

Model MS-RhoC5 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



MS-RhoC5
Radiometric Sensor

ABOUT

The BNC Medusa RhoC5 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 agricultural endeavors and field bulk density is a critical indicator of physical soil health. The rhoC5 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 1 meter 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 rhoC5 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 rhoC5: 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	JSON, NMEA, CSV
Streaming	RS-232, ethernet, Wi-Fi, Bluetooth
Sensors	Soil density, GPS, moisture
Internal Storage	16 GH
Mechanical	
Dimension	Diameter: 1.18 in; Length: 51.85 in
Weight	3.97 lbs.
Operating T	-20 to +85 °C
IP rating	IP68
Electrical	
Input voltage	5V
Battery	Internal
Connectivity	
Wi-Fi	2.4 and 5 GHz
Ethernet	100 Mbps
Port	RS-232

DOCUMENT HISTORY

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

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