



Before installing Kavlico sensors, reference the Dynon Technical Advisory website (dynoncertified.com/support) for important information regarding Kavlico sensors sold by Dynon.



Figure 62 – Original 1/8-27 NPT 0-50 PSI Sensor (P/N 503389-000)



Figure 63 – New 1/8-27 NPT 15 PSI Sensor (P/N 503850-000) (Shown Without Wiring Connector)

12.2.14 Fuel Flow Sensor



The approximate pulses/gallon for the Fuel Flow Sensor is 68,000 (17,963.70 pulses/liter). You must configure the fuel flow transducer using this numerical value in the Sensor Setup Menu (SETUP MENU > HARDWARE CALIBRATION > EMS CALIBRATION > FUEL FLOW CALIBRATION). More information on this topic is discussed in the Fuel Computer Configuration section of this section.

Table 22: Fuel Flow Transducer Connections

Wire Color	EMS Harness Wire Color	EMS Harness Pin Number	Function
Black	Black	Any of Pins 3, 13, 16, 17, or 30	Ground
Yellow or White	Yellow	14	Fuel Flow Input 1(From fuel tank)
Red	Red (share-able with other sensors)	15 (share-able with other sensors)	+12 Volt Auxiliary
Yellow or White	White / Black	19	Fuel Flow Input 2 (optional return to tank)

12.2.14.1 General Placement Recommendations for Fuel Flow Transducer

- Do not install the fuel flow transducer, hoses and fittings near exhaust system or turbocharger. Excessive heat can damage fuel system components.
- Do not install 90 degree fittings (elbows) on the input or output of the fuel flow transducer. Doing so will cause turbulence in the fuel flow which causes inaccurate fuel flow data.
- Install the fuel flow transducer with the three (3) wires pointed UP.
- Install a fuel filter UPSTREAM of the fuel flow transducer to screen out debris.
- For best measuring performance, the fuel should travel uphill by one (1) to two (2) inches (2.54-5.08 cm) after leaving the fuel flow transducer.
- Placement of the fuel flow transducer relative to other items in the fuel system like fuel pumps is left to the builder. It is common to place the sensor downstream of any auxiliary electric boost pumps but upstream of the engine driven fuel pump.



Due to vibration issues, never connect the fuel flow transducer directly to the engine.



When sealing the fittings on the fuel flow transducer, *do not use Teflon tape!* Instead, use a sealant such as “United EZ-Turn Fuel Resistant Lubricant” or “Permatex Thread Sealant.”

12.2.14.2 Mechanical Installation

The fuel flow sensor has ¼” (6.35 mm) female NPT ports. Do not exceed a torque of 300 inch-lbs. (.112 Nm) when installing fittings into the transducer. The sensor should NOT be installed with its wires pointing DOWN (the best situation is with the wires pointing UP). The fuel line on the outlet port should not drop down after exiting the transducer - this configuration can trap bubbles in the transducer, causing jumpy readings. The inlet port, outlet port, and flow direction are marked on the top of the sensor.

12.2.15 Fuel Level Sensor

Dynon Avionics does not sell fuel level sensors.

12.2.15.1 Resistive Fuel Level Sensors

You may connect as many resistive fuel level sensors to the SV-EMS-220 to General Purpose (GP) input – any of Pins 4, 7, 9, 10, 11, 12, 20, 21 (that are not already in use). We recommend not using Pins 6, 8, 22, and 23, and 31 for fuel level sensors as these pins are used for some specialized functions. *We recommend that Pins 20 and 21 of the SV-EMS-220 D37 be used for fuel level sensors before using other general purpose inputs.*

If you use a General Purpose Input other than Pins 20 and 21, you must configure the pin you use: SETUP MENU > EMS SETUP > SENSOR INPUT MAPPING > C37 Pxx.