



## LIGHTNING ALERT SYSTEM

### New Cost Affordable Atmospheric Monitoring and Lightning Warning Device

While the statistical odds of a direct lightning strike are small, the sight, sound, and danger of not knowing if, when, and where it will hit creates fear and demands respect. Modern technology, manufacturing techniques, and lower prices are combined within the **ZEBRA Field Mill** 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.

The simple fact is that without elevated electric fields and a separation of charge lightning will not and cannot occur. The **ZEBRA Field Mill** 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 ZEBRA Mill, is reliable, compact, and easy to install.

This sensor is directly compatible with the Data Logger and Transmission Unit Model **METEODATA-2000C/3000C Series** from GEONICA, as a fundamental component of the **LIGHTNING ALERT SYSTEM**

### ZEBRA 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



# ZEBRA Field Mill (Electric Field Sensor)

## as a part of the LIGHTNING ALERT SYSTEM

### Technical Specifications

#### Operational

Accuracy of field measurement.....  $\pm 5\%$   
(when e-field > 500 Volts per Meter)  
Range..... Storm dependent minimum 7 mile radius  
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 Uni-polar

#### 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 - 40,000hours / MTBF  
Speed ..... 1650 RPM

##### Sensor

Weight ..... 25kg  
Dimensions ..... height 13.0 cm, diameter 7.6 cm  
Cable Interface ..... Cat 5 STP, 4 Shielded Twisted 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 protectio

#### Environmental

Operating Range..... -23 to 54 Degrees (C)

#### Communications

Analog Output..... 0-5 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  
Can be purchased locally  
Indoor Power supply..... with user interface  
Cable protective conduit..... not included

#### Data Storage & Transmission

The **ZEBRA Sensor** is directly connectable with the Data Acquisition  
and Transmission Unit Model **METEODATA-2000/3000C** Series as a  
fundamental component of our LIGHTNING ALERT SYSTEM.



**METEODATA-2008C**, Data Acquisition and Monitor / Alarm Unit