



# OIL & GAS

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## AT APG, WE'RE DEDICATED TO YOUR SUCCESS

We design and manufacture innovative level and pressure sensors to solve real-world, niche problems across industries. APG's mission is to design, develop, and manufacture top quality and highly valued industrial measurement equipment and data service.

APG sensors are trusted in applications across many industries, including but not limited to:

- Water/Wastewater
- Food & Beverage
- Chemical & Petrochemical
- Mining & Minerals
- Medical & Pharmaceutical
- Aerospace
- Oil & Gas
- Car Wash
- Agriculture
- Power

As an **ISO 9001:2015-certified manufacturer**, quality is at the heart of everything we do. We believe our success is tied to yours—because when you thrive, we thrive.

How can we help solve your level or pressure measurement challenges?

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Our solution experts are ready to assist you.

**Phone, Email, or Live Web Chat:** Monday–Friday, 8 AM to 5 PM MT

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You can also visit our website and fill out our Contact Us form anytime.

At APG, we're here to support you every step of the way.

# PRESSURE SENSORS

APG's pressure sensors leverage advanced piezoresistive technology to deliver precise pressure measurements for liquids. Widely trusted in the oil and gas industry, our pressure transducers excel in both process and storage applications. Our digital pressure gauges provide critical safety monitoring, ensuring accurate pressure control in any system using pressurized vessels or lines. With their user-friendly, highly accurate design, they are an indispensable tool for safety and efficiency. Globally, our Hammer Union pressure transducers monitor drilling mud pressure during drilling operations, alongside the reliable performance of our PT-400 and PT-405 models.

## HAMMER UNION PRESSURE TRANSMITTERS

APG's Hammer Union Pressure Transmitters are built for extreme pressure, intense vibration, and rough handling. Designed with a wider top for easy connector access, these sensors also feature large drain holes to keep water from collecting around the connector.

### HU1502I FIG. 1



#### Intrinsically Safe and Recalibratable

Combining the toughness you need with a recalibration port, the HU-1502I is field-proven and features corrosion-resistant material alongside welded construction.

- | **Range:** Up to 20,000 psi | **Output:** 4-20 mA; 0-5V  
**Enclosure Protection:** IP67/IP65



FIG. 1

# PRESSURE TRANSMITTERS

APG's Pressure Transmitters are engineered and manufactured to provide accurate and reliable pressure measurements everywhere you need them. From protected pump houses to exposed oil rigs, in commercial, industrial, or hazardous environments, you can depend on APG's high-precision pressure transducers.



## PT-200

### Compact General Purpose Sensor

Series PT-200 are rugged, general purpose sensors that offer reliable and accurate measurements in versatile conditions.

**Range:** Up to 10,000 psi | **Output:** 4-20 mA | **Enclosure Protection:** IP65



## PT-300

### Enhanced Output Pressure Transmitter

The small size, integrated electronics, wide operating temperature ranges, and durability make the PT-300 a great option for pressure measurements.

**Range:** Up to 7,500 psi | **Output:** 4-20 mA



## PT-400



### For Harsh Conditions & Hazardous Locations

The PT-400 is built for harsh environments, high vibration, high-pressure spikes, and even extended temperature compensation.

● | **Range:** Up to 30,000 psi | **Output:** 4-20 mA; 0-5V, 0.5-4.5V, 1-5V, 0-10V; RS-485 with temp. output



## PT-405



### Explosion-Proof

The PT-405 pressure transducer offers high accuracy and reliability over a wide range of pressures with cCSAus approvals.

● | **Range:** Up to 30,000psi | **Output:** 4-20 mA; 0-5V, 0.5-4.5V, 1-5V, 0-10V; RS-485



### PT-L1/L3/L10

#### Amplified Output for General Use

These compact, inexpensive pressure transducers have an amplified output and are great for a wide variety of uses, including OEM applications.

**Range:** Up to 10,000 psi | **Output:** 4-20 mA; 0-5V; 1-5V; 1-6V; 0-10V



### PT-L9/L13/L14

#### Millivolt Output for General Use

Our millivolt output transducers are the economical answer for all general purpose measurements where a cost-effective, high reliability unit is required.

**Range:** Up to 5,000 psi | **Output:** mV/V  $\pm 2\%$

# SUBMERSIBLE PRESSURE TRANSMITTERS

APG's submersible pressure transmitters are incredibly versatile, often used in waste liquids. Their low current draw makes them popular for battery-powered applications. With our pressure transmitters, you can get a pressure level reading inside a tank, well, containment vessel, or outside in areas prone to running or standing liquids.

