MicroStrain®

Quick Start Guide

ENV-Link™-Mini-LXRS™ Wireless Environmental Monitoring Node

Version

- ENV-Link™-Mini-LXRS™ firmware 8.0 and higher
- WSDA®-Base firmware 3.0 and higher
- Node Commander® software 2.5.0 and higher

Batteries, Base Station and Software

- The ENV-Link™-Mini-LXRS™ ships 2 AA with batteries. Compatible types are size AA with a voltage range of 0.9 - 6V
- The ENV-Link™-Mini-LXRS™ is designed to operate with a MicroStrain WSDA®-Base Synchronized Extended Range Base Station. Provide and install this as normal.
- The ENV-Link™-Mini-LXRS™ is designed to operate with MicroStrain Node Commander® software. Provide and install this as normal.

Hardware Installation

Caution
The ENV-Link™-Mini-LXRS™ has been pre-configured at the factory and the sensors must be installed in the channels as stated below.

1. Insert the Binder (silver, keyed, quick-connect) connector of the sensor(s) into the **Desired Channel 1, 2, or 3** connector on the sidewall of the ENV-Link™-Mini-LXRS™ enclosure. Align the keyway and screw the connector on hand-tight.
2. Insert the Binder connector of the **Temperature/Relative Humidity** Sensor into the **RHT Channel** connector on the sidewall of the enclosure. Align the keyway and screw the connector on hand-tight. **RHT Channel** is **only** compatible with the **Temperature/Relative Humidity** Sensor.
3. Open the ENV-Link™-Mini-LXRS™ enclosure by popping the transparent latch and insert the two batteries into the battery holders, carefully observing the +/- polarity.
4. Set **Excitation Voltage** switch to 3 volts as shown in Figure 1.
5. Set **Input Mode** switch #1, #2 and #3 to Single Ended (SE).
6. Set **Voltage Divider** switches #1, #2, and #3 to No Divide (NO DIV). If you are connecting a **Soil Moisture Probe** to a channel set that channel to Division **(DIV)**
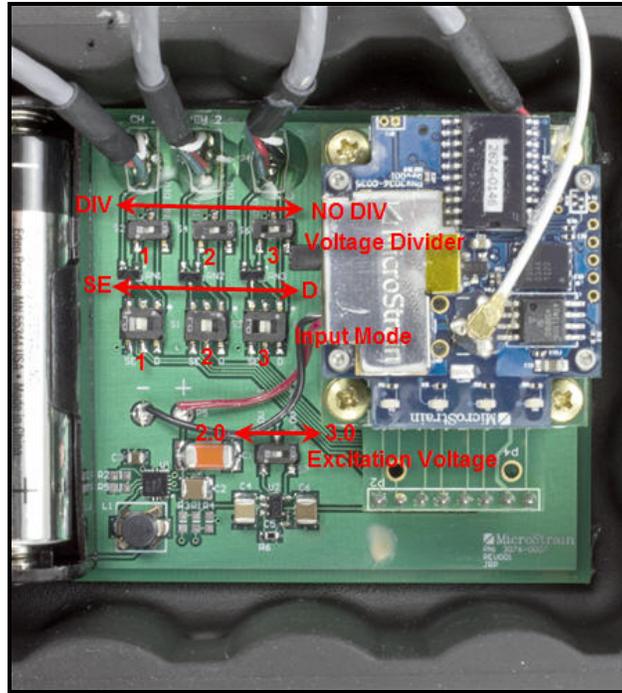
Figure 1. Switches

Software Operation

1. Connect a WSDA®-Base to the host computer as normal.
2. Establish communication between the WSDA®-Base and Node Commander® software.
3. Right-click the Base Station Com X and a drop-down menu will appear.
4. Click Add Nodes.
5. Click Node Discovery and the Node Discovery window will open.
6. Switch the node On/Off switch to the ON position as shown in Figure 2.
7. Observe the node Activity LED; it will blink rapidly for a second, turn off momentarily and begin throbbing on and off, on and off about every second, indicating the node is in idle mode.
8. Observe that the node, e.g. Node 105, has been discovered under the Base Station Com X.
9. Click the Stop button and the Node Discovery window will disappear.
10. Close the ENV-Link™-Mini-LXRS™ enclosure and lock the latch.
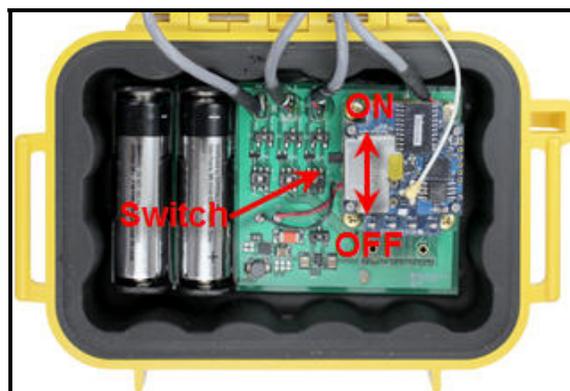

