

## Automotive Sensor Products

### Diesel Fuel Heater – Post Style



#### General Description

At low temperatures paraffin drops out of diesel fuel. This paraffin clogs the fuel filter, making the cranking and the run of the vehicle difficult or even impossible. The Fuel Heater warms up the fuel before the filter, keeping the paraffin in liquid phase and assuring the cranking and the running of the vehicle at low temperatures.

#### Operation

##### Basic Principle

The integrated NTC sensor continuously monitors the fuel temperature. When it reaches a value such that the paraffin may agglomerate the heating elements are switched on, increasing the temperature of the fuel before it reaches the filter. When the incoming fuel temperature rises to a safe level, the heater automatically switches off, achieving power saving of the vehicle.

##### Packaging Options

Custom packaging can be provided to meet any need, please contact Littelfuse Engineering for details.

#### Features

- ♦ Self regulated PTC heating elements
- ♦ 180W @ 13.5V power rating
- ♦ NTC temperature sensing
- ♦ Integrated electronic thermostat
- ♦ Over voltage and reverse polarity protected
- ♦ Choice of connectors and terminals

#### Benefits

- ♦ Robust construction makes this heater well suited to harsh environments
- ♦ Completely stand-alone functions, no need of external components like temperature probe or power switch
- ♦ Over voltage and reverse polarity protected
- ♦ PTC self regulates the power absorption in function of fuel flow and temperature
- ♦ Solid state design with no mechanical contact assure high reliability and life time

#### Applications

- ♦ All diesel engines: passenger cars, commercial vehicles, power generator, etc.

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### Functional Characteristics

| Parameter                |               |         |                       |
|--------------------------|---------------|---------|-----------------------|
| Type                     |               |         |                       |
| PTC Fuel Heater          |               |         |                       |
| Thermostat               |               |         | Built-in – Electronic |
| Electrical               |               |         |                       |
| Voltage                  | Min.          | V       | 8V                    |
|                          | Max.          | V       | 16V                   |
| Thermostat               | Switching ON  | °C      | 0°C +/-2°C            |
|                          | Switching OFF | °C      | 5°C +/-2°C            |
| Rating                   | Power         | W       | 180W @ 13.5V          |
| Skin Temperature         | Max.          | °C      | 160°C                 |
| Environmental/Mechanical |               |         |                       |
| Temperature              | Operating     | Celsius | -30° to +130°         |
|                          | Storage       | Celsius | -30° to +130°         |

### Littelfuse

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