

## Digatron LLC S Series Sensor Installation Instructions

### Tach / Lighting Coil Sensor (RPM1)

Your instrument receives its power from your sled's lighting coil. Most sleds also get their Tach signal from the lighting coil.

To install Digatron's standard power harness, splice the red lead of the harness directly into the lighting coil wire, before the regulator, using the connector provided. Connect the other lead of the harness directly to the engine block.

For a sled with a high output ignition and a pulsating DC voltage, rather than an AC voltage off of an alternator, you need a different Tach sensor. With this sensor, bolt the black wire to the engine block. Locate the main bundle of wires coming from the engine to the handlebars. Splice the orange wire on the Tach sensor to the yellow/black wire in the bundle. Splice the red wire on the Tach sensor to the red wire in the bundle. After splicing the wires we recommend soldering the wires and wrapping the connection with electrical tape.

### Jackshaft RPM Sensor (RPM2)

The Jackshaft RPM function uses a magnetic pick up. The sensor detects the passing of any ferrous object (steel bolt head or nut, etc.). Mount the sensor so that any ferrous object rotating on the jackshaft passes within 1/16" (or less) of the sensor. The sensor can pick up any number of ferrous objects on the jackshaft that are evenly spaced, one or two objects is preferable. If this is not available on your installation, mount our collar on the jackshaft. Attach the sensor and adjust the angle of the mounting bracket from side to side so the sensor is in line with the middle of the collar. Secure the sensor in this position with the nuts and lock washers provided. Modify the mounting bracket as needed.

### EGT Sensor

Our standard EGT sensor is a type K thermocouple temperature sensor. Install the sensor clamp assembly, or weld on, to the exhaust header. Position the clamp so that the sensor will be in the center of the header. Using the fitting on the clamp assembly as a drill bushing, drill a 3/16" hole through the header. Reinstall the clamp assembly and align it with the hole just drilled. Due to differences in pipe manufacturing, Digatron recommends that you contact the manufacture of the pipe, or the dealer, for correct placement of your EGT sensor. Please contact Digatron technical support with questions.

Insert the sensor into the fitting so that the tip of the sensor extends 1/4" past the center of the header. Tighten the compression nut to lock it in place.

When routing the sensor cable from the motor to the instrument, secure the cable with cable ties to prevent excessive movement. **The thermocouple cable can be damaged and will break at the flex points if not properly tied down. It is also good practice to protect the sensor with fuel line, especially at any point where the cable may rub against a hard surface.**

## Water Temperature Sensor

Water temperature should be taken from a point well below the water level in the block, or from a fitting provided for this purpose in the head (do not use the radiator).

The sensor can also be placed inline in the hose where coolant exits the engine. This is not recommended, but if this is the only location available, be sure the inline pipe is grounded to the engine block.

**If your sled already has a water temperature sensor, do not disconnect it. Use our sensor and leave the old sensor attached and to the side.**

The compression fitting provided with the sensor is an 1/8" NPT. You may need to use a reducing bushing in some applications to adapt the compression fitting to an available water temperature port. When installing the sensor, be sure that at least 1" of the probe is in the water.

## Oil Pressure Sensor

The Oil Pressure Sensor will replace the one you are currently using. Mount the sensor directly to the engine block or to a steel braided hose with an added grounding wire. When locating the sensor, remember to avoid the ignition system. If using a braided hose to attach the sensor, a clamp will be required to mount the sensor securely. (A 1 3/4" muffler clamp works well for this purpose) Be sure that the clamp assembly is grounded to the block. Attach the Sensor Extension terminal end to the post on the rear of the sensor.

Route this sensor extension lead to the instrument paying attention to the wire routing notes listed earlier.. Twist the sensor connector 1/4 turn to lock the connector in place.

Refer to the model number on the back of your instrument for the appropriate pressure sensor:

U: 16# pressure

X: 30# pressure

Y: 100# pressure

Z: 150# pressure

## Fuel Pressure Sensor

The Fuel pressure sensor should be installed into the fuel system to monitor the fuel pump outlet pressure. The sensor should be mounted in the same way as the Oil Pressure Sensor. Attach the Sensor Extension terminal end to the post on the rear of the sensor. Route this sensor extension lead to the instrument paying attention to the wire routing notes listed earlier. Twist the sensor connector 1/4 turn to lock it in place.

**NOTE:** If you are burning alcohol, you must *remove* the sensor after draining your fuel. Alcohol vapors will damage the seals in the sensor

Refer to the model number on the back of your instrument for the appropriate pressure sensor:

U: 16# pressure

X: 30# pressure

Y: 100# pressure

Z: 150# pressure

## **Beacon Receiver Placement**

The Digatron beacon receiver is used in conjunction with the Digatron transmitter to automatically record lap times. Mount the beacon receiver on your sled with an unobstructed view of the transmitter. Mount it with the red lens facing where the transmitter is located, with the longest part of the case protecting the red lens from the sun.

Other racers will rarely interfere with the beacon signal, but mounting the receiver as high as practical will help to avoid that situation.

## **Manual Lap Switch Placement**

The Lap switch should be mounted to the steering wheel within thumbs reach of the driver. This switch requires a 15/32" mounting hole for installation. Mount the switch in a position that will provide easy access while driving. Tie the coil cord to the steering column where needed to prevent it from interfering with the driver. If the Lap switch or beacon receiver is not used, leave the input connector open; do not use a shorting plug.