APG's PT-500 Series Submersible Pressure Transmitters are the only transmitters on the market with **built-in lightning transience protection, Class I Division I certification, and field-adjustable zero**. The PT-500 Series is compatible with Settler and Explorer for remote monitoring via the internet.



## PT-500-P1



### For Clean Liquids

The PT-500-P1 for clean liquids offers unparalleled reliability and accuracy in industrial applications. Features field-adjustable zero for flexible and easy installation.

● | **Range:** 250 psi | **Output:** 4-20 mA; 0-5, 1-5, 1-10 VDC; mV/V; Modbus RS-485



## PT-500-P38/39



### For Harsh, Dirty Liquids

The patented, welded cage on the PT-500-P38/39 is designed to protect the sensitive diaphragm in turbulent and dirty liquids. The cage is either removable and reusable, or permanently welded to the PT-500.

● | **Range:** Up to 575 ft. | **Output:** 4-20 mA; 0-5, 1-5, 1-10 VDC; mV/V; Modbus RS-485



## PT-500

### For Chemical Applications

The PT-500, made with durable PVDF, excels in harsh chemical environments with precise performance and unmatched reliability.

**Range:** 30 psig | **Output:** 4-20 mA; 0.5-4.5 VDC (Ratiometric)

# LEVEL TRANSMITTERS

APG offers both contact and non-contact level transmitters that provide continuous level measurements. APG manufactures level transmitters that can be used to determine the level of liquids at any given time. Many of the level transmitters can additionally be used for point-level detection.

## ULTRASONIC LEVEL SENSORS

Ultrasonic sensors are ideal for tank-level monitoring, sump control, and flow measurement in oil and gas operations. They offer reliable, non-contact measurement with programmable outputs for distance, level, or volume.



### LPU-2428



#### Intrinsically Safe, Loop-Powered

Made for highly configurable measurement in linear and non-linear tanks and channels, the LPU-2428 can internally calculate distance, level, open-channel flow, or volume.

● | **Range:** 1–25 ft. | **Output:** 4-20 mA | **Enclosure Protection:** IP65



### IRU-2420



#### Non-Incendive Mid-Range Sensor

The IRU-2420 series provides a non-contact method of detecting distance or proximity, with on-board level or volume calculations.

**Range:** 1–25 ft. | **Output:** 4-20 mA; 4-20 mA w/ 2 NPN trip points | **Enclosure Protection:** IP65



### IRU-3430



#### Non-Incendive Long-Range Sensor

With built-in technology to compensate for unpredictable variables, the IRU-3430 is designed to excel in long-range applications, like crane collision-avoidance.

**Range:** 1.25–50 ft. | **Output:** 4-20 mA; 4-20 mA w/ 2 NPN trip points | **Enclosure Protection:** IP65



### IRU-6429



#### Datalogger Compatible

The IRU-6429 features auto-sense software for quick and easy programming, and an excitation input for datalogging.

**Range:** 1–30 ft. | **Output:** 0-2.5V, 0-5V; RS-232  
**Enclosure Protection:** IP65



### DST



#### Mid-Range Pump Control

DST ultrasonic sensors pair with APG's DCR controller for a simple, stand-alone system, delivering accurate distance data over 2000 feet with no signal loss.

**Range:** 1–50 ft. | **Output:** DCR Controller  
**Enclosure Protection:** NEMA 6P, NEMA 12, IP65



### IRU-5000



#### Non-Incendive Short-Range Sensor

IRU-5000s have the smallest blanking distance in APG's ultrasonic sensors at 4 in., making them perfect for precise use in tight quarters, such as small container level measurement.

**Range:** 4–79 in. | **Output:** 4-20 mA; 4-20 mA w/ 2 NPN trip points; 0-2.5V, 0-5V; RS-232 | **Enclosure Protection:** IP65



### IRU-2000



#### For Object Detection

IRU-2000 Series ultrasonic sensors are ideal for presence/absence detection, proximity detection or measurement, object profiling, and more.

**Range:** 1–25 ft. | **Output:** 1 SSR; Isolated 4-20 mA; RS-485 w/ 1 NPN trip point; 4-20 mA w/ 2 NPN trip points | **Enclosure Protection:** NEMA 4X



## MNU-IS



### Intrinsically Safe Modbus Sensor

MNU-IS offers Intrinsically Safe, power-saving ultrasonic sensing with QuickMode, optional surge protection, and easy RS-485 Modbus integration.

