

## SENSORS

### for Tachometers & Stroboscopes or stand alone use

**ROS (Remote Optical Sensor):** Threaded stainless steel remote optical sensors have a visible red LED light source and green LED 'On Target' indicator. Performs over a wide speed range and operating envelope.

**Common usage:** Wide range of general purpose applications in relatively clean environments.



Operating Distance	3 feet (1 m) and 45° from reflective tape
Speed Range	1-250,000 RPM
Operating Temperature	-14° to 158°F (-10° to 70°C)
Power Required	3.3 to 15 Vdc @ 45 mA
Output Signal	TTL Same as Source
Standard Cable	8 Feet (2.4 m)
Dimensions	2.9" (L) x 0.625" diameter (73 x 16mm)

**ROS-HT (Remote Optical Laser Sensor High Temp):** Threaded stainless steel optical sensor with visible white light source. Ideal for automotive and truck cooling system testing up to 257°F (125°C)

**Common usage:** Automotive and heavy truck cooling fan speeds.



Operating Distance	2 feet (61 cm) and 45° offset from target
Speed Range	1-50,000 RPM
Operating Temperature	-13° to 257° F (-25° to 125° C)
Power Required	6-24 Vdc @ 40mA
Output Signal	TTL Same as Source
Standard Cable	25 Feet (7.6 m)
Dimensions	2.9" (L) x 0.625" diameter (73 x 16mm)

**ROLS (Remote Optical Laser Sensor):** Threaded stainless steel remote optical laser sensors have a visible red laser light source and green LED 'On Target' indicator. Performs over a wide speed range and operating envelope.

**Common usage:** Wide range of applications where distance to target is large



Operating Distance	Up to 25 feet (7.62 m) and 60° offset from target
Speed Range	1-250,000 RPM
Operating Temperature	-40° to 180° F (-40° to 80° C)
Power Required	3.3-15 Vdc @ 35mA
Output Signal	TTL Same as Source
Standard Cable	8 Feet (2.4 m)
Dimensions	3.12" (L) x 0.71" (M16 x 18 x 79.4mm)

**IRS-W or IRS-P:** Ideal sensor for working up to 0.5" (12 mm) from high speed equipment or other applications providing only contrasting light and dark surfaces or beam interruption by solid objects as small as 0.30" (1mm).

**Common usage:** Dentist and other high speed drills, slots or gear teeth. Does not require reflective tape. Use black/white CAD drawing.



Operating Distance	0.5" (12 mm)
Speed Range	1-999,990 RPM
Operating Temperature	-10° to 212°F (-23° to 100°C)
Power Required	3.3 to 15 Vdc
Output Signal	TTL Same as Source
Standard Cable	8 Feet (2.4 m)
Dimensions	2.9" (L) x 0.625" diameter (73 x 16mm)

**M-190W or M-190P (Magnetic Sensor):** Most popular sensor for use with 60 tooth 20 pitch gears. Sensor mounts within 0.005 inches (0.127 mm) of a minimum 0.1 inch (2.5 mm) target. Requires no power from the display module and self-generates an AC signal.

**Common usage:** Ferrous metals, primarily gear teeth.



Operating Distance	0.005" (0.127 mm) gap with 0.1" target (2.5mm) min.
Speed Range	1-99,999 RPM
Operating Temperature	-100° to 225°F (-73° to 107°C)
Power Required	None (Self Generating)
Output Signal	190V P-P
Standard Cable	8 Feet (2.4 m)
Dimensions	2.0" (L) x 0.625" (50 x 16mm)

**MT-190W or MT-190P (Magnetic Sensor):** Amplifier extends operating gap to 0.25 inches (6.35 mm) from the target. Frequently used on gears as the M-190, but can also sense bolt heads or shaft keys and provides a TTL output signal that is equal to the source voltage.

**Common usage:** Ferrous metals including bolt heads or shaft keys for on-line systems.



Operating Distance	0.25" (6.35mm) gap with 0.1" target (2.5mm) min.
Speed Range	1-99,999 RPM
Operating Temperature	-100° to 225°F (-73° to 107°C)
Power Required	3.3 to 24 Vdc, 4mA
Output Signal	TTL Same as Source
Standard Cable	8 Feet (2.4m)
Dimensions	2.0" (L) x 0.625" (50 x 16mm)

**GE-200HP:** Ideal sensor for detecting gasoline engine RPM. Up to 12 inch (304 mm) working distance from ignition coil or magneto.

**Common usage:** 2-cycle and 4-cycle gasoline/petrol engines.



Operating Distance	Up to 12 inches (304mm)
Speed Range	200-30,000 RPM
Operating Temperature	0° to 175°F (-18° to 80°C)
Power Required	3.3 to 24 Vdc, 4mA
Output Signal	TTL Same as Source
Standard Cable	15 Feet (4.5 m)
Dimensions	2.16" (L) x 0.82" (55 x 21 mm)

**P5-11:** A two wire probe style inductive sensor for use up to 0.2 inches (5 mm) from 0.5 inch (12 mm) metallic target such as bolt head or shaft locking key.

**Common usage:** Permanent installation in harsh industrial environments.



Operating Distance	0.2" (5mm) from 0.5" (12mm) metallic target
Speed Range	1-60,000 RPM
Operating Temperature	-4° to 140° F (-20° to 60° C)
Power Required	7.7 to 9 Vdc, 3mA
Output Signal	Namur (DIN 19 234)
Standard Cable	6 Feet (1.8 m)
Dimensions	1.3" (L) x 0.43" (32 x 11 mm)

**PS-12:** A three wire threaded IP67 metal sensor outputs an open collector PNP pulse. Operates at a 0.15 inch (4mm) gap with a .45 inch (12mm) target. Includes red LED on target indicator.

**Common usage:** Permanent installation in harsh industrial environment. Online vibration data collectors



Operating Distance	0.15" (4mm) from 0.5" (12mm) metallic target
Speed Range	1-60,000 RPM
Operating Temperature	-10° to 160° F (-25° to 75° C)
Power Required	6 to 36 Vdc, 15mA
Output Signal	PNP open collector
Standard Cable	6 Feet (1.8 m)
Dimensions	2.0" (L) x 0.48" (diameter) (50 x 12 mm)