0871TD series ice detectors

Affordable ice detection for proven peace of mind

Adding a Collins Aerospace ice detector to your aircraft adds another layer of safety for those situations where icing cues are difficult to sense or during high-workload conditions, when the pilot is focused on other tasks.

We've leveraged our proven experience on ice detection platforms to develop the 0871TD series, designing them to provide an economical choice for general aviation aircraft.

With over 50 years of ice detection experience and innovation, Collins continues to be at the forefront of icing technology. Our flexible, robust designs detect ice in a wide range of icing environments and have demonstrated their capabilities around the world on thousands of aircraft, ranging from commercial and business jets to military fighters and helicopters.

Key features & benefits

- Low power
- Light weight
- Small physical size
- Established core technology
- Robust design and construction leveraged from baseline 0871 series ice detectors
- Unheated strut lowers power consumption
- Small size enables flexibility for mounting and installation
- Built-in testing provides self-diagnostic capability
- Compatible with aluminum or composite skin

Collins Aerospace
An RTX Business

General specifications

Power consumption	
Sensing mode	5 W max. at 28 VDC
De-icing mode	42 W max. at 28 VDC

Discrete outputs: customer-selectable output configuration	
Ice	Open/ground
Fail	Open/ground
Test	Open/ground
Weight	0.7 lbs. max./0.32 kg

Theory of operation

Magnetostrictive technology is used to drive the sensing probe to resonate at its natural frequency. As ice accretes on the probe, a shift in resonant frequency occurs. When the resonant frequency reaches the set point, an ice signal is activated and the probe de-ices.

The heaters remain on for a predetermined time once ice has debonded from the probe to ensure the ice is removed. De-icing takes approximately six seconds. Once the heaters deactivate, the probe quickly cools down to begin sensing again.

Based on operational experience, once the ice signal is activated, it is latched in the "on" configuration for approximately 60 seconds in order to avoid nuisance on/off indications in intermittent icing conditions.

Operational considerations

Functionality is qualified in compliance to Radio Technical Commission for Aeronautics (RTCA) DO-160 for environmental conditions. Software follows the DO-178 process. The unit complies with ASTM F3310-18 requirements. As stated in section 8 of the ASTM specification, installation location is important for proper droplet impingement. For many aircraft, mounting within the first 25% chord on the lower surface of the wing requires no impingement analysis.

Ice detection sensitivity

- Sensitive to less than 0.001 inches (0.00254 cm) of ice
- Indicates detection at 0.020 inches (0.0508 cm)

Learn more at **collinsaerospace.com**

Collins Aerospace
Four Coliseum Centre
2730 West Tyvola Road
Charlotte, NC 28217
USA

Connect with us

RTX.com

Collins Aerospace
An **RTX** Business

Specifications subject to change without notice.
Collins Aerospace is a registered trademark of Collins Aerospace companies.
All other marks are owned by their respective companies.
© 2025 Collins Aerospace. All rights reserved. SON 4554281