- **Range:** 5 in.–25 ft. | **Output:** Modbus RS-485  
**Enclosure Protection:** IP68 (M12 connector only rated IP67)



## MNU

### Web-Enabled Modbus Sensor

Built for any Modbus application, the MNU is compatible with any Modbus controller and can be monitored online when paired with APG's Settler and Explorer.

- **Range:** 4 in.–40 ft. | **Output:** Modbus RS-485  
**Enclosure Protection:** NEMA 6P



## LOE



### Web-Enabled Sensor & Controller

Designed for remote measurement, the LOE series connects to the internet to provide online monitoring via APG's Explorer.

- **Range:** 7 in.–40 ft. | **Output:** TCP/IP; Up to 2 Isolated Solid State Relays (120V / 120 mA max) | **Enclosure Protection:** IP65



## LPU-2127



### Built-In Keypad & Display

The LPU-2127 features an LCD display for easy programming performed entirely through the built-in keypad.

- **Range:** 1–25 ft. | **Output:** 4–20mA; 600 ohms @ 24 VDC; 150 ohms @ 12 VDC  
**Enclosure Protection:** IP65

# CONTINUOUS FLOAT LEVEL TRANSMITTERS

THE MPXI-F series features Class I Zone 0/1 rating which allows for an Explosion Proof connection to a Zone 1-installed housing on top of a Zone 0-installed probe stem.

## MPXI-F (PVDF) FIG. 2



### PVDF (Kynar) Flexible Stem

The MPXI-F/K features a proprietary PVDF-blend flexible stem and optional high-level float switch for simple installation in the tallest of tall tanks.

● | **Length:** 10–50 ft. | **Output:** RS-485 Modbus; 4–20 mA  
**Enclosure Protection:** NEMA 4X; IP66

## MPXI-F (STAINLESS STEEL) FIG. 3



### Stainless Steel Flexible Stem

The MPXI-F/B features a 316L SS flexible tubing braided stem that uncoils easily for simple installation in tall tanks.

● | **Length:** 4–32 ft. | **Output:** RS-485 Modbus; 4–20 mA  
**Enclosure Protection:** NEMA 4X; IP66

## MPX-F FIG. 4



### Stainless Steel Flexible Stem

The MPX-F is designed for effortless installation in tall tanks, thanks to its corrosion resistant 316L SS flexible tubing with a braided stem.

● | **Length:** 10–32 ft. | **Output:** RS-485 Modbus; 4–20 mA  
**Enclosure Protection:** IP65



FIG. 2

FIG. 3

FIG. 4

Our original magnetostrictive probes carry Class I Division 1 / Class I Zone 1 Flameproof (Explosion-Proof) certifications for installation in hazardous areas throughout North America.



### MPX-E



#### Float Transmitter—Low-Level Capable

With a 0.5 in.-diameter 316L SS stem available in lengths up to 12.75', the MPX-E is built to handle tough environments—while offering low-level float measurement capabilities.

● | Length: 1–12.75 ft. | Output: RS-485 Modbus; 4-20 mA  
Enclosure Protection: IP65



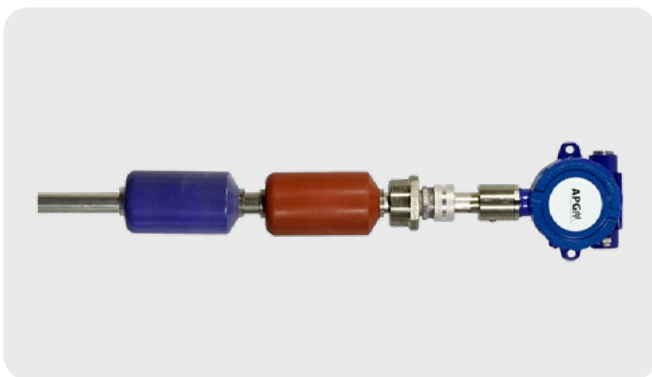
### MPX-E CHEMICAL



#### Float Level Transmitter for Harsh Environments

An anti-corrosion stem sleeve, a chemically-resistant float, and Explosion-Proof ratings allow the MPX-E Chemical to handle chemicals in small-scale containers and transport settings.

● | Length: 1–12.75 ft. | Output: RS-485 Modbus; 4-20 mA  
Enclosure Protection: IP65



### MPX-R



#### Explosion-Proof Float Level Transmitter

The MPX-R's large, buoyant, and robust float allows it to be used in harsh applications where fouling or buildup might otherwise be of concern.

