

INDUSTRIAL PRODUCT DATASHEET

Industrial-Grade Optical Rain Gauge RG-9 Rain Sensor

Industrial-Grade Optical Rain Gauge RG-9 Rain Sensor: a reliable, cost-effective, maintenance-free, compact rain gauge for smart agriculture, smart city, climate studies, hydrological network monitoring, irrigation control, and more.

SKU

101990760

UPDATED

2026-08-11 06:22:23

PRICE

\$49.00(Excl. VAT)



Overview



Industrial-Grade Optical Rain Gauge RG-9 Rain Sensor is a maintenance-free, compact optical rain gauge that uses infrared light beams to determine rainfall status and raindrop size, replacing conventional tipping buckets. It offers selectable sensitivity levels and hold times, an open-collector output emulating a tipping bucket plus RS232 serial communications, and a built-in mounting arm for easy installation on weather station masts, buildings, and other infrastructure.

Key Features

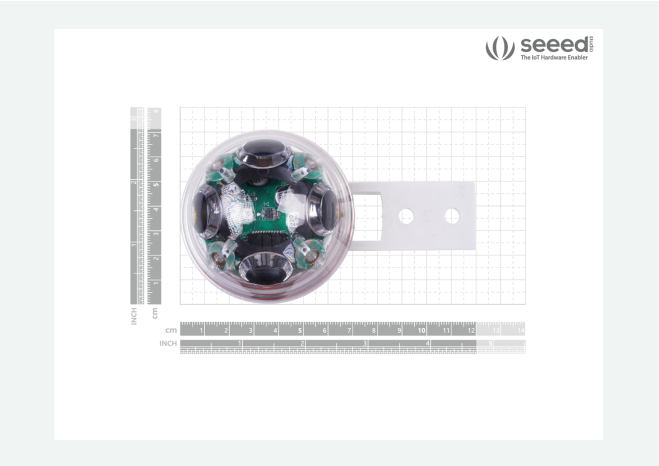
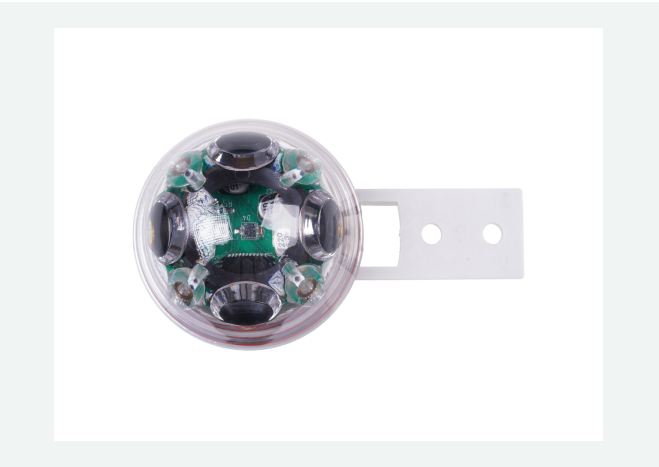
- Industrial-grade: round and reliable lens surface which discourages the collection of debris and dirt
- Easy-installation: on weather station masts, buildings, and other infrastructures
- Maintenance-free: as a low maintenance rain gauge, it can be used for 7-10 years without replacement
- Compacted Sized: as small as a tennis ball
- Wide Application Scenarios

Rainfall volume provides important information for people's decisions and actions in weather and climate studies, hydrological network monitoring, agriculture, food delivery, and many other industries. Taking agriculture as an example, rainfall is one of the most important sources of water for plant cultivation. With accessible precipitation information, farmers can make sound decisions for the irrigation schedule and amount, thus make sure there is sufficient water for crop growth, and not too much water that leads to waste, root rot, or other diseases.

Detecting rain intensity is of vital importance. Thus, this industrial-grade RG-9 Rain Sensor is a perfect fit. It's a reliable, cost-effective, maintenance-free, and compacted rain gauge that uses the change in light beams intensity to determine the rainfall status and the size of raindrop. It sensitively detects when raining is starting and when it is not. This industrial-grade optical rain gauge is intended to replace conventional tipping buckets of rain gauges. It uses beams of infrared light within a plastic lens which are about the size of tennis balls. It is maintenance-free: with the round surface of the lens, there are no collections of debris, no moving parts to stick, or water-pathways to clog. The sensitivity levels include: Rain Drops, Very Light, Medium, and Heavy. The duration of the positive detection is also selectable: No Hold, Hold Time 5 Minutes, Hold Time 10 Minutes, and Hold Time 15 Minutes.

RG-9 Solid State Rain Sensor features an open-collector output that emulates a conventional tipping bucket, as well as RS232 serial communications that provide more detailed data allowing for configuration of the device. It can be configured through the serial port, or optionally via DIP switches. A built-in mounting arm allows for convenient mounting to weather station masts, buildings, and other infrastructure. It's also suitable for solar-powered applications.

Product Gallery



Specification

Parameter	Value
Input Voltage	Range 5-15 VDC on J1 Reverse polarity protected to 50V or 3.3VDC through pin 8 on J2
Current Drain	110 uA nominal. (No outputs on, dry not raining) 2-4 mA when raining
Output	NPN Open Collector Output 500 mA / 80V/300mW Max
Operating Temperature	-40°C to +60°C (Will not detect rain when freezing)
DIP Selectable Sensitivity	Rain Drops Very light Medium Heavy
RS232 Port	3.3V
Supported Baud Rates	1200, 2400, 4800, 9600, 19200, 38400, 57600

	RG-15	RG-9
High Accuracy Tipping Bucket	✓	-
Wiper Control	-	-
Drop Detection	-	-

	RG-15	RG-9
Condensation Sensing	-	-
Irrigation Control	-	-
Rain Water Harvest	-	-
"It's Raining Mode"	-	✓
Low Power	✓	✓
Unique Hardware	-	-
Current Drain	110 uA Nominal 4 mA Raining	110 uA Nominal 4 mA Raining
Tipping Bucket Accuracy	±10% in our controlled environment	-
Serial Communication RS232	Command Based Bidirectional	Command Based Bidirectional

Applications

- **Smart Agriculture**
- **Smart City**
- **Climate Studies**
- **Hydrological Network Monitoring**
- **Condensation and Frost Sensing**
- **Irrigation Control**
- **Drop Detection**
- **Process Control**
- **Opening and Closing Skylights, Vents, Louvers, or Windows**

Compliance & Logistics



HSCODE	9031900090
USHSCODE	9027908800
UPC	
EUHSCODE	9013101000
COO	China

Resource Links

- <https://www.seeedstudio.com/Rain-Gauge-RG-9-p-4744.html>
- [RG-9 Datasheet & Specification](#)

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