

Application Note

Configuring a Sentinel Modbus with an Electrolab DLS 2100

OVERVIEW

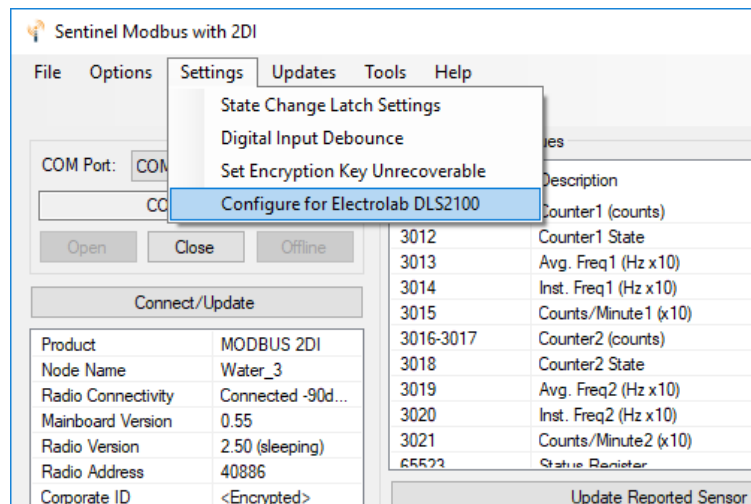
The Electrolab DLS 2100 is a popular float stick found ubiquitously in upstream oil & gas. SignalFire provides a simple solution to make the Electrolab DLS 2100 completely wireless with minimal setup. The Sentinel Modbus and Sentinel Modbus/2DI have a one-click option that automatically pulls in the core parameters needed to get a system up and running in no time. **This option requires SignalFire ToolKit v2.2.12.00 or higher.**

PROCEDURE

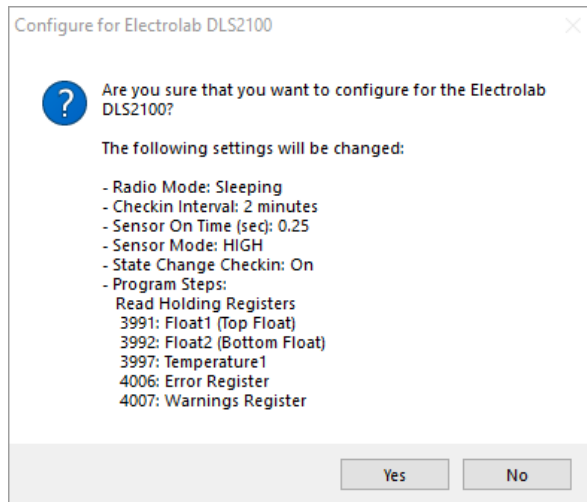
First, wire the Electrolab to the 4 terminals of the Sentinel Modbus (Power, Ground, Modbus-A, Modbus-B) and set up the Electrolab for 2-wire Modbus as specified by its wiring diagram. Using the Electrolab HHC-1000 Handheld Communicator, take note of what the Electrolab unit's slave ID is. Keep in mind that if there are multiple units, they will each have to be configured with unique slave ID's. The 485 communication should be set to the default of 9600 baud rate, 8 data bits, no parity bit, and 1 stop bit (**9600 8N1**).

Program the Sentinel Modbus to have the same slave ID as the Electrolab unit it is reading from (default ID 1) and configure the Sentinel as normal to join the network and connect to the Gateway.

To automatically populate the Sentinel Modbus with the pre-set registers, go to Settings → “Configure for Electrolab DLS2100”.



Click “Yes” when the following message pops up:

