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SENSORS AND FLUID MANAGEMENT SYSTEMS
AMETEK



Engine Oil Temperature Sensor

Overview

AMETEK introduces a highly reliable and cost effective method of sensing the temperature of engine oil for GEAE CF6-80C FADEC engines. The Temperature Engine Oil (TEO) Sensor (Model 8TC34ABV1) is comprised of a stainless-steel flanged housing, Mil-C-83723 connector, and type K thermocouple wire sheathed in an MgO matrix inside a stainless-steel tube. All components are welded to form a hermetically sealed unit. The dual element, enclosed thermocouple junction is precisely positioned in the engine oil line.

While the TEO was developed for engine oil, AMETEK has successfully designed and developed temperature measurement devices for fuel and hydraulic systems on commercial and military aerospace applications. AMETEK's understanding of the environmental requirements for these systems provides highly reliable and cost-effective solutions. Temperature measurement can be accomplished using thermocouple or resistance temperature device (RTD) techniques depending upon system interface or accuracy considerations. Mechanical interface options include flange mount or threaded fluid fitting mounting. Electrical connections can be accomplished using receptacle connector or integrated cable assembly with remote termination.

Part Number Replacements:

TEO Probe: GE PN 1963M64P01 / AMETEK PN 8TC34ABV1 replaces GE PN 1459M16P03.



Specifications

Fluid and Ambient Temp.:	-65 to 500 F (-54 to 260 C)
Accuracy:	+2F (+1C), per NIST monograph 175 special half-limits wire
Response Time:	10 sec. max 212 to 32 F (100 to 0 C)
Endurance Cycles:	50,000 pressure, 50,000 temp. cycles
Hermeticity:	1 x 10-8 std cc/sec helium
Fire Proof:	2000 F (1093 C) flame, 15 minutes
Vibrations:	25 Gs to 3000 Hz
Insulation Resistance:	100 megohms min. 400 VDC
Dielectric Strength:	600 VAC
Estimated MTBF:	300,000 hours
Weight:	0.31 lb. (141 g)

Features

- *Rugged, multi-purpose flange*
- *Larger pin contact size 16, rated for 60 Gs vibration*
- *Dual thermocouple elements for critical applications*
- *Special limits thermocouple wire for best accuracy Oversized thermocouple wire for long term stability*
- *Fully certified by OEM - PMA granted*

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