

# **METEODATA/ZEBRA-2 FIELD MILL**

## **LIGHTNING ALERT SYSTEM with Data Transmission in real-time**

While the statistical odds of a direct lightning strike are small, the consequences can be catastrophic. The Lightning Alert System is an advanced atmospheric monitoring and lighting warning device, specifically designed to determine when conditions exist where lightning is likely to occur in the local area.

A Modern Atmospheric Electric Field Monitor and an advanced Data logger/Transmitter are combined within the **METEODATA/ZEBRA-2** Lightning Alert System to eliminate the need to take chances.

Organizations involved with explosives, chemical processes, and sensitive operations including military ordnance and aviation facilities use a zero tolerance approach in response to the danger and consequences posed by the presence of lightning. This policy is possible through an ability to monitor the atmosphere for a change in the local electric fields, an approach that has been proven and refined time and again over the last 15 years through use of systems and sensors designed and produced under the most exigent technical requirements.

The simple fact is that without elevated electric fields and a separation of charge lightning will not and cannot occur. The **METEODATA/ZEBRA-2** monitors your location - 24 hours/day, 7 days/week - the reported data updated virtually every second. Monitoring the threat against pre-defined thresholds makes it possible to implement timely decisions and to take action such as triggering alarms and notification devices, engaging auxiliary power sources, or isolating sensitive equipment and data, and more.

**Field Mills** are not Lightning Detectors: but rather, are designed to determine when conditions exist where lightning is likely to occur in the local area. While using a "detector" is an ideal method to confirm that lightning HAS already occurred, it is often too late to be of real operational value especially if the first event occurs either nearby or at the place that is most vulnerable.

Designed for applications where budgets are limited the **METEODATA/ZEBRA-2**, is reliable, compact, and easy to install



**METEODATA/ZEBRA-2 Field Mill**

### **Applications:**

- DOD / DOE Facilities
- Blasting Operations
- AeroSpace
- Hazardous Materials Management
- Atmospheric Research
- Oil & Gas Storage and Handling Facilities
- Military/Commercial Ordnance & Munitions
- Airport FBO and Ground Operations
- Golf Courses and Swimming Pool
- Crane/Heavy Equipment Operations
- Construction Sites
- Public Events and Outdoor Recreation

## Technical Specifications

### Operational

Accuracy of field measurement.....± 5%  
 (when e-field > 500 Volts per Meter)  
 Range.....Storm-dependent, 5 miles radius typical  
 Reliability .....100% notification of field changes  
 False Alarms.....0% chance of providing false indication  
 of field change in the area  
 Response Time.....One second  
 Signal Interface.....Analog {and} 8 bit digital standard  
 Range.....0 to ±10kV/m

### Electrical

Power Requirements .....15 VDC or 20-30 VDC, 120-240V  
 50-60Hz adapter included  
 Power Consumption .....2 Watts  
 Power Protection.....Self-resetting automatic  
 over-current plus Multi-Stage Transient Protection

### Mechanical

#### Motor

Type .....Brushless - 60,000hours / MTBF  
 Speed .....1650 RPM

#### Sensor

Weight .....250 g  
 Dimensions .....height 13.0 cm, diameter 7.6 cm  
 Cable Interface ..Cat 5e STP, 4 Shielded (STP) 4Twisted Pairs

#### Sensor Mount

Weight .....400 g  
 Height (Installed) .....60 cm  
 Junction Box .....Screw terminal, wire interface  
 with 1/2" trade size conduit outlet

#### Construction

Material Aluminum, paint and powder coating  
 for corrosion protection

### Environmental

Operating Range .....From -23 °C to 54 °C

### Communications

Analog Output.....From 0 to ±5 Volt  
 Digital Output .....RS-232 Streaming, fixed 9600 Baud,  
 ASCII Output

### Mounting Hardware

Stand with junction box and mounting brackets for vertical  
 pipe or flat vertical surface mounting

Cable ..... 30m included, can be extended to 90m

Indoor User Interface Box with externalPower Supply  
 Cable protective conduit..... not included

### Data Transmission

The Field Mill is connected directly to the Data Logger /  
 Transmitter Model **METEODATA** for data storage and data  
 transmission in real-time to the Central Receiving Station.



**METEODATA / HYDRODATA**  
 Datalogger with integrated comms  
 (3G, GPRS, Line, Radio or Satellite)