ICP® LASER TACHOMETER

LaserTach™

LaserTach

NEW!

The LaserTach ICP tachometer from The Modal Shop senses the speed of rotating equipment and outputs an analog voltage signal for referencing vibration signals to shaft speed. The sensor allows for measurements in excess of 30,000 RPM from distances as far as 2 meter. A status LED provides positive, visual indication of proper signal pickup. The standard BNC jack connects the sensor to any constant current, IEPE conditioned data acquisition systems and signal conditioners. Unlike magnetic tachometer pickups, the LaserTach does not require the rotating equipment to be a ferrous material - only a retroreflective target needs to be attached to the shaft.

Since the unit is powered from standard ICP sensor signal conditioning, only a single coaxial or twisted pair cable connection is required - exactly how your ICP accelerometers are conditioned. No additional or specialized external power source is needed, facilitating deployment of multiple speed sensors using the same cabling setup as with other ICP sensor arrays for acquiring dynamic vibration, pressure, strain or force data. The LaserTach operates using the standard constant current supplied by many data acquisition systems and all ICP sensor signal conditioners.

BENEFITS:

- Simplifies the acquisition of rotating equipment speed signals by operating through standard ICP sensor signal conditioning
- Offers flexibility in positioning and mounting due to the use of long range (2 m) optics and standard 5/8” UNF threaded bolt package
- Eliminates need to oversample all channels due to high frequency tach signal by always outputting 1 pulse per revolution.
- Simplifies cable management for dynamic testing of rotating equipment

“Simplifying with Smart Sensing Solutions”

THE MODAL SHOP INC.

A PCB GROUP CO.

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Helping you test, model, and modify the behavior of structures and processes.

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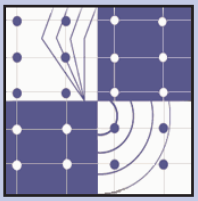
LaserTach



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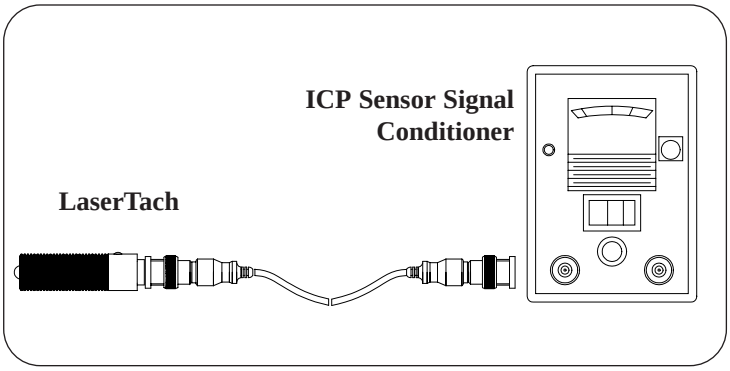

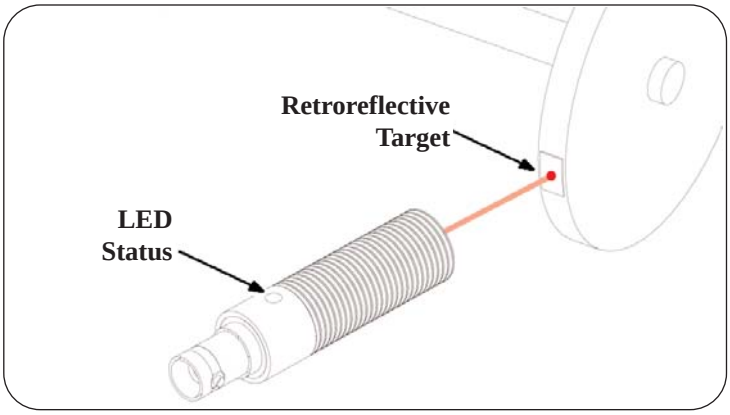

Using The LaserTach

ICP® Sensors are a popular family of dynamic transducers used for measuring acceleration, force, pressure, shock, and strain. They rely upon a constant current excitation to the sensor from a signal conditioner.

Rotating shaft speed can now be measured using these same signal conditioning/data acquisition channels. While conventional tachometers require a special power supply, the ICP LaserTach is powered from the ICP sensor signal conditioner, and outputs a voltage pulse train at the frequency of the shaft speed.

Simply connect the LaserTach BNC connector to an ICP sensor signal conditioner and point the laser at a retroreflective target on the rotating shaft. The LED on the LaserTach gives a visual indication of the passing target while the voltage pulse train is output on the BNC connector. The focal length of the laser emitter can be adjusted using a small screwdriver on the front face (not shown).

SPECIFICATIONS:*

PERFORMANCE		
Speed Range:	Revs Per Minute (RPM)	30,000
	Revs Per Second (RPS)	500
	Revs Per Hour (RPH)	1,800,000
Output Amplitude		1 Vpp @ 4mA supply current
		0.25 Vpp @ 20mA supply current
Operating Range:	90° Incidence	1,8 meters
	45° Incidence	0,6 meters
ENVIRONMENTAL		
Operating Temperature Range		10° - 50° C
Storage Temperature Range		-40° - 85° C
ELECTRICAL		
Excitation Voltage		18 to 30 VDC
Constant Current Excitation (mA)		3 to 20 mA
Output Impedance (Ohms)		< 100
MECHANICAL		
Size (Length x Diameter)		88,9 mm x 15,9 mm
Mounting Thread		5/8-18 UNF 2A
Weight:	With Mounting Nuts	70,9 gr
	Without Mounting Nuts	28,3 gr
Connector Type		BNC Jack

DS-0006 rev C

* In the interest of constant product improvement, specifications are subject to change without notice. The specifications on this sheet are typical, operating range may vary slightly depending on the optical contrast available in operating environment