

Finally, a Replacement for Tipping Bucket Rain Gauges

Minneapolis, Minnesota (July 29, 2020) Hydreon Corporation has released a new rain sensor that is a rugged and reliable replacement for tipping bucket rain gauges. The new sensor model RG-15 uses beams of infrared light rather than a moving mechanical part to measure rainfall. Consequently, the sensor is impervious to dirt, dust, insects, birds, and the other nuisances that plague traditional tipping bucket rain gauges.

Hydreon has been producing optical rain gauges for over a decade, but the new device is the first such sensor to be deemed by the company as suitable for replacing tipping buckets. The breakthrough has been in the device accuracy; while former Hydreon rain gauges do not claim an accuracy specification, the new RG-15 is nominally accurate to within 10% under controlled conditions. While not as accurate as a properly maintained tipping bucket, it is vastly more accurate than a broken one, or one that has been contaminated by bird droppings or insects. And therein lies the advantage of the RG-15; when deployed in inaccessible locations, tipping buckets frequently fail altogether. The RG-15 has been found by Hydreon corporation to be more accurate than a competing piezoelectric solid-state rain sensor.

The Hydreon RG-15 is based on the same principle used in automotive windshield wiper control systems. The construction is similar to prior Hydreon rain sensors, and the device is about the size and shape of a tennis ball. The improvements in accuracy have been primarily in software, and have been the result of a years-long research effort. Additionally, the new model features a serial communications protocol for simple integration into existing systems, as well as an open-collector output that emulates a mechanical tipping bucket output. The RG-15 consumes just about 100 micro-amps when it is not raining, so the device is well suited to solar power applications.

The RG-15 costs \$79.00 each in quantity of 3, which is cost-competitive with professional tipping bucket rain-gauges. Further information is available at www.rainsensors.com

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