

# 3000 Series Thermostats in Vehicle Fire Suppression Applications

### BACKGROUND

A fire resulting from a vehicle collision may lead to death because it becomes impossible to escape the burning vehicle. An effective fire suppression system helps to reduce fatalities in these situations.

### SOLUTION

Honeywell manufactures the 3000 Series Thermostats (see Table 1), a range of rugged, sealed thermostats, that signal when a certain temperature has been reached. In an automatic fire suppression system, the thermostat signals the system to discharge in the event of a fire.

When the thermostat ambient temperature reaches the rated temperature, the switch contacts close, completing the electrical circuit which triggers the system actuator. When the thermostat cools, the contacts reopen, which resets the thermostat to its normal operation condition.

At least one thermostat is installed in each protected area of the vehicle (see Figure 1). The four-conductor configuration allows continuous integrity monitoring of all circuits connecting the thermostats.

**Table 1. 3000 Series Vehicle Fire Suppression Thermostat**

| 3000 Series Vehicle Fire Suppression Thermostat   |
|---|
|    |
| Features and Benefits   |
| <ul style="list-style-type: none"> <li>• Stainless steel housing provides enhanced resistance to corrosion and harsh, under-the-hood chemicals</li> <li>• Sealed construction designed to prevent water ingress</li> <li>• Configurable operating point may be tailored to application requirements up to 232 °C [450 °F]</li> <li>• Enhanced response for reduced deployment time</li> <li>• Enhanced reliability for potentially maintenance-free operation</li> <li>• Flexible mounting bracket allows multiple installation sites for the same product</li> </ul> |

**Figure 1. Fire Suppression System Block Diagram**



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## **WARNING**

### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

## **WARRANTY/REMEDY**

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

## **WARNING**

### **MISUSE OF DOCUMENTATION**

- The information presented in this application note is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

## **SALES AND SERVICE**

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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