



## **RIFE Surface Mount Temperature Sensors**

**Range -20F to 275F**

**Part #'s**

**52-1234, 52-1235, 52-1236, 52-1237, 52-1238, 52-1240, 52-1241, 52-1242**

RIFE's Surface mount temp sensors allow for ultra-flexible mounting for checking temps around the vehicle. While, due to their mounting style, no surface mount sensor will ever be as fast responding as a sensor directly in the air or fluid stream, they will provide valuable information in a variety of applications.

The RIFE Surface mount temperature sensor come in both bolt-down and surface/sub-surface mounting styles.

### **Bolt Down:**

The Bolt down style sensors should be mounted to a clean surface using an appropriate size fastener. The Aluminum ring must be directly against the surface to be measured. The included sealing washer can be used to insulate the sensor from ambient temperatures, it should be placed between the aluminum ring and the bolt head. Using an appropriate bolt, torque to spec:

1/4" (6mm): 6-10 ft-lbs.

5/16" (8mm): 12-20 ft-lbs.

3/8" : 20-33 ft-lbs.

### **Surface/Sub-Surface Mount:**

There are several different ways to mount the surface mount sensor. The supplied die cut circles are good to 400F and can be used for temporary or semi-permanent mounting of the sensor to a variety of surfaces. For other applications, the user can drill a blind 3/32" diameter hole (min. .200" deep) place the tip of the sensor in the hole and then seal the hole with silicone (semi-permanent) or epoxy it in place for a permanent solution. Optionally the die-cut circles can be used to seal the sensor in the drilled hole.

### **Wiring:**

#### **Direct Wire Sensors:**

Wires are interchangeable, for consistency sake:

Gray – Temp 1 (signal)

White – Temp 2 (Sensor Ground)

#### **M5 Cable Connection:**

Tip: pre-fit the cable to the sensor 1 time before installation, then disconnect the cable. The first installation can be a bit tight and pre-fitting the assembly makes it easier to connect the cable after the sensor is mounted. There are 4 wires inside the cable, this is done so that the cable can be used for a variety of other sensors, for temperature sensors, 2 wires are used and they are interchangeable, for consistency sake:

Blue – Pin 3 - Temp 1 (signal)

Brown – Pin 1 - Temp 2 (Sensor Ground)

Looking at the sensor connection, Pin 1 is just clockwise from the alignment notch, pin 3 is diagonally across from pin 1.

**Calibration:**

Calibration data can be found at [rifesensors.com/calibration](https://rifesensors.com/calibration)

**Installation tips:**

- The sensor must be tightly held against the surface to be measured; this is especially important when hole mounting with silicone due to silicone's insulation properties.
- After mounting, a dab of silicone on top of the bulb of the sensor will insulate the sensor for ambient air and increase accuracy.
- A more permanent surface mounting solution would be to epoxy the sensor to the surface to be measured.
- Special care must be taken to provide strain relief to the connector and wiring, excessive movement may break the sensor wires.