Electric Fuel Senders
FS240, FS88 and FS5V Models

Racor’s Electronic Fuel Senders are ruggedly reliable, 100% solid state and are designed for use in any 12 or 24 volt petroleum-based product. These fuel senders eliminate the need to continuously replace mechanical senders and can be used in a stand alone application or integrated with a Racor Hot Stick fuel heater. They fit standard 5-bolt SAE fuel sender holes, 14" to 66" tanks, and are available for 0-88 ohm and 240-33 ohm gauges.

The Racor Electronic Fuel Sender consist of a sensor probe and an amplifier which is located in the mounting plate assembly. All components are encapsulated in an epoxy resin to seal out moisture and other contaminants which could affect the operation of the unit.

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Product Features
- Rugged and Reliable, 100% solid state construction
- Designed for use in any 12 or 24 volt petroleum based product
- Continuous readout of the fuel tank level
- Stand alone application or can be integrated with Hot STK fuel heater
- Available in most lengths 14" to 66" (check availability)
- Available for 240-33 ohm and 0-88 ohm gauges
Installation Instructions

General Instructions

Before beginning disconnect battery. Do not over-tighten mounting bolts; torque to a MAXIMUM of 15 in. lbs. This unit is calibrated at the factory for FULL and EMPTY settings. Note: When ignition switch is turn to on position, fuel sender will show FULL for a few seconds, then drop back to the actual fuel level.

Wiring Instructions

Ground existing wire directly to frame using appropriate fasteners and ring terminals.

Red Wire
to ignition power (12 or 24 volt)

White Wire
to existing send wire off old sender

Black Wire
to existing ground wire off old sender

Note: If excess water is present in fuel tank, fuel sender will show a false FULL reading until excess water is removed.

Warning: Use of other than Racor components can cause damage and voids warranty.

Parts Breakdown

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>FS***/**</td>
</tr>
<tr>
<td>2.</td>
<td>FS2703K</td>
</tr>
<tr>
<td>2A</td>
<td>10/32 X 1-1/2 SHCS Bolts (5 ea)</td>
</tr>
<tr>
<td>2B</td>
<td>Adapter Plate Gasket</td>
</tr>
<tr>
<td>2C</td>
<td>Female Pigtail</td>
</tr>
</tbody>
</table>
The Racor Fuel Sender is a solid state design which uses no moving parts to sense fuel/liquid levels using capacitance technology. The sender is available for diesel fuel, gasoline, light oils etc. This sender is available in all common ohm ranges currently in use. The two standard ranges are 240-33 OHM and 0-88 OHM.

### Specs.

<table>
<thead>
<tr>
<th>Power Consumption</th>
<th>12 volt DC Negative Ground Approx. 30mADC at Vign=15VDC</th>
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<tbody>
<tr>
<td>Sensing Method</td>
<td>Capacitance</td>
</tr>
<tr>
<td>Operating Temp. Range</td>
<td>-40°F - +240°F (-40°C- 116°C)</td>
</tr>
<tr>
<td>Variances</td>
<td>Approximately 1% reading change for every 15°F change from calibrated temperature.</td>
</tr>
<tr>
<td>Mounting</td>
<td>Standard 5 hole SAE bolt pattern for fuel senders.</td>
</tr>
<tr>
<td>Material</td>
<td></td>
</tr>
<tr>
<td>Mounting Head</td>
<td>30% glass filled nylon 6</td>
</tr>
<tr>
<td>Probe</td>
<td>D3003-H14 6061-T6 Aluminum Tubing</td>
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**Limited Warranties Statement**

All products manufactured or distributed by Racor are subject to the following, and only the following, LIMITED EXPRESS WARRANTIES, and no others: For a period of one (1) year from and after the date of purchase of a new Racor product, Racor warrants and guarantees only to the original purchaser-user that such a product shall be free from defects of materials and workmanship in the manufacturing process. The warranty period for pumps and motors is specifically limited to ninety (90) days from date of purchase. A product claimed to be defective must be returned to the place of purchase. Racor, at its sole option, shall replace the defective product with a comparable new product or repair the defective product. This express warranty shall be inapplicable to any product not properly installed and properly used by the purchaser-user or to any product damaged or impaired by external forces.

**Warning**

Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the applications are met.

The products described herein, including with limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

The following statement is required pursuant to proposition 65, applicable in the State of California: ‘This product may contain a chemical known to the State of California to cause cancer or reproductive toxicity’.