

Tech Note 130508.1: *ECO*-SLC ground wire attachment

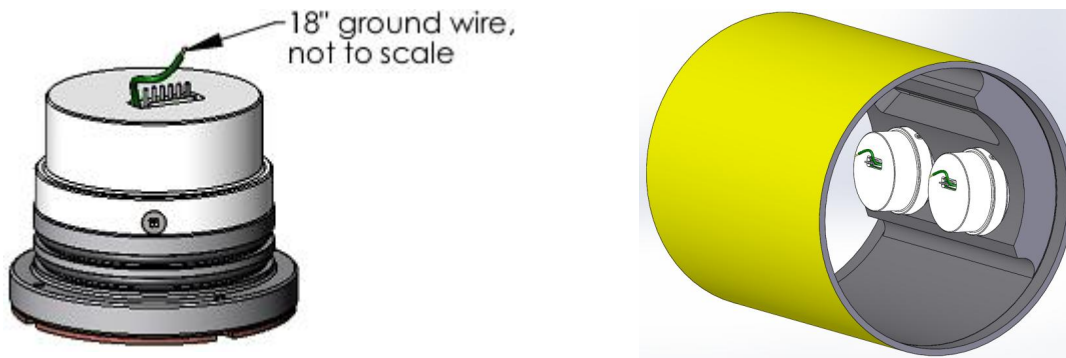
Reason for ground wire

The *ECO*-SLC sensors have a 22-gauge green wire coming out of the electronics protective cap. This wire is critical to the anodic protection of the *ECO*-SLC's aluminum optics end flange. Since this sensor is specially designed for TWR's Slocom glider and the sensor does not have its own anodic protection, the wire must be connected to the science bay and be electrically connected to an anode located on the glider.

Without anodic protection, the optics end flange will corrode over time and will cause the sensor to fail, and possible loss of the glider.

Location of ground wire

The green 22-gauge wire is grounded to the aluminum optics end flange and its conductivity is verified by WET Labs. The copper faceplate is isolated from the aluminum optics end flange to prevent rapid corrosion of the aluminum. Due to the anodization of the aluminum optics end flange and the isolation of the copper faceplate, verification of continuity between the aluminum and the wire cannot be performed on a completed sensor.



Attachment of ground wire

WET Labs provides only the wire to ground to the science bay. The wire end is bare, enabling TWR to attach to the inside of the science bay as to their design. Crimping a #4 ring terminal to the end and using a #4 screw threaded into the inside of the science bay is one method.

Any wire attachment point must be free of anodize (i.e. threaded hole). Anodize is an insulator and will not allow electrical continuity to a ground source, i.e. zinc anode.

Warranty voided

WET Labs is not responsible for any damage or loss of sensor due to corrosion caused by not connecting the *ECO*-SLC ground wire to an anodic source.