

RhoC 5 Radiometric Sensor



Features

- Bluetooth
- IP68 waterproof
- Temperature range: -20 / +85°C
- 3 Sensors (soil moisture, density, and depth sensor)

Key Applications

- Measure soil bulk density in the field
- Measures backscatter of gamma radiation emitted from a low activity source – can be used without legislation
- Agricultural and construction applications



RhoC 5
Radiometric Sensor

ABOUT

The BNC Medusa Radiometrics RhoC 5 radiometric sensor is used to indicate soil health by measuring field bulk density and soil moisture content directly in the field. Soil quality is crucial for both agricultural and construction endeavors and field bulk density is a critical indicator of physical soil health. The RhoC 5 endorses several useful features, including measurements of backscatter of gamma radiation emitted from a low activity source. This unit only needs a hole of 30 mm diameter to measure up to 80 centimeters deep; there is no need for a soil pit or any laboratory work to determine soil bulk density. Additionally, soil scientists can gather more information on the vertical as well as the horizontal scale because the sensor provides the density measurements in real time.

Any field worker can operate the RhoC 5 with its straightforward interface, ruggedized design, and easily portable form factor. The density meter is controlled over Wi-Fi via an android app, which enables the data acquisition to be monitored by the smartphone and stored locally on the phone itself. Data can easily be exported from the smartphone to a PC or saved on the cloud.

There are three sensors contained in the RhoC 5: a soil moisture sensor, a density sensor, and a depth sensor. The moisture sensor measures the soil moisture content over a layer of 50 mm and is in the nylon tip. 100 mm below the density measurement is the center of the moisture measurement. The density is determined over a layer of approximately 50 mm. The depth sensor utilizes radar technology and returns the depth of the center of the density measurement.

SPECIFICATIONS

General Specifications	
Weight	3.97 lbs.
Length	51.85 in
GPS Accuracy	~0.01 g/cm ³
Data Format Streaming Sensors Internal Storage	JSON, NMEA, CSV RS-232, ethernet, Wi-Fi, Bluetooth Soil density, GPS, moisture 16 GH
Mechanical Dimension Weight Operating T IP rating	Diameter: 1.18 in; Length: 51.85 in 3.97 lbs. -20 to +85 °C IP68
Electrical Input voltage Battery	5V Internal
Connectivity Wi-Fi Ethernet Port	2.4 and 5 GHz 100 Mbps RS-232

DOCUMENT HISTORY

Version	Date	Author	Notes
V1.0	10/10/24	AT	New product initiation

Berkeley Nucleonics Corporation

2955 Kerner Blvd.
San Rafael, CA 94901

Phone: (415) 453-9955
Email: info@berkeleynucleonics.com

berkeleynucleonics.com
berkeleynucleonics.com/downloads