


This document provides supplemental information for the Cognex DS1000L displacement sensor. For complete instructions, refer to the DS1000 Series Quick Reference Guide supplied with your device, and available at <http://www.cognex.com/support/DS1000>

**DS1000L Sensor Specifications**

Weight	6.5 Kg	
Operating Temperature	0°C — 50°C (32°F — 122°F)	
Storage Temperature	-10°C — 80°C (14°F — 176°F)	
Maximum Humidity	10%-85%, non-condensing (Operating and Storage)	
Power Supply Requirements	Voltage: +24 VDC +/- 10% Current: 500 mA max	
Discrete I/O operating limits	Trigger	Input voltage limits: Trig+ - Trig - = - 24VDC to +24VDC  Input ON: > 10 VDC (> 6 mA) Input OFF: < 2 VDC (< 1.5 mA)
	Encoder Input Specification	Differential: A+/B+: 5-24V (50 kHz max) A-/B-: Inverted (A+/B+)  Single Ended: A+/B+: 5-24V (50 kHz max) A-/B-: VDC = ½ (A+/B+)
"Field of View and Working Section" on page 36	working distance	1200-1850 mm
Ethernet	<ul style="list-style-type: none"> <li>• Gigabit Ethernet interface</li> <li>• Integrated link and traffic LEDs</li> <li>• Standard M12-8 female connector</li> </ul>	
Certification		
Altitude rating	2 km / 6561 ft	

**DS1000L Laser Specifications**

This Laser Product is designated as **Class 2** during all procedures of operation.

Wavelength	660 nm	
Laser Power for classification	< 3 mW	
Laser Maximum Total Power	< 40 mW	
Minimum Divergence	horizontal: 30 degrees	
Laser Line Thickness (FWHM)	< 4.0 mm	
Sensor Size	1024x768 pixels	
X Resolution	Top	0.700 mm
	Bottom	1.00 mm
Z Resolution	Top	0.080 mm
	Bottom	0.180 mm
Y Resolution	This value depends on the Encoder Resolution, the Distance per Cycle and the Steps per Line settings.	

**Laser Safety Information**

**Laser Safety Statement - DS1000L**



Compliance with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

This device has been tested in accordance with IEC60825-1 2nd ed., and has been certified to be under the limits of a Class 2 Laser device.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



CAN/CSA-C22.2 No. 61010-1-04 Part 1, UL STD. No. 61010-1, 2nd Edition.

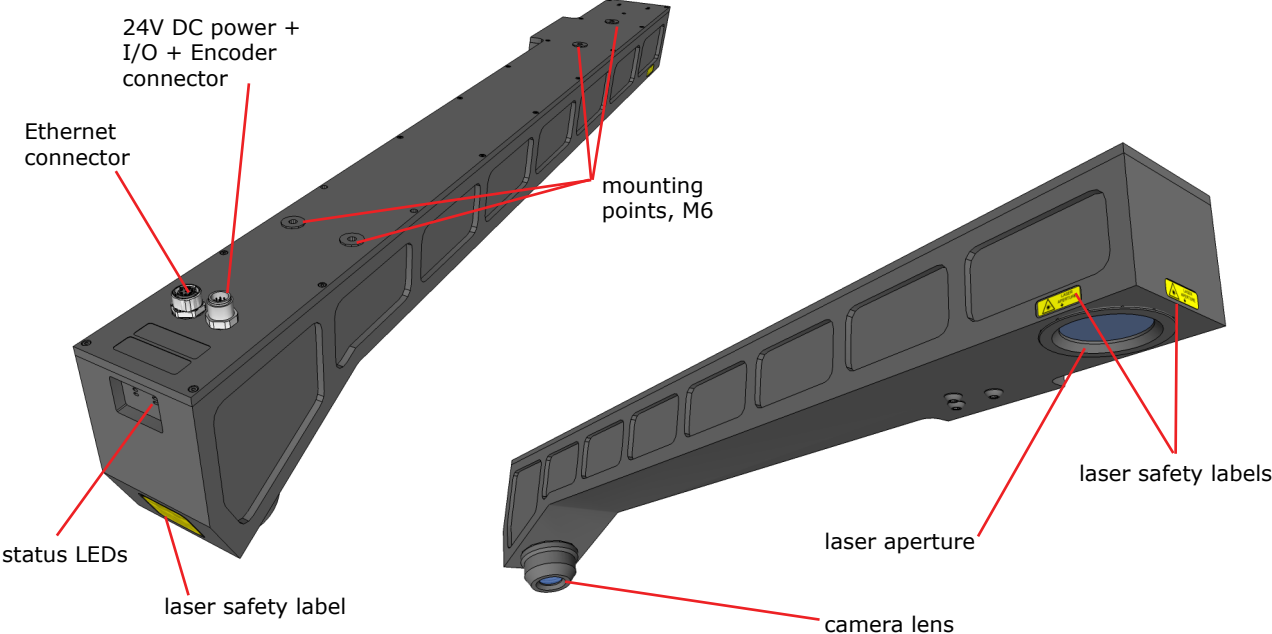


**Warnings and Notices**

- DS1000L Series Sensors with a maximum laser power up to 3 mW are classified in Laser Class 2.
- Do not stare into beam.
- Do not place optical components (mirrors) into the beam.
- Design test fixtures in such a way that unintentional viewing of the beam is prevented.
- Switch off the laser when not in use.
- Avoid the use of highly reflective materials. If you cannot, try to angle the part so unintentional viewing of the reflection is prevented.
- Terminate (block) unused beams.
- Keep the laser plane horizontal or pointing downwards.
- Report any issues that may have an impact on laser safety to your supervisor or Laser Safety Officer.
- There is no scheduled maintenance necessary to keep the product in compliance.
- Under no circumstance should you modify in any way the sensor or its housing.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- When moving the unit from a very hot environment to a cold environment please allow the unit to equalize in a room temperature environment for 24 hours between temperature extremes.
- Hazard to the eye via laser radiation! Consciously close your eyes or turn away if the laser radiation impinges on the eye.



**System Component Location**



**Dimensions**

