**THERMOMETRICS**
A COMMITMENT TO EXCELLENCE

# A-1737
# Motor Coil
# Temperature
# Sensor

The A-1737 Motor Coil Temperature Sensor provides critical temperature feedback of an electric motor's operating condition. Used by either interlacing into the stator coil, or tied to the neutral bus bar on the motor circuit, it provides a temperature feedback to indicate motor load or stall conditions.

In the event of excessive load or stall in the electric motor, the current in the coil or bus bar increases. This increase in current creates heat in the system which is measured by the sensor. By understanding the temperature conditions, the system can prevent damage to the motor system.

## Applications

• EV/HEV Motor Protection

• Starter/Generator Motor Protection

• Industrial Motor/Generator Protection

• Traction Motor Protection

## Features

• Robust design utilizing the Amphenol Advanced Sensors AL03006 Series of NTC Thermistors, which is exclusively designed for applications in harsh environments

• Qualified in automotive harsh environment conditions

• Assembly materials rated to 210°C

• Configurable for alternative R/T curves and accuracy requirements

• Connector, terminal or straight leads are optional

• Abrasion sleeve utilized to protect wires in application

# Amphenol
## Advanced Sensors

# Specifications

**R @ 25°C**
30,000 ohms ±5%

**R @ 210°C**
155.45 ohms ±11.5%

**B (25/85°C)**
3974K

**Operating Temperature Range**
-40°C to 210°C

**Storage Temperature Range**
-50°C to 210°C

**Response time**
7 seconds liquid to liquid

**Housing Material**
Axial leaded glass NTC thermistor

**Terminal**
Molex Terminal 33011-3001

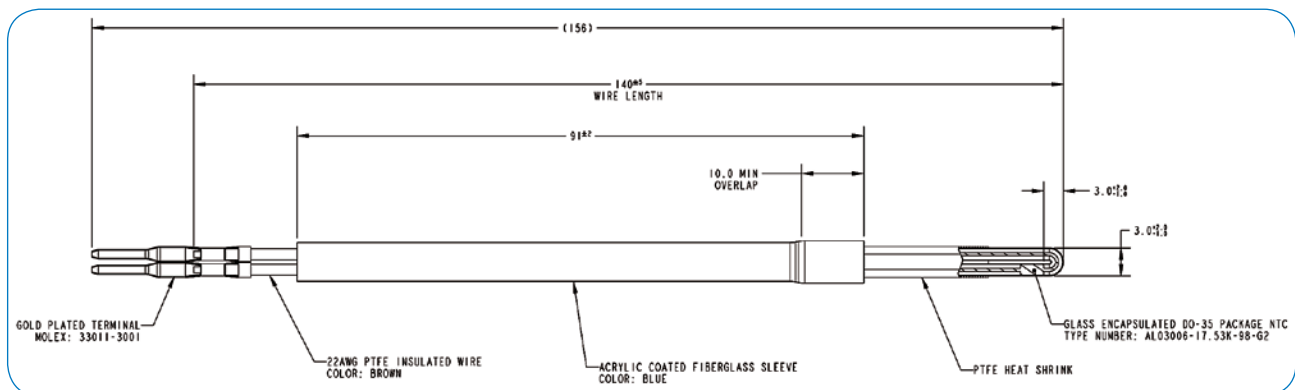**NTC Element Part Number**
AL03006-17.53-98-G2

**Weight**
2 grams

**Ordering Code**
A-1737

**Thermistor Material System**
GE9.8

## Resistance vs. Temperature Data

| Temp | Resistance Ω | ± % Resistance | ± °C |
|------|------|------|------|
| -40 | 965808 | 9.99 | 1.53 |
| 0 | 96255 | 6.51 | 1.30 |
| 20 | 37387 | 5.29 | 1.19 |
| 25 | 30000 | 5.00 | 1.15 |
| 50 | 10850 | 6.42 | 1.68 |
| 80 | 3775 | 7.78 | 2.40 |
| 100 | 2034 | 8.67 | 2.91 |
| 130 | 886.6 | 9.51 | 3.69 |
| 150 | 541.7 | 10.22 | 4.33 |
| 175 | 310.1 | 10.68 | 5.05 |
| 210 | 155.4 | 11.47 | 6.23 |



GOLD PLATED TERMINAL MOLEX: 33011-3001 · 22AWG PTFE INSULATED WIRE COLOR: BROWN · ACRYLIC COATED FIBERGLASS SLEEVE COLOR: BLUE · PTFE HEAT SHRINK · GLASS ENCAPSULATED DO-35 PACKAGE NTC TYPE NUMBER: AL03006-17.53K-98-G2

# Amphenol
## Advanced Sensors

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