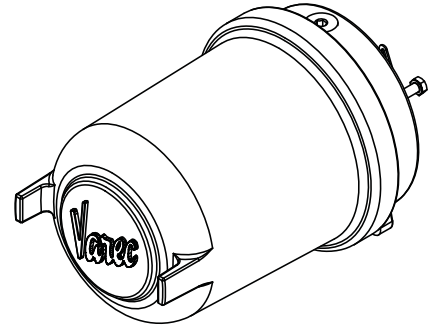


## 2910 Float & Tape Transmitter

Activate alarms or relays with two, four or six optional SPDT cam-operated switches

Limit Switch Only Version





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Varec, Inc.  
5834 Peachtree Corners East  
Norcross (Atlanta), Georgia 30092  
Phone: (770) 447-9202  
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## FCC (US)

This device complies with Part 18 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 18 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. Any modifications made to this device that are not approved by Varec, Inc. may void the users authority to operate this equipment

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This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada

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Qualified personnel are required for installation of this product in a hazardous environment

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This manual is solely intended to describe product installation and functions and should not be used for any other purpose. It is subject to change without prior notice. This manual was prepared with the highest degree of care. However, should you find any errors or have any questions, contact one of our service offices or your local sales agent.

## Safety Precaution Definitions

**Caution!** Damage to equipment may result if this precaution is disregarded.

**Warning!** Direct injury to personnel or damage to equipment which can cause injury to personnel may result if this precaution is not followed.

**Note** Qualified personnel are required for installation of this product in a hazardous environment.

## Safety Precautions

Read this manual carefully and make sure you understand its contents before using this product. Follow all instructions and safety guidelines presented in this manual when using this product. If the user does not follow these instructions properly, Varec cannot guarantee the safety of the system.

**Note** Comply with all applicable regulations, codes, and standards. For safety precautions, the user should refer to the appropriate industry or military standards.

**Caution! Electrical Hazard!** Read and understand static and lightning electrical protection and grounding described in API 2003. Make certain that the tank installation, operation, and maintenance conforms with the practice set forth therein.

**Warning! Striking the gaugehead of the transmitter with a metal object could cause a spark to occur.** When removing or replacing the gaugehead in flammable or hazardous liquid storage areas, take necessary measures to protect the gaugehead from impact.

**Warning! Volatile fumes may be present!** Ensure that the tank has been leak and pressure tested as appropriate for the liquid to be stored. Observe appropriate safety precautions in flammable or hazardous liquid storage areas. Do not enter a tank that has contained hydrocarbons, vapors, or toxic materials, until a gas-free environment is certified. Carry breathing equipment when entering a tank where oxygen may be displaced by carbon dioxide, nitrogen, or other gases. Wear safety glasses as appropriate. Use a hard hat.

**Warning! Sparks or static charge could cause fire or explosion!** The mechanical connections between the guide cables, the float, the tape, and the gaugehead provide a resistance to ground that is adequate for the safe electrical drain of electrostatic charges that may accumulate in the tank and the product. Worker activity and worker clothing may accumulate electrostatic charges on the body of a worker. Care should be used in flammable environments to avoid the hazard.

---

**Warning!** Broken negator motor spring pieces can cause injury when the back cover of the gaugehead is removed! Whenever the back cover is removed, stand to one side as the last bolt is removed.

**Warning!** Discard plastic conduit entry plugs. Use aluminum plugs that are shipped loose in a bag.

**Warning!** Explosion and water ingress hazard. Tighten cover and tighten and seal conduit and plugs prior to operation. Failure to do so voids manufacturer's warranty.

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# 1 Introduction

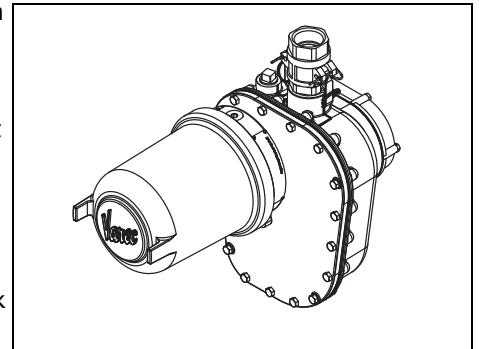
This manual provides the information needed to install, maintain, and troubleshoot the Varec 2910 Float & Tape Transmitter (FTT).

## 1.1 Overview

The 2910 Float & Tape Transmitter (FTT) is a precision instrument designed to mount directly to most mechanical float and tape tank gauges to provide a switch driven indication of alarms or relays. There are no communications capabilities in the unit; it is a limit switch only unit.

**Note** "N2910aa0NAbcdA" is one of the order codes that this manual covers.

It can be mounted directly to most manufacturers' tank gauges, including GSI, L&J, and others (see Figure 1-1 with the 2910 FTT mounted to the Varec 2500 Automatic Tank Gauge (ATG)).



*Figure 1-1: 2910 FTT - Installed on Varec 2500 ATG*

The 2910 FTT provides two (2), four (4), or six (6) cam-operated SPDT (Single-Pole, Double-Throw) switches that are used to activate alarms, relays, or other devices when the tank's content reaches a predetermined level.

The optional switches can be selected for normally closed operation. They are mechanically operated directly from the main drive gearing and can be independently configured to switch at any desired tank level. These switches can be used to maintain a safer working facility and provide basic automation and control.

The 2910 FTT is explosion proof and approved for use in hazardous-classified locations, making it particularly suitable for bulk storage applications found in the oil and gas industry.

