The rugged and versatile Pocket Laser Tach is ideally suited for non-contact, contact and linear speed measurements.

**Pocket Laser Tach 200 (PLT200)** is a digital, battery-powered portable optical tachometer, which operates up to 25 feet (8 meters) from a reflective target using a class 2 laser light source. The ergonomic design allows safe, direct line-of-sight viewing of both the target and the display at the same time, while providing a non-slip rubber surface for single hand operation.

### Multi-Function For Pro-Active Maintenance
PLT200 is a 32 function Tachometer/Ratemeter, Totalizer/Counter and Timer (stopwatch), which is programmable in both Imperial and Metric rates. Two phono plug connectors for our optional Remote Contact Assembly (RCA) or remote sensors. The PLT200 also has a TTL compatible pulse output to trigger devices like vibration data collectors or stroboscopes. The KIT is supplied complete with a Remote Contact Assembly including concave and convex tips and a 10 cm linear speed wheel all in a latching carrying case.

### Example Applications:
- Centrifuges
- Saw blades
- Grinders
- Elevators/escalators
- Engines
- Motors
- Conveyor belts
- Fans
- Propellers
- Vibration Studies

### Specifications PLT200
- **Display:** 5 Digits, 5 Alphanumeric LCD
- **Range(s):**
  - *Optical:* 5 to 200,000 RPM
  - **Contact:** 0.5 to 20,000 RPM
- **Totalizer:** 1-999,990 (events or length)
- **Timer:** 99:59.9 Min, sec, tenths
- **Accuracy:**
  - Optical: ±0.01% of reading
  - Contact: ±0.05% of reading (rpm)
- **Resolution:** 0.001 to 10 RPM (range dependent)
- **Operating Distance:** 2” to 25’ (5cm to 7.62m), ±70° from perpendicular
- **Memory:** Maximum, Minimum and Last
- **Power:** (2) “AA” 1.5 VDC batteries (30 hours)
- **Environmental:**
  - 5° to 40°C (40° to 105°F)
  - 80% RH up to 31°C (88°F)
- **Dimensions:** 6.92 "H x 2.4"W x 1.6"D
- **Weight:** 7 oz. (210 g)

- **Performance subject to intensity of ambient light irradiation.**
- **Also reads units per second and per hour.**

### Ordering Information
Pocket Laser Tach 200 Tachometer, N.I.S.T. traceable certificate of calibration, 12 inches of Reflective Tape.
Pocket Laser Tach 200 Kit Tachometer with Latching Carrying Case, RCA, Tips and Linear Speed Wheel, Battery, 5 foot roll Reflective Tape, N.I.S.T. traceable certificate of calibration.
ROS-P Remote Optical Sensor with Mounting Bracket and 8 foot cable for Pocket Laser Tach 200 only.
ROS-P-25 Same as above with 25 foot cable.
T-S Reflective Tape, 5 foot roll, 1/2” wide.
TTL pulse output cable
Latching Carrying Case
Pocket Tach 99 (PT99) is a digital, battery-powered portable non-contact optical tachometer, which operates up to 36 inches from a reflective target using a bright red LED light source. The ergonomic design allows safe, direct line-of-sight viewing of both the rotating target and the display at the same time, while providing a non-slip rubber surface for single hand operation. Pocket Tach 99 is the value-leader of the world-class Pocket Tach Series from Monarch.

Phasar-Laser combines the accuracy and safety of a non-contact optical tachometer with the convenience and ease of operation of a pistol grip instrument, housed in a rugged steel enclosure. The tachometer provides a convenient visible red laser for easy targeting along with a latching trigger for hand held operation and a mounting bushing for tripod mounted use.

Phasar-Laser-R provides for an optional remote sensor for difficult to reach locations in addition to the standard internal measurement optics.

