

# Bullhorn RM4016 Remote Monitor



The RM4016 remotely collects cathodic protection (CP) measurements used to demonstrate corrosion mitigation effectiveness. It monitors pipelines, well casings, tanks and other assets by reading rectifier AC and DC volts and amps, pipe-to-soil potential, shunts, test points, and critical bonds. The unit can survive the harshest of conditions, with built in surge protection and optional high energy surge arrester. Solar panel and battery provide reliable power in areas where the main power source may be unreliable or unavailable.

## Remote Monitoring For:

- Rectifier AC and DC volts and amps
- Pipe-to-soil potential
- Shunts
- Critical bonds
- Test points

# Bullhorn RM4016 Remote Monitor

## Key Benefits

### Rugged

The unit can survive the harshest of conditions, with built in surge protection and optional high energy surge arrester.

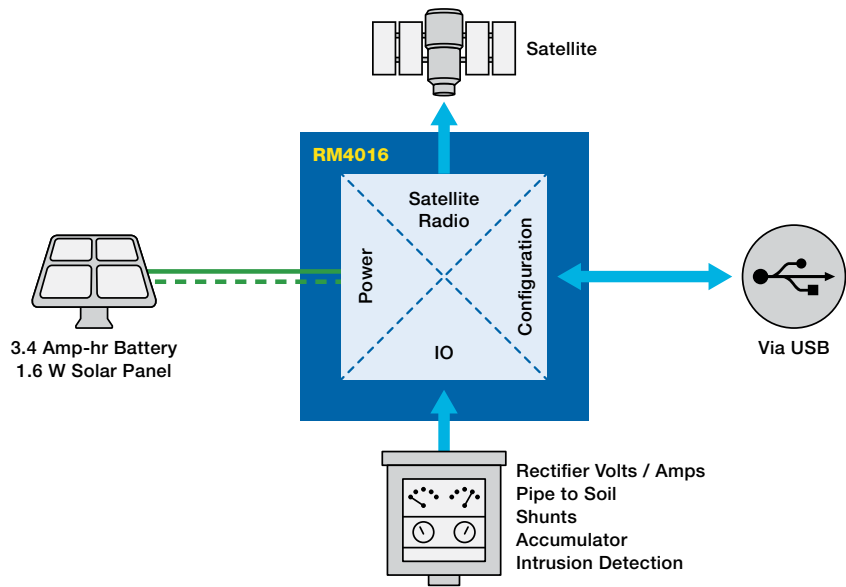
### Reliable

Solar panel and battery provide reliable power in areas where the main power source may be unreliable or unavailable.

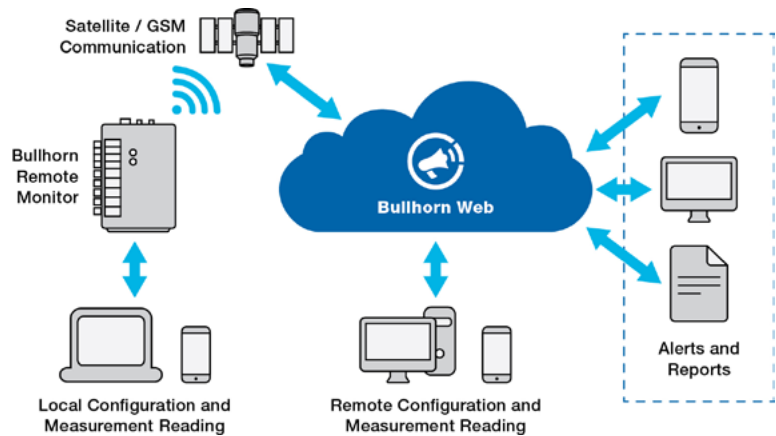
### Integrated Compliance Solution

Complete end-to-end system to prove regulatory compliance, with filtered measurements easily imported into PCS where they can be made into compliance reports.

The RM4016 remotely collects cathodic protection (CP) measurements used to demonstrate corrosion mitigation effectiveness. It monitors pipelines, well casings, tanks and other assets by reading rectifier AC and DC volts and amps, pipe-to-soil potential, shunts, test points, and critical bonds. The Orbcomm IsatData Pro satellite network is used for one-way, global, reliable, low-latency communications. The solar-paneled RM4016 reduces the costs and risks of connecting to 120 V/240 V AC "mains," as well as providing a more reliable power source in areas where the main power source may be unreliable. Measurements are automatically uploaded to Bullhorn Web, a web-based asset manager that works with AI's Pipeline Compliance System to form a full end-to-end regulatory compliance solution from measurement to reporting.



RM4016 System Diagram



Bullhorn Communications Architecture

# Bullhorn RM4016 Specifications

## Inputs

### 4 Analog Channels

Channels 1, 3, 4 DC voltage range: +/- 5 V

Channel 2 DC voltage range: +/- 100 V

Accuracy of 2% of reading

Scan rate: once every 16 seconds

Channel-to-channel isolation:  $\geq 250$  V DC

### 2 Digital Channels

Functions: Digital input, accumulator, accumulator reset, or contact closure (0 - 15 V DC)

Minimum logic: 1 = 2 V

Maximum logic: 0 = 800 mV

Scan rate: once per second

Minimum pulse width: 250 ms

## Communications

Orbcomm - IsatData Pro

## Software Interface

Bullhorn Web

Bullhorn Tools for PC

## Power Supply

Solar: 3.4 Amp-Hr sealed lead acid battery with 1.6 W solar panel

## Dimensions

Weatherproof enclosure 8.5" x 6.5" x 4.5"

## Data Integrity

Data stored in non-volatile (EEPROM) memory.

## Environment

Temperature: -30° C to +70° C

Humidity: 0-95% non-condensing

## Compliance

FCC Part 15

NEMA 4X compliant enclosure

ESD: 8kV Air / 4 kV Contact