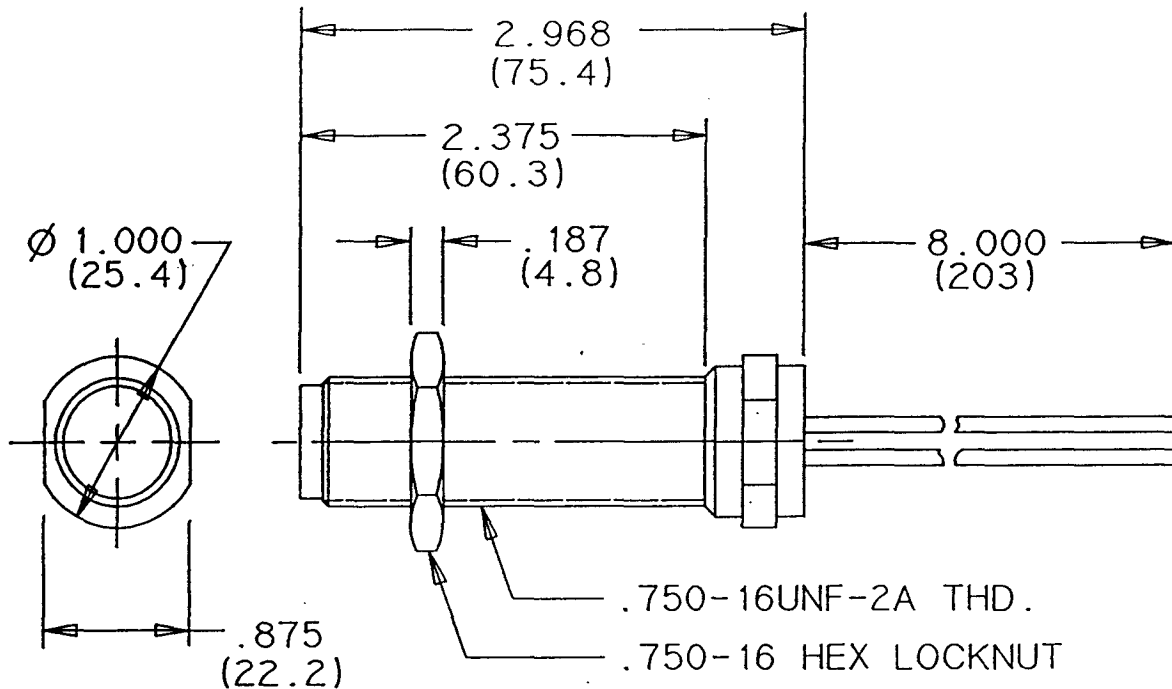


MP 6750

# MAGNETIC SPEED SENSOR



## SPECIFICATIONS

- Type ..... Passive, permanent magnet, variable reluctance
- Thread Size ..... 3/4-16 UNF-2A
- Tap Drill Size ..... 45/64"
- Proximity to Gear Teeth ..... 0.75mm (0.030 in.)
- Temperature Range ..... -40° to 125°C (-40° to + 255°F)
- Output ..... 1.0 to 30 volts RMS
- Resistance ..... 40 to 85 ohms
- Inductance ..... 25 mH
- Weight ..... 2½ oz. (73 grams)

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## INTRODUCTION

The magnetic speed sensor is a variable reluctance type sensor. It contains a coil and permanent magnet, and is "passive" in the sense that it requires no power source. It responds to the teeth and gaps of an engine

flywheel or other ferrous projections passing by its tip. The pulses induced onto the coil are sent to a speed control unit or speed switch. The frequency of these pulses is directly proportional to engine RPM.

## INSTALLATION

The speed sensor is typically mounted in the flywheel bell housing. The threaded hole should be relatively perpendicular to the flywheel centerline. A spot face should be provided for a flat surface to anchor the locknut securely. With the engine off, screw in the speed sensor until the tip comes in contact with the top of a gear tooth. Then back it off  $\frac{1}{2}$  turn. That will provide a gap of approximately 0.030 inch.

The two wire leads from the speed sensor are connected to the speed control unit. For short lengths (under 3 meters), wire leads should be twisted or shielded. For lengths longer than 3 meters, use shielded wire. Do not ground the shield or either of the speed sensor leads at the speed sensor end. One of the two speed sensor input terminals on the speed control unit is internally connected to ground. Connect both the shield and one of the two sensor leads to that terminal (see Speed Control literature).

## TROUBLESHOOTING

Signal strength across the output leads is a minimum of 1.0 VAC (rms) during engine cranking. Anything less indicates a gap that is too large, or there is an

excessive load across the output leads, or a defective sensor.