## Thank You

Thanks for purchasing a Modbus Scout Portable RS485 Modbus Communicator from APG! We appreciate your business and your trust. Please take a moment to familiarize yourself with the product and this manual before installation. If you have any questions, don't hesitate to call us at 888-525-7300. You can find the full Modbus Scout manual at: https://apgsensors.com/resources-user-manuals/

# MODBUS SCOUT

## Portable RS485 Modbus Communicator

### Installation Guide

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## 1 Description

Modbus Scout is a portable Modbus sensor configuration device. The simple design allows users to connect to their Modbus sensor in the field via an easy-to-use app or a convenient USB port. Additionally, Modbus Scout can broadcast simple readings to the app, so users can quickly check the status of several devices within range at once.

## 2 How To Read Your Label

Every Modbus Scout device comes with a label that includes the devices's wiring pinout, model number, part number, and serial number. Please ensure the model number and part number on the label match your order.

## 3 Warranty and Return Information

This product is covered by APG's warranty to be free from defects in material and workmanship under normal use and service of the product for 24 months. For a full explanation of our Warranty, please visit https://www.apgsensors.com/resources/warranty-certifications/warranty-returns/. Contact Technical Support to receive a Return Material Authorization (RMA) before shipping your product back.

If your Modbus Scout needs to be returned for evaluation, contact us via email, phone, or on-line chat on our website. We will issue you an RMA number with instructions. You can also find the form on our website by clicking "RMA" in the web footer, or go to apgsensors.com/RMA-Form

- Phone: 888-525-7300
- Email: sales@apgsensors.com
- Online chat at www.apgsensors.com

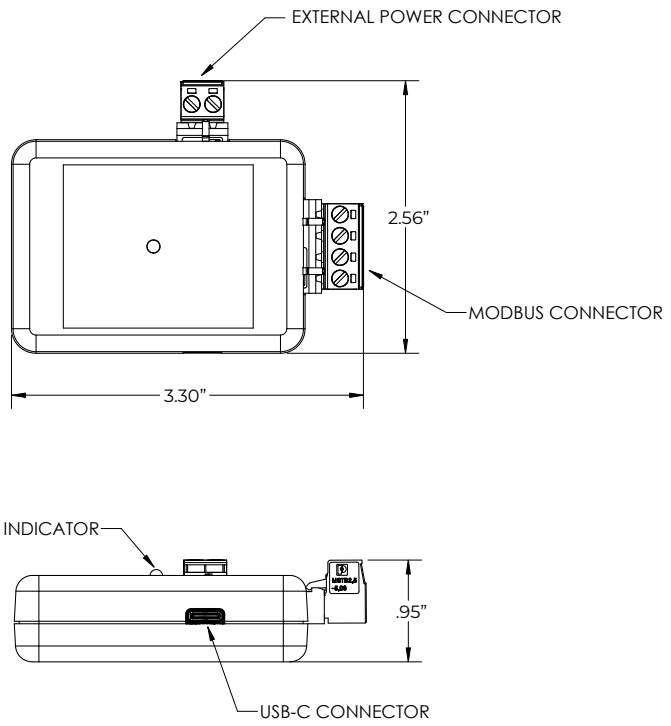
Please have your part number and serial number available.

## 4 General Care

Your Modbus Scout is very low maintenance and will need little care, as long as it is installed correctly. However, in general, you should:

- Avoid applications for which the device was not designed, such as extreme temperatures, contact with incompatible corrosive chemicals, or other damaging environments.

## 5 Dimensions




**Modbus Scout**

## 6 Installation Procedures

Modbus Scout can be used as a portable device to set up a RS485 Modbus sensor or it can be installed and set to broadcast mode, allowing users to view 1-2 registers per device on the Bluetooth app within range without requiring a paired connection.

Modbus Scout should be installed only in environments that meet the following conditions:

- Indoor areas with little to no exposure to water or dust
- Temperature between 0 to 140° F (-18 to 60° C)

Modbus Scout can be connected to APG Scout Communicator app via Bluetooth for convenient setup.

Connecting Modbus Scout to a Windows computer via USB will create a virtual COM port. This connection allows the device to be used with other Modbus software products or basic serial terminals.

