

# LM System

## Length Measurement

### Overview

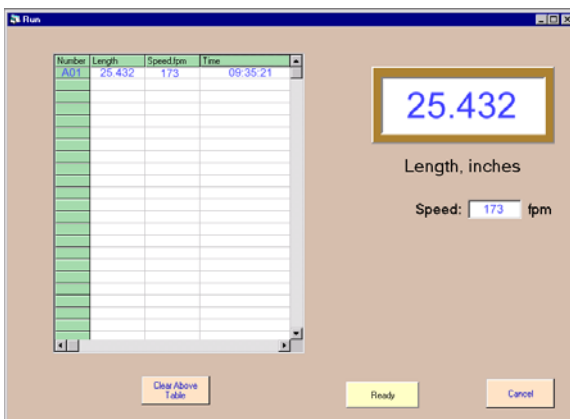
The new SCAN-A-LINE™ LM System - Length Measurement System incorporates an Auto-Sync - 10XAS-Series sensors and a Length Measurement Processing Unit - Model LMPU with a Laser Array and personal computer running Windows®-based software into a dynamic length measurement system for measurement of widely varying length materials.

As illustrated below, the computer display of the LM System provides the operator with several outputs:

- 1) Measurement accuracy of  $\pm 1/16"$  [ $\pm 1.6\text{mm}$ ],
- 2) Speed of product on line in feet per minute,
- 3) Time logging of the material run.

Edge detection's from the SCAN-A-LINE™ 10XAS-Series sensor and the Laser Array are processed by the Model LMPU. This data is then forwarded to the PC running the LM System software. This software then processes the measurement information from the Model LMPU and produces several outputs: that are displayed on the program Run Screen.

Configuration of the system is performed through the Windows®-based software Calibration Screen. System troubleshooting is available with the Diagnostics Screen. A large, visible display of the measured length of the current part in the sensor is shown in the upper-right area of the screen. A smaller display, immediately below the length display, indicates the speed of the part, in feet per minute, as it passes over the sensor.



Run Screen of LM System Software

To the left, a table is displayed showing item number, length, speed and time. The data in the table is updated after passage of each part being measured and is logged for use by other programs (such as a spread sheet).

### Components

- Auto-Sync Sensor - Model 10XAS
- Length Measurement Processing Unit - Model LMPU
- Laser Array of up to seven (7) lasers
- Windows®-based Software
- IBM®-compatible Host Computer

### Specifications

**System Accuracy:**  $\pm 0.0625"$  [ $\pm 1.6\text{mm}$ ].

**Minimum Product Length:** 6" [152mm].

**Maximum Length Variation:** Up to 30' [9.1m].

**Minimum Product Width:** 0.5" [13mm]  
(Must be aligned over Sensor & Laser Array).

**Line Speed:** Line speed is only limited by the length of product & spacing of lasers in the Laser Array.

**10XAS-Series:** 10" [254mm] to 60" [1524mm],  
On-Line Sensor Balancing.

**Model LMPU:** Two 12 bit Analog Outputs,  
Serial Communications Port,  
Sensor FAULT Alarm,  
Switching Power Supply.

**Laser Array:** Up to seven (7) lasers, Lasers  
spacing based on dynamic range of  
sensor.



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