Differential Speed Measurement System

LaserSpeed
BETA LaserMike

Non-Contact Measurement of Differential Speed

On-line measurement of differential speed at two different locations

The Beta LaserMike Differential Speed Measurement System offers you an easy-to-use solution for applications requiring the measurement and comparison of two different line speeds.

By adding the LaserSpeed Length Differential Indicator (LDI) and two LaserSpeed 8000/9000 Series Gauges, you can monitor line speed at any two locations on your manufacturing line.
For example, you can:

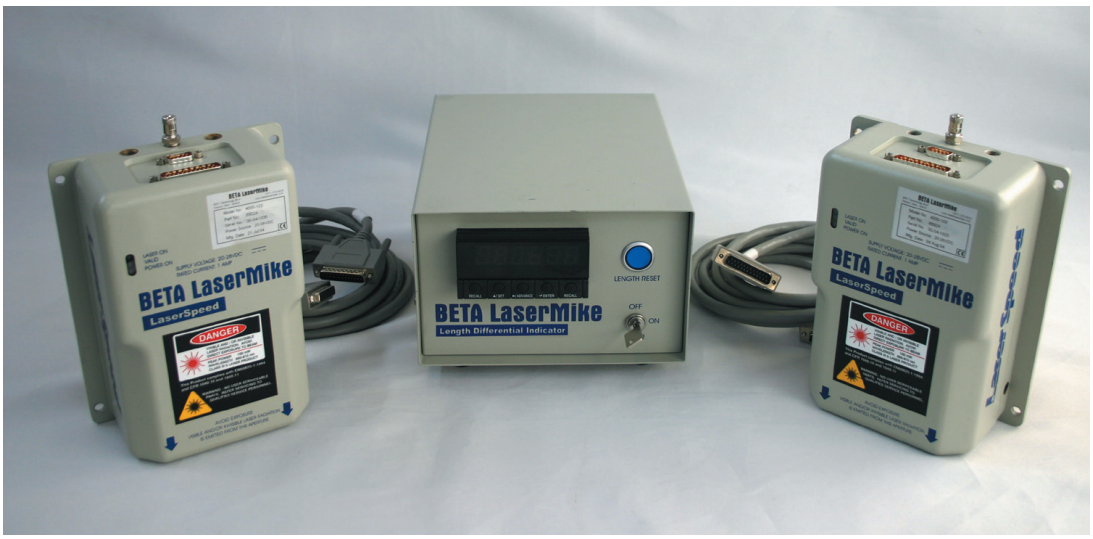
- Measure and monitor product stretch
- Monitor the speed of two different parts of the product during lamination
- Interface with a PLC to control differential speed
- Connect to a light stack or alarm to notify the operator when differential speed exceeds your tolerance(s)

Features

- Differential speed resolution of 0.01%
- Bright, easy-to-read LED display
- Three relay outputs (Good Measurement, Under Tolerance, and Over Tolerance) for alarm indications
- RS-232 output of differential speed measurement value for input to a PLC or an SPC analysis program
- LaserTrak software for diagnostics and monitoring individual speeds

Benefits

- Monitor product stretch to ensure proper thickness and to prevent breaks
- Ensure two products being joined together during lamination are moving at proper relative speeds
- Simplify line operation through user-friendly interface
- Document product quality by importing differential speed data into statistical analysis package
- Easy system integration through flexible I/O options



Visit our website at:
www.betalasermike.com

NDC TECHNOLOGIES

Unidirectional

LS8000	-303	-306	-310	-315	-320	-325
Standoff Distance	300 mm (12 in.)	600 mm (24 in.)	1000 mm (39.4 in.)	1500 mm (59.1 in.)	2000 mm (78.1 in.)	2500 mm (98.4 in.)
Speed Range	0.4-4000 m/min (1.3-13100 ft/min)	0.8-8000 m/min (2.6-26200 ft/min)	1.0-12000 m/min (3.2-39400 ft/min)	2.0-19000 m/min (6.5-62400 ft/min)	3.0-20,000 m/min (9.8-65,600 ft/min)	4.0-20,000 m/min (13-65,600 ft/min)
Measurement Depth of Field	35 mm (1.4 in.)	50 mm (2 in.)	100 mm (4.0 in.)	200 mm (8.0 in.)	200 mm (8.0 in.)	200 mm (8.0 in.)