### Interface Platform Options

| | Bluetooth to App | USB to App | USB to virtual comm port |
|---|---|---|---|
| Windows | X | X | X |
| Android | X | X | |
| Mac | X | | |
| IOS | X | | |

## 7 Wiring Information

Modbus Scout can be powered via the 2-Pin External Power connector or the USB connector. If both connectors are plugged in, power will be supplied by the 2-Pin External Power.

**Power In Options**

- 2-Pin Connector: 8 to 30 VDC, 3 Amp max
- USB C

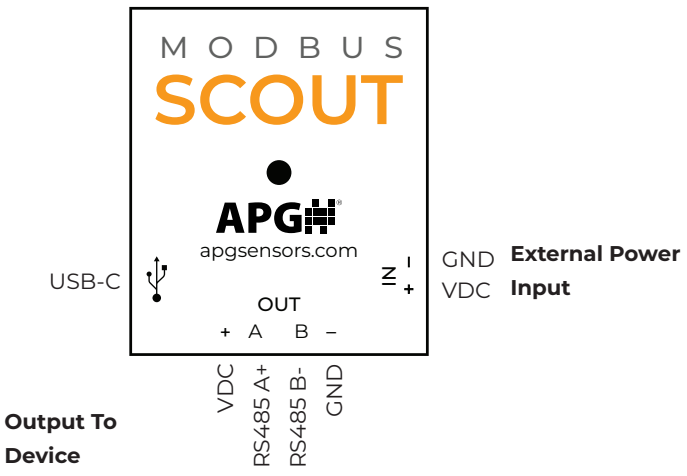
**Power Out (to 4-Pin Modbus Connector)**

- If powered via the 2-Pin connector, the output voltage approximately equals the input voltage*
- If powered via USB-C, the output voltage is regulated to 24V (max 70mA)

> ***Warning**: Due to internal circuitry, the output voltage will be slightly less than the input voltage when using the 2-Pin External Power.

### Wiring Pinout

The wiring pinout is printed on the Modbus Scout label.




## 8 APG Scout Communicator App

Install the APG Scout Communicator app on a Bluetooth compatible device. Search for "APG Scout Communicator" in the app store or click one of the links below.

- Android: https://play.google.com/store/apps/details?id=com.apg.ble
- Windows: https://apgsensors.com/resources/product-resources/software-downloads/
- Mac and IOS: https://apps.apple.com/us/app/apg-scout-communicator/id6741690341

For a full description of app function, please see the Modbus Scout User Manual.

**Connect to your device:**

1. Press "Scan for Devices" then press "Scan" to look for available devices.
2. Identify your device and press "Connect." For first time setup, identify device by the serial number on the label. The LED will turn solidly blue when connected.

**Serial Configuration:**

1. Press "Configure" to enter the Serial Configuration page.
2. Set the desired Baud Rate, Parity, Stop Bits, and Timeout for your sensor. If you are connecting to an APG Modbus sensor, these will already be set to sensor defaults. Check the sensor's user manual for more information on RS485 Modbus communication settings.
3. Press "Send."
4. In the Device Configuration page, change your Device Name and setup the Broadcast Mode settings (optional).
5. Press "Save" to save settings and return to the Scan For Devices page.

**Read/Write Sensor Registers:**

1. Press "Communicate."
2. Set the Device Address and choose the APG sensor model from the "Model" list.
3. The sensor's calculated and raw reading will appear, along with the Modbus registers.
4. To change a register value, enter the desired value in the register line. Press "Write" to save changes. Press "Read" to see current sensor values.

**Setup Broadcast:**

1. Press "Configure," then press "Send."
2. In the Device Configuration page, set your Device Name to your preferred broadcast name.
3. Check the "Broadcast Mode" box.
4. Set the Broadcast Timer Interval. This is how often Modbus Scout will read the selected register (in seconds).
5. Press the (+) button to setup a register to broadcast. Set the Modbus ID, Register (Input registers only), Register Type (U16 or I16), and Function Code.
6. Press "Test Modbus Message" to read the selected register. If the register is not an input register, a Timeout Error will appear. Press "Save"

**View Broadcasts:**

On the app home page, press "Broadcast Mode" to see all broadcasting devices within range. The "Last Update" and "Reading" boxes will flash red when Modbus Scout communicates with the app, roughly every 5-10 seconds.