

# Line Scan Measurement System

## Non-contact position and dimension monitor



- ✓ Measures width, diameter, position of continuous material or web-based production flow
- ✓ Monitors edge displacement
- ✓ Tracks eccentricity
- ✓ Gauges gaps, measures opening widths
- ✓ Detects holes and flaws
- ✓ Suitable for continuous flow manufacturing and other process control applications
- ✓ Adds no friction, mechanical loading or distortion in measuring moving objects.
- ✓ For use in normal lighting conditions
- ✓ Works with subjects in hostile environments such as high voltage, vacuum, hot or cold

### Precise and Easy to Use

The Line Scan is self-contained and ready to operate. A keypad and menu system make the Line Scan System configurable for a wide variety of needs. The high-brightness Display Module is easy to read. Limit-alarm relay outputs, analog outputs, and serial outputs offer a large range of possibilities for instrumentation and process control.

### Features

5000-pixel linear CCD array

Three Limit-Alarm Relays

Analog Outputs: +/-10V and 0-20ma

Serial Output

Built-in User Interface

## How the Line Scan System Works

The Line Scan System consists of an Optical Head, a Control Unit and an inter-connection cable. The Optical Head contains a linear CCD array and imaging lens selected and calibrated to provide the field of view and working distance you specify. The Optical Head is fully enclosed to protect the lens from dirt or accidental readjustment. A compact NEMA-12 flanged mounted enclosure houses the Control Unit, complete with an Interface Module and LCD display.

The subject image is focused onto a 5000 pixel Linear CCD Array and the resulting signal from each pixel is compared to a programmable threshold. The information is then analyzed, scaled and sent to a local or remote Display Module (5-digit LED display and 50 segment LED bar graph). Analog, serial digital, and limit-alarm relay outputs are also available.

## Specifications

<b>Resolution</b>	1/5000th of full scale
<b>Full Scale Maximum</b>	Varies with optics selected; 10 mm to 10 meters
<b>Linearity</b>	+/- 0.25% of full scale
<b>Measurement Rate</b>	10 to 1000 scans per second, continuously adjustable
<b>Power Requirements</b>	90 to 265 VAC, 50/60 Hz
<b>Interconnect Cable</b>	20-ft standard, custom available
<b>Output Signals:</b> Video Sync Pulse Analog Output Serial Output Relay Output	Analog video for oscilloscope observation External scope trigger when viewing video +/-10 V, and 0 to 20 ma (with adjustable gain and offsets) Selectable baud-rate serial output of all measurements Three independent programmable limit-alarm relay outputs, Form C, 1 Amp / 120 VAC
<b>Enclosure</b> Size Mounting Holes	8.5" W x 10.75" H x 4.375" D 4.25" W x 10.5" H (four 0.125" holes)
<b>Options:</b>	Display Module (with Controller, Panel Mounting Kit or Remote NEMA 12 enclosure)  Interface Module (Panel Mounting Kit or Remote NEMA 12 enclosure)
<b>Lighting</b>	A variety of illumination sources suitable for most applications are available from Diversified Engineering. Please contact your local sales office for more information.