SFMS
SENSORS AND FLUID MANAGEMENT SYSTEMS
AMETEK



FUEL & INERTING

Oxygen Sensor 8TJ330AAA1

Overview

From the AMETEK that has made oxygen sensors for decades, AMETEK has now developed the lowest weight oxygen sensor available for aircraft fuel tank inerting systems. Qualification is underway for a business jet application. The oxygen sensor contains the sensing element and the electronics to convert the oxygen concentration to a 10 Volt output.

The oxygen sensor uses a heated zirconia ceramic coated with platinum with specialized signal processing to measure oxygen. As such, the oxygen sensor is intended for an inerting gas ducting installation as opposed to the fuel tank itself. The internal heater warms up the element within 2 minutes. Output voltage reflects the oxygen concentration, with 10 Volts correlating to 21%, and accuracy with 0.25%.

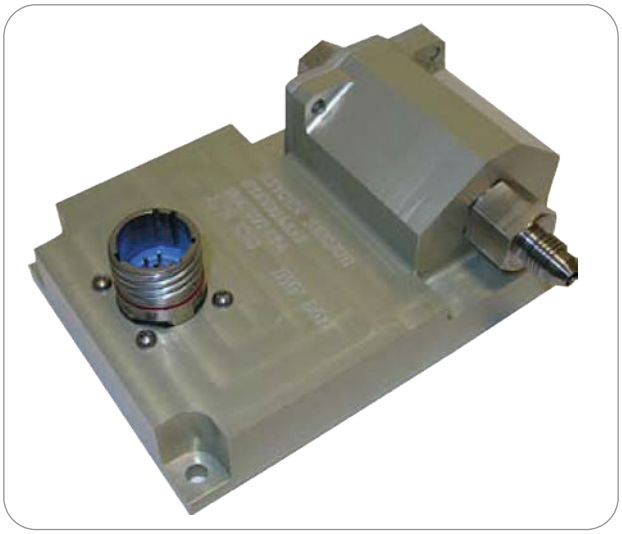
Internal Built In Test (IBIT) capability indicates detected failures with an out of range signal.

The oxygen sensor has passed tests in accordance with DO160 substantiating that the sensor does not ignite in the presence of a flammable fluid mixture. The ports are designed to prevent flames from passing through the sensor.

An optional pressure sensor output can be incorporated.

Features

- *Explosion Proof per DO160 Section 9 Category A*
- *Standard Electrical and Pneumatic Connectors*
- *Analog 10V Output*
- *Internal Built In Test*
- *Optional Pressure Output*



Specifications

Range:	1 to 21% oxygen
Input:	MIL-STD-704/DO-160
Output:	0 Volts non-IBIT fault 0.5 Volts IBIT fault 0.75 Volts Heater Warm-Up 1 to 10 Volts
Operating Temp.:	-40°C to +70°C (-40°F to 158°F)
Inlet Gas:	49°C to 93°C (120°F to 200°F), 15 psig to 82.5 psig
Weight:	1.4 lbs.
Time Response:	From 20% to 10% oxygen concentration: 2 seconds typical

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