

LaserRanger™ Ride Height Sensor

The LaserRanger™ is an optical sensor that uses a laser to make accurate range measurements regardless of vehicle speed or light conditions. The sensor was developed for professional racing yet is affordable for club racers. It's ideal for a variety of range measurements related to vehicle testing, including:

- Direct and instantaneous vehicle height measurement above track surface
- Transient movements of suspension components and shock absorbers
- Wheel runout and tire compression

Sports Cars IMSA, ALMS
Stock Cars NASCAR
Open Wheel F1, IRL, CART
Drag Racing NHRA



FEATURES

- 1,000 samples per second, i.e. a data point every 2" at 113 mph
- 3.2" – 8.2" measurement range
- Electronic ambient light rejection
- Automatic laser power control for varying surfaces
- LED for data and range status
- No controller needed – sensor interfaces directly to any analog data collection system
- Compact, rugged package with removable bezel for easy window replacement
- Windows are not damaged by gas, alcohol and oil

NONCONTACT MEASUREMENT

Noncontact optical range sensors have many advantages over linear potentiometers

- **NEW DATA** – Take vehicle measurements not possible with other methods, i.e. centerline ride height measurements for wing adjustment analysis.
- **EASY SET-UP** – Mounting is simplified because you only mount one side.
- **LOWER COST** – No moving parts and no contact with target surface means no mechanical failure or degradation of measurement accuracy, saving you time and money over many races.
- **VERSATILITY** – Sensors can be moved around the car to get different data, you don't need a different sensor for each application or test.

NEED AN EXTRA ADVANTAGE?

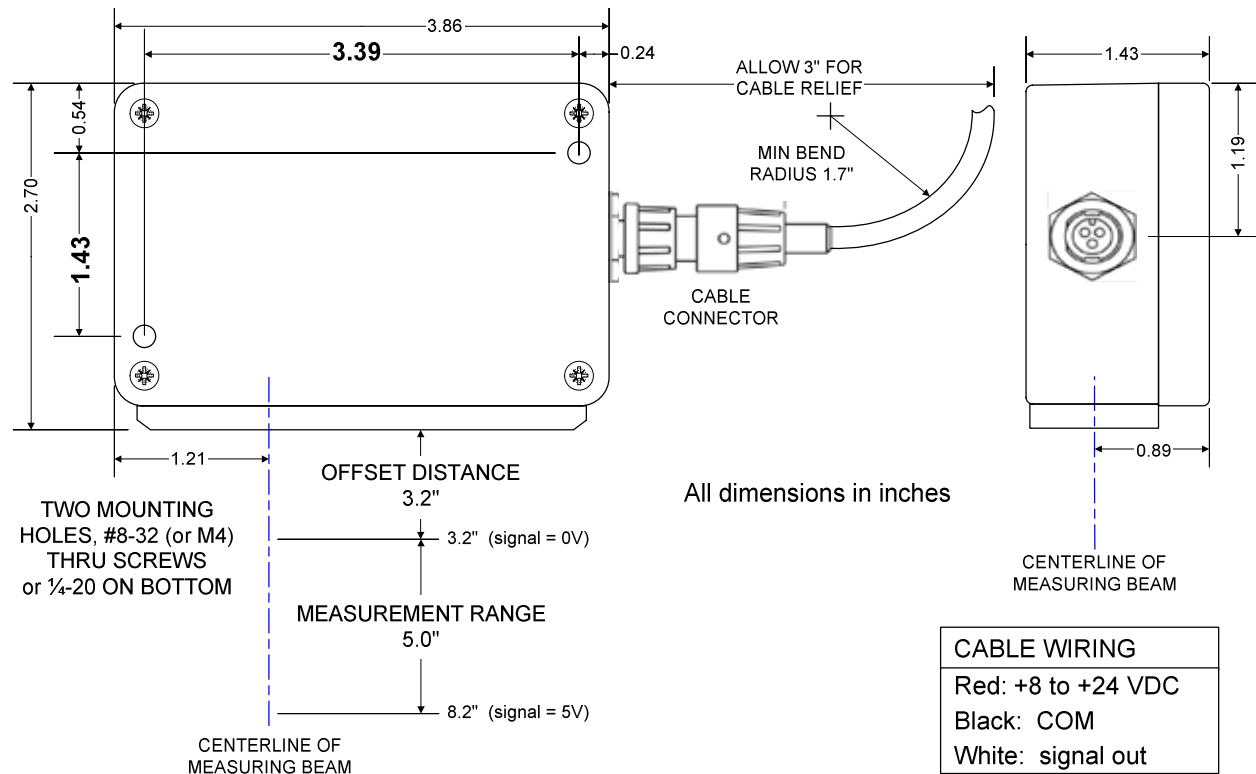
The standard sensor is perfect for most racing applications but your testing needs may demand a custom sensor. Aculux develops custom sensors for professional race teams. Contact Aculux to discuss your unique testing issues and get a sensor that produces the data you need to win.

SPECIFICATIONS

MECHANICAL	
Measurement range	3.2" – 8.2" (81 - 208 mm)
Weight	12 oz (340 g)
Size	3.9" x 2.7" x 1.4" (98x69x36 mm)
Enclosure	aluminum with removable bezel
Enclosure rating	IP67
Cable	3-wire cable with flying leads, 15ft
Windows	Polycarbonate, replaceable
Operating temp.	32 -122 °F (0 – 50 °C)

ELECTRICAL / OPTICAL	
Supply voltage	8-24 VDC at 125 mA
Output signal	0-5 V
Sampling rate, max	1,000 Hz
Accuracy	+/- 0.2% of full scale
Resolution	0.001" (25 um)
Laser source	visible red, class II
Laser spot size at SO	< 0.005" (127 um)
Detector type	PSD

DIMENSIONS



CALIBRATION INFORMATION

Near point 3.2" 0 V
 Far point 8.2" 5 V
 1 inch = 1 volt

ORDERING INFORMATION

Model No. LR1-RH-A10

Aculux products are made in the USA

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500-0012-009
 08/04