Features
- Convenient pistol grip design
- Rugged steel enclosure
- Safe non-contact operation to 10 feet (3 m) and 45 degrees from reflective tape
- On-target and low battery indicators
- Last measurement memory

Specifications PT99
- Display: 5 Digits, 5 Alphanumeric LCD
- Range: 5 to 99,999 RPM
- Accuracy: ±0.01% or ±1 Digit
- Resolution: 1 Digit RPM
- Operating Range: 2 inches to 36 inches, ±45°
- Memory: Maximum, Minimum and Last
- Power: (2) "AA" 1.5 VDC batteries (60 hours)
- Environmental: 5° to 40°C (40° to 105°F) 80% RH up to 31°C (88°F)
- Dimensions: 6.92"H x 2.4"W x 1.6"D (17.58 x 6.10 x .06cm)
- Weight: 7 oz. (210 g)

Specifications Phasar-Laser and Laser-R
- Range: 5-100,000 RPM
- Accuracy: ±1 RPM or 0.01% of reading
- Resolution: 1 RPM
- Display: 6 digit, 0.5" high Liquid Crystal Display
- Power On: Pistol grip trigger with latching "on" switch
- Operating Range: 10 feet (3m) and 45° from reflective tape
- Power: (4) "AA" (LR6) Alkaline batteries or NiCad batteries and AC recharger

Example Applications:
- Grinders
- Abrasives
- Motors
- Engines
- Pumps

Ordering Information
Pocket-Tach 99 Tachometer, Battery & 6 inches Reflective Tape.
Phasar-Laser Kit: Tachometer, Recharger, 5 foot roll of Tape, NiCad Batteries in Latching Carrying Case
Phasar-Laser-R Kit: Tachometer, Recharger, Remote Optical Sensor, 5 foot roll of Tape, NiCad Batteries in Latching Carrying Case
### Sensor Types

<table>
<thead>
<tr>
<th>Sensor Types</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical LED (1-250,000 RPM)</td>
<td>Most popular.</td>
<td></td>
</tr>
<tr>
<td>Optical Laser (1-250,000 RPM)</td>
<td>Distances to 25 feet.</td>
<td></td>
</tr>
<tr>
<td>Proximity (1-60,000 RPM)</td>
<td>Rugged industrial sensor.</td>
<td></td>
</tr>
<tr>
<td>Magnetic (1-99,999 RPM)</td>
<td>Self-powered gear sensor.</td>
<td></td>
</tr>
<tr>
<td>Magnetic with Amplifier Module (1-99,999 RPM)</td>
<td>Enhances performance of M-190 magnetic sensor.</td>
<td></td>
</tr>
<tr>
<td>Inductive (200-20,000 RPM)</td>
<td>Gasoline Engine RPM.</td>
<td></td>
</tr>
<tr>
<td>Infrared (1-999,990 RPM)</td>
<td>High speed sensor.</td>
<td></td>
</tr>
</tbody>
</table>

### Description

**ROS (Remote Optical Sensor)**: Threading 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. Modulated and High Temperature versions available (to 257°F). **Common usage**: Wide range of general purpose applications in relatively clean environments.

**ROLS (Remote Optical Laser Sensor)**: Threading 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.

**PS-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.

**M-190W or M-190P**: 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.

**MT-190W or MT-190P**: 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 0-5V TTL output signal. **Common usage**: Ferrous metals including bolt heads or shaft keys in addition to gear teeth.

**GE-200**: Ideal sensor for gasoline engine RPM, working 0.5 to 4.0 inches (12 to 100 mm) from ignition coil or magnteto. **Common usage**: 2-cycle and 4-cycle gasoline engines.

**IRS-W or IRS-P**: Ideal sensor for working 0.5 to 1.0 inch (12 to 25 mm) from high speed equipment or other applications providing only contrasting light and dark surfaces or beam interruption by solid objects. **Common usage**: Dentist and other high speed drills, slots or gear teeth. Does not require reflective tape.

**NOTE**: W = tinned wire leads, P = 1/8” (3.5mm) phone plug connector. ROS is available with 8 or 25 foot cable.

**NOTE**: Additional cable length for all sensors (up to 500 feet) can be purchased and added in the field.