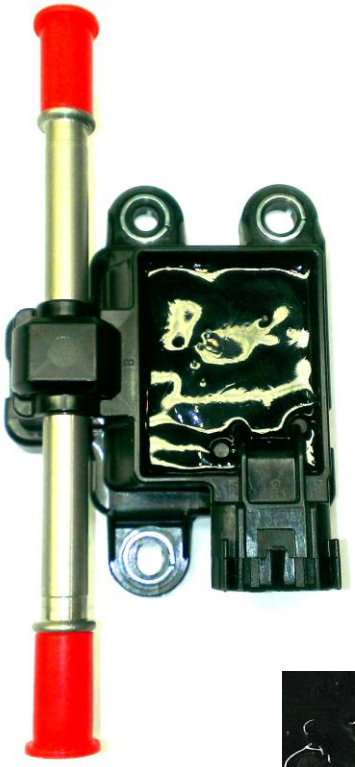
RaceGrade

Document Number		RG_SPEC_0029	
Title		RaceGrade FF-394 Flex Fuel Sensor	
Revision	**Date**	**Prepared By**	**Change History**
0.1	7/21/14	Hannah Westbrook	Initial release

Introduction

This M FF-394 Flex Fuel sensor measures the ethanol to gasoline ratio of a vehicle's fuel system. The sensor contains a pull up resistor to 5v and pulses to ground, producing a variable frequency output corresponding to the ethanol content. The sensor's signal wire also produces a variable pulse width output which can be calibrated to read the fuel's temperature. This sensor has quick connect style fuel connections and a M15-1131 mating electrical connector.



Part #	**Range**
M FF-394	50-150 hz, 0 -100% ethanol
	1- 5 ms , -40 to 125 °C
M 15-1131	Mating connector

Ethanol Calibration:

50 hz = 0 % Ethanol

150 hz = 100 % ethanol

180-190 hz = possibly contaminated fuel

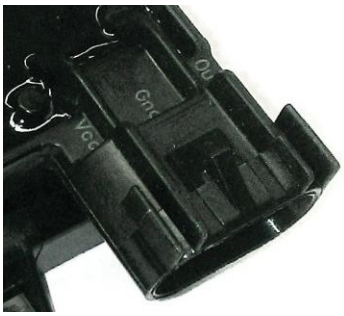
Fuel Temperature Calibration:

1 ms = - 40°C

5 ms = 125°C

Specifications:

- Fitting: quick connect style fuel fittings
- M 15-1131 Mating connector
- Supply: 12 Vdc



Connection:

Sensor:

As labelled in picture

1 2 3

Mating connector (wire entry view):
pin 1 – Vcc
pin 2 – GND
pin 3 – Signal

Note: For Motec Mx00 series, two digital inputs are needed to configure both the Ethanol content and the Fuel temperature. One input is set up as a frequency measurement, while the other is set up as a pulse measurement.