

Delphi HVAC Temperature Sensors

▶ Description

Delphi heating, ventilation and air conditioning (HVAC) Temperature Sensors are continuous function devices that change resistance inversely to temperature. Delphi's HVAC product portfolio includes:

- Outside air temperature (OAT) sensor
- Discharge air temperature (DAT) sensor

Design flexibility allows these sensors to be customized to match calibration criteria, and mounting and packaging requirements. The sensors are also capable of system integration.



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▶ OAT Sensor

- Consists of plastic shell and a pre-mold subassembly containing a negative temperature coefficient (NTC) thermistor with a crimpless conductive path
- Measures the ambient air temperature
- Signals the outside temperature display or automatic climate control unit

▶ DAT Sensor

- Consists of a NTC thermistor with a crimpless conductive path protected by a plastic body
- Measures the HVAC air duct discharge air temperature
- Signals the automatic climate control unit

▶ Benefits

- Simple, lightweight, and cost-effective design
- Customized packaging of:
 - Mounting features
 - Sealing options
 - Connection system
 - Resistance output
- Crimpless conductive path eliminates electrical interface
- 100 percent resistance calibration verification helps ensure quality and reliability

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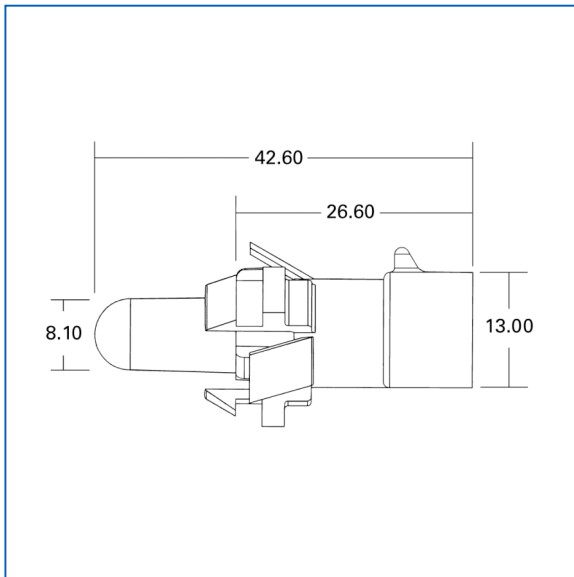
► Specifications for Outside Air Temperature (OAT) Sensor

Thermal and Electrical Properties

- Typical voltage supply: 5 V DC
- Operating temperature: -40°C to +135°C
- Resistance at 25°C: 2795 ohms
- Thermal time constant: 60 seconds in dry air stream
- Accuracy (\pm °C) -40°C to +100°C: 0.56 to 0.77
- Accuracy (\pm °C) +100°C to +150°C: 0.77 to 1.24

Mechanical Characteristics

- Sensor body material: PA6, 12
- Mating hole size: 15.4 mm
- Installation: snap fit
- Overall weight: 3.5 grams
- Color: black
- Suggested mating connector assembly: P/N 15336004



Outside Air Temperature Sensor (OAT) Diagram

Note: All measurements are in millimeters.

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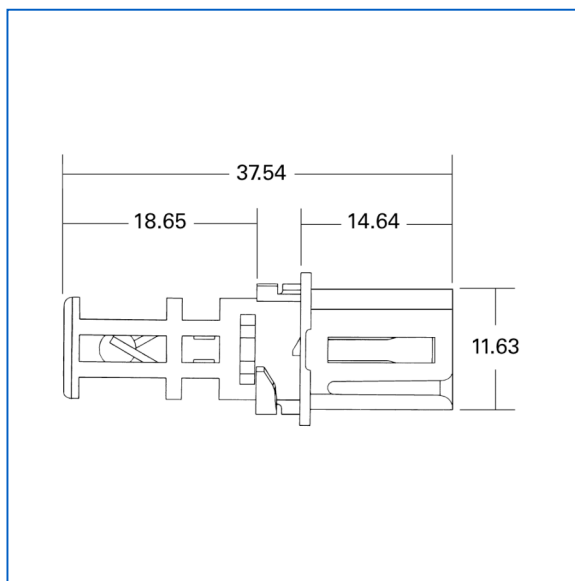
► Specifications for Discharge Air Temperature (DAT) Sensor

Thermal and Electrical Properties

- Typical voltage supply: 5 V DC
- Operating temperature: -40°C to +135°C
- Resistance at 25°C: 2795 ohms
- Thermal time constant: 8 seconds in dry air stream
- Accuracy (\pm °C) -40°C to +100°C: 0.56 to 0.77
- Accuracy (\pm °C) +100°C to +150°C: 0.77 to 1.24

Mechanical Characteristics

- Sensor body material: PA66 HS IM
- Installation: twist lock into mating hole
- Overall weight: 2.2 grams
- Color: black
- Mating connector: P/N 12047662
- Mating connector TPA: P/N 12047664



Discharge Air Temperature Sensor (DAT) Diagram

Note: All measurements are in millimeters.