LASER-PRECISE MEASUREMENTS

HS702 Sensor

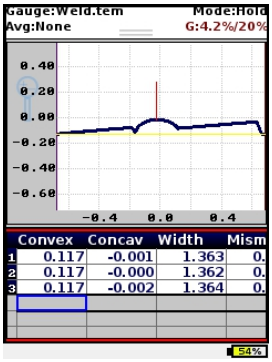
Overview

The HS702 is the smallest and most rugged of the LaserGauge® DSP sensors. It is perfect for high volume applications, such as measuring gap and flush on automotive assemblies or inspecting fastener flushness on aircraft panels. With the 1GHz processor, accurate measurements are completed in **less than one second**.

All operations are performed on the sensor. An integral battery powers the sensor. No cables are needed.

Operating Modes

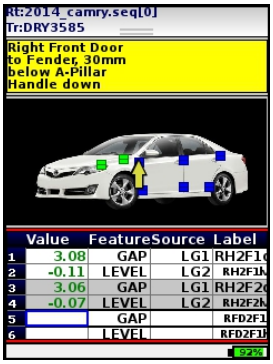
Gauge Mode – In the Gauge Mode, measurements are taken using one algorithm at a time, such as the fastener or weld algorithm. Measurements can be made in millimeters or in inches. Multiple measurements are calculated on each scan and values are displayed in the data table. Values are color-coded to indicate in-spec and out-of-spec conditions.



Pan and Zoom functions on the graph allow for detailed analysis of each scan. On-screen point and select functions can be used to manually measure extraordinary features.

Measurement values are saved to a file automatically and each scan can be saved and cross-referenced to the measurement values for documentation purposes or subsequent analysis.

Routine Mode – Inspection routines are designed to measure different features on an assembly or part. The routines are developed using the LGWorks software, and the routine files are sent wirelessly to the sensor through a ZigBee module or by using a USB cable.



A routine is started when the operator enters the identifying number for the assembly, or the optional barcode reader can be used to scan the identifier, such as a VIN. Operators follow graphical instructions to position the sensor at predetermined measurement locations, and the appropriate measurement algorithm is loaded automatically.

Data files are saved automatically. Measurements can be retaken, and data files can be closed and reopened at any time. The sensor can hold hundreds of files.

Features

User Interface – Menus are available in multiple languages. The 2.4" high resolution color LCD provides graphical and textual information before, during, and after the scanning. A 5-way joystick and two keypad buttons are used to make menu selections and to pan and zoom in the scan window. Color LED's on the top and the bottom of the sensor provide roll angle and error feedback.

Automatic Gain Adjustment – Measurements can be made on all color surfaces, from raw metal, to white, to glossy black. The image of the surface is optimized through a sophisticated gain algorithm that runs each time the trigger is pulled. For special applications, the gain can also be set manually.

Processor and Memory – The 1GHz processor speeds through the scans and through algorithms, producing final results in less than one second. Graphics and surface profiles are plotted instantly. 8GB of memory provides plenty of space to save data and scans.

Wireless Communications – Data files and scan files that have been saved on the sensor can be retrieved wirelessly using the integral 2.4GHz ZigBee module in the sensor to a matching USB stick plugged into a local computer. A USB cable can also be used to retrieve and send files.

Power – A rechargeable, lithium-ion battery provides power for three to four hours of constant operation. Power saving functions can be used to extend operating times even longer. Files are constantly saved, so data is never lost. The on-screen fuel gauge and a "low battery" message informs the operator when it is time for a fresh battery.

Options

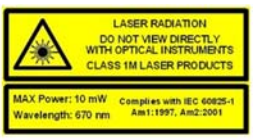
Barcode Module – A barcode module can be installed on the front of the sensor to scan the identification number of assemblies or parts, such as the VIN or serial number.

High-Capacity Battery – The higher capacity, lithium-ion battery, Series 2037, runs the sensor for more than six hours of normal use and requires the installation of a different battery holder under the handle.

Holster and Belt – An optional holster and belt can be worn by the operator to securely hold the sensor when the sensor is not being used.

Sensor Specifications

Type	DSP – Handheld
Size	2.3" (w) x 3.8" (h) x 10.1" (l)
Weight	21 oz. (25 oz. with battery)
User Interface	2.4" Color Display, 2 sets of 3 LED's, 5-Way Joystick and 2 Buttons
Communications	Wireless - 2.4GHz ZigBee module with ZigBee USB Stick for computer Cable - USB 2.0A to Mini 5-Pin USB, 6'
Processor	1GHz Speed
Memory	8GB of data/scans/routines
Battery	Rechargeable lithium-ion. Recommend Energizer Model ER-C680, Samsung Model SB-L160, or equivalent Optional, high-capacity, rechargeable lithium-ion battery Series 2037
FOV Options / Horizontal Scanning Resolution / Depth Accuracy	1.20" (30mm) / 0.0008" (20μm) / ± 0.0008" (20μm)
Shock Protection	Cast urethane housing
Environment	0° – 70° C



Linear Measurement Instruments, Corp.
101 North Alloy Drive * Fenton * Michigan 48430 USA
sales@lmicorporation.com * 810.714.5811 * www.lmicorporation.com