Forward, Reverse, and True Zero Speed

LS9000	-303	-306	-310	-315	-320	-325
Standoff Distance	300 mm (12 in.)	600 mm (24 in.)	1000 mm (39.4 in.)	1500 mm (59.1 in.)	2000 mm (78.1 in.)	2500 mm (98.4 in.)
Speed Range	0..±4000 m/min (0..±13100 ft/min)	0..±8000 m/min (0..±26200 ft/min)	0..±12000 m/min (0..±39400 ft/min)	0..±19000 m/min (0..±62400 ft/min)	0..±20000m/min (0..±65600ft/min)	0..±20000m/min (0..±65600ft/min)
Measurement Depth of Field	35 mm (1.4 in.)	50 mm (2.0 in.)	100 mm (4.0 in.)	200 mm (8.0 in.)	200 mm (8.0 in.)	200 mm (8.0 in)

Length Differential Indicator (LDI) Specifications

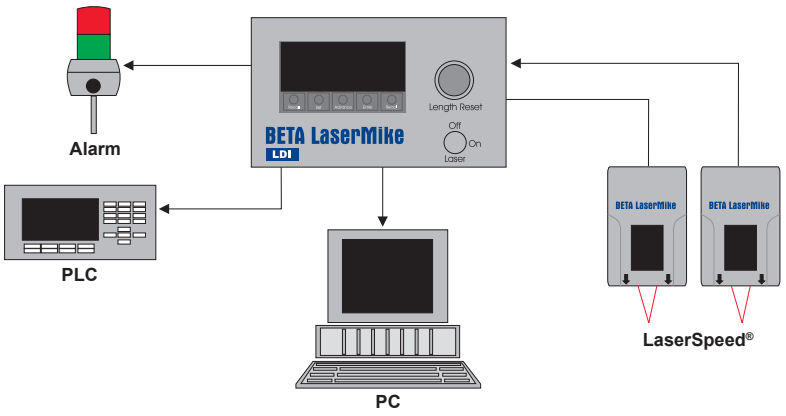
Power Requirements	100-240 VAC, 1.2 A maximum
Operating Temperature	0-40°C (32-140°F) <80% humidity, non-condensing
Dimensions	203 x 142 x 254 mm (8.0 x 5.6 x 10.0 in)
Weight	2.9 kg (6.4 lbs)
Digital Outputs	Three digital outputs for alarm status information
Serial Data Out	RS-232 Serial Data Out sends both alarm status and differential speed measurement information

LS8000/9000 Gauge Specifications

Accuracy	<±0.05% of reading
Repeatability	±0.02%
Measurement rate	LS8000: >50,000/s LS9000: >100,000/s
User Isolated Voltage	Provided by LDI
Gauge Size	228.6 x 159 x 95.2 mm (9 x 6.3 x 3.75 in)
Gauge Weight	-303, -306, -310: 3.4 kg (7.5 lbs) -315, -320, -325: 3.7 kg (8.3 lbs)
Temperature Range	5° to 45°C (41° to 113°F)
Relative Humidity	Non-condensing
Water Cooling	1.0 to 3.8 l/min (0.26 – 1 gpm) Typical 1.5 l/min (0.4 gpm)
Degree of Protection	IP67

Other specifications are subject to gauge selection.

System Diagram



This unit is a class IIIB laser product and complies with EN60825-1:2001. Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001. The following safety features required to comply with the Bureau of Radiological Health Class IIIB laser requirements are included:

- Key-operated power switch on optional controller
- Laser indicator light on supply and laser
- Delayed laser startup-laser indicator light on prior to laser radiation
- Laser beam blocking device
- Interlock capability for remote shut-off

NDC TECHNOLOGIES

USA Office
8001 Technology Blvd.
Dayton, OH 45424 USA
Ph: +1 937 233 9935
Fax: +1 937 233 7284

Europe Office
Unit 3, First Avenue
Globe Park, Marlow
Buckinghamshire, SL7 1YA
United Kingdom
Ph: +44 1628 401510
Fax: +44 1628 401511

Germany Office
Fallgatter 3,
44369 Dortmund
Deutschland
Ph: +49 231 758 930
Fax: +49 231 758 9333

Asia Office
Unit 302, XinAn Plaza,
Building 13,
No. 99 TianZhou Rd.
Shanghai 200233, China
Ph: +86 21 6113 3688
Fax: +86 21 6113 3616

Visit our website at: www.betalasermike.com