## 1.2 Functional and System Design

### 1.2.1 System functionality

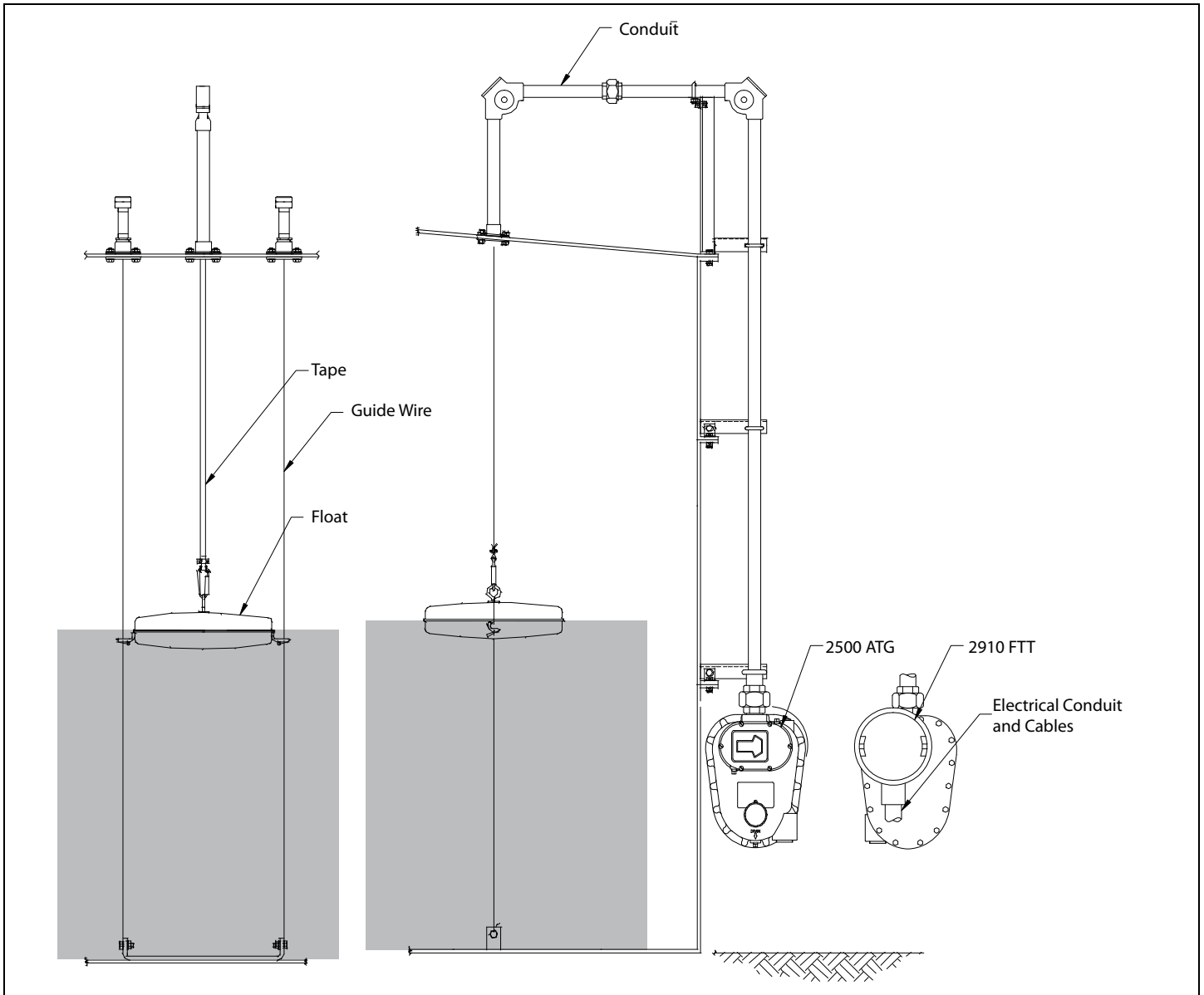


Figure 1-2: 2910 FTT System

1. In response to changes in liquid level, the mechanical level gauge rotates the 2910 FTT transmitter drive shaft.
2. The 2910 FTT's precision direct drive gearing turns an adjustable cam that triggers the limit switches.
3. The switches may be used to operate lamps, relays, or solenoid valves (see Section 7.1, "System Design" on page 21 for more information about the switch load ratings).

## 2 Preparing for Installation

This chapter provides a pre-installation checklist, safety information, unpacking instructions, grounding instructions, and an overview of the installation steps.

### 2.1 Site Preparation Checklist

Before installing the 2910 FTT transmitter on a mechanical float and tape gauge, ensure that:

1. The mechanical float gauge is operating correctly.
2. There is sufficient space around the mechanical gauge to install the transmitter and accessories (such as conduit and cabling). Refer to Figure 2-1.
3. The correct transmitter/mechanical gauge adaptor is available, if required.
4. The gaugehead provides resistance to the ground that is adequate for the safe electrical drain of electrostatic charges that may accumulate in the tank and the product (see Section 2.6 on page 5).
5. The correct field connections at the gaugehead are ready to connect to the 2910 FTT.
6. All Safety Guidelines are complied with as described in Section 2.2 and Section 2.3 on page 4.

The tank can remain in-service and the mechanical float gauge can remain in place while installing and configuring the 2910 FTT.

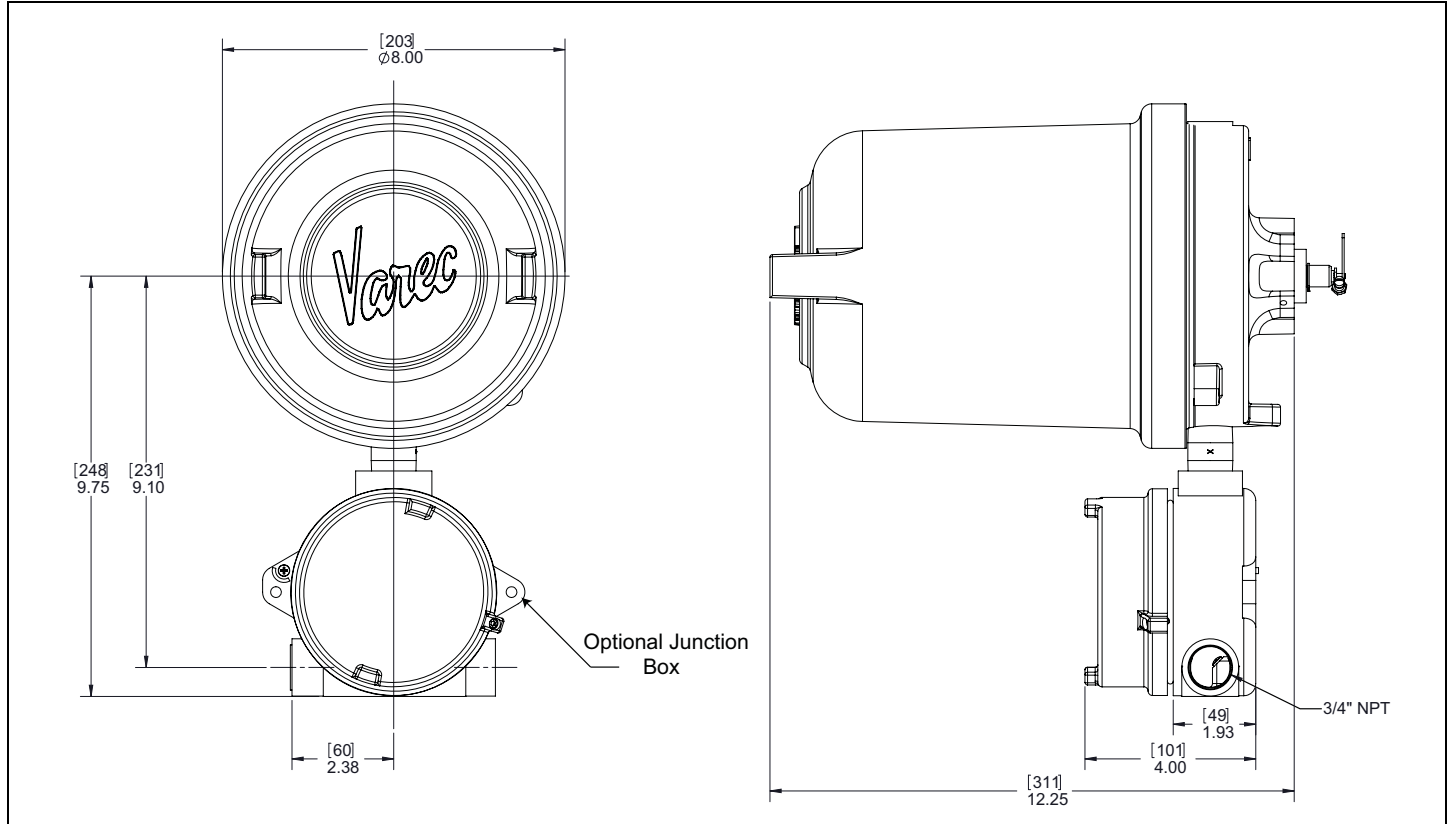


Figure 2-1: 2910 FTT Dimensions

## 2.2 General Safety Guidelines

The 2910 FTT is certified to be used in Class I, Division 1, Groups C and D, and Class I, Zone 1, Group IIB hazardous locations.

The user shall follow safety guidelines provided by the Occupational Safety and Health Administration (OSHA) for additional protection. Information may also be obtained from the following sources:

- National Electric Code (NEC)
- National Fire Protection Association (NFPA)
- Instrument Society of America (ISA)
- FM Approvals LLC (FM)
- Underwriters Laboratories Incorporated (UL)
- Canadian Standards Association (CSA)

When in doubt about the safety of an area, the user should check with the local safety authorities. Always observe equipment labels and warning signs posted in the area.

---

## 2.3 Installation Safety Guidelines

This equipment should be installed only by qualified personnel familiar with the installation of float and tank gauging equipment.

**Caution!** Exercise caution when any area that is posted or otherwise assumed to contain hazardous gases. Always, follow OSHA guidelines.

---

## 2.4 Unpacking

Varec 2910 Float & Tape Transmitters are shipped fully assembled and ready for installation.

