

# Surge Hardened to perform in the most extreme environments.

Bullhorn S Series stands up better than ever in the field. Intense testing ensures these rugged RMUs withstand lightning strikes up to 30,000 volts.



## Flexible

Monitor and measure more components of the rectifier with five channels:

- ✓ AC and DC Volts
- ✓ Pipe-to-soil Potential
- ✓ Shunts
- ✓ Instant Off
- ✓ Accumulator

## Accurate

AC and DC voltage within one percent of reading accuracy throughout the range. Automatically calibrate and zero every measurement. Find and fix small problems before they become big ones.

## Connected

Transfer data through cellular connectivity, even in the most remote locations.

## Integrated Compliance Solution

Easily import filtered measurements into [PCS™ Compliance Software](#) through [Bullhorn Web](#) to create your compliance reports.

## Unrivaled Warranty

We've got your back. Our industry-leading warranty covers your S Series RMUs against all surge damage for three years.

# Bullhorn RM4150S / RM4151S Specifications

## Inputs

5 Analog Channels (RM4151S has 2 analog channels)	
DC voltage range:	±150 V with accuracy of 1% of reading
AC voltage range:	150 V with accuracy of 1% of reading
Input impedance:	10 MΩ
Scan rate:	Once every 30 seconds
Channel-to-channel isolation:	≥ 250 V DC
Surge:	Survives multiple 30KV strikes. Tested using 50uS waveform to simulate lightning strike.

## 2 Digital Channels

Functions:	Digital input, accumulator, accumulator reset, or contact closure (0 - 24 V DC)
Minimum logic:	1 = 2 V
Maximum logic:	0 = 1 V
Scan rate:	20 scans per second
Minimum pulse width:	250 ms

## Interruption

Switch Out channel	
Maximum current:	500 mA DC
Output voltage:	10-14 V DC
Minimum switching cycle:	1 s
On/off cycle increments:	100 ms
Interruption modes:	Daily, interference, start/stop, continuous, and Instant Off
Interference mode:	Set up to 99 rectifiers or groups for influence studies
Relay types:	NO or NC, solid state or mechanical

## Instant Off

Analog channel 3:	± 10 V DC, sampled 60 times per sec
IR drop edge delay:	0 to 60 seconds in increments of 1 ms
Configuration:	GPS-synchronized measurement using configurable on, off, and delay settings

## Communications

GSM cellular:	Worldwide compatibility on LTE cellular networks
USA:	Carrier independent. Automatically selects the best signal.
Poll, reconfigure, set alarm thresholds & update firmware over-the-air	

## Software Interface

Bullhorn Web
Bullhorn Tools for PC

## Power Supply

AC:	100 - 240 V AC with included AC/DC converter
DC:	10 - 14 V DC (9 - 36 V DC with optional external DC/DC supply)
Backup:	Internal sealed rechargeable battery

## Dimensions

RM4150S/RM4151S:	Polycarbonate enclosure (5" x 2.25" x 8")
External mount (optional): Part #: 517200-000	Aluminum Enclosure (7.3" x 4" x 12.4")

## Environment

Temperature:	-30° C to +70° C
Humidity:	0-95% non-condensing

## Safety and Compliance

Emissions:	FCC Part 15
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