Thank You

Thanks for purchasing a Settler Remote Monitoring Device 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 Settler manual at: https://apgsensors.com/settler

SETTLER

Remote Monitoring Device

Installation Guide

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APG

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Doc # 9006889 Rev B

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Description

Settler is a versatile remote monitoring gateway designed for seamless sensor data acquisition via Modbus RS485 and 4-20mA inputs. It supports up to four 4-20mA sensors and multiple Modbus sensors. Collected data is encrypted and securely transmitted to APG's cloud-based monitoring platform, Explorer, using MQTT with AES (Advanced Encryption Standard). With Ethernet or Wi-Fi connectivity model options, Settler ensures reliable communication and robust data security, making it ideal for remote monitoring and control applications across various environments. The Ethernet version connects via a standard network cable, while the Wi-Fi version supports wireless setup and communication through a secure 2.4 GHz network.

2 How To Read Your Label

The Settler label indicates the power, 4-20 mA, and Modbus connector pinouts. The manufacturing label contains the part number and the serial number, which is used to identify your Settler in APG's cloud-based monitoring platform Explorer.

#10 BOLT HOLE WITH COUNTERBORE 4.89" 124.2mm Power Modbus 35.1mm

Settler

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 apgsensors.com/warranty-returns. Contact Technical Support to receive a Return Material Authorization (RMA) before shipping your product back.

If your Settler needs to be returned for evaluation, contact us via email, phone, or online 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

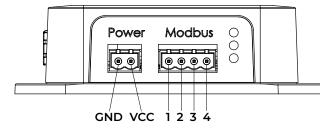
- Phone: 888-525-7300
- Email: sales@apgsensors.com
- Online chat at www.apgsensors.com

Please have your part number and serial number available.

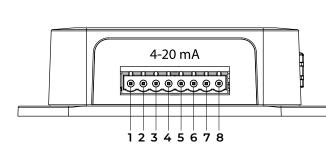
7 Wiring Information

Supply Voltage

- 5 to 32 VDC
- 10 mA at 24V



	Modbus Pinout		
	1	А	
	2	В	
	3	VCC	
_	4	GND	



	4-20mA Pinout		
	1	4-20 in 4	
	2	V+	
	3	4-20 in 3	
	4	V+	
	5	4-20 in 2	
	6	V+	
	7	4-20 in 1	
	8	V+	

4 General Care

Your Settler 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 Settler was not designed, such as extreme temperatures, contact with incompatible corrosive chemicals, or other damaging environments.
- Avoid applications with excessive moisture.

Settler is designed for indoor use only.

5 In the Box

Inside the box you will find:

- Settler Remote Monitoring Device
- Power Connector (2-Pin)
- Modbus (RS485) sensor connector (4-Pin)
- 4-20mA sensors connector (8-Pin)

Ensure you have all components before proceeding.

8 Installation

Settler is intended for indoor use. It can be installed in environments that meet the following conditions:

- The device is protected from excessive moisture, extreme heat, or corrosive environments.
- Adequate space is provided for wiring connections.
- For Ethernet models: Ethernet accessibility (wired network access is required).
- For Wi-Fi models: Reliable 2.4 GHz Wi-Fi signal coverage in the installation area.

Tools & Materials Required

- A flathead screwdriver is required to make electrical connections.
- Settler can be mounted using size #10 bolts.
- For Ethernet version: Use a CAT5, CAT5e, or CAT6 Ethernet cable.
- For Wi-Fi models: A mobile device (phone, tablet, or laptop) with Wi-Fi is required for initial setup.

9 Connect to Network

Connect to Ethernet Network

- Use a CAT5, CAT5e, or CAT6 Ethernet cable. Settler will automatically request an IP address using DHCP.
- When the device connects successfully, it will establish a secure link with explorer.apgsensors.com where you can configure your Settler and sensors.

Connect to Wi-Fi Network

- Upon first boot-up, Settler Wi-Fi will broadcast a temporary Wi-Fi access point. The network name will be the device's serial number.
- Use a mobile device (phone, tablet, or laptop) with Wi-Fi to connect to the temporary access point. The password is 12345678
- Open a web browser and type http://129.168.4.1 into the address bar to access the configuration page.
- Select your preferred 2.4 GHz Wi-Fi network and enter the credentials. The device will
 then connect to your selected network and establish a secure link with
 explorer.apgsensors.com where you can configure your Settler and sensors.

Settler Wi-Fi will automatically connect to the chosen network when it is available. If the network is unavailable, Settler Wi-Fi will broadcast the temporary Wi-Fi access point to allow configuration.

10 LED Indicators

LED Color	State	Meaning
Green	Solid	Settler is powered on
Yellow	Blinking Fast	Searching for internet connection
Yellow	Blinking Slow	Connecting to explorer.apgsensors.com
Yellow	Solid	Successfully connected to explorer.apgsensors.com
Red	Solid	Error detected — check connections and settings

Once the Yellow LED is solid, Settler is fully operational and is sending data to $\underline{\text{explorer.apgsensors.com}}$

© Connect to Explorer

Sign In

New users are sent an email invitation to sign up in Explorer. Existing users can send invitations to other members of their organization. If you did not receive an invitation email, please contact APG.

Set Up New Sensors

- Go to <u>explorer.apgsensors.com</u> and sign in.
- 2. Click "My View" at the top of Explorer webpage.
- 3. Click the Group card.
- 4. Click your Gateway card. Check the label on the side of Settler to identify its unique Gateway ID number (serial number).
- 5. On the Sensors page, click the "Configure Gateway" button on the right.
- 6. Follow the steps of the Gateway Configuration Wizard.
 - a. Name the Gateway.
 - Add sensors. For APG sensors, choose the sensor from the Sensor Model dropdown list. Give the sensor a name. Set the Modbus ID (Modbus sensors) or select the Power Line (4-20mA sensors).
 - c. Set Gateway Timings, Alarms (optional), and Location (optional).

7. To see sensor readings, click on the Sensor card and look at the Chart.

- d. Click "Finish" to save the configurations and send any pending commands.

NOTE: For a complete description of the features and tools in Explorer, check out the official **Explorer User Manual** at <u>apgsensors.com/explorer-manual</u>

11 Connect Sensors

For 4-20mA inputs:

- Each Settler unit supports up to four 4-20mA sensors.
- Wire each sensor to the corresponding terminals on Settler.
- The number indicated on the pinout (ie. IN4) refers to the Power Line.

For Modbus RS485:

- Wire sensors according to the pinout on the label.
- If connecting multiple sensors, connect and setup sensors one at a time at explorer.apgsensors.com before adding the next one.

13 Regulatory Compliance

This device contains a 2.4 GHz Wi-Fi transceiver based on the Infineon CYW43439 chipset. The wireless module is certified under the following regulations:

FCC ID: 2ABCB-RP2040

IC: 20953-RP2040

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ISED (Canada) Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil contient des émetteurs/récepteurs exemptés de licence qui sont conformes aux CNR d'Innovation, Sciences et Développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.