To unpack the 2910 FTT:

1. Place the shipping container on a secure bench.
2. Open the shipping container, taking care not to damage the contents.
3. Carefully remove transmitter from the shipping container and place it on the bench.
4. Inspect the transmitter for shipping damage. Report any damage to the carrier.

**Note** If the transmitter must be stored prior to installation, it should be repacked in its shipping container and stored in a temperature- and humidity- controlled environment.

---

## 2.5 Becoming Familiar with the 2910 FTT

The 2910 FTT is housed within an explosion-proof enclosure (see Figure 6-1 on page 19). The cover is provided to permit access to the 2910 FTT's limit switches. "O" Ring seals are provided to prevent moisture from entering the termination or electronics compartments.

The 2910 FTT housing provides an external grounding lug and 3/4-inch NPT plugs. The plugs permit access to the 2910 FTT wiring connections.

## 2.6 Grounding the Equipment

**Warning!** The 2910 FTT must be grounded before any connections are made.

An external grounding lug is provided on the 2910 FTT. A connection from the ground lug to earth ground must be made before any other wiring connections are made.

**Note** For proper operation of the 2910 FTT, a ground strap must be attached to the FTT. Grounding through mounting kits or pipe coupling is not adequate.

Properly seal all ports to prevent moisture or other contamination from entering the wiring compartment.

## 2.7 Installation Overview

To install the transmitter, follow the steps shown in the following flowchart:

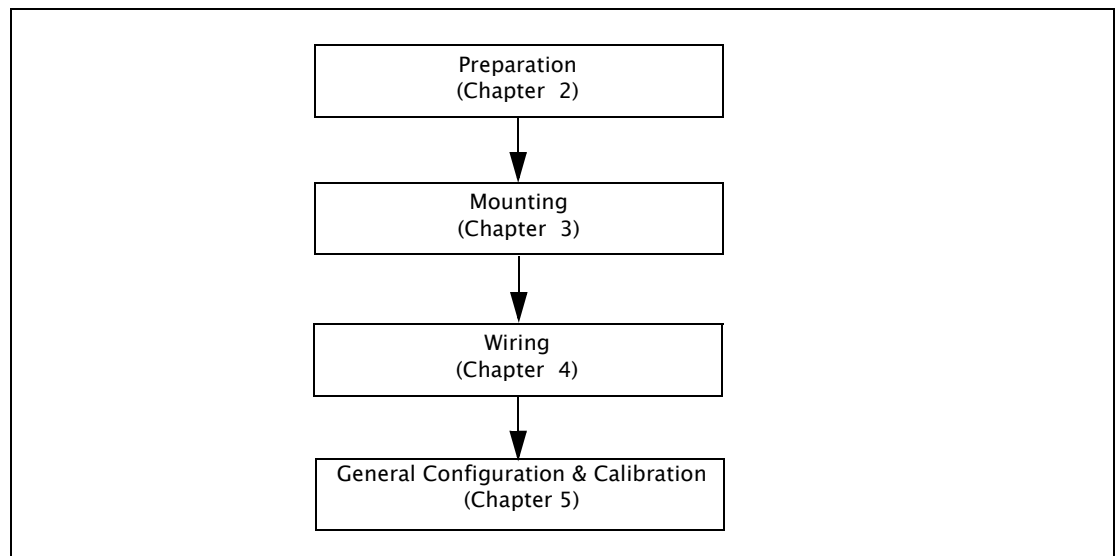


Figure 2-2: 2910 FTT Installation Sequence

## 3 Mounting

The 2910 FTT can be mounted in the following ways:

- Mount the complete transmitter on a 2500 ATG gaugehead (see Section 3.2, "Mounting on a Varec Gaugehead" on page 7).
- Mount the complete transmitter on a non-Varec gauge (see Section 3.3, "Mounting on Alternate Gaugeheads" on page 8).

This chapter describes each of the above procedures.

The tank can remain in-service and the mechanical float gauge can remain in place while installing and configuring the 2910 FTT.

**Note** Please read the safety guidelines section before beginning the mounting process.

---

### 3.1 Installation Safety Guidelines

- This equipment should be installed only by qualified personnel familiar with the installation of tank gauging equipment.
- Caution should be exercised when entering any area that is posted or otherwise assumed to contain hazardous gases. Always follow other local guidelines.
- Obtain a hot permit before removing the transmitter cover with power applied.
- To prevent shock hazards, the housing of all units should be properly grounded in accordance with the National Electric Code. A grounding conductor should be wired to the grounding terminal provided on the 2910 FTT.

**Warning!** Before attempting installation of the 2910 FTT, review the General Safety Guidelines described in Chapter 2 "Preparing for Installation" on page 3. Installation and maintenance personnel should become familiar with any hazards present as well as any agency requirements before working with any equipment.

### 3.2 Mounting on a Varec Gaugehead

This procedure provides instructions to mount the transmitter on a 2500 ATG gaugehead, as shown in Figure 3-1.

Instructions applicable to other tank gauges follow in later paragraphs. To install the gaugehead, refer to the *2500 Automatic Tank Gauge Installation and Operations Manual*. The exploded view in that manual shows the mechanical relationship between this accessory and the gaugehead.

**Warning!** Whenever the back cover of the gaugehead is removed, stand to one side as the last bolt is removed. If the negator motor spring is broken, the broken pieces may cause injury when the cover is removed.

**Warning!** The mechanical connections between the gauge float guide cables, the float, the tape, and the gaugehead provide a resistance to ground that is adequate for the safe electrical drain of electrostatic charges that may accumulate in the tank and the product. Worker activity and worker clothing may accumulate electrostatic charges on the body of a worker. Care should be used in flammable environments to avoid the hazard.

Make certain grounding straps are fastened properly to the case of each unit. Ground connections via mounting clamps and bolts are not sufficient to ensure proper ground.

**Note** The Weep Hole Screw is installed at the factory in the default TOP position. If the transmitter is rotated and mounted in an alternate orientation, the weep hole screw may need to be removed and re-installed in the final TOP position.

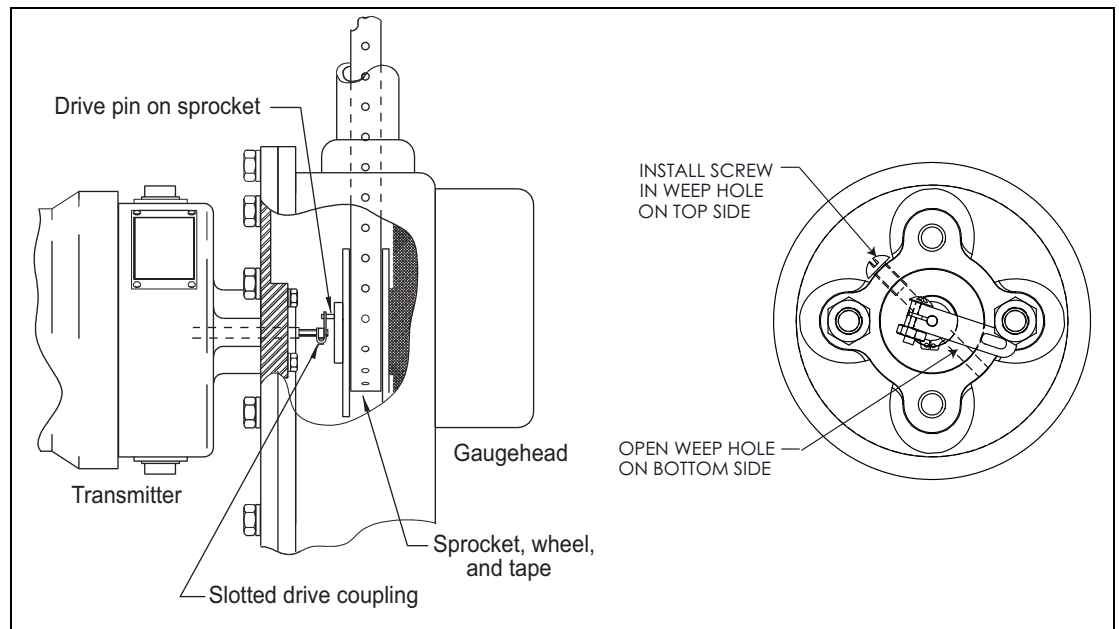


Figure 3-1: Typical Transmitter Mounting and Weep Hole details

Follow the steps below to mount the transmitter on Varec's gaugehead:

1. Remove the back cover of the gaugehead (see the *2500 Automatic Tank Gauge Installation and Operations Manual*).
2. Remove the access cap from the back cover of the gaugehead (see the *2500 Automatic Tank Gauge Installation and Operations Manual*). Remove and discard the four fiber washers.

