

RPE SANITARY SERIES — RPS

Resistive Chain Probe Level Sensors

USER MANUAL



Automation Products Group, Inc.

Automation Products Group, Inc.

1025 W 1700 N Logan, UT 84321

apgsensors.com | (435) 753-7300 | sales@apgsensors.com

Doc # 9005977

Part # 200472

Rev. D | 03/2026

TABLE OF CONTENTS

Introduction 1

 Reading Your Label 1

Warranty and Warranty Restrictions 1

Chapter 1: Dimensions and Wiring 2

 Dimensions 2

 Electrical Connections & Circuit Wiring Diagram 3

Chapter 2: Install & Removal Procedures & Notes 4

 Tools Needed 4

 Physical Installation Notes 4

 Mounting Instructions 4

 Electrical Installation 4

 Removal Instructions 4

Chapter 3: Maintenance 5

 General Care 5

 Cleaning 5

 Repair & Returns 5

 **NOTE:** Find additional product documents, specifications, accessories, and more on the RPS online product page. Go to:
apgsensors.com/product/rps

INTRODUCTION

Thank you for purchasing an RPE Sanitary Series — RPS Resistive Chain Probe Level Sensor from APG. We appreciate your business and your trust. Please take a few minutes to familiarize yourself with your RPS and this manual.

The RPE Sanitary Series — RPS Resistive Chain Probe Level Sensors are designed to provide continuous liquid level measurement in applications requiring 3-A Sanitary Standards, Inc. compliance. The RPS is designed for effective cleaning by either Clean-in-Place when used in a Clean-in-Place system, or Clean-Out-of-Place when used in a Clean-Out-of-Place system. If Clean-Out-of-Place is needed, the RPS is designed for quick process removal to facilitate Clean-Out-of-Place procedures.

APG's RP family of resistive-chain level probes use a permanent magnet in a float moving over reed switches in the probe's stem to produce a continuous-level-indicating output.

Reading Your Label

Every APG instrument comes with a label that includes the instrument's model number, part number, and serial number. Please ensure that the part number on your label matches your order. Please refer to the back of this manual for 3-A Sanitary Standards, Inc. certificate.

❗ IMPORTANT: RPE Sanitary Series RPS level sensor **MUST** be installed and cleaned according to the 3-A Sanitary standards of the system in which it is installed to meet listed approvals. Faulty installation will invalidate sanitary certification.

WARRANTY AND WARRANTY RESTRICTIONS

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/resources/warranty-returns/.

Contact Technical Support to receive a Return Material Authorization (RMA) number before shipping your product back.

If your product 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.

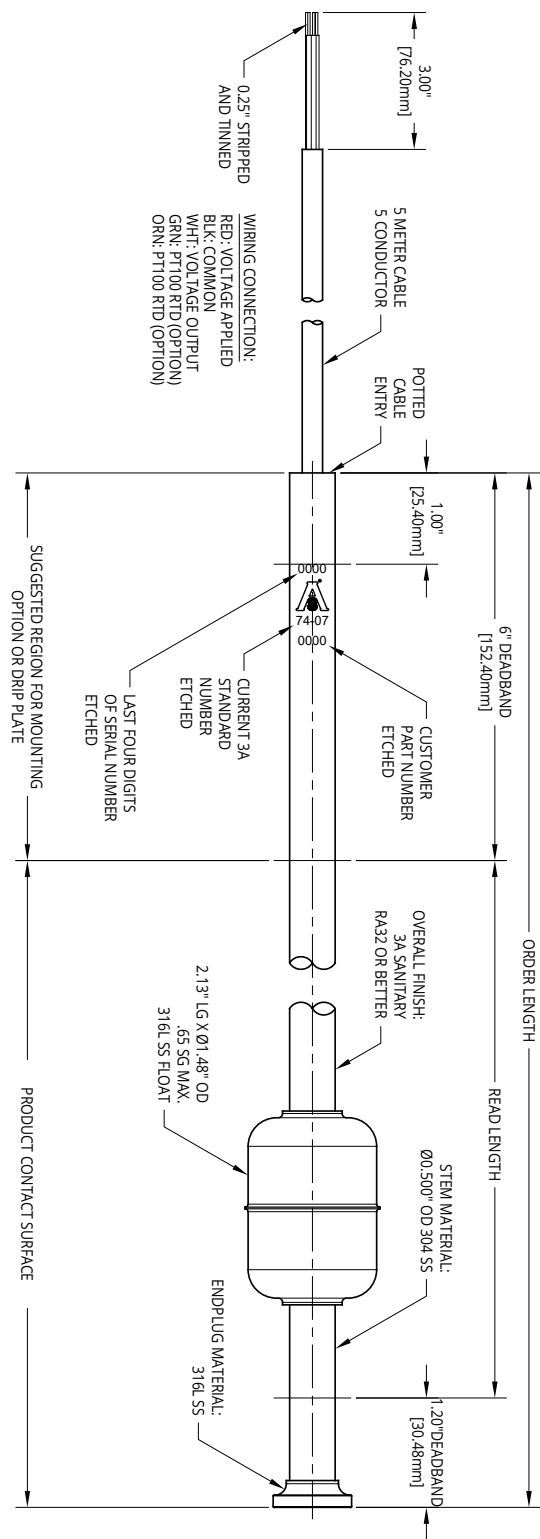
- Phone: (435) 753-7300
- Email: sales@apgsensors.com
- Online chat at apgsensors.com

Please have your part number and serial number available.