● | Length: 4–31.5 ft. | Output: RS-485 Modbus; 4-20 mA  
Enclosure Protection: IP65



### MPX-T



#### Titanium Float Level Transmitter

The MPX-T's 1 in. Ø titanium stem extends its chemical capabilities for use in rougher, tougher environments, including H<sub>2</sub>S.

● | Length: 4–25 ft. | Output: RS-485 Modbus; 4-20 mA  
Enclosure Protection: IP65

# LOW LEVEL FLOAT

## ALSO KNOWN AS THE BUNA FLOAT

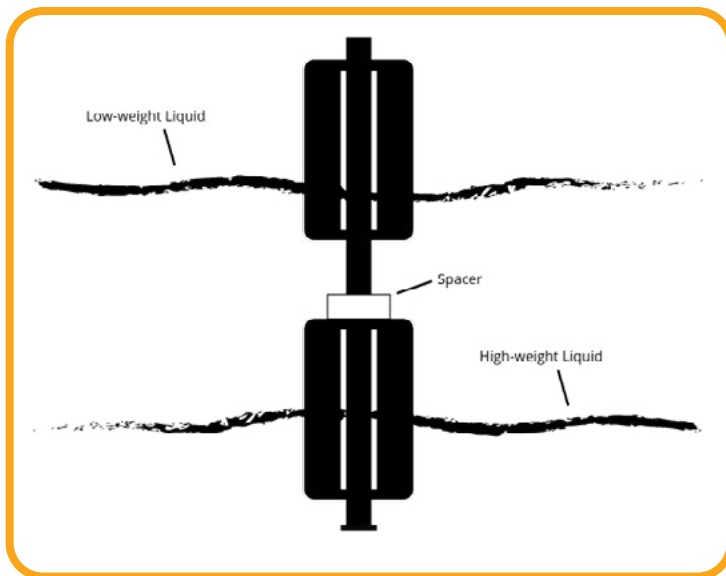
### How It Works

The low-level (Buna) float option enhances continuous level measurement by allowing the sensor to accurately detect and monitor liquid levels near the bottom of a tank or vessel. As liquid levels rise and fall, the float moves with the surface of the liquid, enabling the probe to continuously track level changes with precision and reliability.

Low-level float configurations are ideal for applications where accurate measurement at minimal liquid level is important. They help operators:

- Improve low-level measurement accuracy
- Detect critical low liquid conditions
- Protect pumps and equipment from dry-run situations
- Maintain better process and inventory control
- Support reliable operation in demanding environments

Our low-level float is compatible with many MPX/MPI configurations. Ask our sales team how the low-level float might work for you.





## MPI-E



### Float Level Transmitter for Small Tanks

With a 0.5 in.-diameter 316L SS stem that comes in lengths up to 12.75', the MPI-E is built to handle tough environments in small spaces.

- | **Length:** 1–12.75 ft. | **Output:** RS-485 Modbus with Surge Protection | **Enclosure Protection:** NEMA 4X; IP65



## MPI-E CHEMICAL



### Float Level Transmitter for Harsh Environments

With a sleeve to keep the probe safe in corrosive liquids, and Intrinsic Safety ratings, the MPI-E Chemical is perfect for small-scale measurements in harsh environments.

- | **Length:** 1–12.75 ft. | **Output:** RS-485 Modbus | **Enclosure Protection:** NEMA 4X; IP65



## MPI-R



### Float Level Transmitter for Large Tanks

The MPI-R's 1 in.-diameter 316L SS stem and 31.5' max length allow it to bring precision measurement to bigger tanks and thicker liquids.

- | **Length:** 4–31.5 ft. | **Output:** RS-485 Modbus | **Enclosure Protection:** NEMA 4X; IP65



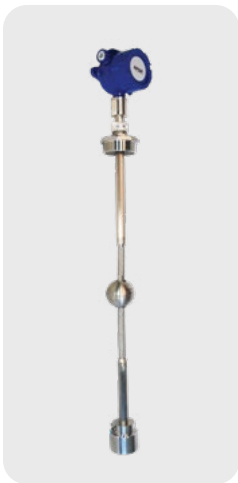
## MPI-T



### Titanium Float Level Transmitter

With a 1 in. Ø titanium stem, Class I Div 1 and Class I Zone 0 approvals, and floats that just don't get stuck, the MPI-T is built to conquer corrosive chemicals and hazardous locations.

