Powering the Modbus Gateway

- Connect the 6 wires from the Gateway to the break-out board.
- Supply 6-36VDC to the break-out board.
- The gateway requires <25mA average (150mA peak) at 12VDC.
- The Status LED should blink indicating the system is running

Configure Gateway

- Connect the RS232 port on the break-out to a PC
- Run the SignalFire ToolKit application
- Select the correct COM port and click “Auto-Detect”
- Set radio network address to use. Default is 0
- Remote nodes must be set to the same network to communicate with the Gateway

Check Remote Devices

- If one or more remote nodes are configured and powered on, while connected with the SF ToolKit click “Show Modbus Devices”
- A list of all connected remote nodes will be displayed
- If no devices are displayed confirm the radio network is the same for all devices

Test Local Modbus/RS-485 Communications

- Connect the Modbus RTU master to the RS-485 lines
- Configure for 9600 Baud, 8,N,1
- Read register 2025 from Slave ID 247, this should return the supply voltage from the Gateway to confirm Modbus communications
- If no response or a bad response is received, confirm that the RS485 lines are not swapped

Read Remote Data

- Configure the RTU master to read register 9993 from one of the remote Slave ID’s
- The gateway should respond with an echo of the Slave ID of the remote device
- This response confirms end-to-end communications are working
- The RTU may now be configured to read the desired data sent in by the remote device. Refer to the specific product manual for register mapping.

Status LED

- **Slow Flash (3 second pause)** System is running with one or more remote nodes connected
- **Fast Flash (0.5 second pause)** System is running but no remote nodes are connected
- **Solid On** System Fault, needs service

Installing Gateway

- The gateway mounting base is threaded with a 3/4” NPT
- Gateway may be mounted directly to a conduit mast
- Mount Gateway as high as possible for best range
- Mount away from other metal objects
- Do not mount directly next to a metal surface such as a metal building or pole

Common Issues

- The distance between the nodes and the gateway should be at least 15-20 feet to avoid communications failure due to the RF signal being too strong
- All devices must be configured with the same radio network to communicate
- Each remote device connected to a Gateway must have an unique Slave ID

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