

2910



Varec

A COGNESENSE BRAND

Float & Tape Level Switch (FTLS)

For terminal operators, process engineers, and compliance managers who need independent high-level, overfill, or low-level alarm actuation on bulk liquid storage tanks, the 2910 Float & Tape Level Switch delivers cam-operated SPDT switching at up to six independently configurable set points - without communications electronics, battery backup, or a separate power supply for the switching function. The 2910 mounts directly to Varec, L&J, GSI, and Sakura mechanical float & tape gauges, adding a dedicated mechanical alarm path to existing gauge installations as part of an API 2350 overfill prevention program or process interlock scheme.

Available with two, four, or six SPDT switches, each with independently adjustable set points and user-selectable normally open or normally closed configuration, the 2910 can drive annunciators, relays, solenoids, horns, or warning lights at defined tank levels. Its explosion-proof, IP66/NEMA 4 die-cast aluminum enclosure and direct-drive stainless steel gearing are rated for hazardous area service with cFMus and ATEX/IECEX approvals. The 2910 directly replaces the legacy Varec 2557 alarm limit switch in existing installations.



Key Features

Terminal and Refinery Storage Tanks

Multi-product inventories, API 650/653 fixed and floating roof designs, and custody transfer measurement under API MPMS and OIML R85.

Aviation Fuel Farms

Jet and AV gas storage requiring power-free, mechanically reliable level indication at hydrant pits, into plane fueling systems, and bulk storage - aligned with JIG Standards.

Chemical and Solvent Storage

Corrosive service applications with specialized float and tape options; ATEX certified for hazardous atmosphere zones.

Floating Roof Tanks and Stilling Wells

Internal and external floating roof tanks and stilling well installations.

Low Pressure Spheres and Bullets

Spheres and bullets in low pressure service; for higher-pressure applications, specify the 2520 ATG.



Typical Applications



OVERFILL AND HIGH-LEVEL ALARMS

Independent mechanical alarm actuation for petroleum, chemical, and refined product tanks under API 2350 overfill prevention programs.



LOW-LEVEL ALARMS

Pump protection and process interlock actuation at user-defined low-level set points.



RELAY AND ANNUNCIATOR AUTOMATION

Drive relays, solenoids, warning lights, or horns at defined tank levels without communications hardware.



COMPLIANCE ALARM PATH

Independent mechanical switching in hazardous areas where a dedicated, non-electronic alarm path is required by regulation or site safety plan.

Benefits



Independent Mechanical Alarm Assurance

Provides a dedicated, power-free alarm path for high-, low-, and overfill protection independent of digital systems.



Multiple Configurable Alarm Set Points

Supports up to six cam-operated SPDT switches with individually adjustable set points and NO/NC selection.



No Power or Communications Required

Mechanical actuation functions through power outages with no batteries, electronics, or external supply needed for switching.



Simple Retrofit to Existing Gauges

Mounts directly to Varec, L&J, GSI, and Sakura float & tape gauges, enabling in-service installation without tank downtime.



Hazardous-Area Ready Construction

Explosion-proof, IP66/NEMA 4 enclosure with global hazardous area approvals for reliable operation in classified locations.



