

# PR002 Installation Guide

## Operating Principle

The Monit Speed Sensor Interface allows you to use a factory fitted speed sensor to operate a Monit Rally Computer. It will work with most types of sensors that produce either an analogue or digital pulse output.

*Note: The interface will not work with ABS wheel speed sensors. Use the PR003 module instead.*

### Step 1:

Locate your vehicle's speed sensor. This is usually mounted on the gearbox or differential.

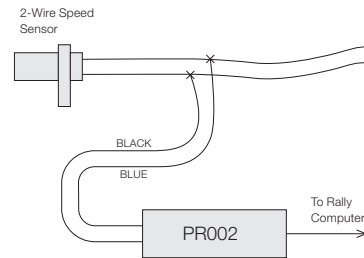
- Your vehicle's workshop manual will have details of the sensor's location and wiring connections.
- If your vehicle does not have a suitable sensor, you will have to fit a Monit Wheel Probe (PR001) instead.

### Step 2:

There are two types of speed sensors used by the majority of vehicles. You can identify the type you have by the number of wires coming from it.

#### 2-Wires—Passive Type Sensor:

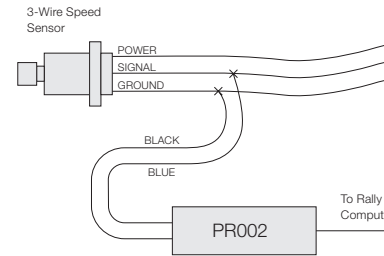
This sensor works like a small electrical generator, producing a low power signal that changes frequency with speed. It should be connected to the interface as follows.



- The polarity of the connections does not matter.

#### 3-Wire—Active Type Sensor:

This sensor contains an electronic chip that produces a digital pulse as the vehicle moves. Its three wires carry the speed signal, provide a ground return, and supply power to the chip. It should be connected to the interface as follows.



- Refer to your vehicle's wiring diagram to identify the wires coming from the sensor.
- You may also be able to tap into the speed signal from behind the instrument cluster or at the engine computer. If you do this, connect the BLACK wire to a ground point on the instrument cluster/computer itself. Do not use the vehicle chassis.

### Step 3:

Connect the Speed Sensor Interface to the Rally Computer wiring loom using the dedicated connector.

- Do not route the cable near high voltage ignition leads.
- If the cable is too short an extension pack can be ordered. Contact your Monit dealer for details.

### Step 4:

Apply power to the Rally Computer. Take the vehicle for a test drive and check that the distance increments when the vehicle is moving.

Installation is now complete.

*Note: The speed and distance measurements will not be accurate until the system has been calibrated.*

## Troubleshooting

### The distance does not increment

Check all connections and verify that you have correctly identified the wire that carries the speed signal. Use an oscilloscope to check this is a clean pulse or sinusoidal waveform with a frequency proportional to vehicle speed.

### The distance is inaccurate / increments when stationary

This can be caused by electrical interference or a sensor that does not produce a suitable signal.

To prevent interference:

- For 3-wire sensors, ensure that the BLACK wire is connected to a clean ground point. Do not use the vehicle chassis for this.
- Check that the cables are not routed close to any sources of interference. Take particular care to avoid parts of the ignition system.

To ensure you have a suitable speed signal:

- Use an oscilloscope to check that the speed signal is a clean pulse or sinusoidal waveform with a frequency proportional to vehicle speed.
- Some older style reed switch sensors can suffer from contact bounce. If you suspect this is the case, try fitting a 0.1uF capacitor across the sensor's terminals.

## Technical Specifications

Hysteresis Voltage	2V
Max. Input Frequency	400Hz
Input Impedance	100Kohm
Operating Temperature	-20C to 125C

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Speed Sensor Interface  
PR002-EN

For vehicle's with gearbox or differential mounted factory speed sensors.