- | **Length:** 4–25 ft. | **Output:** RS-485 Modbus | **Enclosure Protection:** NEMA 4X; IP65



## MPI-F/B (STAINLESS STEEL)



### Flexible Float Level Transmitter

The MPI-F/B features a 316L SS flexible tubing braided stem that uncoils easily for simple installation in tall tanks.

- | **Length:** 4–32 ft. | **Output:** RS-485 Modbus; 4–20 mA | **Enclosure Protection:** NEMA 4X; IP65



## MPI-F/K (PVDF)



### Float Level Transmitter for Large Tanks

The MPI-F/K features a proprietary PVDF-blend flexible stem for easy installation and wiring in the tallest of tanks.

- | **Length:** 10–50 ft. | **Output:** RS-485 Modbus; 4–20 mA | **Enclosure Protection:** NEMA 4X; IP66

# RESISTIVE LEVEL TRANSMITTER

## How They Work

Our RP (Resistive Chain) Probes are designed around two technologies that excel in the ultra-tough environments of oil and gas exploration: resistive chain and large, buoyant floats. Inside each probe stem is a chain of resistors linked by reed switches, which are opened and closed by the magnet in the float traveling up and down the stem. No amount of physical shaking or bumping can change the state of a resistor, and the floats are designed to provide unimpeded movement in thick, viscous liquids.

### RPE FIG. 5



#### 1/2 in. Stem—Industrial Strength Level Probe

Designed with small spaces in mind, the RPE combines a 1/2 in.-diameter stainless steel stem with unsinkable floats for long-lasting, dependable continuous level readings.

**Length:** 11–153 in. | **Output:** Resistive; 4-20 mA  
**Enclosure Protection:** NEMA 4X, 4, & 7; IP65; IP68

### RPX FIG. 5



#### 1/2 in. Stem—Hazardous Location Level Probe

From mud tanks to meat-processing-plant waste sumps, and any hazardous location in between, the RPX doesn't flinch when called to action in challenging environments.

● ● | **Length:** 11–96 in. | **Output:** Resistive; 4-20 mA  
**Enclosure Protection:** NEMA 4 & 7; IP65

### RPM FIG. 6



#### 1.25 in. Stem—Explosion Proof Liquid Level Probe

The RPM is made to work for you and is completely customizable for your needs including: probe length, float type, specific gravity and outputs.

● ● | **Length:** 48–240 in. | **Output:** Resistive; 4-20 mA  
**Enclosure Protection:** NEMA 4 & 7; IP65



FIG. 5

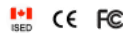
FIG. 6

# RADAR LEVEL TRANSMITTERS

Radar sensors use electromagnetic waves, not physical sound waves like ultrasonics, to measure distances. This makes them ideal for challenging materials. TRUE ECHO® Radar Level Transmitters further enhance performance by ignoring echoes from physical interferences, delivering clearer readings with lower power.



## CR-L



### Liquid Radar Level Sensor

The TRUE ECHO® CR-L delivers precise radar-level readings for industrial liquids, even in tough environments, with a narrow beam for accurate readings.

**Range:** 7.87 in.–49.21 ft. | **Output:** 4–20 mA; RS-485  
**Enclosure Protection:** IP67



## PRS



### Dual-Frequency Radar for Solids

The TRUE ECHO® PRS provides accurate level readings of difficult to measure solids: powders, pellets, grains, and granules.

**Range:** 1–100 ft. | **Output:** 4–20 mA (shared common or isolated); HART; RS-485; RS-232 | **Enclosure Protection:** NEMA 6



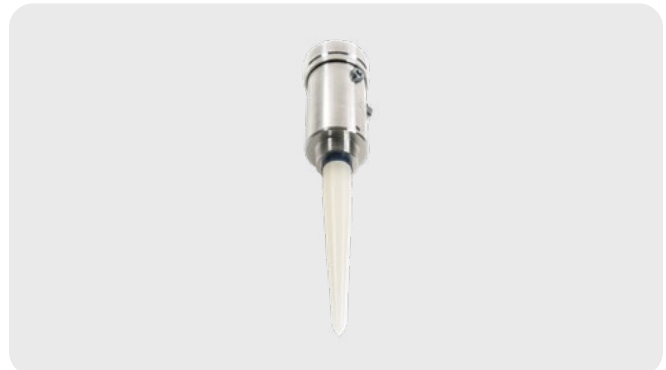
## PRL



### Pulse Radar for Liquids

The PRL provides accurate level readings from all types of liquid level measurement, including oil-water interface measurement via additional firmware.

