) or 2-4 SPDT cam-operated switches (as option)
- 20-65 VDC or optional 40-240 VAC on-board power supply
- No battery back-up is required - maintains the correct level reading during and after a power outage
- cFMus (USA and Canada), IECEx and ATEX approved for use in hazardous areas
- IP66, NEMA Type 4 enclosure rating
- Self-diagnostics - identifies problems and goes off-line without closing the entire field communication loop. Serial port connection for advanced diagnostics and troubleshooting
- Isolated power and communications circiuts

Applications

The 2910 Float & Tape Transmitter (FTT) provides data from the tank-side to the control room for use in inventory management volumetric calculations. The 2910 FTT utilizes precision direct-drive gearing and an absolute capacitive encoder to accurately convert the mechanical level measurement from the connected tank gauge. It is also able to integrate a single temperature sensor and provide cam-operated switches for the indication of alarms or drive relays. The encoder and electronics can be ordered as a single unit (no housing) so that they can be placed inside an existing housing at the tank-side. Alternatively, it can be ordered as a limit switch only device that does not require power.



Example Tank Gauging System

Technical Specifications

Performance

Accuracy	± 1/16" (1.58 mm)
Repeatability	± 1/16" (1.58 mm)

Functional

Available ranges	0 to 120 ft; Meters: 0 to 36 m **Note!** Limit switch range is 100 ft (30 M).
Field communications Optically isolated from the micro controller.	Mark/Space EIA-485/GSI Type MODBUS® L&J Tankway
Temperature RTD input	High-accuracy 20-bit analog-to-digital converter. 3-wire RTD Copper (CU90, CU100) or Platinum (PT100).
Discrete inputs Enables connection to ancillary devices, such as switches, pumps valves	Standard (DC Unit) Option: Two (2) discrete inputs. Optional (AC Unit): 4 discrete inputs Host Signal: Open/Closed
Contact outputs Triggers temperature or level alarm lights, horns, etc.	Optional (AC Unit): Four (4) software-driven contact outputs Host Signal: Open/Closed Ratings: 0.6 A @ 125 Vac 1 A @ 30 Vdc 0.6 A @ 110 Vdc
Limit switches ratings	11 amp - 125, 250, 277 VAC 4 amp - 125 VAC Tungsten Filament Lamp Load 1/3 HP - 125 VAC, 250 VDC 1/2 amp - 125 VDC, 1/4 amp - 250 VDC

Physical

Weight	Net 13 lbs (5.9 kg). Shipping 18 lbs (8.2 kg)
Encoder	Absolute, capacitive
Gearing system	Stainless Steel, Direct Drive
Enclosure	Explosion proof die-cast aluminum Rated IP66 (NEMA 4)
Conduit entries	2910 FTT Enclosure: 2 x 3/4" NPT (standard configuration uses one entry) Terminal junction box: 2 x 3/4" NPT

Environmental

Operating temperature	-4 °F to +185 °F (-20 °C to +85 °C)
Operating humidity	0 to 95% non-condensing

Power

Power requirements	Standard: 20 to 65 VDC 0.02A Optional: 40 to 65 / 110 / 220 – 240 VAC 500 mW nominal, 50/60 Hz
Galvanic Isolation	Built in - Both AC and DC

Order Codes

	Approvals								
	EA	None (encoder & electronics upgrade only) cFMus (USA & Canada) - Explosion Proof Class I Division 1 (Ta>= 25°C)/ Zone 1							
	FM	cFMus (USA & Canada) - Explosion proof Class I Division 1 (Ta≥ -25°C)/Zone 1 (Ta≥-20°C) Groups C&D (Ta≤+85°C), NEMA 4 & IP66							
	AT	ATEX/IECEx (International) - Flameproof Ex II 2G, Ex d IIB T5 Gb -20°C ≤ Ta ≤ +85°C, IP66							
		Power Input							
		0	NA (Limit Switches Only)						
		1	DC						
		2	AC						
			Input						
			NA	NA (Limit Switches Only)					
			MS	Mark/Space					
			MB	EIA-485 MODBUS/GSI Type MODBUS					
			LJ	Tankway (L&J)					
				Range (Applies only to models with limit switches)					
				0	N/A (Select this option if no limit switches are supplied)				
				1	0-25 ft				
				2	0-50 ft				
				3	0-100 ft				
				4	0-7.5 m				
				5	0-15 m				
				6	0-30 m				
					Limit Switches				
					N	No additional limit switches			
					A	Two (2) SPDT Limit Switches (180° adjustable dwell, positive activation)			
					B	Four (4) SPDT Limit Switches (180° adjustable dwell, positive activation)			
						Additional Junction Box			
						0	No additional JB[1]		
						1	Additional JB[2]		
							Digital Inputs/Outputs		
							A	No Additional DIDO[3]	
							B	Additional DIDO[4]	
N2910-									Complete designation

Notes:

[1]Communications code NA comes with 0 junction boxes. Communications codes MS, MB, and LJ come with 1 or 2 junction boxes depending on the options chosen.

[2]Applies only to Communications Code NA

[3]Select this option if Communications code= NA. Communications codes MS, MB, and LJ come with 2 discrete inputs. Power Input code 2 (AC models) come with a total of 4 discrete inputs and 4 dry contact outputs.

[4]Select this option for Power Input code 1 (DC models).Comes with a total of 2 discrete inputs and 4 dry contact outputs.

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