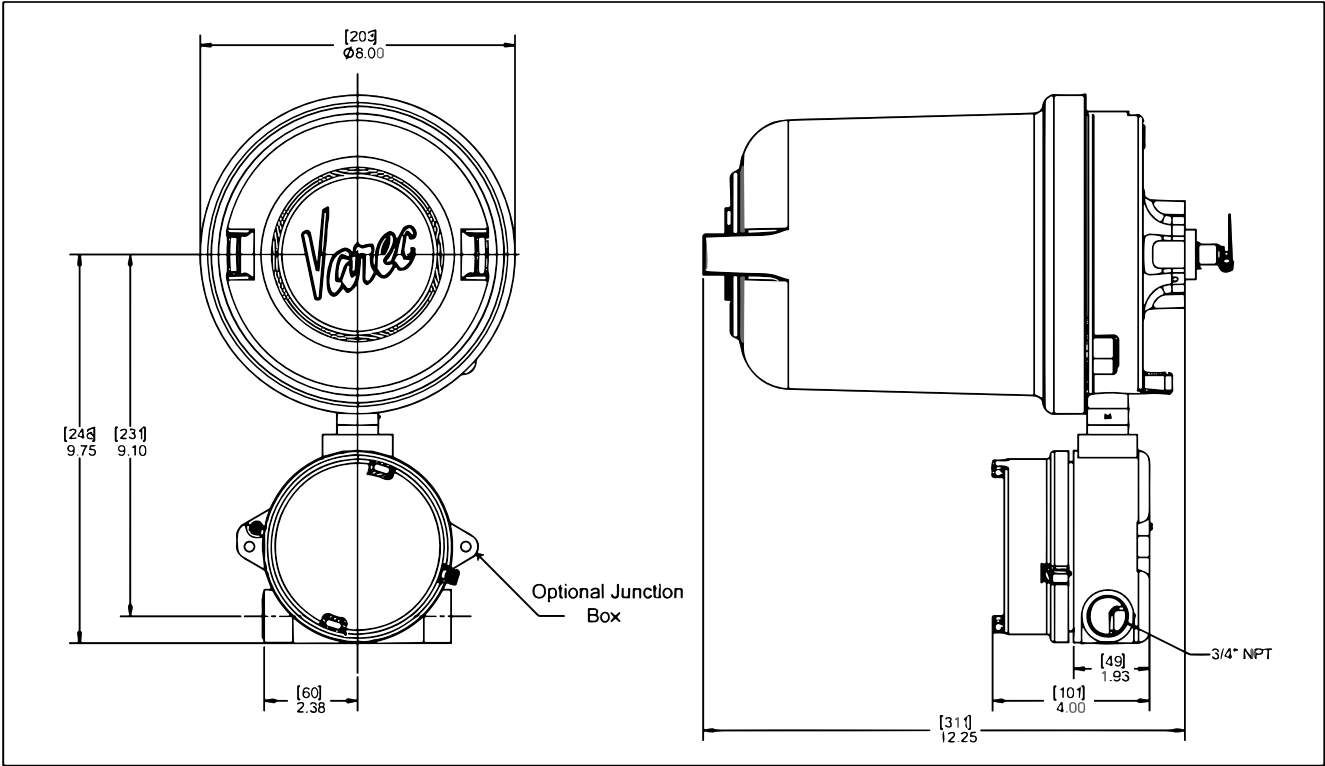
Proven Replacement for Legacy Alarm Switches

Directly replaces the Varec 2557 alarm limit switch, extending the life and capability of existing installations.

