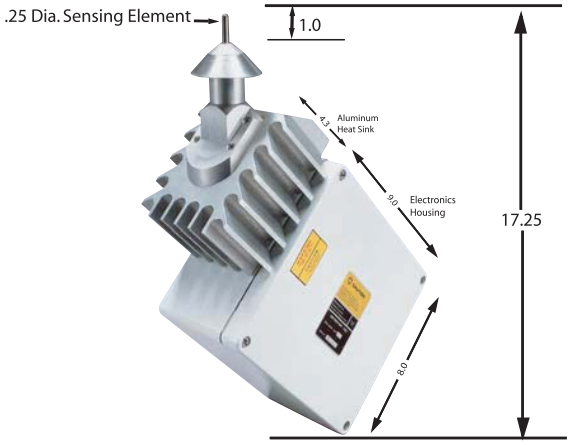
GOODRICH

SENSOR SYSTEMS

MODEL 0872E3
ICE DETECTOR

- > Sensing Technology Eliminates False Signals
- > Advanced Probe Design
- > Self Deicing/Water Shedding Capability
- > Repeatable Measurement



All dimensions in inches

DESCRIPTION

The Goodrich Ice Detector measures precipitation transitions between liquid and solid states. The sensor is designed to measure the intensity and duration of ice storms. It differentiates rain from freezing rain as temperatures approach freezing. Ice accumulations as low as 0.005 inches (0.13 mm) are detected.

The Ice Detector provides real-time, fully automated weather icing data for surface observations. The electrical interface and communications protocol can be configured in a variety of formats.

Operational Benefits

The Goodrich Ice Detector provides field-proven performance in the most severe environmental conditions.

Sensing Technology Eliminates False Signals

- Vibrating probe measures actual ice mass
- Only ice/freezing rain cause characteristic frequency shift

Advanced Probe Design

- Collects icing water droplets regardless of wind velocity
- Detects ice anywhere on the probe (360° sensitivity)

Self Deicing/Water Shedding Capability

- Thermal deicing heaters in probe and strut
- Sloped collar with grooves remove water from probe base

Repeatable Measurement

- Operates without periodic maintenance
- Continuous built-in test verifies sensor functions
- Sensor failures stored on non-volatile RAM for fault diagnostics

Applications

- Automated surface weather observation stations
- Back-up measurement for manned weather observation stations
- Heated structure anti-icing control
  - Broadcast communication towers
  - Electrical power line utility poles
  - Radomes
  - Sidewalk heating
  - Off-shore oil platforms

Weather Research Production Programs

- United States National Weather Service Automated Surface Observing System (ASOS)
- Canadian Atmospheric Environmental Service automated weather station program
- Various test programs in North America, Europe and Asia

SPECIFICATIONS

Ice Signal

Output Range:	Mass equivalent between 0.020 and 0.10 inches (0.5 mm and 2.5 mm)
Output Formats:	RS-232 (300 BAUD)
Input Power Requirements:	115 VAC 60Hz
Power Consumption:	5 Watts in ice sensing mode 350 Watts in deicing mode
Electrical Connection:	Conduit Fiber optic Current loop or customer-specified connector
Sensor Mounting:	Optional mounting pole available

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