Figure 2. On/Off switch

11. Right-click the Node and a drop-down menu will appear.
12. Click Load Node Information and momentarily, a tree of information (model, serial number, firmware version, memory and number of triggers) will read out underneath the Node.
13. Right-click the Node and a drop-down menu will appear.
14. Click Configure.
15. Click Configure Node and the Configuration window will appear.
16. The ENV-Link™-Mini-LXRS™ has been pre-configured at the factory to support four attached sensors. Figure 3 displays the factory settings.
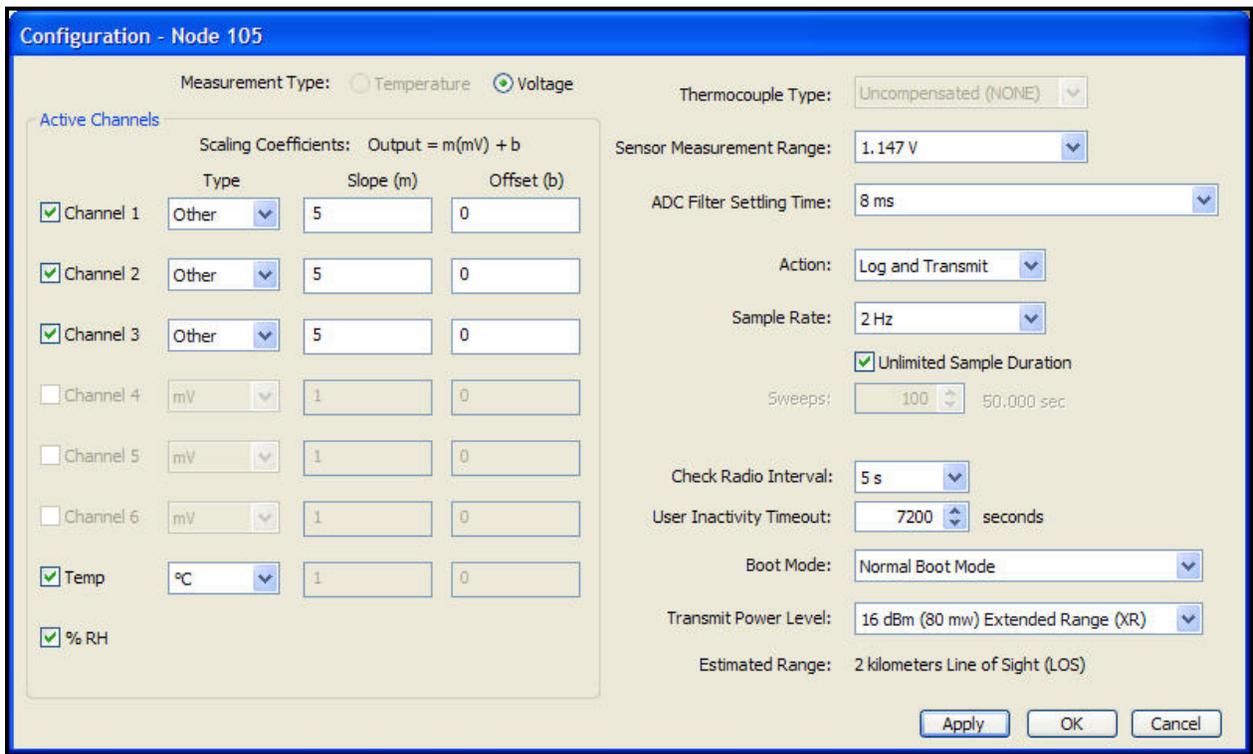

Figure 3. Configuration window

17. In particular:
- Channels 1-3 are configured to support the input of the available Pyranometer, Photon Flux, Soil Moisture, and Soil Moisture sensors.
- Select the active channels 1-3 that correspond to the connected sensors.
- The Temp and %RH channels are enabled with temperature reporting in °C and relative humidity reporting in %. These measurements will appear as channels 7 and 8 respectively in the data displays.
- The Action is set to Log and Transmit; data will be written to datalogging memory on-board the device as well as transmitted at the sample rate.
- The Sample Rate is set to 2 Hz (2 samples per second).
- The Unlimited Sample Duration is checked; the sampling will continue until the datalogging memory is full, the Stop Node command is issued, the battery discharges, etc.
- The ADC Filter Settling Time is set to 8ms.
- All other settings are at default.

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- **Note: If the settings are not as they are shown in Figure 3, they should be made to match.**

18. Click Apply.
19. Click OK and the Configuration window will disappear.
20. Right-click the Node and a drop-down menu will appear.
21. Click Sample.
22. Click Legacy Low Duty Cycle and the Sampled Data window will appear.
23. Momentarily, data will appear in channels 1, 2, 3, 7 and 8 and refresh at 2 Hz.

Congratulations!

You are off and running! MicroStrain Support Engineers are always available by phone, email, web chat or SKYPE to assist you in any way we can.