

DataMite Infra-Red Temperature Sensor Notes

The Infra-Red temperature sensor puts out a 0-4.5 volt signal over a range of 0 to 150 deg C (32 to 302 deg F). For typical calibration numbers, see Analog Sensor Specs screen below.

The sensor has a “spot diameter” which expands at a conical angle 22 deg. For example, at a distance of 5 inches, the circular area it is measuring the average temperature of is a circle of about 2 inches in diameter. See graph to the right. This means if you want precise measurements of a particular area, you must mount the sensor close to that area.

Mounting tips:

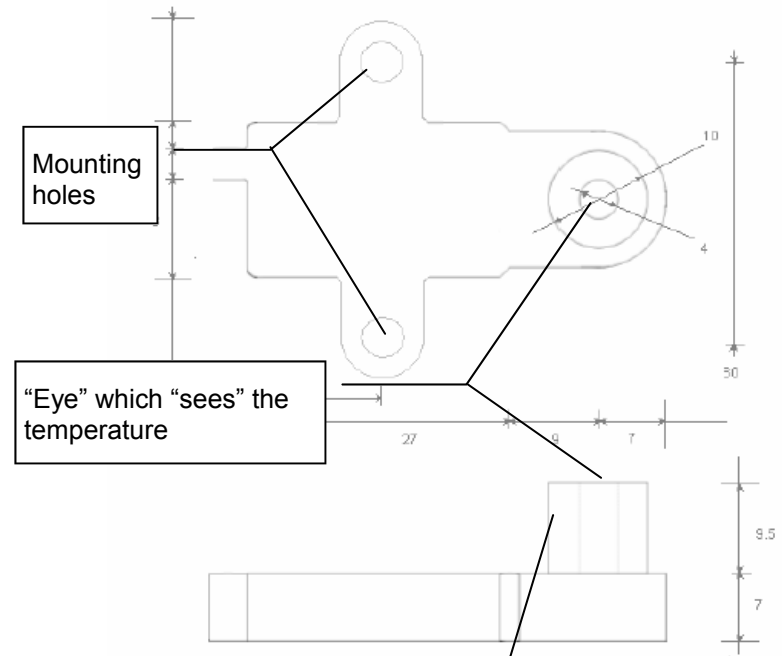
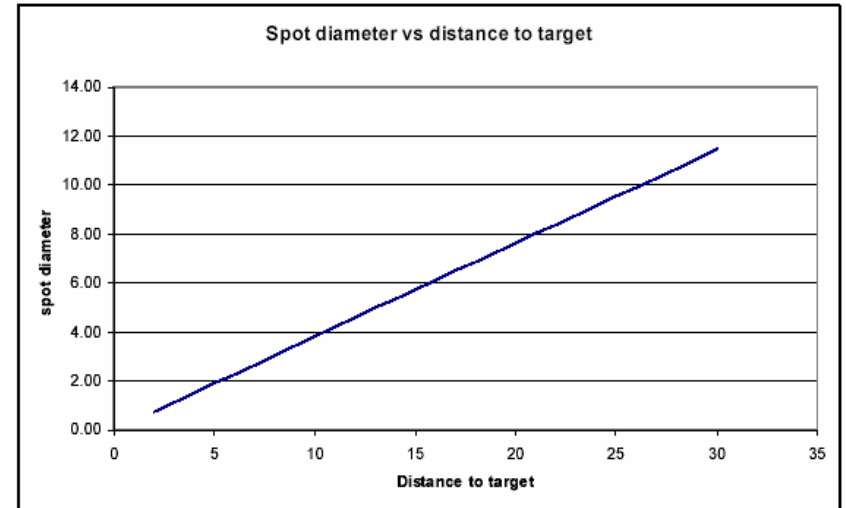
If mounting to record tire temperature, it is best if you mount to a bracket which moves with the tire’s movement. If the distance and angle of the sensor eye to the tire is changing, it is quite likely you can measure just tire temperature some times, and tire and road at others, introducing errors.

Keep the sensor body and line of sight to the target away from engine exhaust, from which the heat can introduce errors.

Do not let the aluminum “temperature reference” cylinder around the eye of the sensor touch other metal. This can affect the temperature of this “reference” and introduce errors in the measurements.

Wiring:

Red = 4.75 to 5 VDC power, 6 mA
 Black = Ground
 Blue = signal



Cylindrical, aluminum heat reference for the IR temperature sensor. When mounted, this should NOT touch any metal components for best accuracy.