Using GroPoint™ Analog (0-5mA) Sensors with Non-Gropoint Data Loggers
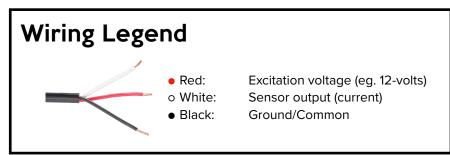
GroPoint provides a full line of data loggers designed to operate with GroPoint sensors. However, GroPoint sensors have standard output that can be used with most data loggers manufactured by other companies. To use your GroPoint sensor with a 3rd-party data logger, you will need to know the following information.

Sensor output:	0 to 5.0 mA
Power requirements:	10 to 20 mA

Each sensor must be powered and read independently. Powering more than one GroPoint sensor at the same time may cause interference between sensors resulting in inaccurate readings.

Output is equivalent to 0-50%. Sensor is linear between 5% and 50%, may be non-linear outside of this range.

To convert the current signal to a voltage signal range of 0 to 2.5V, connect a 499 ohm 1% resistor between the sensor output (white wire) and the analog ground (black wire).
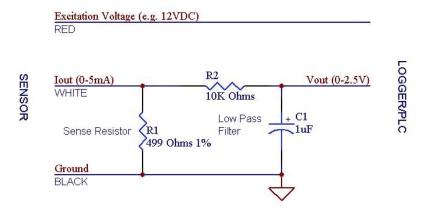
Wiring Legend

- Red: Excitation voltage (eg. 12-volts)
- White: Sensor output (current)
- Black: Ground/Common

To interrogate a GroPoint sensor follow this sequence:

1. Apply power of 8 to 18 VDC.
2. Wait 10ms minimum.
3. Sample the signal output.

It is NOT recommended that power be applied continuously to the GroPoint sensor. This can cause electrolytic corrosion to the sensing element, and reduce the lifetime of the sensor.

There may be noise on the signal output so it should be low-pass filtered. This may extend the wait time (step 2) to 50-100ms. See below for an example circuit showing sense resistor and low pass filter. This circuit requires a minimum wait time (step 2 above) of 50ms.

If additional technical data is required, contact GroPoint at support@gropoint.com.

GroPoint offers engineering consulting services to clients at a rate of US$150/hour. This service is available to clients who require assistance with customizing third party systems or for programming assistance with third party data loggers.

Growing innovation.