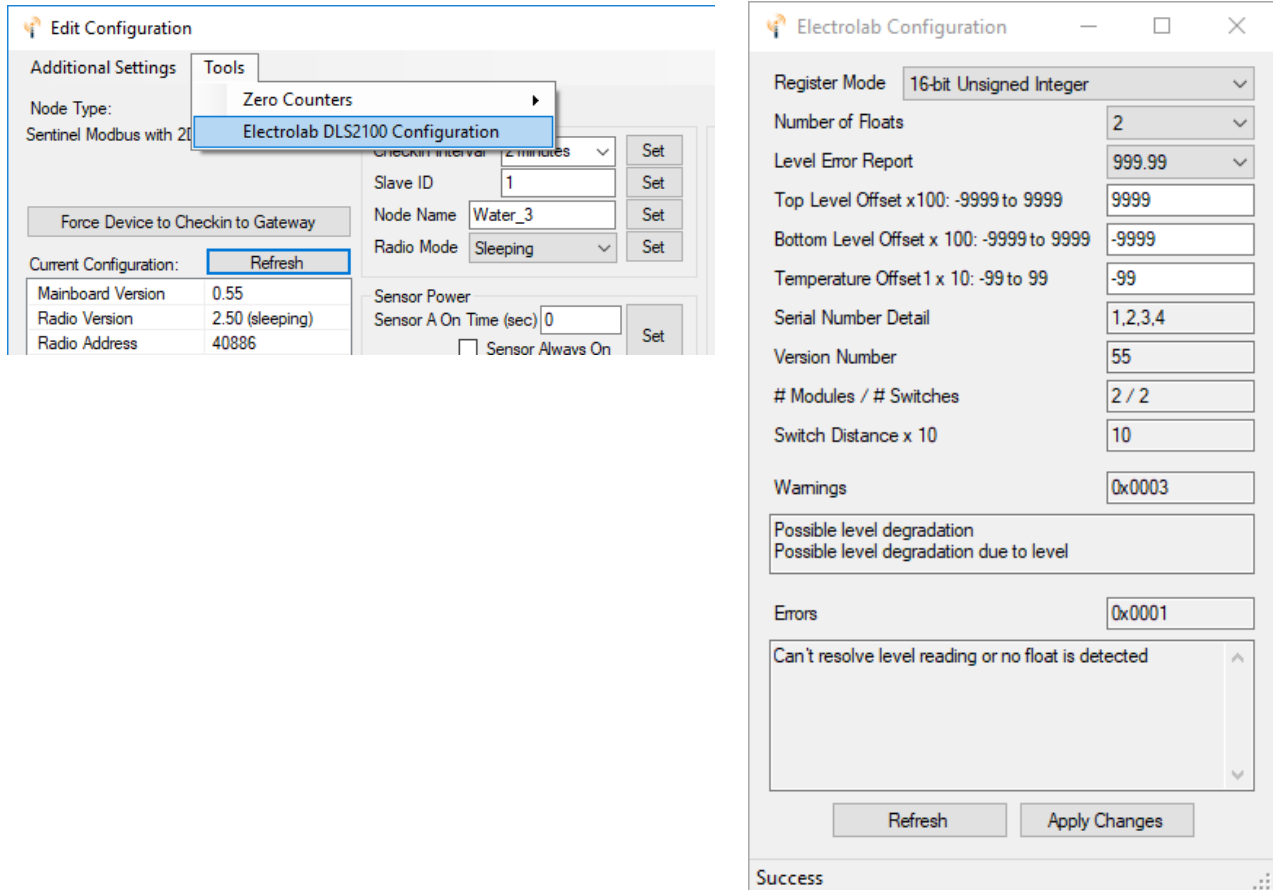


The parameters and registers listed in the window will be set and the Electrolab DLS 2100 is now fully configured for wireless communication. The program steps assume the default register mode of 16-bit unsigned integers.

The following requires Gateway Firmware version 8.24. If the Sentinel Modbus is already connected to a Gateway, but not configured to read an Electrolab, the parameters can be set from the Gateway using the remote configuration feature. Enable remote configuration as normal and again go to Settings → “Configure for Electrolab DLS 2100” and click “Yes”.

More options can be read and set on the Electrolab while in remote configuration mode through the Gateway. While remotely configuring the Sentinel Modbus, go to Tools → Electrolab DLS 2100 Configuration.

Register Mode down to Temperature Offset are settable, while Serial Number down to Errors are read-only. To change the settings, simply type or choose what to set the parameter to, and then click Apply Changes. The Gateway will write to the Electrolab's Modbus registers over the air. If the desired setting is out of range (such as setting the Temperature Offset to 150), the Sentinel will throw a warning.



For further assistance, call SignalFire at (978)-212-2868 x2
or email support@signal-fire.com.