3. Mount the transmitter in place of the cap onto the back cover of the gaugehead, using the four hex head cap screws that attached the access cap. Make sure that the top of the 2910 FTT housing (marked with "TOP") lines up with the top of the back cover.
4. Position the back cover and transmitter so that the drive pin on the gaugehead sprocket passes through the slotted drive coupling on the transmitter drive shaft.
5. Fasten the back cover to the gaugehead.
6. Proceed with field wiring, as described in Chapter 4 "Wiring" on page 9.

---

### 3.3 Mounting on Alternate Gaugeheads

The following steps describe the typical tasks required for mounting the transmitter on other manufacturers' gaugeheads. An adapter is required. Refer to Chapter 6 "Maintenance" on page 19.

The gaugehead is assumed to be installed on the tank. See Figure 3-1 on page 7 and perform the following steps.

#### 3.3.1 Mounting the transmitter

Follow the steps below to mount the transmitter on alternate gaugeheads:

1. Remove the mounting plate from the gaugehead.
2. Remove the access cap from the mounting plate of the gaugehead (see the *2500 Automatic Tank Gauge Installation and Operations Manual*).
3. Mount the transmitter to the adapter.
4. Install the transmitter with the adapter on the gaugehead mounting plate, using the four hex head cap screws that attached the cover cap. Make sure that the top of the 2910 FTT housing (marked with "TOP") lines up with the top of the mounting plate.
5. Position the mounting plate and transmitter so that the drive pin on the gaugehead sprocket passes through the slotted drive coupling on the transmitter drive shaft.
6. Fasten the mounting plate to the gaugehead.
7. Proceed with field wiring, as described in Chapter 4 on page 9.



## 4 Wiring

This chapter describes how to connect wiring terminations for the 2910 FTT. Wiring should be done after the unit is mounted as described in Chapter 3 "Mounting" on page 6.

### 4.1 Overview

The wiring of the junction boxes to the 2910 FTT varies based on the order options. Figure 4-1 on page 10 shows one of the wiring options available for the 2910 FTT.

The following table presents a typical ordering code with a description of the option and the associated figure:

Order Code	Option Description	Associated Figure
N2910-xx-0-NA-x-A-1-A	2 Limit Switches	Figure 4-1 on page 10
N2910-xx-0-NA-x-B-1-A	4 Limit Switches	Figure 4-2 on page 11

Table 4-1: Typical Order Options

#### 4.1.1 Safety Guidelines

- Maintenance should be performed only by authorized personnel.
- Caution should be exercised when entering any area that is posted or otherwise assumed to contain hazardous gases. Always follow local guidelines.
- Obtain a hot permit before applying the power.
- Before installing/repairing any wiring to the 2910 FTT, make sure that the power is turned off at the main circuit breaker or switch. The power switch should be locked in the OFF position and labeled to prevent other personnel from turning the power on during installation.
- To prevent shock hazards, the housing of all units should be properly grounded in accordance with the National Electric Code. A grounding conductor should be wired to the grounding terminal provided on the 2910 FTT.
- Do not apply power until all wiring connections have been made.
- Do not apply power in a hazardous environment until the explosion proof case is closed.
- Incorrect field wiring connections can damage the electronics and cause system malfunctions.

## 4.2 2910 FTT Wiring Diagram — 2 Limit Switches

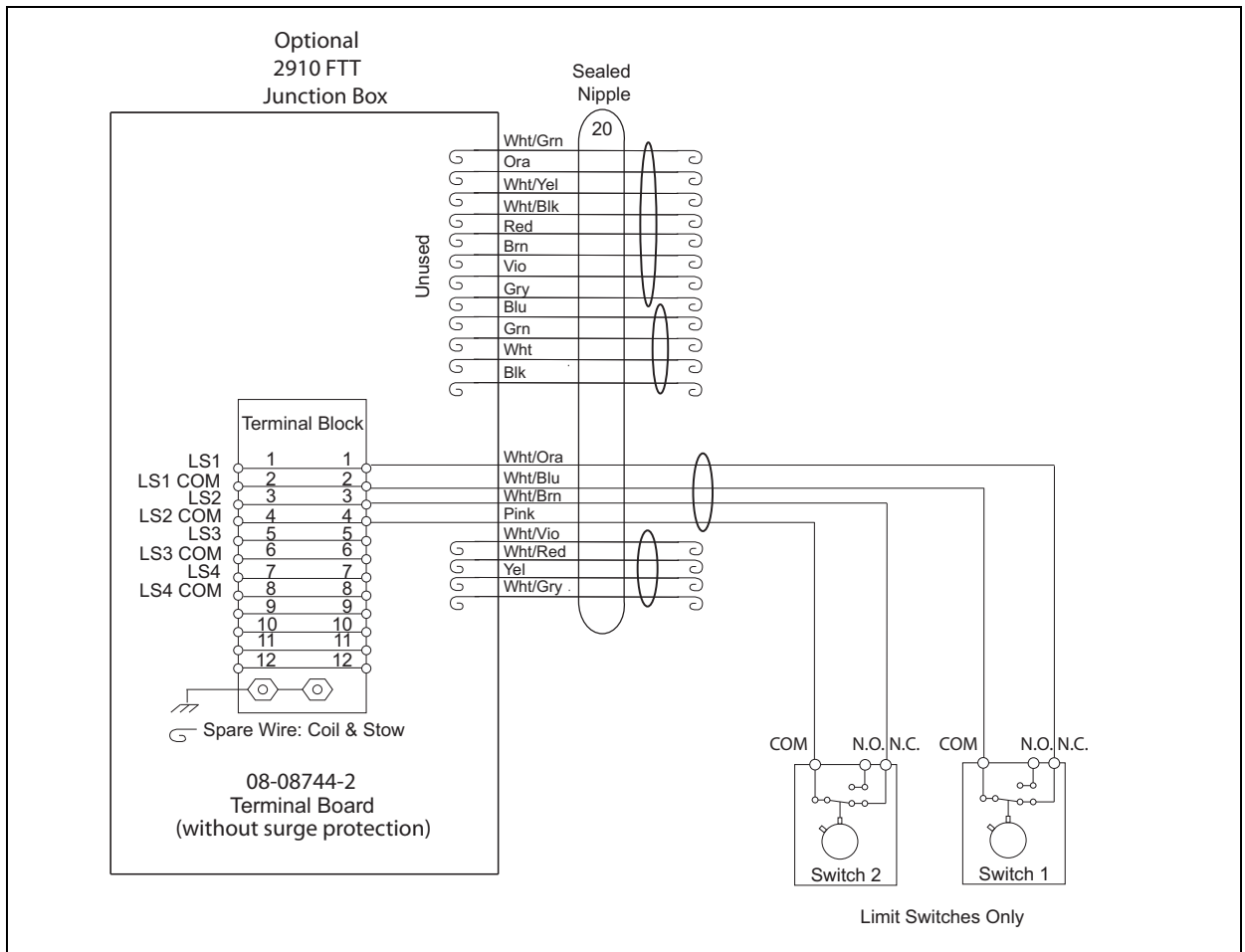


Figure 4-1: 2910 FTT Internal Wiring — 2 Limit Switches (Order Code: N2910-xx-0-NA-x-A-1-A)

