

Bullhorn® RM4211 / RM4251 Remote Monitoring Units (RMU)

Capture AC & DC Voltage Measurements with our Most Adaptable Bullhorn RMUs



Monitor coupon test stations, bonds, decouplers, and solar-powered rectifiers with:

- **3 High-voltage analog channels for AC/DC Pipe-to-Soil, Instant off, Shunts, Rectifier Volts and Amps**
- **Satellite or Cellular Communication**

Key Benefits

- **Versatile** – Facilitates remote monitoring across a range of applications including: coupon test stations, bonds, solar-powered rectifiers, decouplers and more. Their design allows for IR-free instant off readings from a coupon for annual interrupted surveys. They can be mounted on any 3" riser or rectifier. These RMUs can measure up to 100 V on a rectifier or low voltage on a test point application. Ensure Cathodic Protection (CP) effectiveness by recognizing asset failure. Program alarm criteria and alert notifications using Bullhorn Web.
- **Powerful** – No power, no boat, no helicopter, no problem! Their long-lasting battery life (up to 10 years) combined with satellite or LTE Cat M cellular connectivity means these RMUs can be used in very remote locations like swamps, mountains, and private land where cell signal and power sources are not available.
- **Efficient & Cost-Effective** – Streamlined features deliver all the general-purpose CP applications you need, cost-effectively. Their components, including antenna, are internal for easy transport and installation. They measure with one percent of reading accuracy all the way through the range with auto-calibration and auto-zero for every measurement. The measurements are automatically uploaded to Bullhorn Web for diagnosis, monitoring, and optimization. Contact your sales person to learn about their cost-effective data plans.

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Specifications

Input measurement level	±100 V DC 0-100 V AC
Input impedance	10 MΩ
Channel-to-channel isolation:	>200V
Readings	Three analog measurements; any combination of AC & DC pipe-to-soil, On and Off Potentials, Rectifier Volts and Amps (with external shunt), and Bond Negatives. Instant off through Coupon. One percent reading accuracy through the range with auto-calibration and auto-zero for every measurement. 1 mV measurement will be accurate within ±10 microvolts.
Instant Off IR drop edge delay	Configurable IR drop edge delay: 200 ms default
Configuration	Bullhorn Tools via Bluetooth low energy
Communications	RM4211 - IsatData Pro Satellite (Inmarsat) RM4251 - LTE Cat M Cellular (AT&T)
Software Interface	Bullhorn Web Bullhorn Tools for iOS and Android
Battery or Optional Power Supply	Internal, field-replaceable primary and secondary batteries. More than 9-year replacement when recording weekly measurements with weekly transmissions Additional DC input voltage: 10-24 V DC or solar panel
Data Integrity	Data stored in nonvolatile (EEPROM) memory Queued two-way communication (communication to the RMU is queued in Bullhorn Web and is sent the next time the unit wakes up to transmit)
Dimensions	Ø6.06" x 3.96" H (8.22" H with test station adapter)
Environment	-30° C to +60° C
Safety and Compliance	Certification mark: TUV Tested Safety Standards: CAN/CSA C22.2 No. 61010-1-2012 CAN/CSA C22.2 No. 61010-2-030:2012 UL61010-1:2012 UL61010-2-030:2012

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