CHAPTER 1: DIMENSIONS AND WIRING

Dimensions

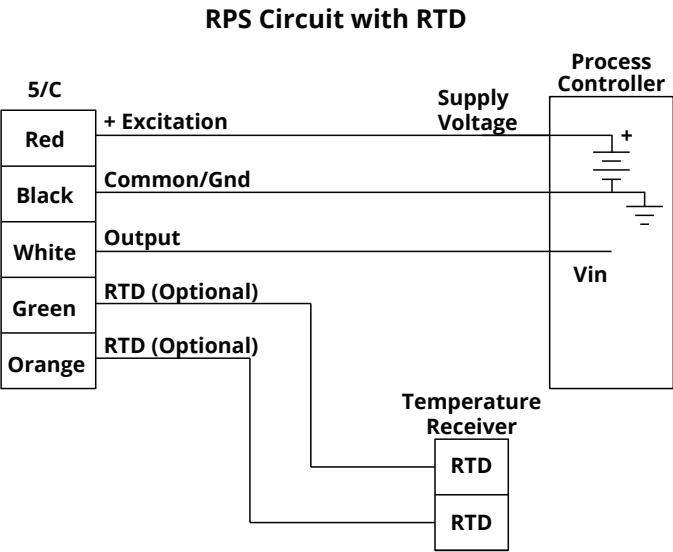
RPE Sanitary Series — RPS Resistive Chain Probe Level Sensor and Float Dimensions



Electrical Connections & Circuit Wiring Diagram

Pigtail		With RTD	Without RTD
	Red	+ Power	+ Power
	Black	Common	Common
	White	Output	Output
	Green	RTD	Not Used
	Orange	RTD	Not Used
	Shield	Earth Ground	Earth Ground

	With RTD	Without RTD
Power Supply	5-30 VDC	5-30 VDC



CHAPTER 2: INSTALL & REMOVAL PROCEDURES & NOTES

Tools Needed

You will need the following tools to install your RPS level sensor:

- Tools to install the RPS in a sanitary application
- Tools to install drip plates or protective covers as required by user's system

Physical Installation Notes

The RPS should be installed in an area—indoors or outdoors—which meets the following conditions:

- Ambient temperature between -18° and 93° C (0°–200° F)
- Temperature of medium between -18° and 93° C (0°–200° F)
- Relative humidity up to 100%
- Ample space for maintenance and inspection

Additional care must be taken to ensure:

- The probe is located away from strong magnetic fields, such as those produced by motors, transformers, solenoid valves, etc.
- The probe is not exposed to excessive vibration.
- The probe is located away from inlets or outlets.

Mounting Instructions

- Ensure that the RPS probe is secured in an upright position, and that only the stem and float are in the liquid to be measured.
- Mount a drip plate or protective cover (not provided) on RPS probe to prevent contaminants from entering the liquid, as needed.

Electrical Installation

- Connect wires from RPS probe to terminals of your control/measurement system.

See Electrical Connections and Circuit Wiring Diagram (page 3).

Removal Instructions

- Removing your RPS level sensor from service should be done with care.
- Detach drip plate or other protective cover from the tank/vessel.
- Remove probe and protective cover from the tank. Ensure that any liquid on the probe is cleaned or contained in a safe and/or sanitary way, as required.
- Clean the stem and floats of any build up or debris and inspect for damage.
- Store your sensor in a dry place, at a temperature between -18° C and 93° C (0° F and 200° F).

CHAPTER 3: MAINTENANCE

General Care

Your RPS level sensor is designed to be low maintenance. However, in general, you should:

- Regularly inspect your RPS to ensure the stem and float are free of any buildup that might impede the movement of the float or create an unsanitary condition.
- Ensure any protective cover is snugly secured. If the cover becomes damaged or is misplaced, order a replacement immediately.

Cleaning

The RPS is designed for effective cleaning by either Clean-in-Place when used in a Clean-in-Place system, or Clean-Out-of-Place when used in a Clean-Out-of-Place system.

Clean-In-Place: Refer to the tank equipment manufacturer's CIP instructions. The user is responsible for ensuring all product contact surfaces are properly cleaned through their "Clean-in-Place" process which should involve a controlled combination of time, temperature, chemical action, and mechanical force to remove all traces of residue, bacteria, and mineral deposits from surfaces.

Clean-Out-of-Place: Use care when removing your RPE Sanitary Series RPS level sensor from service.

- Detach drip plate or other protective cover from the tank/vessel.
- Remove probe and protective cover from the tank. Ensure that any liquid on the probe is cleaned or contained in a safe and/or sanitary way, as required.
- Follow on-site "Clean-Out-of-Place" procedures and inspect for damage.
- Follow Physical Installation instructions on page 4 to reinstall the RPS probe.

Repair & Returns

Should your RPS level sensor require service, please contact the factory via phone, email, or online chat. We will issue you a Return Material Authorization (RMA) number with instructions.

- Phone: (435) 753-7300 or +1 (877) 373-5940 for toll free
- Email: sales@apgsensors.com
- Online chat at www.apgsensors.com

Please have your part number and serial number available. See Warranty and Warranty Restrictions for more information.

❗ IMPORTANT: All repairs and adjustments of the RPE Sanitary Series — RPS Resistive Chain Probe Level Sensor must be made by the factory. Modifying, disassembling, or altering the RPS probe on site is strictly prohibited and may jeopardize your probe's sanitary rating.



Automation Products Group, Inc.
1025 W 1700 N Logan, UT 84321

apgsensors.com | (435) 753-7300 | sales@apgsensors.com