**Note** Earth Ground is located on the terminal circuit board in the junction box, as shown in Figure 4-4 on page 13.

### 4.3 2910 FTT Wiring Diagram — 4 Limit Switches

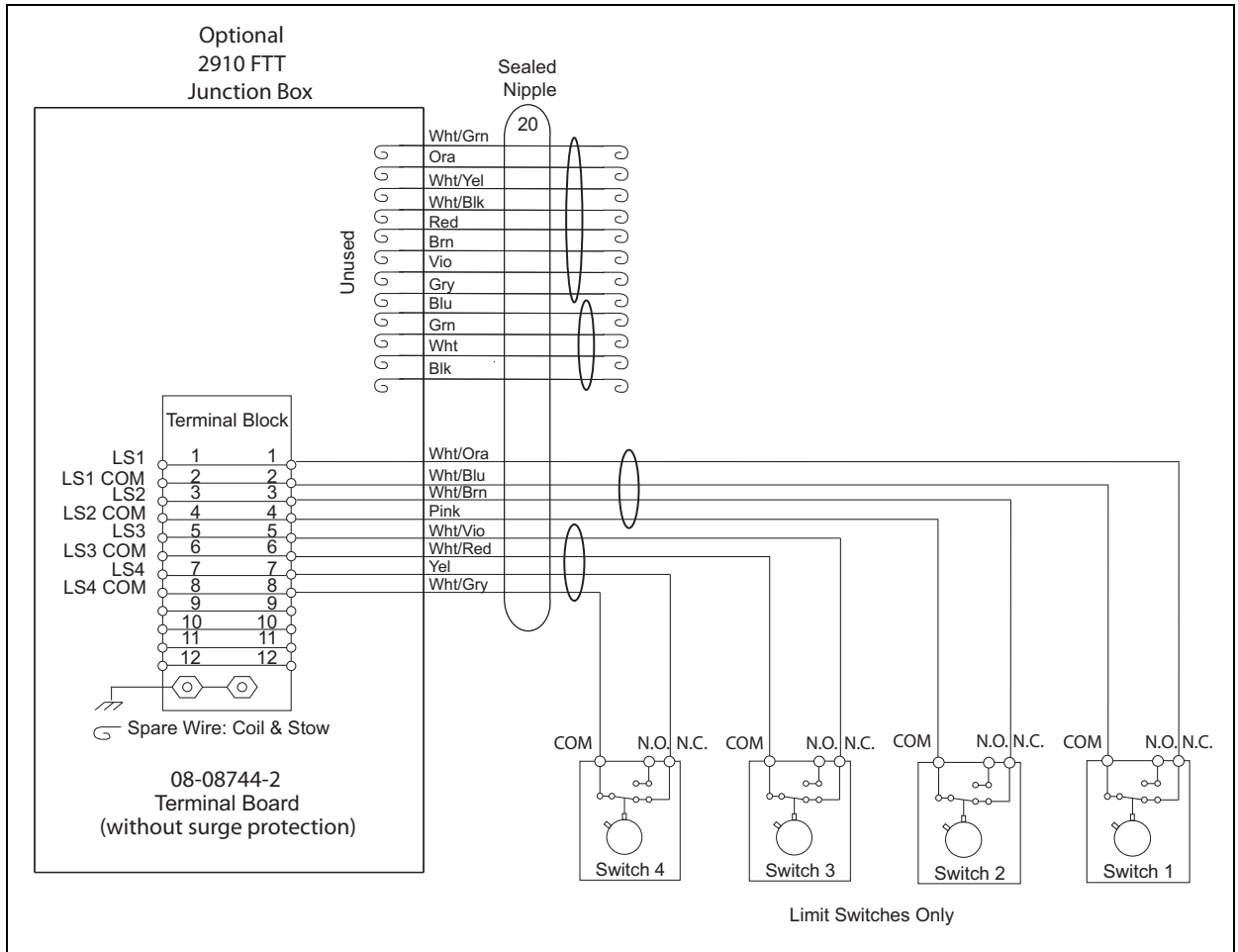


Figure 4-2: 2910 FTT Internal Wiring — 4 Limit Switches (Order Code: N2910-xx-0-NA-x-B-1-B)

**Note** Earth Ground is located on the terminal circuit board in the junction box, as shown in Figure 4-4 on page 13.

### 4.4 2910 FTT Wiring Diagram — 6 Limit Switches

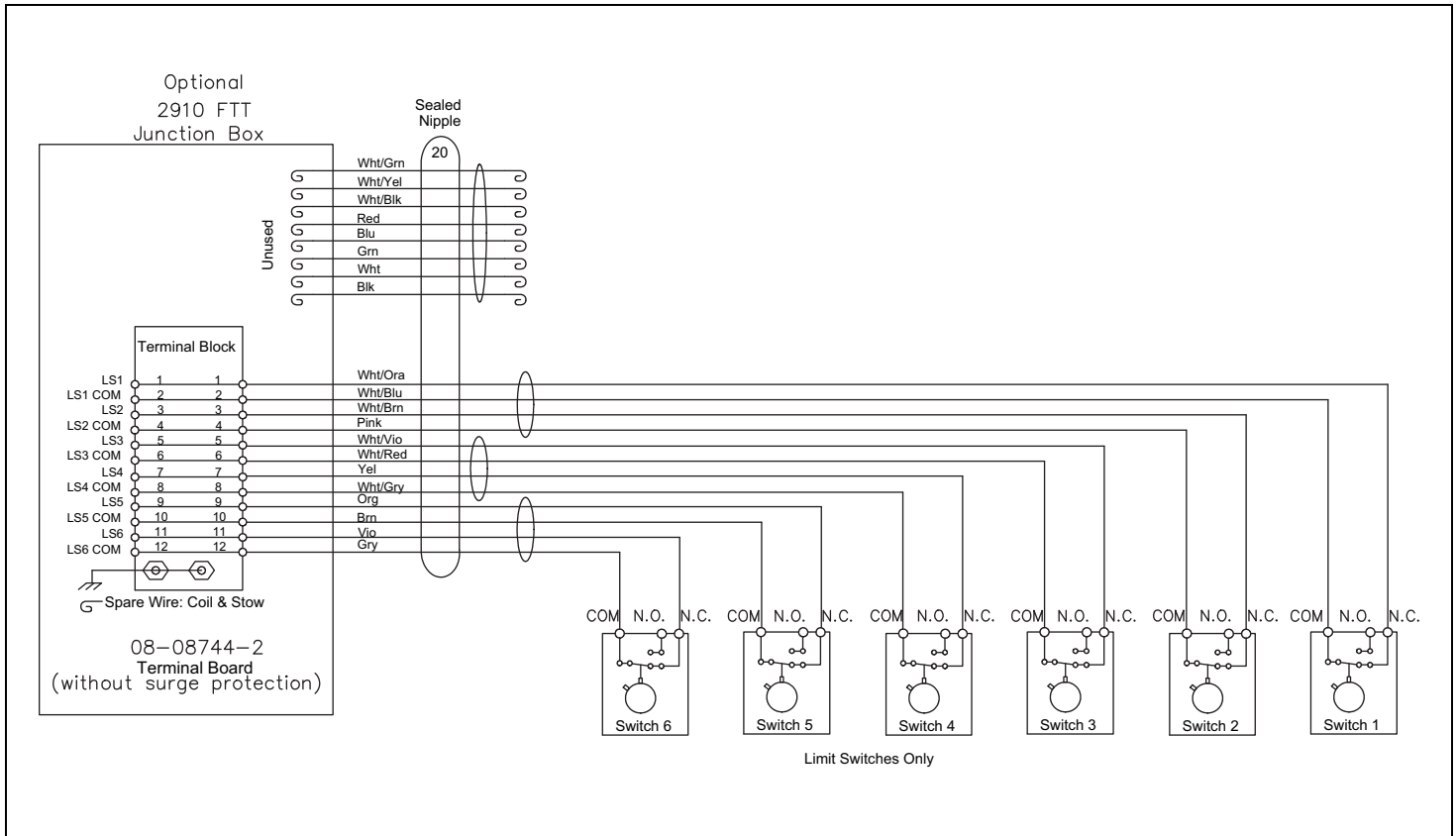


Figure 4-3: 2910 FTT Internal Wiring — 6 Limit Switches (Order Code: N2910-xx-0-NA-x-C-1-A)

