

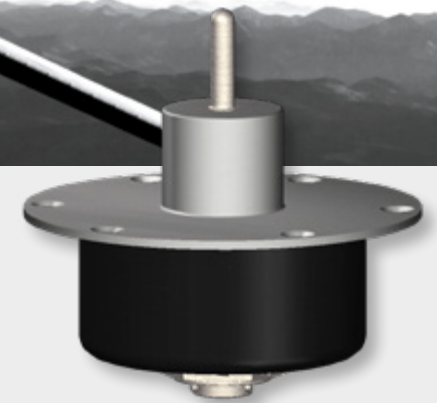


ICE DETECTORS, 0871TD SERIES

AFFORDABLE ICE DETECTION: 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.

The 0871TD Series of ice detectors is designed to be the most economical choice for general aviation aircraft. With over 50 years of ice detection experience and innovation, Collins Aerospace continues to be at the forefront of icing technology. Flexible, robust designs detect ice in a wide range of icing environments and have demonstrated their success around the world on thousands of aircraft, ranging from widebody commercial and business jets to military fighters and helicopters. With the 0871TD series, we've leveraged our proven experience on these platforms to develop a solution for general aviation aircraft.



KEY BENEFITS/FEATURES

- Lower power
- Lighter weight
- Smaller package size
- Same proven core technology
- Same robust design / construction of other 0871 Series ice detectors
- Unheated strut lowers power consumption
- Reduced size offers greater flexibility for mounting and installation
- Built-in test capability verifies internal electronics are functioning properly
- Compatible with aluminum or composite skin

GENERAL SPECIFICATIONS

Power Consumption

| | |
|---------------|-------------------------|
| Sensing Mode | 5 Watts max. at 28 VDC |
| De-Icing Mode | 42 Watts max. at 28 VDC |

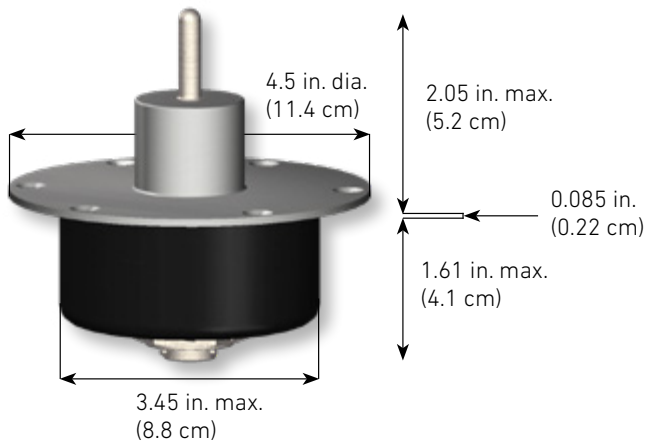
Discrete Inputs/Outputs:

| | |
|------|-------------|
| Ice | Open/Ground |
| Fail | Open/Ground |
| Test | Open/Ground |

| | |
|---------------|-------------------------|
| Weight | 0.7 lbs. max. / 0.32 kg |
|---------------|-------------------------|

THEORY OF OPERATION

Collins Aerospace ice detectors use a magnetostrictive technology 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

Collins Aerospace ice detectors are designed to meet the demanding aerospace requirements of 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)

INSTALLATION

The 0871TD ice detector is designed for outside-in mounting and can be easily installed using the installation kit (included). The kit includes wiring, strain relief, shrink tubing, interconnects, ice/fail/test indicator light for the instrument panel, placard, doubler plate/gasket (if needed), fasteners and instructions.



Specifications subject to change without notice.



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