

ORG-815-DS™ Optical Rain Gauge



OSi's ORG® (Optical Rain Gauge) is a superior tool for rain measurement. The ORG® is the only instrument available to measure true rain rate. This means you avoid the reading errors due to mechanical limitations, which plague other low-tech gauges. No other rain sensor comes close to the ORG® in performance and features. Our scintillation technology has undisputed advantages over the competition.

From Antarctica to Saudi Arabia and from Switzerland to Australia, users worldwide rely upon OSi sensors. Our instruments can be found working for airports, transportation authorities (such as state DOT's), businesses, municipalities, universities, research institutions, military, and other government agencies. Our customers include the NWS, FAA, MIT, NASA, USAF, and USGS. If your weather measurement needs involve hydrological profiling, research, or synoptic observation, OSi's sensors will do the job.

OSi's scintillation technology is the best method for optical measurement of rain. Falling rain causes beam intensity variations in the infrared light as it passes through the beam. These irregularities, known as scintillation, have characteristic patterns, which are detected by the sensor and converted to rain rate.

ORG® has a very tough, lightweight frame, which can withstand the rigors of the weather. Lens heaters keep the optical path clear of dew or condensation. The enclosure is rated NEMA-4 (IP 66). The instrument is easily installed using our U-bolt configuration to a vertical pole or horizontal bar. (No special mounting pole required.) ORG® reports rain rate in mm/hr. The output format is a

ORG-815™ Advantages

- **Superior Technology:** ORG® uses Optical Scintillation which is superior to other methods; measures true rain rate
- **Long-term reliability:** operates unattended 24 hours/day, 7 days/week
- **Low maintenance:** no field calibration needed
- **Rugged, all-weather design:** designed for wide-range of climates
- **Easy installation:** simple U-bolt configuration for horizontal pipe or vertical pole
- **Self diagnostics & Testing:** continuously monitors performance and informs user of trouble

common ASCII delimited data string, which is easily handled by a PC or Data Collection System.

ORG® Reports:

Rain rate in Metric units (mm/hr)
Rain accumulation in Metric units (mm)

ORG® Accessories:

QCS-815 Qwik Collect Software: Collects, displays, archives data (compatible w/ all Windows systems)
PSB-815 Power Supply Box for the ORG®
LDM Limited Distance Modem: for distances > 100 ft. (max = 7 miles).

ORG® Ordering Information:

Part number: ORG-815-DS

ORG® is not designed for snow detection. For snow, use our present weather sensors, OWI™, WIVIS® or DSP-WIVIS®. Contact OSi for details.



Optical Scientific Inc. (OSi) • 2 Metropolitan Ct., Suite 6 • Gaithersburg, MD, 20878 • USA
Ph.+01 301 963 3630 • Fax +01 301 948 4674 • www.opticalscientific.com • email: sales@opticalscientific.com

OSi's sensors have more than 200 million hours of proven field operation in all climates. MTBF (Mean Time Between Failure) for OSi instruments is in excess of 45,000 hours. The ORG[®] operates unattended 24 hours a day, 7 days a week. The instrument uses proprietary algorithms that eliminate the need for frequent analog calibration. Field calibration is no longer required. The sensor uses an Automatic Gain Control to compensate for signal loss caused by dirty lenses. The sensor also employs a comprehensive self-test that updates once per minute and reports any potential problems in the output message.

No other precipitation sensors provide this powerful combination of high technology and proven reliability!

ORG[®] Specifications

Performance Specification	
Rain Dynamic Range	0.1 to 500 mm/hr
Rain Accumulation	0.001 to 999.999 mm
Rain Accuracy	5% Accumulation
Rain Resolution	0.001 mm
Measurement Technique	Forward Scintillation
Output Format	RS-232 Serial I/O, simple polled protocol

Electronic Specification	
Supply voltage	Nominal 12 VDC
Fusing	User-supplied 1.0 a Slow Blow
Signal Output	RS-232 ASCII
Transient Protection	All power & signal cables protected

Environmental Specification	
Temperature	-40° to 50° C (-40° to 122° F)
Humidity	0-100%
Precipitation / Dust	NEMA 4 type protection

Physical Specification	
Head Size	730 x 102 x 254 mm (29 x 4 x 10 inches)
Head Weight	3 kg (6.6 lbs.)
Cable Length	15m (48 ft)

*Specifications are subject to change without notice

**ORG[®] is not designed for accurate snow detection. For snow, use our present weather sensors, OWI[™], WIVIS[®] or DSP-WIVIS[®]. Contact OSi for details.



2 Metropolitan Ct.
Suite 6
Gaithersburg, MD 20878 USA
Tel: +01. 301 963 3630
Fax: +01 301 948 4674
website: <http://www.opticalscientific.com>
email: sales@opticalscientific.com

For the world's best performing and most reliable meteorological instruments, please contact OSi today!