**Note** Earth Ground is located on the terminal circuit board in the junction box, as shown in Figure 4-4 on page 13.

4.5 Earth Ground Location: 08-08744-2 (without surge protection) — Compatible Terminal Board

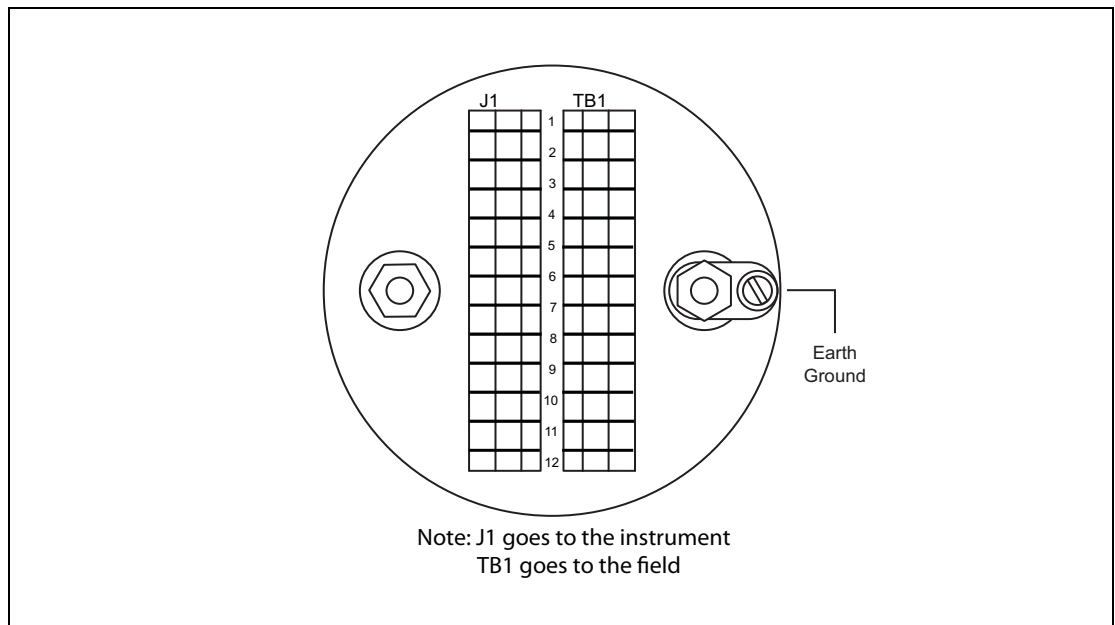


Figure 4-4: Earth Ground Connector: 08-08744-2 (without surge protection) — Compatible Terminal Board

4.6 Wiring Limit Switches

Each of the optional SPDT limit switches can be wired for Normally Open (NO) or Normally Closed (NC) operation by using the appropriate terminals:

Figure 4-5: Limit Switch Connections

- Under normal operating conditions, the Normally Closed (NC2) and Common (COM1) terminals of the limit switch are connected. The Normally Open (NO3) and Common (COM1) terminals of the limit switch become connected as the switch arm rides up the cam, as shown in Figure 4-5.
  - When the limit switch arm rides up on the cam, it makes contact between the Normally Open (NO3) and Common (COM1), but it also breaks the connection between the Normally Closed (NC2) and Common (COM1).

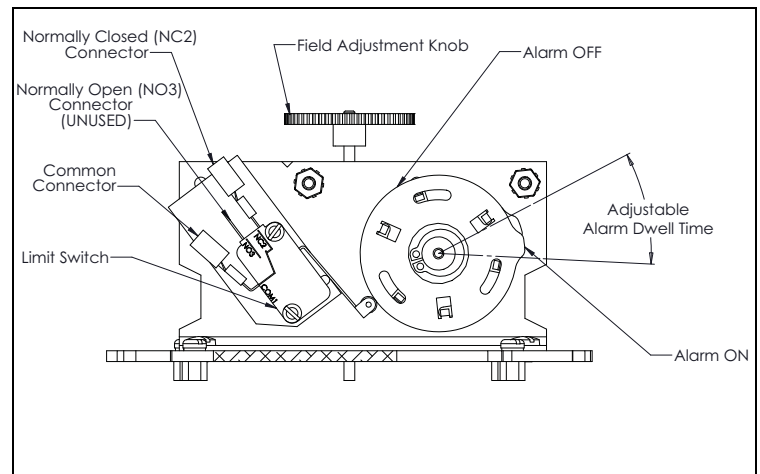


Figure 4-4 on page 13 shows the limit switch terminal connections.



## 5 Configuration & Calibration — Level and Limits

Follow the steps below to configure & calibrate the limit switches:

1. Take a manual reading of the tank contents.
2. Set the level to match the tank gauge level reading (see Section 5.1.2, "Setting the transmitter level" on page 16).
3. Calibrate limit switches to the desired tank level (see Section 5.2, "Calibrating Limit Switches" on page 17).

## 5.1 Calibrating the Tank Level

### 5.1.1 Before beginning the calibration process

Before setting the level, perform a manual tank level reading and verify that the level gauge is calibrated properly. If it is not, calibrate the gauge as directed in the gauge installation and operation manual.

This procedure assumes that the 2910 FTT has been mounted to the gaugehead back cover and wired.

### 5.1.2 Setting the transmitter level

To set the transmitter level:

1. Remove the 2910 FTT cover.

**Warning!** Obtain a hot permit before removing the 2910 FTT cover with power applied.

2. Loosen the set screw on the encoder drive shaft slotted coupling, as shown in Figure 5-1. This allows the encoder to rotate freely without rotating the coupling.

**Caution!** Excessively loosening the set screw will cause the coupling to fall. Loosen the set screw only to the extent required to free the encoder.

3. Rotate the encoder shaft until the correct level reading is indicated on the dial indicator (see Figure 5-2).

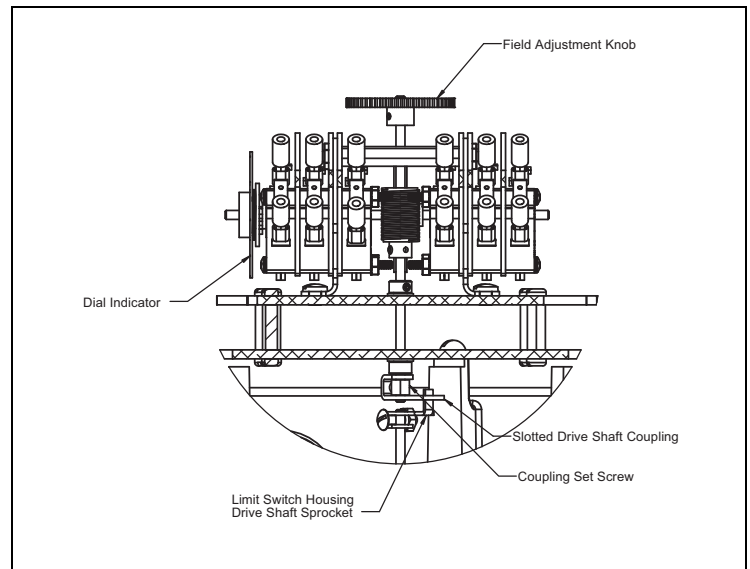


Figure 5-1: 2910 FTT Drive Shaft Coupling

4. Tighten the set screw on the encoder coupling.
5. Replace the transmitter cover.

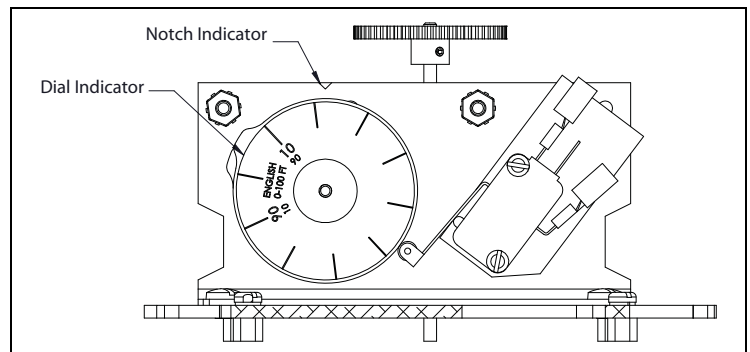


Figure 5-2: Dial and Notch Indicators



## 5.2 Calibrating Limit Switches

Limit switches are cam-operated SPDT (Single-Pole, Double-Throw) switches that are used to turn on alarms or other devices when the tank contents reach a predetermined level. The adjustable cams on the 2910 FTT provide a limited amount of dwell adjustment. The adjustable dwell can be used to extend the duration of an alarm. Two or four limit switches are available as an option with the 2910 FTT.