**Range:** 1–100 ft. | **Output:** 4–20 mA (shared common or isolated); HART 7; RS-485; RS-232 | **Enclosure Protection:** NEMA 6



## PRX



### Explosion-Proof Radar

TRUE ECHO® PRX makes getting dependable level readings in Class I, Division 1, and Class II/III, Division 1 hazardous locations simple.

● | **Range:** 1–100 ft. | **Output:** 4–20 mA (shared common); HART 7; RS-485; RS-232 | **Enclosure Protection:** NEMA 6

# CONTROLLERS & DISPLAYS

APG's controllers and displays simplify remote applications by supporting up to 10 Modbus sensors with centralized monitoring. With features like sensor power supply, easy programming, and tank level management, they're ideal for standalone and compact setups.



## MND

### Modbus Digital Display

Local display that works with up to 10 sensors as a server, client, or power source on any Modbus network.

**Input:** Modbus RTU | **Output:** 4-20 mA; 0-3V; 1 SPDT Relay; 2 NO or NC Relays | **Enclosure Protection:** IP67/IP68



## MDI



### Intrinsically Safe Modbus Display

CI, Z1 display that can power and control a CI, Z0 or CI, Z1 sensor, with optional passive connection to external monitoring network.

● | **Input:** Modbus RTU | **Output:** Modbus RTU | **Enclosure Protection:** IP66



### DDD/DBD



#### Din Mounted Digital Display

Din Mounted Digital/Bright Displays provide highly configurable, 2-line displays with NEMA 4X / IP65 front facing ratings.

**Input:** 0-20 mA, 4-20 mA; 0-5 VDC, 1-5 VDC, 0-10 VDC | **Output:** 0, 2, or 4 SPDT Relays; Isolated 4-20 mA | **Enclosure Protection:** NEMA 4X, IP65



### DDL

#### Large Digital Display

The DDL features 2.8 in. digits readable from 100 ft. with high intensity LED's for direct sun visibility, and a NEMA 4X/ IP65 rated enclosure.

**Input:** 0-20 mA, 4-20 mA; 0-5 VDC, 1-5 VDC, 0-10 VDC  
**Output:** 0, 2, or 4 SPDT Relays; Isolated 4-20 mA points  
**Enclosure Protection:** NEMA 4X, IP65



### LPD

#### Loop-Powered Display

The LPD features a simple three-button interface with a large LCD and supports optional Modbus RTU programming for easy setup.

**Input:** 4-20 mA | **Output:** 4-20 mA; RS-485  
**Enclosure Protection:** IP67, IP68



### DCR-1006A

#### Full Controller with 4 Relays & Signal Outputs

The DCR-1006A is a capable stand alone controller for select APG Modbus level sensors.

**Input:** MNU/MPX Sensor (RS-485), DST Sensor, 1 Dry Contact  
**Output:** 4 Relays, 4-20 mA, RS-485 (Modbus RTU) interface  
**Enclosure Protection:** NEMA 4X, IP66

# SETTLER & EXPLORER



## REMOTE MONITORING GATEWAY & SOFTWARE

Settler is a powerful remote monitoring gateway that works worldwide, effortlessly collecting and transmitting data from any Modbus and 4-20 mA sensor to APG's Explorer platform via MQTT with AES (Advanced Encryption Standard). With reliable connectivity options, and easy setup, and the ability to monitor anything, it ensures real-time insights, robust data security, and seamless industrial monitoring.

**Temp. Range:** -20° to 85°C (-4° to 185°F) | **Input/Output:** Modbus RS485 input; 4x 4-20 mA analog inputs (active loop power provided)  
**Enclosure Protection:** IP40

\*Settler is not intended for use in hazardous environments.

# MODBUS SCOUT (SCT-1)

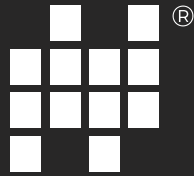


## PORTABLE RS485 MODBUS COMMUNICATOR



Modbus Scout (SCT-1) is a compact RS485 Modbus communication 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.

**Operating Temp.:** -18° to 60°C (0° to 140°F) | **Broadcast Range:** Approximately 33 ft. (10 m) | **Interfaces:** Bluetooth® connectivity via APG Scout Communicator app; USB connectivity via APG Scout Communicator app; USB connectivity via virtual COM port



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