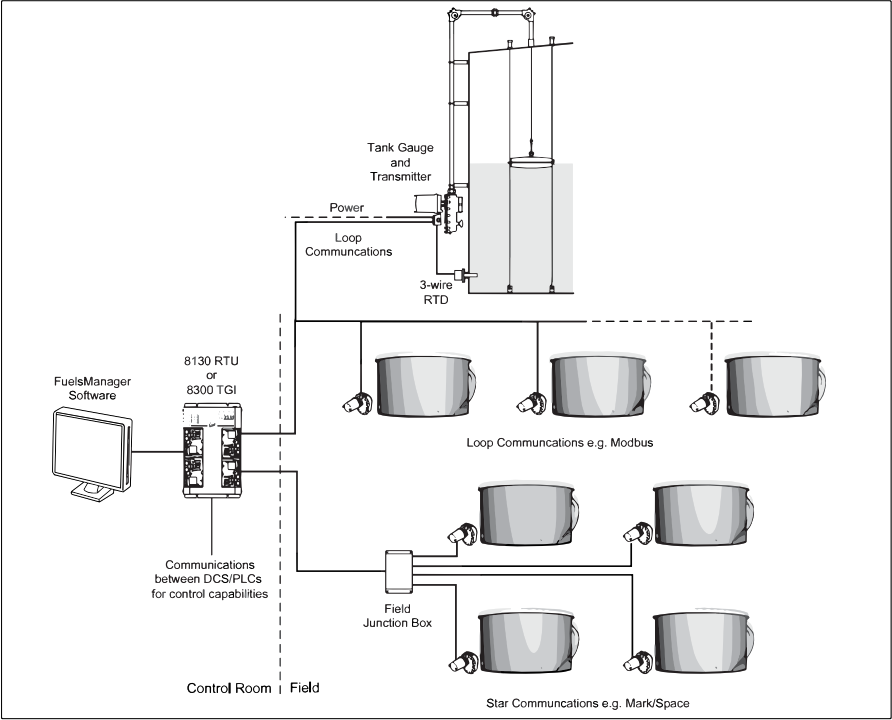
Technical Specifications

Specification	Details
Switch Options	2 or 4 SPDT cam-operated switches (180° adjustable dwell, positive activation); or 6 SPDT cam-operated switches (18° adjustable dwell, positive activation); independently adjustable set points
Accuracy / Repeatability	±1/16 in (1.58 mm) typical
Available Ranges	0–25 ft, 0–50 ft, 0–100 ft (0–7.5 m, 0–15 m, 0–30 m)
Limit Switch Ratings	Up to 11 A @ 125/250/277 VAC; 4 A @ 125 VAC (tungsten filament lamp); 1/3 HP @ 125 VAC / 250 VDC; 1/2 A @ 125 VDC; 1/4 A @ 250 VDC
Operating Temperature	–40 °F to +185 °F (–40 °C to +85 °C)
Enclosure / Protection	Explosion-proof die-cast aluminum; IP66 / NEMA 4
Conduit Entries	Transmitter enclosure: 2 × 3/4" NPT; terminal junction box: 2 × 3/4" NPT
Approvals (typical)	cFMus (US/Canada); ATEX/IECEX flameproof Ex II 2G, Ex d IIB T5 Gb, Class I Zone 1 (–20 °C ≤ Ta ≤ +85 °C); IP66
Compatibility	Direct-mount to Varec, L&J, GSI, Sakura float & tape gauges

Dimensions



Typical System Layout



Model Number Selection

N2910-

2910 Float & Tape Transmitter (FTT) Level Switch

	Housing
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	None

	Communications
NA	None

	Range (Applies only to models with limit switches)
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
A	Two (2) SPDT Limit Switches (180° adjustable dwell, positive activation)
B	Four (4) SPDT Limit Switches (180° adjustable dwell, positive activation)
C	Six (6) SPDT Limit Switches (180° adjustable dwell, positive activation) (For Limit Switch Only model)

	Additional Junction Box
0	No Additional Junction Box
1	Additional Junction Box

	Digital Inputs/Outputs
A	None

Example Order Code: N2910-FM-2-MS-NA-N-0-A

N2910-

2910 Float & Tape Transmitter (FTT) Level Switch no Housing

	Housing
EA	Level Switch Assembly (No Housing)

	Power Input
0	None

	Communications
NA	None

	Range (Applies only to models with limit switches)
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

Example Order Code: N2910-EA-2-NA-N-0-A

	Limit Switches
A	Two (2) SPDT Limit Switches (180° adjustable dwell, positive activation)
B	Four (4) SPDT Limit Switches (180° adjustable dwell, positive activation)
C	Six (6) SPDT Limit Switches (180° adjustable dwell, positive activation) (For Limit Switch Only model)

	Additional Junction Box
0	N/A for Level Switch Assembly (No Housing)
1	N/A for Level Switch Assembly (No Housing)

	Digital Inputs/Outputs
A	No Additional DIDO (Select this option if Communications code= NA) Note: Communications codes MS, MB, and LJ come with 2 discrete inputs. Note: Power Input code 2 (AC models) come with a total of 4 discrete inputs and 4 dry contact outputs.

Summary

The 2910 Float & Tape Level Switch adds independent mechanical alarm actuation to existing float & tape gauge installations, providing a dedicated switching path for API 2350 overfill prevention programs, process interlocks, and relay automation without requiring communications electronics or battery backup. Its explosion-proof construction, IP66 protection, and direct mount compatibility with the major float & tape gauge platforms make it a straightforward addition to any bulk liquid storage monitoring program. For applications requiring digital protocol output alongside alarm switching, the 2910 can be paired with the 2920 Float & Tape Transmitter.

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This document is for information purposes only. All designs subject to change. Certified dimensions, specifications, and performance data available upon request