Limit switches are mechanically driven directly from the transmitter drive shaft. Each switch can be set to close or open at any tank level.

**Note** All limit switches are wired to operate as a Normally Closed (NC) circuit at the factory. If a Normally Open (NO) operation is required, the user must change the wiring at the switch. See Section 4.6, "Wiring Limit Switches" on page 13.

**Warning!** Obtain a hot permit before removing the transmitter cover with power applied.

To calibrate limit switches:

1. Remove the transmitter cover.
2. Loosen the slotted coupling on the transmitter drive shaft (see Caution on page 16).
3. Rotate the 2910 FTT encoder shaft until the level reading to activate the switch is displayed on the dial indicator (see Figure 5-4).

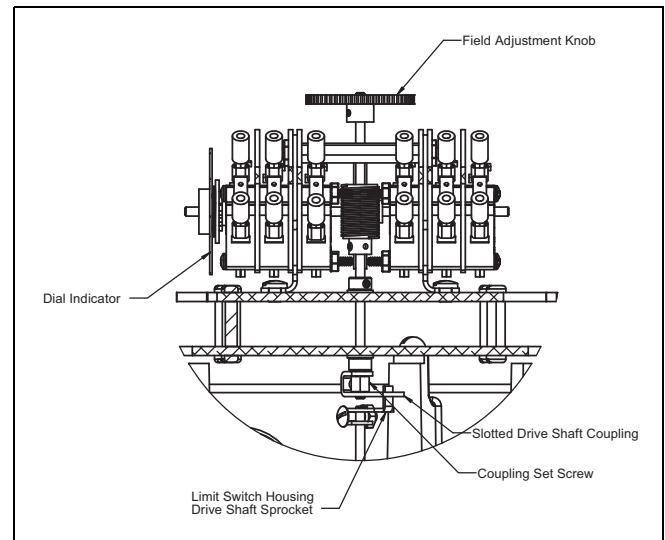


Figure 5-3: Drive Shaft Coupling

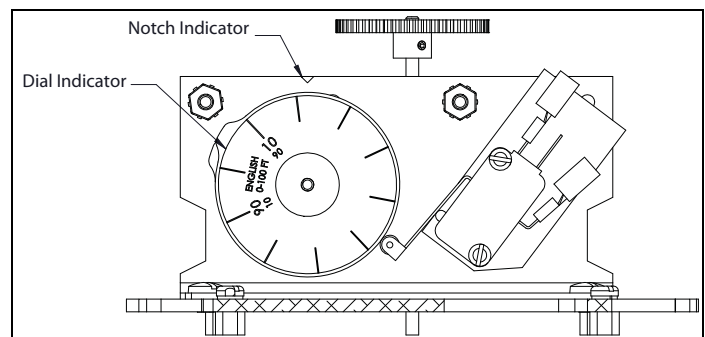


Figure 5-4: Dial and Notch Indicators

4. Turn the cam until the switch activates with an audible click (see Figure 5-5).
5. Gently turn the encoder shaft back and forth to verify that the switch is operating properly.

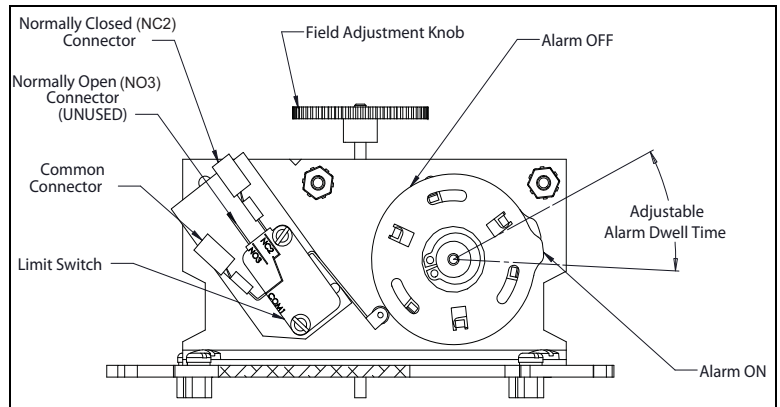


Figure 5-5: Dwell on Cams

6. Twist the adjustable cams relative to each other to adjust the length of the dwell (the duration of the alarm).

**Note** Care should be taken to avoid having too much dwell that will cause the low alarm to sound at the high levels and vice versa.

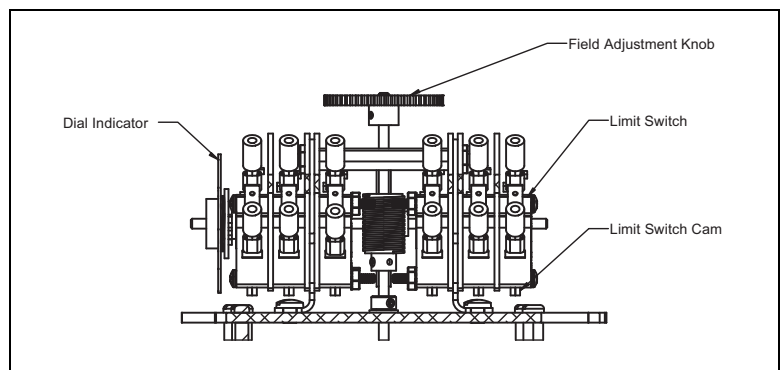


Figure 5-6: Limit Switch Cams

7. After adjusting the dwell, verify that the level that the limit switch activates did not change using the dial indicator (see Figure 5-7).
8. Repeat steps 3 through 7 for each of the remaining limit switches.

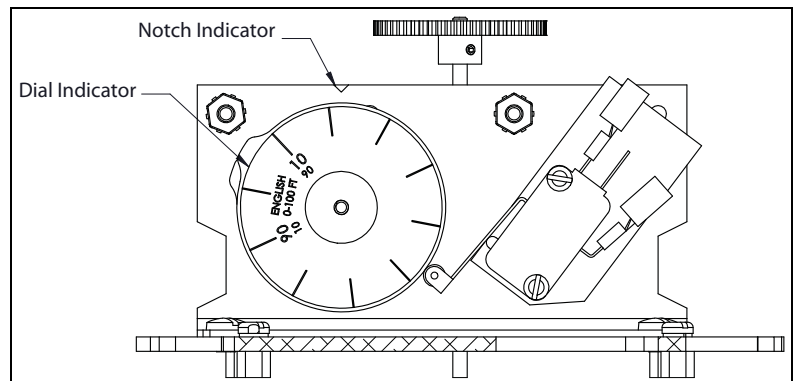


Figure 5-7: Dial and Notch Indicator

9. Rotate the 2910 FTT encoder shaft until the correct level reading (matching the gauge) is displayed by the dial indicator (see Figure 5-7).
10. Tighten the coupling on the transmitter drive shaft.
11. Replace the transmitter cover.

## 6 Maintenance

The 2910 FTT is designed and manufactured to provide accurate and reliable operation with no scheduled maintenance.

Varec can provide spare parts, maintenance kits, transmitter adapter kits, preventive maintenance advice, training, and warranties upon request.

### 6.1 2910 FTT Exploded View — with Limit Switches Only

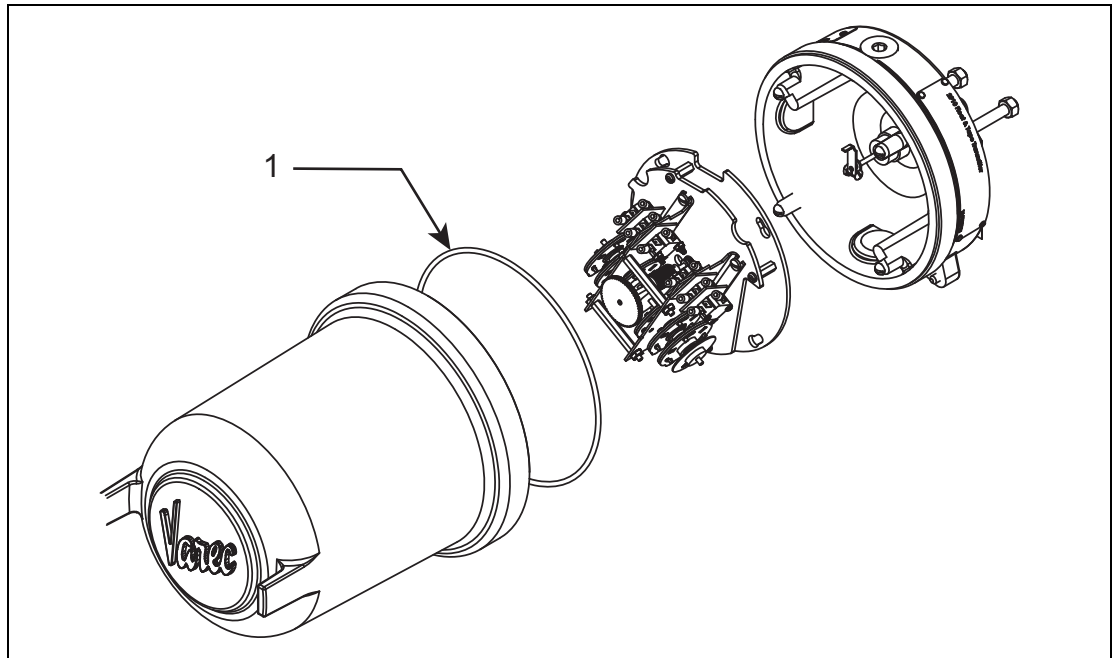


Figure 6-1: 2910 FTT Exploded View — with Limit Switches Only

### 6.2 2910 FTT Spare Parts List — with Limit Switches Only

Item No.	Part Number	QTY	Description
1	P14-170	1	O-Ring, Main Cover

Table 6-1: 2910 FTT Spare Parts List — with Limit Switches Only

### 6.3 Transmitter Adapter Kits

Part Number	Description
13-05956-102	Adapter kit for mounting to L&J 92514, 92020, and 92030 gauges.
13-05956-202	Adapter kit for mounting to L&J 92006 and Whessoe Varec 2006, 2026, and, 2036 gauges.

*Table 6-2: Transmitter Adapter Kits*

## 7 Specifications

### 7.1 System Design

Item	Description
Gearing System	Stainless Steel, Direct Drive
Limit Switches	2 or 4 SPDT limit switches (optional): <ul style="list-style-type: none"> <li>• 11 amp – 125, 250, 277 VAC</li> <li>• 4 amp – 125 VAC Tungsten filament lamp load</li> <li>• 1/3 HP – 125 VAC, 250 VDC</li> <li>• 1/2 amp – 125 VDC, 1/4 amp – 250 VDC</li> </ul>

### 7.2 Environmental

Item	Description
Operating Temperature	-4 [-13]°F to +185 °F (-20 [-25] °C to +85 °C)
Operating Humidity	0 to 95% relative humidity, non-condensing
Safety Approvals	Factory Mutual (cFMus) – (USA and Canada) Explosionproof, Class I, Division 1, Groups C&D T5 -25 °C ≤ Ta ≤ +85 °C NEMA Type 4 Flameproof, Class I, Zone 1, AEx/Ex d IIB T5 -20 °C ≤ Ta ≤ +85 °C
	ATEX/IECEx (International) Flameproof, Class I, Zone 1, Ex II 2G, Ex d IIB T5 Gb -20 °C ≤ Ta ≤ +85 °C
Environmental Approvals	IP66, NEMA 4

### 7.3 Functional

Item	Description
Available Ranges	Feet: 0–120 ft Meters: 0–36 m <b>Note: Limit switch ranges up to 100 feet.</b>

## 7.4 Physical

Item	Description
Net Weight	13 lbs (5.9 kg)
Shipping Weight	18 lbs (8.2 kg)
Enclosure	Explosion proof die-cast aluminium
Conduit Entries	2910 FTT Enclosure: 2 x 3/4" NPT (standard configuration uses one entry) Optional terminal junction box: 2 x 3/4" NPT

## 8 Ordering Information

### 8.1 Order Codes

<b>N2910</b>	<b>Approvals</b>	
	FM	cFMus (USA & Canada) --Explosionproof, Class I, Division 1, Groups C&D T5 -25 °C ≤ Ta ≤ +85 °C NEMA Type 4 --Flameproof, Class I, Zone 1, AEx/Ex d IIB T5 -20 °C ≤ Ta ≤ +85 °C
	AT	ATEX/IECEX (International) --Flameproof, Class I, Zone 1, Ex II 2G, Ex d IIB T5 Gb -20 °C ≤ Ta ≤ +85 °C
	EA	Electronics Assembly (No housing) <sup>1</sup>
	<b>Power Input</b>	
	0	Not Applicable <sup>2</sup>
	1	DC
	2	AC
	<b>Communication</b>	
	NA	Not Applicable <sup>2</sup>
	MS	Mark/Space
	MB	EIA-485 MODBUS/GSI Type MODBUS
	LJ	Tankway (L&J)
	<b>Limit Switch Range</b>	
	0	Not Applicable <sup>3</sup>
	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
	<b>Limit Switches</b>	
	N	None
	A	2 SPDT Limit Switches (18° adjustable dwell, positive activation) <sup>4</sup>
	B	4 SPDT Limit Switches (18° adjustable dwell, positive activation) <sup>4</sup>
	C	6 SPDT Limit Switches (18° adjustable dwell, positive activation) <sup>4,5</sup>

<b>N2910</b>	<b>Approvals</b>					
						<b>Additional Junction Box</b>
						0 No Additional Junction Box <sup>6</sup>
						1 Additional Junction Box <sup>5</sup>
						<b>Digital Inputs/Digital Outputs</b>
					A	Not applicable or 2 Digital Inputs <sup>7</sup>
					B	4 Digital Inputs + 4 Dry Contact Outputs <sup>1</sup>
N2910						Complete Order Code

**Notes:**

<sup>1</sup> Not available with Communication option NA.

<sup>2</sup> Limit switch only version.

<sup>3</sup> Applies only to Limit Switch option N. Otherwise select an option from 1 to 6.

<sup>4</sup> Ensure a Limit Switch Range option from 1 to 6 has been selected.

<sup>5</sup> Only available with Communication option NA.

<sup>6</sup> The number of junction boxes supplied from the factory depends on the Communication, Digital Input/Output and Analog Input/Output options selected. Communication option NA (Limit Switch Only) is supplied with no (0) junction boxes. All other options are supplied with 1-2 junction boxes dependent on the terminal and wiring requirements.

<sup>7</sup> Two (2) digital inputs if Communication option is not NA.  
Not Applicable if Communication option is NA.



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